Molnár, F.A.

On the History of Word-Final Vowels in the Permian Languages.

- Szeged, 1974.

Studia Uralo-Altaiaca V.
1. PREVIOUS INVESTIGATIONS

The first work to provide information on the history of Permian word-final vowels was that of Wichmann, on Chuvash loan-words in Permian languages. It is pointed out in this work that original Permian word-final \[ \text{\textit{xy}} \] has disappeared in Ziryene, whereas it has been preserved in Votyak. Chuvash loan-words also underwent this change /TLPS 35, 129/.

An early paper of György Lakó "A permí nyelvek szóvégi magánhangzói" (The Word-Final Vowels in the Permian Languages) has provided the fullest treatment of my subject up to the present day /hereafter Lakó; where his name occurs, only the page number is indicated/. I will discuss his work at some length, not because I want to undertake the easy job of criticizing an article written forty years ago, but because I have drawn on it considerably myself.

+ The present thesis is based on a university doctoral dissertation, which, in turn, is an elaboration and improvement of a lecture delivered at the National Conference of Hungarian Scientific Student-Circles in 1965. The dissertation was submitted in Debrecen, in spring, 1972, prior to the resumption, in the same year, of the discussion also connected with the question of Permian word-final vowels. The text of the dissertation has been abridged in places and, mostly as a result of critical remarks made, somewhat modified. This will become clear from the particular references. No change in style has been made. Here I should like to express my gratitude to professors Béla Kálmán, Károly Rédei, János Harmatta and Péter Hajdú for their valuable advice. I am also indebted to Magda A. Kövesi for her help in the completion of my paper for the Conference of Scientific Student-Circles.
According to Lakó, the word-final vowels of Permian languages today — taking into account the corresponding words in Ziryene and Votyak — present the following picture:

1. Only Votyak has word-final vowels /6-23/
   a. Ziryene -ʊ̞ ~ Votyak -ɨ̞/ -ɨ̞
   b. Ziryene -ʊ̞ ~ Votyak -ɨ
   c. Ziryene -ʊ̞ ~ Votyak - ej

Votyak words under a are either root-words or derivatives. It is very difficult to separate them, for they are identical in shape and their paradigms became mixed up. PFU diminutive suffixes, ɨ or ɨ́, first formed a diphthong together with word-final vowels, then they changed into a monophthong, ɨ́, and merged with the root: ɨ́, > ɨ́, > ɨ́, > ɨ. Thus, words with diminutive suffixes coincided with words possessing an -ɨ́ final vowel proper. Word-final ɨ́ in the U, G, and Bess dialects and -ɨ in the K dialect are developments from -a already in the separate life of Votyak.

In words belonging to group b the -ɨ́ of Votyak forms goes back to the word-final vowel of the original language, or is a productive or assimilated suffix. A number of suffixes belong here, which in Votyak are sounded together with an -ɨ́ final vowel, but in Ziryene without it. /Ziryene -ɨ́, Votyak -ɨ́; Ziryene -ri, Votyak -ri, etc. / Lakó quotes only one example for the third correspondence /eq/, and even there he points out a suffix in the Votyak form. Consequently, this case can be ignored in a diachronic investigation.

2. Both Ziryene and Votyak have word-final vowels /23-49/
   a. Ziryene -a ~ Votyak -a
   b. Ziryene -a ~ Votyak -o
   c. Ziryene -i/-ɨ̞/ ~ Votyak -ɨ/-ɨ̞/
   d. Suffixided forms /acc, illat., Px1Sg, etc./ ending in different vowels /e, e, i/.
Group b can be traced back to group a, for Votyak -o is the result of a change a > o, which had already taken place in the separate life of Votyak, under the influence of word-initial o and u respectively. The corresponding pairs -a ~ -a, -a ~ -o occur in words of Finno-Ugrian origin, in Proto-Permian Chuvash loan-words and in numerous derivative forms. Consequently, the separation of derived and root-words present difficulties here, too. Words with assimilated suffixes were able to enter the group of root-words. In words belonging to group c, word-final -i is a suffix or an inflectional ending or a part of it, and in one or two cases it is a final vowel. The vowel -i did not disappear in these forms as it had some function to fulfil. The disappearance of diminutive -i, for instance, would have meant the loss of the diminutive quality of the word, too, at the same time. The preservation of the final vowel may also be due to phonetic compulsion, i.e., if the disappearance of the vowel would have resulted in a consonant cluster difficult to pronounce, the final vowel was retained.

In inflected and suffixed forms ending in various vowels /ɛ, œ, i/ the final vowel was also preserved as a result of a certain function or under phonetic compulsion /group d/. ɛ and œ appeared at the end of words after the disappearance of word-final -m when the changes affecting word-final vowels of middle tongue position had already taken place.

3. The final vowel is missing both in Ziryene and in Votyak /50-52/.

Ziryene -ø ~ Votyak -ø

The greater part of the word-stock belongs to this group: root-words, inflected and suffixed words in which the final vowel of the inflectional ending or suffix has disappeared.

4. Only Ziryene has retained the final vowel /52-53/

Ziryene -i/-i/ ~ Votyak -ø
Word-final ʷi/-i/ in Ziryene words is generally a diminutive suffix. This correspondence, therefore, is not an original one, historically it evolved only later.

After the contrastive examination of Permian final vowels Lakó summarizes the main conclusions, according to the testimony of the related languages, as follows /53-61/: At the beginning of the Proto-Permian age the following vowels occurred in word-final position: ʰʰ, ʰʰ, ʰʰ, ʰʰ /54/. "Proto-Permian ʰʰ was generally retained both in Ziryene and in Votyak and it changed into ʰʰ in the latter only under certain conditions /after ʰ or ʰ/." /56-57/.

Proto-Permian ʰʰ and ʰʰ were preserved in Votyak unchanged; in Ziryene, however, they generally disappeared." /58/.

ʰʰ disappeared when contacts were first made with the Chuvash, ʰʰ and ʰʰ, on the other hand, "were to become of low or high tongue position probably, and then to share the fate of original final vowels." /56/
The history of Permian final vowels testifies "not just one loss of final vowels, but more than one." Their disappearance took place in three different ages. "That which affected the greatest part of the word-stock and is the oldest of them can be referred to as Proto-Permian. In Ziryene, however, the disappearance of final vowels is more limited and it can be attested in Votyak only sporadically" /53/. This means that in words belonging to group 3 their disappearance took place as early as the Proto-Permian age, while in the case of the members of group 1, only in the separate life of Ziryene. Finally, taking into account the testimony of Chuvash and Veps-Karelian loan-words, too, the disappearance of Ziryene ʰʰ and ʰʰ is dated by Lakó from the 11th and 12th centuries /65/.

Generally, later investigations relating to Permian word-final vocalism also make use of or accept the results of this paper. Lytkin
poses several new questions, too, in his IstGramm, for example, he mentions the linking sound \( j \) in Ziryene. He regards it as a remnant of \( -j \), which has disappeared. However, he reaches a partially different conclusion in regard to one of Lakó's problems only: "Konečnye glasnye srednego podjema v permskix jazykax otpali, glasnye nižnego podjema /a/ i glasnye verxnego podjema /i, y/ vo mnogix slučajax soxranils' — poslednee otnositsja glavnym obrazom, k umurtskomu jazyku /69/. Consequently, even though Proto-Permian \( ^{\text{X}}a \) was retained in many cases, it disappeared in the majority of them.

Collinder makes the following assertion in his ComGr about the further development of the final vowels of Proto-Finno-Ugric in Proto-Permian: 402. In Permian, \( ^{\text{X}}-ä \) developed into \( a \) at the word-end and before /Permian/ a. 554. In Permian, \( ^{\text{X}}a \) has changed into \( y \) in the second syllable, as a rule. \( ^{\text{X}}-a \) has disappeared in Ziryene, with few exceptions. In Votyak, \( ^{\text{X}}-a \) has developed into \( y / or o/ in the counterparts of fi nujja club, ... it has disappeared in the counterparts of fi maksa liver, ... 

Note: — Genuine Permian nouns ending in -a /in vty sometimes -o because of vowel harmony/ may be derivatives, e.g. zr gada gull, fi kajava ... 567. In Permian, \( ^{\text{X}}-ä \) seems to have disappeared. 577. In Permian, \( ^{\text{X}}-ö \sim ^{\text{X}}-e \) has mostly disappeared. Votyak has -y in some words, e.g. gižy, zr gyaž naž = fi kynis; vty lymy, zr lym snow = fi lumí, "

In a more recent book of his /VokPerm/ Lytkin does not give a detailed analysis of word-final vowels. Mostly on the basis of his investigation concerning the vowels of productive suffixes he reaches the conclusion that Proto-Permian had only delabialized vowels: a, i, e /perhaps e, too, which soon merged into / in non-word-initial syllables. It is possible that in early Permian the root of certain words
ended in a or ξ of low tongue position, while that of others in a closed vowel /i/.

At the Seventh Conference of Hungarian Scientific Student-Circles in 1965, in Budapest I delivered a lecture entitled "Contributions to the History of Permian Final Vowels." In this I demonstrated on the corpus of the FUV that final vowels had become closed before their disappearance from the Permian languages, and PFU k-a and k-ü are no exceptions to this rule. As a matter of fact, my dissertation is an extension of that paper and apart from the inclusion of Iranian loan-words and monosyllabic words into the analysis almost all the essential assertions of this dissertation were already included, even if in brief, in the paper written for the conference.

Károly Rédei, in an article dealing with the vocalism of the first syllable in the Permian languages, touches very briefly upon the vowels of the second syllable, too, and remarks that the first stage in the reduction of "Pre-Permian /PFU/ final vowels a/ä/ and e/ę/ in unstressed position must have been that open and half-open vowels became closed, though not without exception" /NyK 70: 41-42/.

Éva Korenchy, in her paper on the problem of the absolute verb-stem in Ziryene, where she also deals with the fate of word-final -a, analysing Lakó's examples, reaches the conclusion that "examples testifying to the complete disappearance of -a / or Votyak > j/ and its secondary quality are greater in number than the one or two words

+A copy of the manuscript is available in the Linguistic Department of the Lajos Kossuth University of Debrecen and with the organizing committee of the Budapest conference.
that would prove the incidental ancient quality of \( -a \) /NyK 73: 159/.

After this survey of previous investigations we must agree with Lytkin in that "problema istoričeskogo vokalizma nepervogo sloga permškich jazykov i finno-ugorskich jazykov v celom/ eště ždět svojego issledovatelja" /VokPerm 243/. The aim of this paper is to contribute to the solution of this problem.
2. THE INVESTIGATION OF THE WORD-STOCK OF THE PERMIAN LANGUAGES FROM THE POINT OF VIEW OF WORD-FINAL VOWELS

2.1. Words of Finno-Ugric Origin

For want of early written records, it is expedient to lean heavily on the testimony of cognate languages and loan-words in the diachronic investigation of Permian final vowels. Not much is known about Proto-Finno-Permian, which was separated from Proto-Finno-Ugric about 2000 B.C. It did not exist long and it must have been very close to Proto-Finno-Ugric. Thus, when studying the system of word-final vowels in the Permian languages, I assume the working hypothesis that at the beginning of the separate life of Proto-Permian word-final vocalism was the same as at the end of the Finno-Ugric period. The FUV, the two volumes of the MSzFE published up to now and the CompGr /this contains corrections of faults and reconstructions of the forms of PFU words published in the FUV/ have been consulted in order to see what sounds took the place of the reconstructed final vowels in the two Permian languages in words of Finno-Ugric origin having Ziryene or Votyak equivalents. In the course of the investigation verbs, doubtful etymologies, words extant only in their derived forms as well as words not having reconstructed Proto-Finno-Ugric forms in the CompGr have been ignored. Verbs were not taken into consideration for their stems.
do not occur by themselves in their dictionary form in the Permian languages, and Korenchy has already dealt with the question of verb stems. This problem will be touched upon once more further on. Although the FUV could be supplemented and provided with corrections, it undoubtedly presents a reliable picture of the whole word-stock. Some rare types of equivalence have been supplied from the KESK. The terms obščepermskij jazyk-osnova and dopermskij jazyk employed there have been translated as Permian (Proto-Permian) and Pre-Permian respectively. Words given with their Russian meanings are all taken from the KESK. Russian words or texts have been transliterated according to the practice accepted in the journal "Language." Permian words written in the Cyrillic alphabet have been transcribed according to the system employed in the Uralisches Etymologisches Wörterbuch in preparation /cf. Rédel: ALH 20: 411-421/. Meanings of words not given in German, Russian or English but in Finnish or Hungarian have been translated into English. The fact that Collinder also reckons with PFU $^{X-e}$, as opposed to the MSzFE and the KESK, does not raise any difficulties for, as will be seen later, all final vowels generally have unified equivalents.

Examining the corpus referred to, the following conclusions have been reached. Word entries are abridged and only Votyak and Ziryene forms are quoted. The data of the FUV were checked in and quoted from other sources /Wichmann—Uotila, Syrjänischer Wortschatz; Wichmann, WotjChr; Uotila, SyrjChr; Uotila, Zur Geschichte des Konsonantismus in der permischen Sprachen; Munkácsi, A votják nyelv szótára; Wiedemann, Syrjäisch—deutsches Wörterbuch; SKES; MSzFE/. With words taken from elsewhere sources are precisely given. Dialects are not marked separately, only dialectal data corresponding to forms in the FUV are used. Abbreviations do not affect the essence of the problem examined here.
mally undergo changes. In two obviously early Russian loan-words word-final -a changed into -o if the preceding first syllable contained o or u /Csúcs: NyK 74: 34, 38/.

Examples /cf. Csúcs: NyK 72: 326 ff/:

K borozna "Furche" < southern Ru dialects: borozna
dusko "ein wenig gebogenes Brett" < Ru doska
pusta "wüst, öde, leer" < Ru pusto
stado "Horde" < Ru stado
S luchče "eher" < Ru luchče
T srazu "suddenly" < Ru srazu
G jesti "if" < Ru esli

Russian o if unstressed is a sort of a sound. For this reason, Votyak -a may also correspond to Russian -o in unstressed position /Csúcs: NyK 74: 38/.

At the time when Russian and Tartar loan-words made their way into the Permian languages, the system of word-final vowels no longer underwent significant changes. It follows from this that no essential conclusions about the history of word-final vowels can be drawn either from the linguistic records of Ziryene going back to the 15th and 16th centuries or from those dating from a still later period: by and large, word-final vowels are identical with their contemporary counterparts /cf. the vocabulary in Lytkin's Drevnepermşkij jazyk. Moskva, 1952/. It would require a separate paper to deal with Permian linguistic records in detail from the viewpoint of word-final vocalism.

After this examination of the PFU word-stock and the loan-words of the Permian languages, from the point of view of word-final vowels, the question arises: how, by means of what tendencies of sound changes, can we account for the present picture?
2.3.1. As mentioned at the beginning of the present paper, in a lecture in 1965 I pointed out that word-final vowels of Proto-Permian underwent a trend-like development of raising (elevation) of the tounge. Later on, a similar idea was hinted at by Károly Rédel /NyK 70: 41-42/, and the same conclusion was reached by Éva Korenchy, who examined the problems of Ziryene absolute verb stems and touched upon this question as well /op. cit. 150 ff/. Still earlier, in connection with PFU $\text{X}_a$, Collinder also asserts something along these lines: "In Permian $\text{X}_a$ has changed into $\text{X}$ in the second syllable, as a rule" /CompGr 584/. In case of word-final $\text{X}_e$ and $\text{X}_a$, Lakó also reckons with lowering and raising /56/.

As has been seen, all three word-final vowels dating back to the Finno-Ugric period have disappeared in most words in the Permian languages, but we also have some examples to show that word-final vowels -- primarily in Votyak -- have been preserved in the form of $\overline{X}_i$ /-I/. This leads to the conclusion that the disappearance of word-final vowels was preceded by raising and PFU $\text{X}_a$, $\text{X}_\tilde{a}$ and $\text{X}_e$ /? $\text{X}_e$/ first changed into closed $\overline{X}_i$ and $\overline{i}$ respectively, to disappear afterwards in the overwhelming majority of cases. According to Lytkin, in late Proto-Permian we can reckon with $\overline{X}_i$ in the second syllable, and this $\overline{X}_i$, then, depending on individual dialects and phonetic position became $\overline{i}$ or $\overline{I}$ /VokPerm 236-238/. Bubrich, however, derives $\overline{i}$ from $\overline{I}$ /Istorijeskaja fonetika udmurtskogo jazyka. Izhevsk, 1948. 57, 64/. On the analogy of changes in the first syllable, Rédel assumes that the elevation of word-final vowels resulted in $\text{X}_u$ and $\text{X}_\tilde{u}$, which became $\overline{I}$ later through $\text{X}_\tilde{u}$ /NyK 70: 42/.
As has been seen, Indo-Iranian, Proto-Iranian and Old Iranian loan-words of Proto-Permian, which ended in \(-a/-\ddot{a}\) have likewise lost their word-final vowels and we find word-final \(-i\) and \(-\ddot{i}\) in one or two Iranian loan-words from a probably later period. The Indo-Iranian, Proto- and Old Iranian loan-words present a similar picture to that of the word-stock of Finno-Ugric origin. Thus, it can be assumed that this layer of loan-words also underwent raising and d'appearance afterwards. Chuvash loan-words preserve the final vowel \(-a\) /cf. also IstGramm 69/, and MB \(\dddot{a}\) is replaced by \(-a\) in PP /cf. E. Itkonen: FUF 38: 270/. It is true that on the basis of the Ziryene gob "Pilz" | Votyak gubi id. < PP gob | MB gumbä Rédel and Róna-Tas think of the possibility, too, that "the phonetic change \(\dddot{a} > \dddot{i}\) at the end of words in PP came to an end in the period of MB and PP contacts"; but they do not exclude the possibility, moreover they find it perhaps more likely that MB \(\dddot{a}\) was replaced by \(-\ddot{i}\) after the PP phonetic change \(\dddot{a} > \ddot{i}\) had taken place /op. cit. 296/. Insofar as it is necessary to start from the MB form gumbä, I am of the latter opinion myself and I should only like to add that an \(\dddot{a} > -a > -i\) sequence of replacements can also be assumed, for \(-a\) may have been felt to be a suffix and it came to be replaced by the suffix \(-i\) having a similar function. It is also an argument in favour of the sound replacements that \(\dddot{a}\) was replaced by \(-a\) in the other two loan-words ending in \(a\). In accordance with this, the raising of early open PP word-final vowels could not have come to an end earlier than the end of the Old Iranian period /about 250 B.C./. At the same time, the process of raising had already terminated by the beginning of the Chuvash influence. It has also been seen that word-final \(-i\) of Chuvash loan-words adopted at the end of the PP period has generally been preserved in Votyak. As the close word-final vowel /\(-i\)/ \(-i\) disappeared in the largest part of the Permian word-stock of Finno-Ugric, Finno-Per-
mian and early Proto-Permian origin, the disappearance must have taken place before the borrowing of Chuvash loan-words and perhaps at the beginning of it, cf. Votyak kćé/. The completion of the -ā > -ä development, therefore, on the basis of one word, cannot be dated from the period of MB--PP contacts for the very reason that it was not only the change -ā > -ä that had taken place in ancient words by that time, but the disappearance of -ä that developed in this way, too. The processes of raising and disappearance themselves took some time to take place, so the time of the beginning of the process of raising cannot possibly be dated from a later period than the first or second centuries B.C. All in all: the raising of early Proto-Permian word-final vowels must have started at the beginning of the second half of the Proto-Permian period /the PP period lasted from 1500 B.C. -- 800 A.D., and the -ä and -ä that developed as a result of this had disappeared before the Chuvash influence /from the 7th century on/ or presumably at the beginning of that period. Korenchy dates raising from a very early phase of Proto-Permian, for, according to her, only close vowels could stand at the absolute end of words as early as the first half of the Proto-Permian period /op. cit. 159/. Rédei partly shares this view and dates the sounds x-u and x-ë, which developed by means of raising, from early Proto-Permian /NyK 70: 42/. The Indo-Iranian and Iranian loan-words, however, demonstrate that the process of raising and sound changes simultaneous with it or appearing as its consequences took place in the second half of the Proto-Permian period.

Collinder reckons with the change -ā > -ä in PP /CompGr 169/, all his examples, however, are pronouns and monosyllabic words, the development of which may, as will be seen later, deviate from that of other members of the word-stock /words mentioned in the CompGr: Vty, Zr ta "this" ~ Finn tāmä, ta-; Zr naja /nyje/ "these" ~ Finn nāmä, nā-. It is impossible to decide on the basis of words of Finno-Ugric origin,
whether there was an \(-ä\) > \(-a\) change in PP or not, the fate of both word-final vowels being disappearance; and \(-a\) may have disappeared, similarly to \(-a\), by means of raising but also by first becoming \(-a\). Despite this, I consider the possibility of a PP \(-ä\) > \(-a\) change -- even in a phase after the completion of raising -- plausible as a hypothesis. Maybe Middle Bulgar loan-words besides the above-mentioned monosyllabic words could also point in this direction (although it is easier to assume sound replacement in their case), and one or two etymologies, which are doubtful from the viewpoint of word-final vowels, and have \(-a\) in the Permian languages as a perhaps exceptionally surviving equivalent of PFU \(x-ä\) /Zr unə\ | Vty unos, Zr jala, cf. above 19/, as well as the fact that PFU verbs with an \(x-ä\) stem have the ending \(-as\) in the PraesVx3Sg form of the Udora dialect of Ziryene. Lytkin has pointed out that there are two types of ending in 3rd person singular Present Tense in this dialect, namely \(-e\) and \(-as\) and these correspond to the PFU stems \(x-e\) and \(x-ä\) /\(x-ä\)/ respectively /Nyk 71: 95-99/. In the first part of the Ziryene compound \(nɛləmɛn\) "forty", too, an \(-ä\) > \(-a\) development can be postulated, for here Ziryene \(nɛlə-\) goes back to PFU \(x-nelja\). A change \(-ä\) > \(-a\) may have taken place before \(a\) in the first syllable, too /e.g. Zr malal ~ Est mälu, cf. CompGr 169/.

On the basis of the argumentation carried out so far, the following word-final vowels could occur in Proto-Permian at the end of the Proto-Permian period: \(-i\) and \(-i\) /according to Lytkin only \(-i\)/. For the disappearance of close word-final vowels was not complete and, in addition, after the process of disappearance, words ending in close final vowels from MB and Modern Iranian also found their way into the language. \(-a\) also existed, which occurred, perhaps, in some MB borrowings taken over after the completion of the process of raising and perhaps in one or two early Modern Iranian loan-words. Although as far as the circumstances and the time of these changes are concerned, we are at variance with
Lakó on several points. Lakó at that time arrived at the same conclusion /56/. This picture of the system of late Proto-Permian word-final vowels, however, can be supplemented. As will be seen, in suffixed forms -E could also stand at the end of words. Then we also have to take into account the word-final vowels of monosyllabic words. These words are rather isolated morphologically, for their final vowels followed the changes of the first syllable rather than those of the last. It is doubtless, however, that the final vowels of monosyllabic words also belong to the system of word-final vowels.

2.3.2. Intervocalic PFU x-k-, x-t- and x-p- were generally lost after the disappearance of word-final vowels in the Permian languages /IstGram 83/. Thus, a number of disyllabic words became monosyllabic and vowels of the first syllable became word-final vowels. Several cases like this were already seen when I was dealing with words of Finno-Ugric origin /cf. above 14, 16, 22/. Of course, there were original monosyllabic words, too, mainly among pronouns. According to the reconstructed Permian base forms of the KESK, apart from x-a, and x-i occurring in polysyllabic words, too, the following additional vowels could stand in word-final position in monosyllabic words at the very end of the Proto-Permian period: x-u, x-u, x-q, x-a, x-q, x-i, x-q, x-q, x-qu /usually only in one or two words, for these see below; in some words, perhaps other vowels may also be reckoned with, for it must not be forgotten that the KESK deals only with Permian words, having a Ziryene equivalent/. Generally these vowels themselves are the results of certain changes that had taken place in the first syllable. These results can mostly be accounted for by the transformation of the original Proto-Permian /and Finno-Ugric/ vertical vowel harmony into a horizontal one as well as by labialization /cf. Rédei: NyK 70: 42/.
In order to demonstrate the word-final vowel system existing at the end of the Proto-Permian period and its further development, I have collected from the KESK those nominals that have a well-established etymology and that have had their Permian base forms reconstructed by the authors of the dictionary. I could not, of course, get a fully reliable picture without a Votyak etymological dictionary and because several Permian forms did not lend themselves to reconstruction or the reconstructions turned out to be false. Nevertheless, the picture thus formed gives a certain guidance and confirms the results hitherto achieved in the investigation. Of the collected 918 reconstructed Permian forms 774 /84, 31%/ end in consonants. The distribution of the other 144 reconstructed forms with respect to their final vowels is the following: \( \frac{4,03}{37}; \frac{2,07}{16}; \frac{1,74}{12}; \frac{1,31}{10}; \frac{0,43}{4}; \frac{0,43}{4}; \frac{0,32}{2}; \frac{0,22}{1}; \frac{0,11}{1}; \frac{0,11}{1}; \frac{0,11}{1}. \) Either loan-words or derived forms constitute the overwhelming majority of these. There are, however, root words of Finno-Ugric origin among them, too, especially words ending in \( -i \) or monosyllabic ones. The KESK assumes an \( -a \) final vowel going back to PFU \( \times\alpha \) or \( \times\ddot{a} \) merely in the Permian reconstructed forms of Ziryene \( \text{d}e\text{r}a \) \( / \text{Vty} \text{d}e\text{r}a \) and Zr \( \text{j}a\text{la} \) \( /\text{d}e\text{r}a \triangleleft \text{PFU} \times\ddot{a}k\ddot{a}r\ddot{a}, \) and \( \text{j}a\text{la} < \text{PFU} \times\ddot{a}k\ddot{a}l\ddot{a}. \)

2.4. On the Development of Ziryene and Votyak Word-Final Vowels

2.4.1. If the word-final vowels of the Permian forms reconstructed in the KESK are compared with their contemporary Ziryene and Votyak equivalents, we get an outline of the change that the system of word-final vowels underwent at the very end of the Proto-Permian period and in the separate life of the two Permian languages.
\( ^{\text{x}}\)-u has been preserved in both Permian languages, while \( ^{\text{x}}\)-\( ^{\text{u}}\) was delabialized and became \( ^{\text{u}}\). \( ^{\text{x}}\)-\( ^{\text{o}}\) yielded \( ^{\text{o}}\) in Ziryene and \( ^{\text{u}}\) in Votyak. Permian \( ^{\text{x}}\)-\( ^{\text{a}}\) developed into Ziryene \( ^{\text{-a}}\) and Votyak \( ^{\text{u}}\) respectively. Permian \( ^{\text{x}}\)-\( ^{\text{e}}\) changed into Ziryene \( ^{\text{-e}}\) and gave Votyak \( ^{\text{-e}}\). All these changes were characteristic of monosyllabic reconstructed words. Since I have been dealing with them in general so far, I am going to present several examples, too, below.

Zr \( ^{\text{mu}}\) "zemlja" | Vty \( ^{\text{mu}}\) id. -- Permian \( ^{\text{mu}}\)  
Zr \( ^{\text{pu}}\) "derevo" | Vty \( ^{\text{pu}}\) id. -- Permian \( ^{\text{pu}}\)  
Zr \( ^{\text{li}}\) "kost" | Vty \( ^{\text{li}}\) id. -- Permian \( ^{\text{li}}\)  
Zr \( ^{\text{ti}}\) "ozero" | Vty \( ^{\text{ti}}\) id. -- Permian \( ^{\text{ti}}\)  
Zr \( ^{\text{so}}\) "sto" | Vty \( ^{\text{su}}\) id. -- Permian \( ^{\text{so}}\)  
Zr \( ^{\text{to}}\) "vot, vot zdest" | Vty tu: tupal "zarechnaja storna" /\( ^{\text{tu}}\)-"ta", pal "storna"/ -- Permian \( ^{\text{to}}\)  
Zr \( ^{\text{ma}}\) "mёd" | Vty \( ^{\text{mu}}\) id. -- Permian \( ^{\text{ma}}\)  
Zr \( ^{\text{sa}}\) "saža" | Vty \( ^{\text{su}}\) id. -- Permian \( ^{\text{sa}}\)  
Zr \( ^{\text{ke}}\) "jesli, koli" | Vty \( ^{\text{ke}}\) -- Permian \( ^{\text{ke}}\) or \( ^{\text{kq}}\) /\( ^{\text{kq}}\)/  
Zr \( ^{\text{pe}}\) "govorit, govorjat" | Vty \( ^{\text{pe}}\) "deskat', govorit" -- Permian \( ^{\text{pe}}\)  

Monosyllabic words are also characterized by Permian \( ^{\text{x}}\)-\( ^{\text{-i}}\) ~ Ziryene \( ^{-i}\) : Votyak \( ^{-i}\) and Permian \( ^{\text{x}}\)-\( ^{\text{-i}}\) ~ Ziryene \( ^{-i}\) correspondences:  
Zr \( ^{\text{ki}}\) "ruka" | Vty \( ^{\text{ki}}\) id. -- Permian \( ^{\text{ki}}\)  
Zr \( ^{\text{li}}\) "mezga, kambij" | Vty \( ^{\text{li}}\) id. -- Permian \( ^{\text{li}}\)  
Zr \( ^{\text{ri}}\) "ry\( ^{\text{x}}\)ag na rassoxe, žuravl' /kolodca/" -- Permian \( ^{\text{ri}}\)  

Permian \( ^{-\text{q}}\), \( ^{-\text{q}}\) -\( ^{-\text{q}}\) and \( ^{-\text{q}}\) are assumed as the antecedents of the following words:  
Zr \( ^{\text{sessa}}\) "zatem, potom" /\( ^{\text{se}}\) "tot"/ -- Permian \( ^{\text{se}}\)  
The Ziryene word is supplied with the ending of the Praeclusive.
2.4.2. As mentioned earlier, Lytkin and the KESK assume only one close word-final vowel by the end of the Proto-Permian period: \( ^{x-i} \). It can be seen in the table that Permian \( ^{x-i} \) /but on the basis of Lakó’s treatise and works by other authors \( ^{x-i} \) may also be reckoned with/ in polysyllabic words and word-final vowels reconstructed as having uncertain phonetic character has generally disappeared in Ziryene; in Votyak, however, it has been preserved in the form of \( ^{-i} \). Therefore, in Ziryene \( ^{x-i} / ^{-i} \) has been lost. In order to determine the time of the process of disappearance, Lakó makes use of the testimony of loan-words. In the Chuvash loan-words of Ziryene, \( ^{-i} \) has disappeared with the exception of a single word. There are a few examples illustrating the preservation of \( ^{-i} \) in Karelian borrowings; the other loan-words ending in \( ^{-i} \) underwent the change. Chuvash loan-words could find their way into Ziryene through the intermediary of Permyak until about the middle of the 13th century. The same period may also mark the very end of Ziryene-Karelian contacts, for it was then that the Russians ultimately settled down between the Ziryenes and the Karelians. As some loan-words taken into Ziryene did not lose their final vowels, Lakó draws the conclusion that the disappearance of Ziryene word-final vowels had come to an end before the 13th century, i.e. before the Ziryene-Karelian contacts were broken off /63-64/.

Although this date is also acceptable, I find it more probable that the disappearance of word-final vowels in Ziryene took place earlier. While
considering Veps-Keralian loan-words, we saw that the disappearance of word-final _i_ may also have come about in Veps, not only in Ziryene, and there are only two loan-words that can with greater probability be claimed to have lost their word-final vowels in Ziryene. Also, Wichmann and Fokos date the very end of Ziryene-Chuvash contacts from an earlier period, from the 11th century /TLPS 147; Fokos: NyK 55: 12/.

It is difficult to draw conclusions from mutual borrowings in Ziryene and the Ob-Ugric languages, for the system of word-final vowels of the latter presents a mixed picture on account of dialectal differentiation, the disappearance of word-final vowels in the Ob-Ugric languages, too, and the attachment of a vowel to the end of words by analogy. At any rate, it can be assumed theoretically that Ob-Ugric loan-words in Ziryene, which ended in a close vowel in Ob-Ugric but lost it in Ziryene, also underwent the process of the disappearance of Ziryene _-i_ /-u/. We have two such words; these, however, can only be later borrowings on the basis of other criteria. On the other hand, if _-i_ is found in Ziryene loan-words of the Ob-Ugrian languages and the Ziryene equivalents show the lack of a final vowel /-u/, it can be assumed that these words had been taken over before word-final vowels disappeared in Ziryene, and the original Ziryene word-final vowels came to be preserved in the Ob-Ugric forms.

We have only a few words having the same correspondence and their individual examination shows that later borrowings constitute the majority of them and word-final vowels were attached to these Ob-Ugrian forms by analogy. There are, however, two words that belong to early loan-words of Ostyak, and it is conceivable that they were borrowed before the disappearance of word-final vowels in Ziryene, although their analogical completion is more probable. In the Votyak equivalent /džir/ of the Ziryene word _džir_ "Angel, Turk-" there is a word-final vowel even today /Lako 7/. It is true that the disappearance of Ziryene word-final
vowels can be clarified on the basis of Ob-Ugrian loan-words only with difficulty, but the fact itself that during the time of the disappearance of word-final vowels no major take-over of loan-words can be reckoned with again indicates that the disappearance of word-final vowels in Ziryene must have taken place at the very beginning of Ob-Ugric and Ziryene contacts. We know that these contacts began in the tenth century /SLO 148-152; SLW 76-77/.

Russian loan-words in Ziryene preserve their final vowels in Ziryene without exception. A greater bulk of Russian loan-words made their way into Ziryene only from the 14th-15th centuries on or still later, but sporadic borrowings can already be reckoned with from the 11th century on /Fokos: NyK 55: 11-12; FgrNNy 223/.

Thus, on the basis of loan-words, I should place the time limit of the disappearance of word-final vowels in Ziryene at the beginning of the 11th century.

As Karelian loan-words taken over from the tenth century on mostly lost their final vowels, Lakó dates the beginning of the disappearance of Ziryene \(-\) and \(-i\) from the 11th century, and the disappearance during the 11th-12th centuries /65/. This opinion is also accepted by Lytkin /IstGramm 73/. The testimony of Karelian loan-words, however, as has been seen, is not so unambiguous. Besides, the fact that the Veps-Karelian /and Chuvash/ loan-words underwent the process of disappearance does not mean that this necessarily had to start simultaneously with the take-over of loan-words or after it, it only means that at the time of the borrowing of loan-words the tendency towards disappearance must still have been in operation.

According to scattered Hungarian words in the text of De administrando imperio by the Byzantine Emperor Constantine Porphyrogenitus, for example, the disappearance of word-final vowels in Hungarian had
already started in the 10th century, and Slavic loan-words that were borrowed in the 11th century lost their word-final -i: Slav tyky > Hung tök, Slav jasli > Hung jászol, Slav vlasí > Hung olasz /A magyar nyelv története. [The History of the Hungarian Language] Benkő, Loránd, ed. Budapest, 1966. 146/. Moreover, it is known that Hungarian also had forms with word-final vowels as late as the 13th century.

I should like to raise the idea that the disappearance of word-final vowels in Ziryene can be linked with the same process in PP. I think that the process of disappearance affecting the largest part of the word-stock at the end of the Proto-Permian period practically ceased in that Proto-Permian dialect which must be regarded as the direct antecedent of Votyak -- as a consequence of changes in stress relations, among other things --, but the process remained in operation in the dialect from which Ziryene developed, and in Ziryene, too, to come to an end only by the turn of the 10th-11th centuries. It is not at all unreasonable to reckon with dialectal differences in Proto-Permian, for the ancestors of the two Permian peoples were living in separate regions by this time: the Ziryenes lived in the northern zone of the territory of the PP and the ancestors of the Votyaks lived south of it /FgrNNNy 212/. If this hypothesis is accepted, there is no need to distinguish three /Proto-Permian, Ziryene and Votyak/ different periods of the process of disappearance, as Lakó does, or two /Proto-Permian and Ziryene/ as Lytkin does /Lakó 57; IstGramm 74/, but the disappearance of Proto-Permian \^x-i/ can be viewed as a homogeneous process. Considerations along the lines of general linguistics would also suggest that the same change is highly unlikely to have taken place twice in a relatively short period in the life of a language. The weak point in my hypothesis is that according to it the process of disappearance took too long a time to take place. Perhaps, this can be accounted for by the diverse and varying stress
relations of Proto-Permian and Ziryene. The stress pattern of early Proto-Permian, where the stress fell on the first syllable, broke down in Proto-Permian and yielded its place to a dynamic stress pattern based on the open or closed quality of vowels. The stress fell on the syllable containing the first "heavy" vowel /half-open or open/ of the word. Later the stress in Votyak fell on the last syllable. /E. Itkonen: NyK 56: 9/. Subsequently it was, presumably on analogy with Tartar, the last syllable that became stressed in Votyak. The process of disappearance of word-final vowels with the stress falling on the first syllable in Hungarian lasted about three hundred years.

2.4.3. Apart from the disappearance of word-final vowels in Ziryene, another conspicuous difference between the Ziryene and Votyak systems of word-final vowels lies in the fact that Permian *-a frequently has -o as its equivalent in Votyak against Ziryene -a. We have seen examples illustrating this among suffixed words of Finno-Ugric origin and MB loan-words of Votyak. And then in Chuvash, Tartar and early Russian loan-words -o may figure against the -a of the source language. The word-final change *a > o in Votyak took place only in certain phonetic positions, after an o or u in the first syllable, and this process may be dated from the 15th-16th centuries or from a later period still, as Tartar and early Russian loan-words also underwent the change. But it had terminated by the end of the 19th century since this change no longer made its effect felt on Russian loan-words taken over at that time or afterwards /Csucs: NyK 74: 34-35/.

2.4.4. As compared with late Proto-Permian, it also points to a change that Permian *-i and *-i underwent a process of levelling in individual dialects and in accordance with their phonetic position and function.

2.4.5. Therefore, the reconstructed Permian forms of the KESK
and their Ziryene and Votyak equivalents are compatible with the conclusions drawn in my dissertation and confirm them. A few irregular or seemingly irregular correspondences naturally occur, but this is not surprising: the words comprise derived ones as well and it is known that sound changes generally take place not without exceptions. Moreover, the majority of these few exceptions, can be accounted for on the morphological level and by the influence of analogy. Let us take some examples. Concerning the etymology exhibiting Permian *-a ~ Ziryene -a : Votyak -a "correspondence" /Zr poča "serēžki ivy" | Vty puč, "verba, počka dereva" -- Permian poča/ we may think that -a was taken for a diminutive suffix and was replaced by the suffix -a having a similar function in Votyak. It is even more likely that *poč having different derivational suffixes in both Permian languages, has to be assumed as a reconstructed Permian form. The word has a form poč /KESK/ in the Luza dialect of Ziryene. In a single word Permian *-a disappeared in Ziryene, but was preserved in Votyak as -o /Zr -mo:n: sojmon "glinja-naja kukla" | Vty mušo, mjuo "kukla" -- Permian *mo:n or *mo:n/. In this Ziryene -a disappeared perhaps under the influence of mo:n "nevestka" /KESK/; it is also possible that -a was felt to be a suffix and was dropped. So far the history of word-final vowels in the Permian languages has been examined on the basis of unsuffixed nominals. The verb lends itself to such an analysis less easily on account of its morphology. Korenchy pointed out that raising and disappearance took place in Ziryene absolute verb stems, too; in this the -a vowel appears under certain phonetic circumstances beside the stem ending in a consonant, and is a preserved open final vowel /op. cit. 153 ff/. Second person singular of the Imperative in the Permian languages is generally identical with the stem form of the verb. In the Imperative of verbs /that is in their stem forms/ two types can be distinguished: Ziryene ʲə, /e.g. mun "go!", vetli "walk!", Votyak ʲə, /e.g. min "go!", likti
"come!", bastj "take!"/. "The -a of kora "cut!", vera "say!" is not a preserved final vowel, but it is to be explained in the phonetic development of the suffix of verbs suffixed with -al: koral, veral > koraj, veraj > kora, vera" /Rédei: Bírálat/. In both Ziryene and Votyak, word-final vowels appear in the Imperative only after consonant clusters, and ı appearing in the stem form in certain Votyak dialects /G, Uf karı-nı, J, MU kari-nı, M kar-nı "machen, tun", G, Uf minı-nı, J, MU mini-nı, M minı-nı "gehen"/ was lost in the Imperative /in absolute word-final position/. In Ziryene a stem ending in a consonant appears always in such cases, after certain consonant groups, however, -ı was retained /Korench: op. cit. 153 ff, Rédei: Bírálat/. Even if -ı were of secondary development, it would not contradict the processes of raising and disappearance. In this case it would have to be assumed that in verbal stems the disappearance of the word-final vowel was fully completed after raising.

2.5. On suffixes ending in vowels

Below, I should like to examine how the suffixed forms of the Permian languages ending in vowels can be fitted into the hitherto outlined system of word-final vowels. Forms ending in -ı and -i present relatively few difficulties. As has also been seen in the examination of base words -ı /-ı/ has not disappeared totally in Votyak: moreover, it has been preserved in several words in Ziryene. In a number of suffixes /Vty, Zr -ı / -ı diminutive suffix, Vty, Zr -ıı suffix of the infinitive, Vty, Zr -lı ending of the Allative, Vty, Zr -tı ending of the Transitive, Vty, Zr Latives ending in -ı, Vty PxlPl -mı, Px2Pl -dı, -tı, Px3Pl -zi, -sı, Vty, Zr Praet1Sg -ı etc./ the -ı, -ıı has not disappeared either because it had a function to fulfil, or the preceding consonant cluster contributed to its preservation /Lakó 39-50/.
Of suffixes ending in -a -- on the basis of Magda A. Kövesi's work, the PermKépz -- first I am going to examine the derivational suffixes. The -a nominal suffix of Votyak and Ziryene is a final vowel that got to the end of words after the disappearance of a \( X_k \) suffix element and took over its function /cf. Radanovics (Rédei): NyK 66: 82 ff/ or it appeared in word-final position after the vocalization of the PFU nominal suffix \( X_p \sim X_k \) /PermKépz 57 ff/, i.e. secondarily at any rate. Kövesi considers the final vowel of the form-variant -ka, -la, -ja of the Vty, Zr -k, the Vty, Zr -l and, with reservations, the Vty, Zr -j / -l/ suffixes to be a preserved word-final vowel /PermKépz 131, 164, 182/.

The -a element of -la is considered by Wichmann, Uotila and Beke the continuier of PFU \( X_k \sim X_y \) Lative ending, and Jemeljanov takes it for a NomPoss suffix /PermKépz 182, with literature/. In connection with the suffix -ja Kövesi also reckons with the possibility that -a is a NomPoss suffix /PermKépz 131/. Zr, Vty -e, Zr, Vty -s, Zr, Vty -t, Zr, Vty \( \bar{z} < d\bar{z} / \), suffixes of PFU origin have the variants -sa, -la, -ta, -d\( \bar{z} a \) and the latter contain the -a nominal suffix according to PermKépz, too /300, 334, 372, 393/. I think, that the suffixes -ka, -la, -ja also preserve the -a nominal suffix and not the original final vowel. This explanation is also rendered possible by the functional examination of the suffixes in question, and, in addition, the process of raising proved on the basis of the basic words resolutely requires that we should not look for the continuer of the final vowel from the Finno-Ugric period in the -a element of the above-mentioned suffixes. -a is the most frequently occurring suffix of the Permian languages, and it could easily join other suffixes on account of its function on a broad scale.

Of the nominal, verbal and non-finite forms the following end in a vowel of low and medial tongue position /in a vowel other than -a and -l/.

Several Lative forms: e.g. Zr myšta, mišta "čerez", Zr ala.
ažla, Vty ažlo "viperjed" /IstMorf 26-27/. In these -a is a former suffix and it appeared in word-final position after the disappearance of the PFU Lative ending ᵃ⁻k /cf. Fokos: JSFOu XXX, 14; Beke: Nyr 55: 47-48/. This very same -a Lative ending exist in the -a ending of the Consecutive and in the -sa ending of the Praeclusive /IstMorf 27/.

The PFU ᵃ⁻m Accusative ending disappeared before the primary Zr -e, -e, Vty -e endings of the Accusative /Lakó 40; IstGramm 84/. The same suffixes appear in the PxlSg where similarly they got to the end of words after the disappearance of a PFU ᵃ⁻m /Lakó 41; IstGramm 86/.

The Zr -e, -e, Vty -e Illative endings were originally followed by a PFU ᵃ⁻k Lative ending, and the final vowels took up the function of the Illative only after its disappearance /Lakó 41; IstGramm 86-87/.

The PFU ᵃ⁻m personal ending originally following the Zr -a and Vty -o ending of the IndPraesVxlSg can even be found in Ziryene language records, and it disappeared only in the 16th-17th centuries. The late disappearance can be explained on morphological grounds: the preservation of -m helped to avoid a formal coincidence with the IndPraesVx3Sg /-a figures in several places in Old Ziryene language records instead of -as/. Later, nevertheless, -m was lost and this process also had morphological reasons, for later the IndPraesVx1Pl acquired the same form as the IndPraesVx1Sg /munam < munamnim "my idem"/. Then -m disappeared in the Vx1Sg /munam > muna "ja idu"/, and in the Vx3Sg the form with -s began to spread /IstGramm 85/.

IndPraesVx3Sg -e, -as /-a/ in Ziryene and -e in Votyak continue Proto-Permian ᵃ⁻a and ᵃ⁻e, which appeared in word-final position after the disappearance of a ᵃ⁻k praesens suffix /Korenchy: op. cit. 159/.

The disappearance of the ᵃ⁻k plural suffix can be taken into account in the plural forms of the Permian Praesens and Praeteritum.
as well as in the plural of the Imperative, too /e.g. Zr munamę, Vty
minomi "pojdём" /manamak /IstGramm 87/.

The Zr -sa, Vty -sa participial suffix is presumably a borrowing
from Chuvash /cf. PermKépz 37, with literature/.

-sa is a NomPoss suffix in the Zr -ana, Vty -ono participial suf-
fix /cf. PermKépz 221, 261/.

Therefore, the testimony of the diachronic investigation of Ziryańe
and Votyak suffixes does not contradict the process of the raising of
word-final vowels, moreover, it can be fitted into the latter, for suffixes
ending or consisting in a vowel of low or medial tongue position are
secondary developments; they are either compound forms or they appear-
ed in word-final position after the disappearance of a k or m ele-
ment when the raising of Proto-Permian open and half-open word-final
vowels had come to an end /cf. Lakó 42; Korench; op. cit. 159/. This
came about in the second half of the Proto-Permian period, after the
borrowing of Old Iranian loan-words. Thus, in the late phase of Proto-
Permian both -a and -e could appear in word-final position in suffixed
forms. We saw what happened to -a when we dealt with the basic words.
After the vowel s /< k-ô, k-é/ had appeared in the first syllable, -e
gave -e in most dialects of Ziryańe, and in Votyak as well as in the
Upper Vičegda and Ižma dialects of Ziryańe it resulted in -e /PermVok
236/. By the time of the first Ziryańe language records the change -e
> -ę had already taken place.

2.6. Further arguments in favour of the raising and disappearance of
Permian word-final vowels

Below, a number of linguistic facts are put forward in favour of
the processes of raising and disappearance affecting the word-final vow-
els of the Permian languages. These are only partial proofs, but taken together they render the hypothesis presented here even more probable.

Word-final vowels were dropped in other languages, too, and in many cases by means of raising, for the sonorous open vowels lend themselves to disappearance to a lesser degree. This is what happened in Hungarian, for instance /Hört\textsuperscript{2} 18/. Finnish also provides examples illustrative of disappearance after raising. A large number of Nominative forms ending in consonants came into being through the disappearance of the final vowel of the full stem. The process of disappearance was preceded by raising in a number of types here, too, e.g. \textsuperscript{k}nooruute > \textsuperscript{k}nooruuti > \textsuperscript{k}nooruusi > nuoruus; \textsuperscript{k}kolmante > \textsuperscript{k}kolmanti > \textsuperscript{k}kolmans > kolmas /Papp I., Finn nyelvtan 28/. Finnish word-final \textsuperscript{-a} and \textsuperscript{-ä} were also raised and became \textsuperscript{-i} in disyllabic words, the first syllable of which contained a long vowel, and in polysyllabic words /SKRK 35/.

The word-final vowel system of the contemporary Permian languages has partly preserved the state I reconstructed for the end of the Proto-Permian period. Vowels of medial tongue position can rarely be found at the end of words, for example in Ziryene only in the following cases: a/ in loan-words adopted after the Chuvash influence; b/ in suffixes where they had some grammatical function to fulfil; c/ in assimilated compounds, where the compound character of the word was clearly discernible to linguistic consciousness; d/ in words of child language /cf. IstGramm 70/.

In suffixes, too /that is mostly in word-final position/, generally only open and closed vowels figure. The percentage rate of the use of vowels, as a part of overall load, in suffixes runs as follows /PermVok 235/.
Ziryene literary language 3.2 1.7 5.2 5.3 -- 0.1 0.1
Permyak literary language 2.7 3.0 3.0 5.6 0.5 0.2 0.1
Votyak literary language 1.3 2.0 2.8 -- 3.3 1.1 0.2

Votyak _e_ and Ziryene _a_ go back to Proto-Permian *\(\text{e}^*\) and Votyak _o_ -- insofar as it has _a_ as its equivalent in Ziryene -- to Proto-Permian *\(\text{a}^*\).

Raising -- although this tendency is by no means without exceptions -- took place in the first syllable, too, in the Finno-Ugric and Iranian layers of the word-stock in the Permian languages.

E.g. Zr _mus_ "pečen'" | Vty _mus_ id. ~ Finn _maksa_
Zr _uv_ "niz" | Vty _ul_ id. ~ Finn _ala_
Zr _zon_ "paren', molodoj čelovek", cf. Oss _zanąg_ "mańčik", Av _zan_ "roždat'" /IstGramm 81/

Lytkin thinks that this raising is also a consequence of the disappearance of word-final vowels and assumes the following development by analogy also referring to Hungarian: _toto_ > _tót_ > _tót_ /IstGramm 82/. The reference to Hungarian is fallacious, for beside sporadic raising in Hungarian trend-like lowering took place.

The original final vowel came to be preserved in a few compounds and adverbs.

E.g. Zr _bara_, Permyak _bera_ "opjet'" /< *beraka/, cf. Finn _perä_
"zad', zadnaja časť"
Zr _něľamín_ "40", cf. Zr _nol_' | Vty _nul_ | Finn _nelja_ "4"
Zr _věťamín_ "50", cf. Zr _vit_, Vty _vit_ | Finn _viite-_ "5"
Zr _kvajtamín_ "60", cf. Zr _koat_' | Vty _kwat_ | Finn _kuute-_ "6" /cf.
IstGramm 82, VokPerm 241/

In the latter two words -- which have an _e_ stem -- it was the raised final vowel that was preserved.
There are one or two words ending in a palatalized consonant, where palatalization can be ascribed to the influence of the former /-i/ final vowel, too.

E.g. Zr košt, Vty kwat" "6", cf. Finn kuute - id.
Zr vit, Vty vit" "5", cf. Finn viite - id.

According to the MSzFE, /275/ in the previous word /t/ may be related to the palatalizing influence of the early Proto-Permian root-final vowel /PFU -e/. In the latter word and in a few others — palatalization is ascribed to the influence of /-i/ in the first syllable /cf. KESK/, but in my opinion word-final /-i/, which was to disappear, may also have contributed to palatalization. In the non-palatalized Ziryene form /-i/ may have been dropped before it could exert its palatalizing influence. Lakó, and subsequently Kövesi, explain the interrelationship between Ziryene /-i/ and the Votyak suffix /-i/ in a similar way /Lakó 19; NyK 55: 120/. The palatalizing influence of the lost word-final vowel /-i/ can also be observed in Estonian: Finn onni ~ Est õnn /Kálmán: NyK 60: 412/.

Mainly in the declined forms of Ziryene words going back to the PFU stem /-e/, a /-i/ suffix appears, e.g. girji - "stupa", kelj - "žena brata", limji - "sneg" /cf. VokPerm 241-243, Lytkin: CIFU 1965: 324-330/. This may be a remnant of the lost word-final vowel /-i/.

A linking vowel, mostly /-i/ developed between members of word-final consonant groups. E.g. Zr turun "trava, seno" | Vty turin id.< Permian /turin < Pre-Permian /tarna, cf. Finn taarna "trava"; Zr kirim "ruka", | Vty kirim "grost" < Permian /kūrim < Pre-Permian /kyrm/, cf. Cher kormiz "gorst" /cf. KESK; Lakó 58-62; Ist-Gramm 75/. The frequent occurrence of the linking vowel /-i/ apart from phonetic reasons, perhaps may also be accounted for by the influence of the lost word-final vowel /-i/.

- 80 -
The linking vowel appearing before individual suffixes is, in fact, a retained word-final vowel. Since the word-end is formed by analogy, the quality of root-final vowels cannot be concluded with certainty on the basis of the quality of the linking vowel /e.g. Vty kiz "jē̄lka", kizen "jē̄koj", kizin "v jē̄lke", cf. Lytkin: SFU 4: 233/.

2.7. On reasons for the disappearance of Permian word-final vowels and its consequences

2.7.1. Finno-Ugric word-stress falling on the first syllable and determining Proto-Permian stress relations, too, is usually regarded as the reason for the disappearance of word-final vowels taking place in the Permian languages /Lakó 55-56/. Also, after the abandonment of the stress falling on the first syllable, the stress could not fall on the last syllable until the completion of the process of disappearance in Proto-Permian, and then in Ziryene. Apart from this, a number of viewpoints that are also relevant in connection with the disappearance of Hungarian word-final vowels must be taken into account here, for example the weakening of intensity towards the word-end, loosening of the articulation /cf. e.g. Htört 18-24/, quickening of speech rate /cf. Kubinyi: M Ny 54: 213-232/, and language function /cf. Papp I.: M Ny 59: 393-408/.

Function not only prevents word-final vowels having a grammatical role to fulfill from disappearing but, in another respect, it also contributes to the process of disappearance. That is to say, in the second half of the Proto-Permian period in numerous declined and suffixed forms /ImpVx2Pl, -a, -i/ derivational suffixes, Latives ending in -a and -i, the Accusative, IndPraesVx3Sg, IndPraetVx1Sg, PxlSg, the Illative/ a phenomenon similar to the so-called latent full stem in Hungarian came
into being: the consonantal suffix following the root-final vowel disappeared and its role was taken over by the root-final vowel; or the root-final vowel and a consonantal suffix element became diphthongized, then monophthongized. Therefore, the original final vowel -- as an element having a grammatical function -- was extracted from the stem in both cases and the truncated consonantal stem came into being: e.g. \( ^{\text{kare-ka}} > ^{\text{kare-k}} > ^{\text{kar-e}} "

gorod" /VokPerm 239/. The forms that developed in this way promoted the formation of the truncated stem by other means, that of the disappearance of final vowels.

Examining the role of function from another angle we can also state that in Permian, but in a number of other languages, too, e.g. in PFU and in Hungarian, word-final vowels were inclined to disappear because their information value was less, or in other words their redundancy was greater. It is known, that in Proto-Finno-Ugric only certain vowels /a, ä, e, ë, è/ partly defined by vowel harmony could occur in word-final position. If the conception concerning the raising of word-final vowels in Permian holds good, then this means that in a phase in the second half of the Proto-Permian period only short vowels of upper tongue position /i and j/ could occur at the absolute word-end. If, then, a good proportion of Proto-Permian words all ended in i and j, linguistic intuition could easily qualify it devoid of function and redundant.

2. 7. 2. The disappearance of Permian word-final vowels is not only the effect, but also the cause of other changes. After the loss of final vowels a number of consonantal suffixes that appeared at the word-end -- first and foremost \( ^{\text{m}} \)- and \( ^{\text{k}} \)-- also disappeared /e.g. \( ^{\text{manm}} > ^{\text{men-s}} "

goes", cf. IstGramm 83-84/. Word-final vowels of suffixes were dropped earlier than those of root-words. Intervocalic \( ^{\text{p}} \)-, \( ^{\text{t}} \)- and \( ^{\text{k}} \)- were also lost after the disappearance of word-final vowels /IstGramm 83/. If after the disappearance of word-final vowels
such consonant groups appear at the word-end as are not tolerated in the Permian languages, the consonant clusters are dissolved /e.g. Zr țșabır "Faust" / fK țșobrottoo "feel, touch repeatedly with the fingers"; cf. Lakó 60; IstGramm 75/. This question is dealt with by Lakó in detail /58-62/.

Lytkin relates raising that took place in the first syllable to the disappearance of word-final vowels, too /IstGramm 82/. Rédei considers labialization presenting itself in the first syllable to be the effect of ă-u, ă-ŭ and ă-ű that developed by raising /NyK 70: 42/.
3. A SHORT COMPARISON OF THE HISTORY OF HUNGARIAN AND PERMIAN WORD-FINAL VOWELS

In connection with the disappearance of word-final vowels in Hungarian and in Permian we cannot think of an identical tendency of sound development, but I would find a parallel examination of the two phenomena useful, for the disappearance of final vowels -- similarly to other sound changes in language -- may exhibit common features as well. This is all the more true of cognate languages. The disappearance of Hungarian and Permian word-final vowels, for example, show the following similar features: 1/ the disappearance was preceded by raising and only final vowels that became of upper tongue position were lost; 2/ stress relations and function also contribute to the promotion of disappearance; 3/ the lost final vowel re-appears in numerous suffixed forms; 4/ the completion of raising is determined with the help of a layer of MB loan-words both in Proto-Permian and in Hungarian. It ought to be examined whether or not Proto-Iranian and Old Iranian loan-words could help in dating approximately the beginning of the raising of Hungarian word-final vowels.

Of course, there are differences, too, between the two processes of disappearance; e.g., 1/ the process of disappearance was not completed in the Permian languages, especially in Votyak; 2/ the word-final vowel could also be retained by phonetic position in the Permian languages, and in Votyak word-final stress could also preserve the final vowel; 3/ In Hungarian there are also long vowels at the word-end and these can be traced back to diphthongized forms that developed after the loss of certain consonants. Here I have touched upon this question only very briefly and only drawn attention to some similar and dissimilar features -- without any claim to completeness. I intend to resume a number of problems treated under 2, 7, and 3, in connection with the history of word-final vowels in PFU and Hungarian.

- 84 -
LIST OF ABBREVIATIONS

Below, I shall only explain my own abbreviations and those which have not as yet gained general acceptance or which are less well-known in the special literature of Finno-Ugric linguistics. For the most frequently used abbreviations see e.g. in Volume I of "A Magyar Szókincs Finno-Ugror Elemei" [Finno-Ugric Elements of the Hungarian Word-Stock] /Budapest, 1967/ and on the back cover of "Sovetskoe Finno-ugrovedenie" (Tallin, 1965—). I also provide the exact place of publication of two articles whose titles are cited in full.


Harmatta = Data provided by professor János Harmatta in his letters. Budapest, 1972.


- 85 -


Kons = Uotila, T. E., Zur Geschichte des Konsonantismus in den permischen Sprachen. Helsinki, 1933. /MSFOf 64/


RLS = Kalima, Jalo, Die russischen Lehnwörter im Syrjänischen. Helsinki, 1910. /MSFOf 29/


TLPS = Wichmann, Yrjö, Die tschuwassischen Lehnwörter in den permischen Sprachen. Helsinki, 1903. /MSFOf 21/


x x x
1. Previous investigations ........................................... 5
2. The investigation of the word-stock of the Permian languages from the point of view of word-final vowels ..... 12
   2.1. Words of Finno-Ugric origin ................................ 12
   2.2. The investigation of the final vowels of loan-words .... 34
   2.3. Tendencies of phonetic development in Permian word-final vowels ............................................. 61
   2.4. On the development of Ziryene and Votyak word-final vowels ......................................................... 66
   2.5. On suffixes ending in vowels .................................. 74
   2.6. Further arguments in favour of the raising and disappearance of Permian word-final vowels ................. 77
   2.7. On reasons for the disappearance of Permian word-final vowels and its consequences .................. 81
3. A short comparison of the history of Hungarian and Permian word-final vowels .................................. 84
List of abbreviations .................................................. 85
Contents ........................................................................ 87