STUDIA URALO — ALTAICA
V.

FERENC A. MOLNÁR

ON THE HISTORY OF
WORD-FINAL VOWELS
IN THE
PERMIAN LANGUAGES

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Redigunt

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Translated by

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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 ^{x}-i̯ 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 permi 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 occours, 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.

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 -∅ ∼ Votyak -i/-į, -e̊/
   b. Ziryene -∅ ∼ Votyak -i
   c. Ziryene -∅ ∼ Votyak -ei̯

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, ^{x}j or ^{x}i̯, first formed a diphthong together with word-final vowels, then they changed into a monophthong, -i̯, and merged with the root: ^{x}j. > ^{x}i̯. > ^{x}i̯i̯ > i̯. Thus, words with diminutive suffixes coincided with words possessing an -i final vowel proper. Word-final į in the U, G, and Bess dialects and -e̊ found in the K dialect are developments from -i already in the separate life of Votyak.

In words belonging to group b the -i 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 -i final vowel, but in Ziryene without it. /Ziryene -l, Votyak -li̯; Ziryene -r, Votyak -ri, etc./ Lakó quotes only one example for the third correspondence /ç/, 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/-i̯/ ∼ Votyak -i/-i̯/
   d. Suffixed forms /acc., illat., Px1Sg, etc./ ending in different vowels /ɛ, 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, ę, i/ the final vowel was also preserved as a result of a certain function or under phonetic compulsion /group d/. ɛ and ę appeared at the end of words after the disappearance of word-final ^{x}-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 -∅ ∿ Votyak -∅

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 -∅

Word-final -i/-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: a,
ä, i, e, ę /54/. "Proto-Permian ^{x}-a was generally retained both
in Ziryene and in Votyak and it changed into -o in the latter only under
certain conditions /after o or u/." /56-57/.

Proto-Permian ^{x}-į and ^{x}-i were preserved in Votyak unchanged;
in Ziryene, however, they generally disappeared." /58/.

^{x}-ɛ/-ä/ disappeared when contacts were first made with the
Chuvash, ^{x}-e and ^{x}-ę, 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 ac-
count the testimony of Chuvash and Veps-Karelian loan-words, too, the
disappearance of Ziryene -į and -i 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 -i, which has disappeared. However, he reaches a partially different
conclusion in regard to one of Lakó's problems only: "Konečnye glas-
nye srednego podjěma v permskix jazykax otpali, glasnye nižnego pod-
jěma /a/ i glasnye verxnego podjěma /i, į/ vo mnogix slučajax soxra-
nilis' — poslednee otnositsja glavnym obrazom, k udmurtskomu jazyku[!!]
/69/. Consequently, even though Proto-Permian [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, [x]-ä developed into a at the word-end and
before /Permian/ a. 554. In Permian, [x]a has changed into y in the
second syllable, as a rule. [x]-a has disappeared in Ziryene, with few
exceptions. In Votyak, [x]-a has developed into y / or o/ in the coun-
terparts of fi nuhja 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, [x]-ä seems to have disappeared. 577.
In Permian, [x]-ŏ ∼ [x]-e has mostly disappeared. Votyak has -y in
some words, e.g. gižy, zr gyž nail = fi kynsi; vty lymy, zr lym snow =
fi lumi."

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 inves-
tigation concerning the vowels of productive suffixes he reaches the
conclusion that Proto-Permian had only delabialized vowels: a, i, ɛ
/perhaps e, too, which soon merged into ɛ/ in non-word-initial syl-
lables. It is possible that in early Permian the root of certain words

ended in $\underline{a}$ or $\underline{\varepsilon}$ of low tongue position, while that of others in a closed vowel /$\underline{i}$/.

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 [x]-a and [x]-ä 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 $\underline{a}$/ä/ and $\underline{e}$/$\underline{\varepsilon}$/ 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 $\underline{-a}$, analysing Lakó's examples, reaches the conclusion that "examples testifying to the complete disappearance of $\underline{-a}$ / or Votyak $>$ $\underline{i}$/ and its secondary quality are greater in number than the one or two words

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[+]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 permskix jazykov /i finno-ugorskix jazykov v celom/ eščë ždët 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 lan-
guages, 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. Rédei: 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 $^x\text{-}e$, 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; Wiede-
mann, Syrjänisch—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.

PFU [x]-a equivalents in the Permian languages

I. -∅ /no final vowel/

A/ Both Permian languages have equivalents

1. Vty kua, kuala "Sommerhütte" /-la is a suffix, cf. FUV/;
   -ka: korka "Haus, Stube" /kor "Balken"/ | Zr kola "Wald-
   od. Wiesenhütte"; -ka, -ku: kerka, kerku "Haus, Stube"
   /ker "Balken"/

2. Vty kwaś "seichtes /Wasser/" | Zr kośmi- "trocken werden"

3. Vty mad' "Rätsel", mad'-kЪ "Sage" | Zr mojd-kil "Märchen"

4. Vty mog "ein hinter mir od. beiseite liegender Ort" |
   Zr meg "Flusskrümmung"

5. Vty mus "Leber" | Zr mus id.

6. Vty ńil-pu "Weisstanne, Silbertanne, Pechtanne" | Zr ńil
   "sibirische Tanne /Abies sibirica/"

7. Vty pi "Kind, Sohn, Knabe" | Zr pi id.

8. Vty saj "Kühle, Frische, Schatten" | Zr saj "Hinter-, Raum
   hinter etw."

9. Vty suj "Arm" | Zr soj id.

10. Vty śu "hundert" | Zr śo id.

11. Vty śul "Darm" | Zr śul id.

12. Vty śuli, śuličeź "krjakva /utka/" | Zr śulka, śul-čśeź
    "eine Ente"

13. Vty śur "Horn" | Zr śur id.

14. Vty šur "Bach, Strom, Fluss" | Zr šor "Bach, Flüsschen
    im Walde"

15. Vty ul "Unterteil, Unterraum, Unteres" | Zr ul: dźo, dź-ul
    "Raum, Keller unter dem Fussboden /dźodź "Fussboden"/

16. Vty -veś: azveś "Silber", uzveś "Zinn" | Zr -iś: eziś
    "Silber", oziś "Zinn"

17. Vty vož "grün, Zorn" | Zr vež "grün, gelb"

B/ Only Votyak has an equivalent

18. nêl "Baumrinde"

C/ Only Ziryene has an equivalent

19. pul "Preiselbeere"

20. ri "Hebepinne"

21. sil "ungefroren, geschmolzen"

22. udž "Nelma /Stenodus nelma/"

23. ur "Eichhörnchen"

II. Votyak -i $\sim$ Ziryene -$\emptyset$

24. Vty puń "Löffel" | Zr pań id.

25. Vty tili "Feder" | Zr til-bord; tiv "Schwung- od. Schwanzfeder"

26. Vty uzi "Erdbeere" | Zr oz id.

27. Zr moj "bobr" | Vty mři, mřjî < ^{x}muji id. -- Permian ^{x}moj- -- Pre-Permian ^{x}maja-

28. Zr tirp "guba" | Vty tirpi id. -- Permian ^{x}turp -- Pre-Permian ^{x}turpa. The FUV gives this etymology, but the CompGr does not reconstruct the PFU form of the word.

III. Votyak -$\emptyset$ $\sim$ Zir -a

29. Vty kož: kenos-kož "abgesonderter Teil in der Scheuer, wo das Getreide eingeräumt wird" /kenos "Scheuer" | Zr kuža "eine besondere Art Reuse" /Toivonen : FUF 19: 60/

IV. Votyak -a $\sim$ Ziryene -a

30. Zr dera "xolst, tkan'" | Vty dera "xolst", derem, dörem /Wied/ "rubaška" -- Permian ^{x}dɛra -- Pre-Permian ^{x}tɜkɜra

V. Votyak -o ～ Ziryene -a

31. Vty luo "Sand" | Zr lia id.

VI. Ziryene -a

32. Zr omra "djagil'" | MordE umrav, umbrav -- Permian
[x]omra -- Pre-Permian [x]umbra-

VII. Ziryene -i

33. Zr sorni "Rede, Gespräch"

The members of etymologies under items 1 and 7 were originally
disyllabic, the present -a and -i are found in word-final position only
later. The PFU forms were [x]kota and [x]pojka /cf. CompGr; MSzFE
207/. In the same way, according to Collinder, Ziryene ri /20/ goes
back to PU [x]ryta /CompGr/. On the strength of the evidence of
sul-tśęž, the element -ka in the Ziryene word sulka / < PFU sośka,
cf. CompGr/ is a suffix and not an element replacing the original
Finno-Ugric word-ending. Ziryene kuža /30 / is supplied with the
denominal suffix -a /PermKépz 43/. In the SKES the word is linked
to the quoted Votyak equivalent only with a question mark /138/.
Rédei does not accept this etymology, the two words cannot be related
to each other for phonetic reasons /Bírálat/. Example 30 is not a sure
etymology /Korenchy: op. cit. 158/, and in example 31 the origin of
Ziryene -a ～ Votyak -o is uncertain /CompGr 188/. Group V and
VI can be traced back to group IV. Votyak -o, as has been mentioned,
is a later development from Votyak -a. Word-final -a in Ziryene omra is
found in word-final position only after the disappearance of a word-final
consonant, which is attested by the Mordvin equivalent, too. Uotila
regards it as an Iranian loan-word, and traces it back to the form
[x]omra[x] /Vir 1930: 181—183; PermKépz 41; Rédei: ALH 17: 249/. Lakó
reckons with an -a adjectival suffix /31— 32/. Thus, I find the Pre-

Permian form reconstructed by Lytkin disputable, in my opinion, the word then still ended in a consonant. Furthermore, the word is not Finno-Ugric, it possibly originated in the Finno-Permian or the Proto-Permian period. In the word šorni /34/ the word-final vowel was preserved for phonetic reasons, on account of the preceding consonant group /Lakó 37/. The same happened to an Iranian loan-word: Ziryene zarni "Gold"; Votyak zarni "Gold" /MSzFE 94/. Linguistic intuition could class these words among diminutives ending in -ni /Lakó 37/.

It can, therefore, be assumed that PFU ^{x}-a has Votyak -∅ ~ Ziryene -∅, or Votyak -i ~ Ziryene -∅ as its equivalents. In a few uncertain forms, which can be interpreted in more than one way, Votyak -o, Ziryene -a, or Ziryene -i occur.

Equivalents of PFU ^{x}ä in the Permian languages

I. -∅ /no final vowel/

A/ Both Permian languages have an equivalent

1. Vty ber "spät; hinteres, hinter, zurück" | Zr ber "Hinter-, Rück-; zurück"

2. Vty tšuž "Verwandte mütterlicher Seite" | Zr tsož "Mutterbruder"

3. Vty dur, dor, "Rand, Ufer" | Zr dor id., cf. CompGr 402, 410

4. Vty gir-puŋ "Ellenbogen" /puŋ "Ende"/ | Zr gira: g. -vilasni "sich auf die Ellbogen stützen", girdža "Ellbogen"

5. Vty in, iń "Himmel, Luft" | Zr jen "Gott, Himmel"

6. Vty kytš "Schlinge, Reifen" | Zr kitš "Ohrring, Ring"

7. Vty ľem "Leim" | Zr ľem id.

8. Vty meń: i tši-m. "Frau des jüngeren Bruders des Mannes" | Zr moń "Schwiegertochter"

9. Vty ńwľ, ńiľ "vier" | Zr ńoľ id.

10. Vty peľ "Ohr" | Zr peľ id.

11. Vty sep "Galle" | Zr sep id., cf. CompGr 398

12. Vty śin "Auge" | Zr śin id.

13. Vty siť "Dreck, Kot" | Zr sit id.

14. Vty son-tśorig "Rohrkarpfen /Leuciscus idus/" | Zr sin id.

15. Vty tol "Winter" | Zr tel id.

16. Vty vîl "Oberteil, Oberfläche", jel-vîl "Milchoberst,
    Milchrahm" | Zr vilas "auf", jel-vil "Rahm, Butterwoche"

17. Vty voć "ganz, jede, alle" | Zr vatś "gänzlich, ganz und
    gar"

18. Zr poz "Nest" | Vty puz "balls /with men and animals/;
    egg" /MSzFE 205/.

    B/   Only Votyak has an equivalent

19. jal = lijal "Baumstamm"

20. seŋka, seŋkě, śeńki /deriv., cf. FUV/ "Zunder, Schwamm"

    C/   Only Ziryene has an equivalent

21. ež "Hautteil des Felles"

22. jem "Nadel"

23. kjs "Fell vom Renntier-, Kuh-, Pferdebein vom Knie ab
    nach unten"

24. leťś "Schlinge, Dohne /für Vögel und Hasen/"

25. miśt, mjś, "nach /v. d. Zeit/": ńe-djr-m. "nach einiger
    Zeit, bald"

26. veń "Gürtel, Gurt, Band"

II.   Votyak -i ∼ Ziryene -∅

27. Vty iˌtśi "wenig" | Zr itś: iˌtś-aj "Stiefvater", iˌtśet
    "klein"

III.   Votyak -i̯ ∼ Ziryene -∅

28. Vty pelị "Daumen" | Zr pel, pev, pej "Daumen, Giebel"

29. Zr repẹd "dymovoe otverstie v lesnoj ban'ke"| Vty žopị
   "dymovoe otverstie v lesnoj bane" -- Permian ˣróp/et/ --
   Pre-Permian ˣräppä

IV. Votyak -o ∿ Ziryene -a

30. Vty uno "viel" | Zr una id.

V.   Ziryene -a

31. Zr jala "Jagel" -- Permian ˣjala -- Pre-Permian ˣjäkälä

The CompGr reconstructs PFU ˣ-ä or ˣ-a as alternatives in three
words, and in our example 35 ˣ-ä or ˣ-e.

32. Vty kịk "zwei" | Zr kịk id.
33. Vty mon "ich" | Zr me id.
34. Vty ton "du" | Zr te id.
35. Vty pal "Seite; halb" | Zr pel "Seite; eines von einem
   Paar", cf. CompGr 384; the MSzFE reconstructs the form
   ˣpälä /196/.

Votyak words ending in -i and -ị can also be derivatives, but as
the root-word cannot be uncovered and the equivalents in cognate languages
also end in vowels, -ị and -i should rather be considered root-final
vowels. Korenchy sees in the word-final -a and -o of the 30th etymol-
ogy an adjectival suffix /op. cit. 158/. The SKES regards the Permian
words of example 31 as of Finno-Ugric origin only tentatively and uses
a question mark /129/.

Consequently, PFU ˣ-ä has generally disappeared in the Permian
languages. In Votyak, -ị/-i/ can occasionally be taken into account. No
mention is made of this in the CompGr. In some words, which can be
interpreted in more than one way, Votyak has an -o, and Ziryene has
an -a as an equivalent.

The equivalents of PFU ^x-e in the Permian languages

I. -ɸ /no final vowel/

A/ Both Votyak and Ziryene have an equivalent

1. Vty din, diŋ "dickes Ende eines Baumstammes" | Zr din "dickes Ende /des Baumes/"

2. Vty jä "breiter Gurtriemen" | Zr ji, jị "Garbenband, Gürtel, Gurt"

3. Vty je, ǯe "Eis" | Zr ji, jị id.

4. Vty ki "Hand" | Zr ki id.

5. Vty kịl "Zunge, Sprache" | Zr kịl id.

6. Vty kịz "dick" | Zr kịz id.

7. Vty ke "Mühlstein" | Zr ki: iz-ki "Mühlstein" /iz "Stein"/

8. Vty mug "Geschäft, Sache, Beschäftigung" | Zr mog "Tat, Geschäft, Sache"

9. Vty muš "Beine" | Zr moš id.

10. Vty nịl "Mädchen, Tochter" | Zr nịl id.

11. Vty nịr "Nase, Schnabel" | Zr nịr "Nase, Schnauze"

12. Vty niź "Zobel" | Zr niź id.

13. Vty nim "Name" | Zr nim id.

14. Vty odik, odig, ok, og "ein, einzig" | Zr et; eti; etik, etik "ein"

15. Vty piľem "Wolke" | Zr piv id., pila "wolkig"

16. Vty si "Jahresring an Bäumen" | Zr si "einzelnes weiches Haar am Menschen und am Tiere"

17. Vty sul "Klafter" | Zr sịl id.

18. Vty šig "Dachboden, Zimmer im Oberteile des Hauses" | Zr šiger "Dachstuhl, Dachfirst"

19. Vty šịr "aus" | Zr šịr id.

20. Vty tej "Laus" | Zr toj id.

21. Vty uj "Nacht" | Zr oj, voj id.

22. Vty vir "Blut" | Zr vir id., cf. CompGr 399

23. Vty vu "Wasser" | Zr va id.

24. Vty vit' "fünf" | Zr vit id.

25. Zr kor "Rinde der Laubbäume /ausser d. Birke/" | Vty kur, kir "Stück Baumrinde" /MSzFE 443/

26. Zr ma "Honig" | Vty mu "Met" /MSzFE 443/

B/ Only Votyak has an equivalent

27. kať-vi "Kraft, Macht" /kat' id./

28. kij "Schlange"

29. mil "Brust des Menschen od. des Tieres"

30. śin-kil' "Träne" /śin "Auge"/

31. kim "Reif" /MSzFE 287/

C/ Only Ziryene has an equivalent

32. is "Gestank, Geruch"

33. kaţš-pomeľ "Wacholder" /pomeľ "junge Fichte, junger kleiner Nadelbaum"/

II. Vty -j $\sim$ Zr -ø

34. Vty giži "Nagel, Klaue" | Zr giž id.

35. Vty voči "wilde Ente" | Zr veź "Pfeifente /Anas penelope/", cf. CompGr 398

36. Zr lim "Schnee" | Vty limi id. /MSzFE 408/

37. Zr pon "Hund" | Vty puni id. /MSzFE 200/

38. Zr boľ, bolk "puzyr'" | Vty puľi "puzyr' /na kože, na vode/" -- Permian ^{x}poľs -- Pre-Permian ^{x}pyľe- or ^{x}pyľje-

39. Zr čaľ "mizinec" | Vty čeľi id. -- Permian ^{x}čεľ-, ^{x}ča°ľ- -- Pre-Permian ^{x}čŏľe

40. Zr čuń "palec" | Vty čińi id. -- Permian ^{x}čyńi -- Pre-Permian ^{x}čŏńe

41.　Zr nom /nomj/ "komar" | Vty nimi "moska, komar"

　　-- Permian ^{x}nǫmi -- Pre-Permian ^{x}nɏme

III.　　　　　　　　Zr -i

42.　Zr tšiktši "Möwe /Larus/"

Monosyllabic words ending in vowels were disyllabic in PFU, the present word-final vowels can be found in word-final position only after the disappearance of the original final vowel and the loss of the word-internal consonant /etymologies 2, 3, 4, 7, 16, 23, 26/. Word-final　-i of Votyak giži /34/ is a root-final vowel /Lakó 6; Lytkin: UAJ 39: 283; Stipa: FUF 37: 139; Rédei: ALH 17: 250/. According to the KESK, Votyak voči is not etymologically connected with　the Ziryene word with which it is equated in the FUV. Rédei also finds that this corre- spondence is　outdated, Votyak č cannot correlate with Ziryene ž /Bi- rálat/. Example 42 is the name of a bird, it is of onomatopoeic origin and thus it can be disregarded in the diachronic investigation of　PFU ^{x}-e.

Consequently, PFU ^{x}-e is represented as -∅ in Ziryene and as -∅/-i/ in Votyak.

The equivalents of PFU ^{x}-e in the Permian languages

I.　　-∅　/no final vowel/

　　A/　Both languages have an equivalent

1.　Vty aŋ "Backenbein, Kinnbacken" | Zr an "Backenknochen, Kinnlade"

2.　Vty im "Mund, Öffnung" | Zr vem, vom id.

3.　Vty es "Tür" | Zr es: e, dzes "Tür"

4.　Vty juś "Schwan" | Zr juś id.

5.　Vty kiz "Fichte" | Zr koz id.

6. Vty kị̃ "Urin" | Zr kudź id.

7. Vty kị̃ź-pu "Birke" | Zr kịdź id.

8. Vty kụaṭ "sechs" | Zr kvaịt, kvaṭ id.

9. Vty kwiń "drei" | Zr kujim id.

10. Vty lị "Knochen, Bein" | Zr lị "Knochen, Grate"

11. Vty lịd "Zahl" | Zr lịd id.

12. Vty ĺem "Traubenkirsche" | Zr ĺem id.

13. Vty mu "Erde" | Zr mu "Erde, Acker, Feld, Land"

14. Vty mịnda "so viel wie"; min: kụamịn "dreissig" | Zr sị-mịn
    "so viel" /sy is a demonstrative pronoun, cf. FUV/, komịn
    "dreissig"

15. Vty ńil' "Pfeil" | Zr ńịl id.

16. Vty pi "Busen" | Zr pi id.

17. Vty sẹn "Sehne" | Zr sẹn id.

18. Vty tị "See" | Zr tị id.

19. Vty tịl "Feuer" | Zr tịl: t.-kẹrt "Feuerstahl, Feuerzeug"
    /kert "Stahl"/

20. Vty va-pụm, wa-pum "Zeit, Lebenszeit" | Zr vo, u "Jahre"

21. Vty vẹị "Butter, Schmalz, Fett, Öl" | Zr vịị "Butter, Öl"

22. Vty vịl' "neu" | Zr vịl' id.

    B/   Only Votyak has an equivalent

23. kẹị "Fett"

    C/   Only Ziryene has an equivalent

24. ťšuk "Anhöhe, Hügel"

25. kịr "männlicher Hund", kịr-pon id. /pon "Hund"/

26. šön "Schatten /von Verstorbenen/"

II. Votyak -ị ∿ Ziryene -∅

27. Vty džažị "Wandbrett" | Zr džadž id.

III.   Ziryene -a

28. Zr kia, kiva "Röte am Himmel"

The -a of Ziryene k̦a and k̦va is a nominal suffix /MSzFE 247/.
So Votyak -∅ and Ziryene -∅ continue PFU ^{x}-e in the Permian languages.
In one word in Votyak -i̦ can be found.

<center>x   x   x</center>

Collinder also postulates PFU ^{x}-u and ^{x}-ü in word-final position:
Vty kuź "lang" | Zr kuź id. /< PFU ^{x}kuńću/, Vty -pu "Baum" | Zr
pu id. /< PFU ^{x}pu/. Zr kel "Schwägerin /Frau des Mannesbruders/" |
Vty kaḽi / < ^{x}kali/ "obraščenie mladšej snoxi k staršej" /KESK/
/< PFU ^{x}kälü/. The MSzFE reconstructs ^{x}końćз ~ ^{x}koćз /304/ as
the PU form and E. Itkonen /FUF 31: 286/ and the KESK ^{x}kosз as a
Pre-Permian form of the first word. Consequently, this etymology
belongs to the group of words ending in ^{x}з. Generally, ^{x}puwe is re-
constructed as a PU form for Votyak and Ziryene pu /MSzFE 171;
KESK/. u appears at the end of words only after the disappearance of
-e and w. In connection with the third etymology Collinder, in the Ural-
Verw, reconstructs the forms ^{x}kälewe and ^{x}kälü as the alternatives,
and the KESK reconstructs Pre-Permian ^{x}kÿle. Therefore, this word,
too, should rather be classed among those ending in PFU ^{x}-e. Thus,
PFU ^{x}-u and ^{x}-ü, reconstructed in the CompGr, can be disregarded in
the history of Permian final vowels; they are not reckoned with in the
special literature either.

The equivalents of PFU ^{x}-з /a vowel of uncertain quality/ in the
Permian languages

    I.   -∅ /no final vowel/
        A/ Both Votyak and Ziryene have equivalents
1. Vty ar "Jahr" | Zr ar "Herbst"
2. Vty bi̦ž "Schwanz" | Zr bež id.
3. Vty čirs, ćérês, čirs "sauer, beissend, herb" | Zr ț̆sirni

<center>- 24 -</center>

"einen Sticht bekommen /Fisch, Speck/, bitte*, herb werden"

4. Vty tšež "Wildente" | Zr tšež, tšež id.

5. Vty gož : gož-tolež "Sommermonat /Mai-Juni; t. Monat/" |
Zr gož "Sonnenwärme, /Sommer/hitze"

6. Vty gir "riesiger Holzmörser, zum Hanfbrechen" | Zr gir
"Mörser"

7. Vty girk "Höhlung /im Baume/" | Zr girk "Eingeweide,
Leibeshöhlung"

8. Vty ju : ju-šur "Fluss" | Zr ju id.

9. Vty kel "Eingeweidewurm" | Zr kol id.

10. Vty kiž "zwanzig" | Zr kiž id.

11. Vty kumeľ "die abgezogene Rinde des Lindenbastes" | Zr
komeľ "Schale, Hülse /von Früchten, Gemüse, Kartoffeln/"

12. Vty lud "Feld, Ackerfeld" | Zr lud "Viehweide, Weideplatz"

13. Vty lul "Atem, Geist, Leben, Seele" | Zr lol id.

14. Vty lup "Milz" | Zr lop id.

15. Vty luž , ludž "Bremse" | Zr ledž id.

16. Vty mugor "Körper, Leib" | Zr mig "Schoss /am Kleid/,
Leib /am Hemd/, mige·r "Wuchs, Leibesgestalt, Rumpf"

17. Vty miž "ein Krankheitsgeist; Krankheit, die Gott gesandt hat,
damit ein Mensch ein Opfer bringe" | Zr miž "Schuld, Sünde"

18. Vty ńar "hairless skin or hide" /FUV/ | Zr ńar "mjagkaja,
tonkaja koža, zamša" /SrSIKomi/

19. Vty ńer "Rute, Gerte" | Zr ńer id.

20. Vty ńur "feucht, nass /z.B. Holz, Korn/; Sumpf, Morast" |
Zr ńur "Sumpf, Morast"

21. Vty paś "Loch, Öffnung" | Zr paś : paś munni "sich ausbrei-
ten, sich entfalten" /munni "gehen"/

22. Vty pi-pu "Espe" | Zr pi-pu id.

23. Vty pil'- "zerspalten, zerhauen" | Zr pel' "Teil, Anteil"

24. Vty piń "Zahn" | Zr piń id.

25. Vty peź "Fausthandschuh" | Zr ke-piś id. /ki "Hand"/

26. Vty piź, piź "Mehl" | Zr piź, piź id.

27. Vty puč, puš "Innere, das Innere" | Zr pits : ker—ka-p. "das Innere der Stube"

28. Vty pum, puŋ "Ende, Spitze" | Zr pon, pom "Ende, Anfang, Spitze"

29. Vty sin "Kamm" | Zr sinnj "kämmän"

30. Vty šom "Schale /z.B. Eier-, Nuss-sch./, Schuppe /z.B. Fischsch/" | Zr šem "Fischschuppen; Geld"

31. Vty šem "Geschmack, Hefe" | Zr šom "Sauerteig, Sauere"

32. Vty ti "Lunge" | Zr ti id.

33. Vty utškyl "Schritt" | Zr voškol id.

34. Vty iž "Schaf" | Zr iž id.

35. Vty val "Pferd" | Zr vel id.

36. Vty vim "Gehirn, Mark" | Zr vem id.

37. Vty val'- "ausbreiten, unterbreiten /eine Decke/" | Zr vol' "Filz"

38. Vty vuz "Ware, Handel" | Zr vuz "Auflage, Steuer, Verkauf, Handel"

39. Zr džuk, žuk "Brei, Grütze" | Zr rok id.

40. Vty džiźol "Raum unter der Pritsche" | Zr džodž "Diele, Fussboden" džo, dž-ul "Raum, Keller unter dem Fussboden"

41. Zr bad', bajd "Weide" | Vty bad-pu, bad' id. /MSzFE 174/

42. Zr koś "Schlägerei" | Vty keś- "reissen, zerreissen; spalten" /MSzFE 377/

43. Zr lap "flache Seite, Fläche" | Vty lap "niedrig" /MSzFE 387-388/

44. Zr piš "Hanf" | Vty pis, peš id. /MSzFE 174/

45. Zr turi "Kranich" | Vty turi id. /MSzFE 132/

B/ Only Votyak has an equivalent

46. kej "Motte"

47. kiz "Krankheit, Krankheitsgeist"

48. kür "Korb aus Lindenbast"

49. važer, važer "Hauer, Hauzahn"

50. veń "Nadel"

51. vir-ser "Ader" /vir "Blut"/

52. vur "Strafgeld"

53. tšog "Pflock, Nagel /aus Holz/" /MSzFE 114/

C/ Only Ziryene has an equivalent

54. adž "Öffnung, Loch im Eise"

55. tšek "dicht"

56. gitš "Karausche /Cyprinus carassius/"

57. katš "Baumrinde"

58. lõ /< *lol/ "the hard half of tree·s bend" /SKES 317/

59. mik "Weissfisch /Cyprinus leuciscus/"

60. ńimál "Hase" /Genetz: JSFOu 15,1: 25/

61. pedž "alt"

62. pir : et-p. "einmal" /et "ein"/

63. retš "Stück, Bissen"

64. ru "Dampf, Nebel"

65. tik "Querholz /z.B. zwischen den Stuhlbeinen/, Querleiste"

66. til "Zugnetz, Schleppnetz"

67. džal "dem Kienspan ähnliche Latte oder Holzspleisse, wird gebraucht

u. a. in der Fischreuse"

68. džor "grau, grauhaarig"

69. lep "Treibholz" /MSzFE 389/

II. Votyak -i̯ ∼ Ziryene -ø

70. Vty giž, gi̯ši "Sandkorn" | Zr kež "steinige od. kiesige Stelle im Fluss od. am Flussufer"

71. Vty susi-pu "Walcholderstrauch" | Zr sus-pu "sibirische Zeder"

72. Vty vi̯ži "Wurzel" | Zr vuž id.

73. Zr dźir, dźir, dźir "Angel, Türangel" | Vty dźiri̯, dzi̯ri̯ "Angel, bes. Türangel" /MSzFE 119/

74. Zr. bed' /bedd-/ "palka, posox, trost', | Vty bodi̯ "palka, trost" -- Permian ^{x}bedi -- Pre-Permian ^{x}pɜntɜ

75. Zr čir "mel' čaǰšaja čast'ica" | Vty čiri̯ "meločʼ -- Permian ^{x}čir- -- Pre-Permian ^{x}cv̈rv̈

76. Zr čež-: čeži̯ev "molozivo" /i̯ev "moloko"/ | Vty čeži̯ "moloziva /varenoe/" -- Permian ^{x}čɛž, -- Pre-Permian ^{x}čv̈čɜ-

77. Zr žaž /žaž-/ "polka" | Vty žaži̯ "polka" -- Permian ^{x}žažv̈ -- Pre-Permian ^{x}čv̈čɜ-

78. Zr gum /gumi̯-/ "polyj stebel /dudčatyx rastenij/" | Vty gumi̯ "polyj stebel' rastenija" -- Permian ^{x}gv̈mɜ -- Pre-Permian ^{x}kv̈mv̈-

79. Zr i̯en "osot" | Vty i̯eni̯ "osot" -- Permian ^{x}i̯ö•nɜ -- Pre-Permian ^{x}i̯v̈nv̈

80. Zr kol' /koll-/ "šiška /na dereve/" | Vty kuli̯, kuli̯ "šiška rastenij" -- Permian ^{x}koli or ? köli -- Pre-Permian ^{x}kv̈pv̈lɜ

81. Zr kom "xarius" | Vty kini̯ "jazʼ /ryba/" -- Permian ^{x}koni -- Pre-Permian ^{x}kv̈nɜ-

82. Zr modž "podruga, drug" | Vty muži̯ id. -- Permian ^{x}mož- -- Pre-Permian ^{x}mučɜ-

83. Zr ed /edi̯-/ "žar v peči" | Vty edi̯ "sʼila" -- Permian ^{x}v̈•d- -- -- Pre-Permian ^{x}v̈ntv̈-

84. Zr p̣ert "kotël" | Vty purtị id. -- Permian ˣpọ̀rt -- Pre-Permian
ˣpɤ̈rttₔ

III. Votyak -ị ∿ Ziryene -i

85. Vty poškị "Schwalbe" | Zr pišťsi id. /cf. CompGr 395/

IV. Votyak -i ∿ Ziryene -∅

86. Vty moḽi, muḽi "Beere" | Zr moḽ "Perle"

V.   Ziryene -ị

87. Zr toktị "Taucher, Seetaucher"

VI. Votyak -a ∿ Ziryene -a

88. Vty vera "Euter" | Zr vẹra id.

VII. Votyak -o ∿ Ziryene -a

89. Vty gurdo: g. tšẹž "eine grosse graue Entenart" | Zr gorda
"Kriekente"

VIII. Votyak -∅ ∿ Ziryene -a

90. Vty kalym "Pfütze, Lache" | Zr kẹla, kola: tị-k. "kleiner Bucht
im See, kleiner Waldsee" /tị "See"/

IX. Votyak -o

91. Vty ṅulo "Ulme"

X.   Ziryene -a

92. Zr kukša "Fichenhäher"

93. Zr ṅia "Lärche /Larix sibirica/', ṅia-pu, nia-pu, ṅeja-pu id.

94. Zr tiska, tisa "Birkenrinde zum Dachdecken"

The Permian members of etymology 11 are related to the Hungarian word hámlik in the MSzFE, and are reconstructed as PU ^{x}kama there, as opposed to the FUV, where they are related to the Hungarian word hüvely. Ziryene and Votyak -l is a nominal suffix /258/. As is stated in the MSzFE, the Ziryene and Votyak word turi possibly preserved the PFU ^{x}k nominal suffix. Its PFU reconstructed form is ^{x}tarȝ-kȝ /132/. Lytkin assumes that the -i belongs to the root, and he derives the present form from that of ^{x}turik /UAJ 39: 284/. Votyak poškį ∿ Ziryene pišťśi /85/ are words of onomatopoeic character /KESK/. Word-final -į and -i are suffixes /Lakó 36; PermKépz 127/ or final vowels that were preserved on account of word-final consonant clusters /Stipa: FUF 37: 139/. Ziryene toktį /87/ is of onomatopoeic character /KESK/, and its word-final vowel is a preserved final vowel or a suffix /Lakó 36; PermKépz 127/. Example 88 is a doubtful etymology, the FUV quotes only a Vogul equivalent, and Korenchy takes it for a word of the Permian period /op. cit. 158/. Votyak gurdo and Ziryene gorda /89/ are names of birds; they can also be derivatives. As a matter of fact, this word belongs to the previous group /cf. the already mentioned Votyak change -o > -a/. Votyak kalym proves that Ziryene kȩla and kola /90/ are derivatives. The KESK reconstructs ^{x}kól as a Proto-Permian form. The original root was retained in a Ziryene compound: tį-kol "melkij zaliv, staroe ruslo reki" /KESK/. Ziryene kukša /92/ is the name of a bird; it can also be a derivative, but possibly it is not of Finno-Ugric origin, but the adoption of the Russian dialectal kukša "Cractes infaustus" /SKES 250/. Word 93 has only Ob-Ugrian equivalents /Vogul ńix, nāŋk "larix sibirica", Ostyak nàˇŋk, id., cf. Kons. 429; KESK/. Its PFU form is ^{x}ńy̨jaŋȝ- /KESK/ or ^{x}ńāŋȝ /CompGr/, so -a appeared at the end of the word only as the result of a secondary development, after the disappearance of ^{x}ȝ and ^{x}ŋ. The

interrelationship between Ziryene tisa and tiska /94/ can be accounted for by considering both of them to be derivatives of the reconstructed word [x]tis, having the suffixes -a and -ka respectively. The etymology is also doubtful, only a Samoyedic equivalent exists.

Consequently, the above words ending in -a are generally derivatives. Several of them are names of birds, and onomatopoeia must be reckoned with in these examples. Thus, in words having a PFU [x]-ᴈ /a final vowel not reconstructed/ the final vowel usually disappeared. Votyak, however, preserved it in the shape of -į in several cases. Zíryene -a ∿ Votyak -a/-o/ correlation can be found in a few doubtful examples.

Because of the importance of words ending in -a, from the point of view of the present thesis, mention must be made of words not recon- structed in the CompGr, or not included in the dictionaries consulted.

1. Vty śala "tetrao bonasia" | Zr śęla id. The FUV regards them as words of Finno-Ugric origin and relates them to the following forms: Vog šula, NOs /Pápai/ süglej, S šutaj "tetrao bo- nasia." These are, however, Ziryene loan-words in the Ob-Ugrian lan- guages /SLW 159-160; SLO 88/.

2. Zr gada "Larus /canus/" This word is included in both the FUV and the KESK, but its form in PFU cannot be reconstructed. It is an onomatopoeic word /FUV 21/, but it can also be a derivative /CompGr 188; PermKépz 40/.

3. Zr gala "kleiner Stein" Lytkin regards -a in this word — with reference to Magda A. Kövesi — as a root-final vowel preserved /UAJ 39: 284/. Kövesi, however, consid- ers -a a diminutive suffix and remarks only that "in a considerable number of the examples, -a is perhaps not a suffix, but a root-final vowel pre- served under certain phonetic conditions" /PermKépz 40/. The meaning of

the word and its Votyak equivalent: U kglî, J kŏlï "Kieselstein" /Wich-
mann: FUF 15: 3; PermKépz 40/ indicate that the Ziryene word is
supplied with an assimilated diminutive suffix.

4. Zr /Wichmann/ I, V, S burńa Brunnen /I/, Tschetwerik /V/,
grosses . . . Gefäss /S/" | Vty /Wichmann/ U, M, J berńo "Braukufe
/U/, Mühltrichter /M, J/" /cf. Lakó 25/. The above Finno-Permian
/Finno-Ugric?/ etymology does not possess a Pre-Permian form in the
KESK. In the case of names of pots and vessels, derivatives are not
infrequent, so -a can also be a suffix /Korenchy: op. cit. 158/.

5. Vty /Wichm/ NS peža "Meise" /cf. Lakó 24/
The word is the name of a bird, so both onomatopoeia and derivation can
be reckoned with here. It has only a Mordvin equivalent /MordE pižas
"Kohlmeise"/ /cf. Lakó 24/.

6. Vty meľ, meľa "Brust, Bruststück /z.B. eines Ochsen/, Wamme
/z.B. Fuchsw./; Brust am Hemde". The MSzFE quotes the forms mïľa,
möl and mol, too. The latter forms, ending in -ļ, probably reflect an
earlier stage /418/. The CompGr does not give a reconstruction of it.
The MSzFE, however, traces it back to ^{x}mɥlȝ or ^{x}mɥljȝ /if it is rela-
ted to the words mell, etc., then it is: ^{x}mɥlkȝ /. The form that has -a,
if the other forms are considered, is evidently derived.

236 etymologies have been examined above, all of them belonging to
the Finno-Ugric /Finno-Permian/ word-stock of the Permian languages.
/Most of them have both a Votyak and a Ziryene member, whereas in a
smaller group only one of the Permian languages has an equivalent. /
These etymologies, also taking into account remarks added to them,
present the following statistical picture -- from the point of view of the
equivalents of PFU final vowels in the Permian languages:

/

1.	Vty -∅ ~ Zr -∅		in 141 words		
2.	Vty -∅	--	"	17	"
3.		Zr -∅	"	32	"
4.	Vty -i̭ ~ Zr -∅		"	30	"
5.	Vty -i ~ Zr -∅		"	2	"
6.	Vty -i̭ ~ Zr -i		"	1 word	
7.		Zr -i̭	"	1	"
8.		Zr -i	"	2 words	
9.	Vty -a/-o/ ~ Zr -a		"	6	"
10.	Vty -a/-o/		"	2	"
11.		Zr -a	"	2	"

Type 2 can be regarded as a subgroup of type 1, type 3 as a subgroup of type 1 /occasionally of type 4/, types 10 and 11 as subgroups of type 9 /the second Permian member of the etymology has been lost/. The members of group 5 can be classed among those of group 4, and types 7 and 8 can be regarded as one, for Votyak-Ziryene -i̭ and -i get mixed in accordance with phonetic and functional position as well as according to dialects /VokPerm 236-238/. Words ending in -i̭ and -i can include several derivatives as well. In the majority of cases, however, the supposition of any suffix is superfluous, for the root-word itself cannot be uncovered. Types 6-11 seem to be exceptions, especially if the small number of etymologies belonging to them is considered. Groups 6 and 7 have only one word as their member /Vty poṣki̭ ~ Zr piṣt̆ši, Zr tokti̭/, furthermore these are onomatopoeic names of birds, in which even derivation can occur /cf. above 30/. One of the two words in group 8 is an onomatopoeic name of a bird /Zr tšiktši, cf. above 22/, the other /Zr śorńi, cf. above 17/ retained the final vowel on account of its phonetic position. Types 9-11 contain ten etymologies /Zr dẹra ~ Vty dera, Zr li̭a ~ Vty luo, Zr una ~ Vty uno, Zr jala, Zr vẹra ~ Vty

vera, Zr gorda ∿ Vty gurdo, Vty nulo, Zr gada, Zr burna ∿ Vty berno,
Vty peža/ As shown above, the majority of these can also be derived
and some of them are of uncertain etymological origin /cf. above 15, 16, 19,
30, 31, 32/. It is conceivable, however, that one or two words have
perhaps retained the original PFU open final vowel. This assumption would
also be supported by the fact that no words ending in PFU [x]-e or [x]-ę
can be found among these, only words ending in [x]-a, [x]-ä and [x]-з̧ are
present.

The 236 words of Finno-Ugric origin treated above may include seve-
ral from the Finno-Permian period, too. The Finno-Ugric age, according
to generally accepted opinion, lasted until about 2000 B.C., and the Finno-
Permian age until approximately 1500 B.C.   /FgrNNy 59/.

2.2. The Investigation of the Final Vowels of Loan-Words

2.2.1. Having considered the word-stock of PFU, let us subject the
loan-words of the Permian languages to inquiry. Loan-words that became
part of the language in the period of Finno-Ugric coexistence, namely
words borrowed from Indo-Iranian, naturally developed in the same way
as the Finno-Ugric part of the word-stock and lost their word-final vowels
in the same manner.

E.g. PFU [x]mete > Permian [x]må < Zr ma "honey"
                                       Vty mu "honey"

∿ Indo-European [x]medhu-, Sanskr mádhu, ? Av madu-
Cf. FUV; CompGr; SKES; MSzFE 443—444; KESK
PFU [x]śorwa > Permian [x]śur < Zr śur "horn"
                                  Vty śur "horn"

∿ Indo-Iranian [x]śrva- /cf. Indo-Eur [x]kr̥-n-go-/,
Sanskr s̨r̥ŋga-, Av srū, srvā

Cf. FUV; CompGr; SKES 977-978; KESK

2.2.2. The examination of Indo-Iranian and Iranian loan-words adopted by Finno-Permian and Proto-Permian poses many more problems. The only thing that is known in connection with these is that they were borrowed from Proto-Indo-Iranian or from some sort of Iranian language, but the particular language from which they were adopted can only be guessed, just as in the case of Iranian loan-words in Hungarian /Lytkin: Izv. 386/. The Votyak and Ziryene words in question are only compared with certain Iranian and Ind forms and they are not derived from them. Apart from this, the Iranian loan-words of the Permian languages have not been analysed and the literature referring to them is outdated for the most part. The discussion of the problem of these loanwords is outside my scope, I should only like to make several new assertions. Below, I shall draw considerably upon János Harmatta's two letters to me, especially in connection with some of the etymologies /in references: Harmatta/.

The Proto-Permian period, by which the age of the original Permian language is meant, lasted from about 1500 B.C. until 800 A.D. /FgrNNy 59, 93/. In this period, the Permians were able to get into contact directly with Indo-Iranian and Iranian peoples until the seventh century, i.e. until the appearance of the Bulgar-Turks /FgrNNy 92, 212/. The characteristic sound changes which finally separated the Iranian group of languages from the Ind one took place probably in the course of the ninth or, perhaps, the eighth century B.C. The transition from Old Iranian to Middle Iranian is to be dated in the third century B.C. /Harmatta; Bolšaja Sovetskaja Enciklopedija, 2nd edition, Volume 18. Moscow 1953, 433; HBO 92; Current Trends in Linguistics, Volume VI. 26/. Thus, Indo-Iranian /Aryan/ and Proto-Iranian loan-

words must have penetrated into Proto-Permian until about 850 B.C. and Old Iranian loan-words were incorporated into the language between 850 and 250 B.C.

Proto-Indo-European word-final vowels were liable to disappearance or various changes in Iranian and Ind languages. As seen above, word-final vowels of PFU also disappeared in the Permian languages. Thus, having in mind only the problem of final vowels, it is very difficult to draw conclusions with respect to Indo-Iranian and Iranian loan-words of Proto-Permian: Proto-Permian is likely to have adopted forms with lost final vowels as well as forms which still had final vowels of full phonetic value, which were to disappear only in Proto-Permian. The result is the same in both cases: the lack of word-final vowels. It may be of great importance to realize, a fact that Harmatta also points out, that Old Iranian languages still had word-final -a /which was a continuation of the Indo-European -o- stem/; in the Middle Iranian period, however, on the strength of Iranian written records in South Russia, Old Iranian -a vanished in languages spoken there. Middle Persian niyag "Grossvater", for example goes back to Old Persian niyaka /HBO 67/. The disappearance of Old Iranian -a is clearly seen, if the Old and Middle Iranian vocabularies of various studies in iranology are compared /cf. e.g. HBO 222-224; Harmatta: Studies in the history and language of the Sarmatians 125-129/. Consequently, the final vowel is likely to have disappeared in Proto-Permian in loan-words with their Old Iranian /and Old Ind/ equivalents possessing word-final -a and adopted before the Middle Iranian period. The separation of the Indo-Iranian, Proto-, Old, Middle and Modern Iranian loan-word layers of the Permian languages on the basis of criteria in the historical phonetics of Proto-Permian and Iranian is partly a task for the future and there can be no doubt that this is going to be one of the major fields of further research,

too. Below, I shall present such loan-words of the Permian languages as may be compared with Iranian and Ind word forms ending in vowels /or among others, with word forms with such endings, too/, and which can thus present a basis for researches into the history of Permian word-final vowels. Although the etymologies of the KESK /and data quoted in Finno-Ugric studies/ are not sufficiently accurate from the viewpoint of Iranian, I shall lean upon this work, for it is a new publication and the Indo-Iranian and Iranian loan-words of the Permian languages -- according to the testimony of Ziryene -- occur jointly /together with some literature/ in this. Word entries from the KESK are quoted in abbreviated form and other literature relating to the loan-words in question is also made use of. I asked János Harmatta's opinion on a number of words and his remarks are also quoted. The abbreviated entries from the KESK as well as Harmatta's remarks are usually closed by --.

1. bon/bonj/ "močalo" | Vty bun id. -- Permian ^{x}bǫn < Iranian, cf. Av banda, Old Ind bandhá -- According to Jabobsohn it was taken from an Iranian dialect that suffered the change nd > n /Kons 3/. As the change -nd- > -n- took place in Middle Iranian /Harmatta/, this word was possibly also taken over at that time /or later/. Cf. also VokPerm 76.

2. buríś "griva /konskaja/", burśi < ^{x}buríś. /The latter is a folk-etymological form, cf. bur "xorošij", śi "volos"/ | Zr < Iranian, cf. Av baraša "spina lošadi" | Pehlevi Modern Persian buš "griva lošadi" | Ossetic barze, bärz "zatylok" -- Harmatta: Old Iranian /further on: OI/ ^{x}barša-, Av baraša-, Middle Iranian /further on: MI/ ^{x}barš -- The linking of Pehlevi and Modern Persian is incorrect, for it was Parthian and Middle Persian texts that were recorded

in Pehlevi writing.

Cf. also: Kons. 2-3; Lytkin: VoprJaz 1953/5: 59.

3. dar /darj-/ "razlivateľnaja čaška" | Vty duri id. -- Permian ^{x}darɣ
Zr < Aryan, cf. Sanskrit dárvi- "ložka", Parachi du're, du'rī
"bolšaja ložka" -- No chronological criteria are available from the
Iranian side /Harmatta/. According to the ArUgr it is an Iranian
loan-word /196, 209, 224/.

Cf. also: Kons 3; VokPerm 171

4. das "desjat'" | Vty das id. -- Permian ^{x}das Iranian, cf. Osset
däs, Av dasa id. -- Harmatta: OI ^{x}dasa-, MI ^{x}das

Cf. ArUgr 95; Wichmann: FUF 16: A 19; SyrjChr; Kons 3; 172;
Lytkin: VoprJaz 1953/5: 59

5. kert, "železo" | Vty kort id. -- Permian ^{x}kòrt ‖ Cher kürtńa
id. | MordE kšni /< ^{x}kürtn-ńi/ id. -- Pre-Permian ^{x}kürtɜ - <
Iranian ^{x}kürt-, cf. Osset kard "nož, sablja", Kurd kērd "nož",
Av karəta "nož", Old Ind kartari- "oxotničij nož", etc. Historical
phonetic and semantic traits indicate that its borrowing took place
long before, perhaps in the Finno-Permian period. -- Harmatta:
OI ^{x}karta-, Av karəta-, MI ^{x}kard -- The change of meaning from
"iron" → "weapon made of iron" must have taken place later in
the source languages. An -ä word-final vowel can also be postulated
in the adopted Iranian form.

Cf. Kons 4; SyrjChr; FUV; Lytkin: VoprJaz 1953/5: 59; VokPerm·
125

6. majeg "kol" | Vty majig id.; majeg /Wichm. -Uot./ -- Permian
majɜg < Iranian, cf. Osset mēx, mīx "kol, palka", Modern
Persian mēx "gvozd', kol", Old Ind mayūkha id. -- Harmatta: OI
^{x}mayuxa-, MI ^{x}mēx -- This is a borrowing from Old Iranian, for

Permian forms refer to Iranian forms with diphthongs. The diphthongs
ai and au became monophthongs in Middle Iranian: $\bar{e}$ and $\bar{o}$ res-
pectively /HBO 61/.

7. mež "baran" ‖ Cher mež; dialectal mež, miž "šerst' /ovcy, kozy/"
Zr < Iranian, cf. Modern and Middle Persian mēš, Av maēša-,
maēšī-, Sanskr mēša- "ovca" --Harmatta: OI [x]maiša- /[x]maišī-,
Av maēša-/maēšī-, MI [x]mēš. It is obviously a borrowing from
Middle Iranian, otherwise there would be some trace of the diph-
thong /Harmatta/.
Cf. SyrjChr; FUV; Lytkin: Izv 388, VoprJaz 1953/5: 59

8. mort "čelovek" | Vty murt "čelovek, postoronnij, čužoj" -- Permian
[x]mort ‖ MordM mirde /mirdč/, MordE mirde "čelovek, suprug,
mužčina, muž". The Permian and Mordvin forms possibly go back
to [x]mertä taken from Iranian /E. Itkonen: FUF 31: 179/, cf. Modern
Persian mard/mård/ "mužčina", Middle Persian mart, Av mareta,
Old Ind marta- "čelovek" -- Harmatta: OI [x]mrta-, Av mareta-, MI
[x]mord. The form [x]mrta may also be earlier Proto-Iranian or Indo-
Iranian. -- It is a borrowing from Old Iranian or from a still earlier
period, for according to the testimony of Mordvin, Iranian still had
the word-final vowel.
Cf. ArUgr 190, 192; SyrjChr; FUV; Lytkin; VoprJaz 1953/5: 58;
E. Itkonen: FUF 31: 179; VokPerm 88

9. mes /mesk-/ "korova" | Vty mes "samka", mes "telenok, molo-
daja korova" /Munk/ -- Permian [x]mesk- < Iranian, cf. Munji
maškay "telenok, telka do dvux let" -- According to Harmatta,
this etymology is mistaken, for Munji maškay goes back to Old
Iranian [x]hamhuškaka-. -- Lytkin reconstructs the adopted Iranian
form as [x]mesky /Izv 388/, but even if the etymology proved to be
correct, it is arguable whether the Iranian form in question ended
in a vowel. The word is not considered a borrowing by the SyrjChr.
Cf. also: Lytkin: VoprJaz 1953/5: 59, VokPerm 156

10. ors dialectal "plet', knut" | Vty uris "pletka, nagajka, bič" --
Permian ^{x}ors < Iranian, cf. Sanskr ástra-, Av astra- "knut, bič"
The word underwent metathesis in Proto-Permian: ^{x}/-str-/ > ^{x}-sr- >
rs. -- Munkácsi derives it from Aryan /ÁKE 494/, and according
to Uotila it can also be an Iranian borrowing /Koŋs 351/.

11. ozir "bogatyj, bogač" | Vty uzir id. -- Permian ^{x}ozir. It was
adopted in the Proto-Permian period or earlier than that /cf. Mord
azor, azoro "gospodin", Vog ōtər, åtər "knjaz" /< from Indo-Ira-
nian languages, cf. Av ahurō "gospodin", Old Ind ásuras id. It is
not clear whether it was taken by individual languages separately
or is a borrowing from Indo-Iranian in the Finno-Ugric period. It
is considered an Indo-Iranian borrowing by the SyrjChr; Jakobsohn,
however, regards it as Proto-Iranian and derives it from the form
^{x}osura^x /ArUgr 38, 183, 223/. Indo-Iranian s -- except before n
and before and after plosives -- became h in Iranian /HBO 3/.
Finno-Ugric languages adopted forms that still had s.
Cf. also: FUV; Lytkin: VoprJaz 1953/5: 58; VokPerm 56-57.

12. egir "goŕaščij ugol'" | Vty egir "ugol'"; egir id. /Wied/ --
Permian ^{x}εgir < ? Aryan, cf. Old Ind áṅgāra- "ugol'" -- Harmatta:
OI ^{x}aṅgāra- -- It may either be an Indo-Iranian, a Proto-Iranian or
an Old Iranian borrowing.
Cf. ArUgr 209; SyrjChr; Lytkin: VoprJaz 1953/5: 59, VokPerm 156

13. eksi /folkl/ "knjaz'" | Vty eksej "car'", dialectal öksej id. /Wied/
-- Permian ^{x}εksü < Iranian, cf. Osset aχsin "koroleva, gospoža,
äχsīn "gospoža", Av χšaya- id. The Iranian original could sound
^{x}āksäu-. -- Harmatta: OI ^{x}χšaya-, Scythian χsaya-, MI ^{x}χsē --
The j in the Votyak word may also derive from an Old Iranian
form with a diphthong, but the Ziryene equivalent without j /?
with an i diminutive suffix/ speaks rather in favour of an ei

diminutive suffix in the Votyak word /cf. Kons 271/. The word-initi-
al vowel may reflect an Osset enclitic vowel /ArUgr 228/. In recon-
structing the Iranian form the KESK refers to the VokPerm and this,
in turn, to an article by Lytkin. The latter, however, reconstructs
^{x}aksɏ- /^{x}ä•ksɏ-/ or ^{x}äχsɏ- /^{x}ä•χsɏ-/ in this /Izv. 390/. It is pre-
sumably a borrowing from Modern Iranian.

Cf. also: Kons 293; Lytkin: VoprJaz 1953/5: 59, VokPerm 156

14. ęš /ęšk-/ "byk, byčok", Permyak ęška id., Ja ȯška id. | Vty oš
"byk" -- Permian ^{x}ȯšk- < early Proto-Permian ^{x}uška ‖ Cher ǔškįž
"byk" /-įž is a suffix/ -- Pre-Permian ^{x}uška or ^{x}ɏskä < ?
Iranian, cf. Av uχšå, Old Ind ukšå "byk". The Volgaic and Per-
mian words underwent a metathesis: ^{x}kš > šk -- Harmatta: OI
^{x}uχšä; There is no trace of the word in Middle Iranian. -- -ka
is a diminutive suffix in the form ęška, oška /Kons 324/. The FUV
also links the Vogul word uskä "ox" here; this, however, is a bor-
rowing from Ziryene /SLW 96-97/.

Cf. also: SyrjChr; VokPerm 126

15. padvež "skreščenie, peresečenie" | Vty padvož "perekrěstok /ulic/,
lestničnaja ploščadka" -- Permian ^{x}pad-vež. It is a compound and
its element pad- goes back to the word pad "doroga". ‖ Ostyak pәnt
"trakt" -- Pre-Permian ^{x}panta < Iranian, cf. Modern Persian pand,
Sanskr panthā-, Av pantay-, Ossetic fändag "put', doroga" --
Denasalization took place in the Permian words concerned. It may
be either an Old Iranian or an even earlier borrowing.

Cf. ArUgr 14; Wichmann: FUF 14: 97; FUV; VokPerm 165; Kövesi:
Vir 1963:250

16. poda dial "skot" | Vty pudo "skot, skotina"; J, MU pudo id. --
Permian ^{x}pǫda < Iranian, cf. Pamiro-Iranian podá, Tadzhik poda
"stado" -- Harmatta: OI ^{x}pāta-, MI ^{x}pād; The Tadzhik word comes
from Old Iranian ^{x}pātaka- -- Consequently, the -a in Tadzhik

poda is a secondary development at the end of the word. Lakó and, in his wake, Kövesi regard the Permian words as derived forms of the word pad "Fuss" with the suffix -a. These acquired their present meaning through the sense development "livestock" ⟶ "cattle" /Lakó 31; PermKépz 41/.

Cf. also: Lytkin: Izv 387-388, VokPerm 59; FUV

17. purt "nož" | Vty purt id. -- Permian ^{x}purt < Iranian, cf. Old Persian ^{x}paraδu -- The reconstructed Old Persian form in the VokPerm is ^{x}paraϑu- /209/.

Cf. also: Paasonen: FUF 2: 186

18. röm "cvet, okraska, ottenok", Ja róma "rumjanyj" | Vty žomžini "zarumjanitsja, podrumjanitsja, prigoret'" -- Permian ^{x}röm < ^{x}röŋ < Iranian, cf. Parachi röŋg, Modern Persian rang, Sanskr ranga- "cvet" --

Cf. Kons 234; PermVok 126

19. šajt "rubl'" < Aryan, cf. Av šoito-, šaeta- "den'gi" -- There exists a form šat, too in several dialects of Ziryene /Kons 120/. Harmatta: Av šaeta- "Geld, Vermögen" < OI ^{x}χšaita-, MI ^{x}šēd < ^{x}šeti -- The word-initial consonant can satisfactorily be explained as coming from Middle Iranian, as Old Iranian χš- could also develop into s as well, according to Iranian linguistic records of South Russia, too /Harmatta: Studies in the History and Language of the Sarmatians 95/. The medial diphthong, however, refers to an Old Iranian form. It can perhaps be said to have come from Old Iranian if we assume that word-initial consonant clusters in Proto-Permian were eliminated by the first consonant being left out. The original form, however, is possibly šat, and thus it is a borrowing from Middle Iranian, for it was monosyllabic words in Ziryene that underwent the change jt < t /Kons 121/.

Cf. also: VokPerm 170

20. sod /sodj-/ "most", Ud sojd, UV sojt -- Permian [x]sọdǀ MordM
    sed' "most, pol" | MordE sed' "most" -- Pre-Permian /Volgaic-
    Permian/ [x]südɜ- < ? Indo-Iranian, cf. Sanskr sētu- "most", Av
    haētu-' id. -- It is either an Indo-Iranian or a Proto-Iranian loan-
    word. In its later Iranian equivalents the s changed into h /cf.
    ozịr; HBO 3/.
    Cf. ArUgr 182; Kons 379; FUV; VokPerm 63

21. sur "pivo" | Vty sur id. -- Permian [x]sur < Iranian, cf. Old
    Ind sürā- "pivo, xmel'noj napitok", Av hurā- "alkogol'nyj napitok"
    -- It can only be an Indo-Iranian loan-word, for the change s > h
    characteristic of Proto-Iranian took place after the borrowing /cf.
    HBO 3; Harmatta: op. cit. 72/.
    Cf. ArUgr 182; SyrjChr; Lytkin: VoprJaz 1953/5: 59, VokPerm
    210

22. šurs "tysjača" | Vty šurs id. -- Permian [x]šurs < Aryan, cf. Old
    Ind sahásra, Av hazañra-, Middle Persian hazār "one thousand";
    the Proto-Aryan form is [x]žhasra- -- Vog N säter; Zr V, Ud
    šurs; Vty K šurĕs "one thousand" can be explained as being a
    borrowing of the Proto-Indo-Iranian [x]žhasra- id. /TESz 819/.
    Cf. also: Setälä: FUF 2: 205; ArUgr 105; Kons 350; SyrjChr;
    FUV; VokPerm 211

23. tasma "remen', remešok" < Iranian, cf. Tadzhik tasma "remen'"
    -- Permian [x]tasma -- The Tadzhik word cannot be explained as
    going back to Iranian. Presumably, it is a Russian loan-word, cf.
    Russian tes'ma /Harmatta/. Wichmann considers it to be of Chuvash
    origin, using two question marks /??/, although he cannot show
    its existence in Chuvash, only in various Turkic and Tartar langua-
    ges. He does not exclude the possibility that the word came from
    Iranian /TLPS 105-106/. Kalima deals with it among Russian loan-

words, but uses a question mark /RLS 145/. According to Lytkin,
however, the first three sounds of the Ziryene word cannot be held
to have come from the Northern Russian tes'ma /Izv 389/.
Cf. also: VokPerm 166

24. tašti "stolovaja čaška, miska" | Vty tušti "čaška, miska" -- Per-
mian [x]tašti < Iranian, cf. Old Persian tašti "časka", Av tašmem
id. -- Harmatta: Av tašta- "Tasse, Schale", OI [x]tašta-; There is
no Av word tašmem -- Lytkin took the Old Persian datum /tašti/
from a manuscript dating back to the second century B.C. /cf.
Izv 386/. This age, however, already belongs to the Middle Per-
sian period /cf. HBO 92/. According to Harmatta, if our point of
departure has to be [x]tašti from the Permian side, this then, judged
on the basis of the single Avestan datum, can only be a borrowing
of the Iranian form dating back to the beginning of the Middle Irani-
an period. By this time, Old Iranian [x]taštah /Nom/ had already
developed into [x]tašti, but the word-final vowel had not yet disappear-
ed. It is not impossible to assume Old Iranian [x]tašti either, but
there is nothing we could rely on to determine whether or not to
reckon with a form [x]tašti-, too, besides the Old Iranian form repre-
sented by Avestan tašta. Harmatta's opinion is justified by the
word found by Lytkin and going back to the beginning of the Middle
Iranian period.
Cf. also: Lytkin: VoprJaz 1953/5 59, VokPerm 171

25. uri "mir, pokoj, soglasie" | Vty urjaškini "primirit'sja" -- Permian
[x]uri-, Vog urak, uraɣ "pokoj" < Iranian, cf. Tadzhik orom, oromi
"pokoj", Afg aram "pokoj, spokojstvie, tišina", Av urvaδa "družba"
-- In Wiedemann's Syrjänisch-deutsches Wörterbuch there is also a Vty
word uri "Friede, Ruhe". Lytkin suggests the adoption of a hypothe-
tical Iranian form: [x]urv- /Izv 390/. Harmatta: OI [x]vraδa-. The ety-
mology of the KESK is wrong. Perhaps we had better reckon with, Avestan

urvata-/urvati- "fides, Treue", but even then there remain serious
historical phonetic difficulties. --

26. verk "počka, počki" ‖ Cher werge, wārgi id. -- Pre-Permian
^{x}wÿrka < Indo-Iranian, cf. Sanskr vṛkka-, Av varaðk "počki" --
Cf. ArUgr 220; Wichmann: FUF 14: 116-117; VokPerm 130

27. vurun "šerst' /ovečja/"< Iranian, cf. Av vūrnā "šerst' životnyx",
Old Ind ūrnā "šerst'" --
Cf. ArUgr 210-211; Kons 353; SyrjChr; Lytkin: Izv 388-389,
VoprJaz 1953/5: 59, VokPerm 216

28. vurd "vydra" | Vty vudor id. -- Permian ^{x}vurd- < Iranian, cf. Os-
set ujrd /urd, urdā/ "vydra", Av udra- id., Sanskr udrá-s id. --
Cf. ArUgr 119; Munkácsi, ÁKE 463; Keleti Szemle 5: 326

29. zarńi "zoloto" | Vty zarńi id. -- Permian ^{x}zarńi < Iranian, cf. Av
zaranya- "zoloto". The Cher šörtnö, MordE sjŕńe, Hung arany id.
etc. are also of Iranian origin. The Finno-Volgaic and perhaps the
Permian words also derive from the Iranian form ^{x}sernä /E. Itko-
nen: FUF 31: 179/. --
Cf. MSzFE 94 /with literature/

30. zon /zonm-/ "paren',xlopec" -- Permian ^{x}zon < Iranian, cf. Osse-
tic zänäg "deti", Av zan- "roždat'," Old Ind jan- id., jana- "čelo-
vek, sozdanie" -- Harmatta: OI ^{x}zāna-, MI ^{x}zān --
Cf. Kons 38, 413; SyrjChr; Lytkin: VoprJaz 1953/5: 59, VokPerm 82

If the above Indo-Iranian loan-words are examined from the view-
point of word-final vowels, it can be seen that these present a pic-
ture similar to that of words of Finno-Ugric origin. Word-final vow-
els   of the source language generally disappeared in these loan-
words, too since without doubt there are a number of Indo-Iranian,
Proto- and Old Iranian loan-words among the etymologies dealt with
that were adopted mostly with -a /and, presumably, on the basis

of Finno-Ugric data, with -ä/. Such, for example, may be etymolo-
gies 5, 6, 8, 11, 12, 14, 15, 20, 21, 22, 26, that is to say, se-
veral of these. Word-final -i̯/i̯/ can be found in three words in Vo-
tyak /3, 24, 29/ and in Ziryene /13, 24, 29/. The preservation of
Votyak -i̯ is also manifest in numerous examples among words of
Finno-Ugric origin. In the Ziryene taśti, ẹksi̯, and zarńi̯, just as
in one or two words of Finno-Ugric origin, word-final vowels were
retained either because of consonant clusters or because they are
suffixes. Two words of uncertain etymology /16, 23/ and ending in -a
-- if their etymology is correct at all -- can only be borrowings
from Modern Iranian and so date back to the latest phase of Proto-
Permian. Of course, a considerable number of Iranian loan-words
ended in a consonant in the source languages themselves as well
before they were adopted by Proto-Permian. Mostly Middle-Iranian
and Modern Iranian loan-words belong here.
In connection with the Indo-Iranian and Iranian loan-words of Permian
languages I did not endeavour to revise critically the existing litera-
ture on the subject, although I am aware of the fact that to do this
would be necessary. My aim has only been to prove that Proto-Permi-
an adopted numerous Indo-Iranian and Iranian /Proto- and Old Iranian/
forms ending in a vowel /namely -a and, presumably, -ä/ and that
these lost their final vowels later. The KESK also reconstructs Pre-
Permian and early Permian base forms ending in vowels in several
Indo-Iranian and Iranian loan-words ending in consonants in Permian
languages /3, 5, 8, 14, 15, 20, 22, 23./[+]

_____

[+] Here I should like to refer to Éva Korenchy's book entitled "Irani-
sche Lehnwörter in den obugrischen Sprachen," which was published in
Budapest at the end of 1972 after the completion of my manuscript so
that I could not take it into account.

2.2.3. Up to now only Wichmann has devoted a comprehensive treat-
ise to Chuvash loan-words of the Permian languages /TLPS/. As becomes
clear from Károly Rédei and András Róna-Tas' recently published
article entitled "A permi nyelvek óspermi kori bolgár-török jövevény-
szavai" (Bulgar-Turkic loan-words of the Permian languages in the Pro-
to-Permian period)[+] /NyK 74: 281-298/ as well, the TLPS is out of
date in several places. Despite this -- since the authors deal only with
loan-words borrowed by Proto-Permian and since the questions of the
history of Chuvash phonetics lie outside the scope of this paper and since
it was not until I completed my manuscript that I became familiar with
the final and full text of the article I am going to handle early Chuvash
/or rather Volga-Bulgarian -- the ancestors of contemporary Chuvash
--, cf. TLPS 140, 145; or Middle Bulgar, cf. Rédei--Róna-Tas' cited
work/ loan-words in the Permian languages on the basis of the TLPS as
well.

Chuvash loan-words penetrated into late Proto-Permian from the 7th
century on, A.D., and with the break-up of Permian unity /8th-9th centu-
ries/ they were adopted mostly by Votyak /FgrNNy 92, 212/. On the
basis of the TLPS the word-final vowel correspondences between the Per-
mian languages and Chuvash, presented briefly, are the following /cf.
mainly the word-list and pp 25-35, the number given in brackets refers
to page number of occurrence/:

[+] In his "Bírálat" Károly Rédei kindly drew my attention to this artic-
le, which was then in manuscript form, and made available to me some
parts of it that interested me. I should like to thank him for this here,
too.

Chuvash -a = Votyak -o, -a Ziryene -a /-ę/

E. g. Vty śurlo, Zr t́śarla "Sichel" = Chuv śurla, śorla /27/

Vty šabala, Zr šabala "Brettchen am Pflug" = Chuv šabala /26/

Vty kuźo "Wirt", Zr kuźę /< *kuźo/ "Waldonkel" = Chuv χuźa, χoźa /27/

Vty ulmo, Zr ulmö /< *ulmo/ "Apfel" = Chuv ulma, olma /27/

Vty ukśo "Geld" = Chuv ukśa, oksa /27/

Vty obida "Waldteufel" = Chuv oβʈʙa, uβʈʙe /10/

Votyak -o is the result of the Votyak change -a > -o, as
mentioned earlier. Of all the loan-words only two end in -ę in
Ziryene. These are not dealt with by the KESK . According
to Wichmann, -ę developed from -o in the separate life of Ziryene
/27/, Lakó, however, assumes an earlier -a in Ziryene, too
/27/. The Chuvash and Votyak equivalents also point to an ori-
ginal word-final -a.
The -ę/-e element of Ziryene kuźę (> kuźe) is a Vocative ending
developed from a PxlSg and that was attached to the form kuź
abridged from *kuźa /Rédei--Róna-Tas: op. cit. 286/.

Chuvash -e /ä/ = Votyak -ę, -a, /-o/ Ziryene -a

E. g. Vty kulto, Zr kolta "Garbe" = Chuv kṏlʙe /31/

Vty arńa "Woche" = Chuv erńe, erńä, ärńä, arńä /31/

Vty sáśka "Blume" = Chuv śeśke, seská /31/

Vty vemę "freiwillige Hülfsarbeit" = Chuv vimä, mime /31/

In the first two words we can reckon with an alternation of
e, ä / a in Chuvash /31/. Wichmann, for example, traces Votyak
kulto and Ziryene kolta back to the Chuvash forms *kulda,
*kolda /34/.

Chuvash -ĭ̄, -i̯ = Votyak -i̯, -ĭ̄, -i   Ziryene -∅

E. g. Vty kudi̯, Zr kud "Korb von Rinde"   = kunɒĭ̄ /28/

Vty gubi /< ᴴgubi̯/, Zr gob "Pilz" = Chuv komᴃa, kumᴃa,
-ķymbý

Vty akĭ̄, aka "ältere Schwester"   = Chuv aɕi̯, akka /9/

Vty busi "Feld" = Chuv puzĭ̄ /15/

In Votyak gubi and Ziryene gob the Permian words may go back
to a Chuvash form ending in -i /58/.

Chuvash -i = Votyak -i

Vty abi "Grossmutter" = Chuv aᴃi /10/

Vty kuṅt́śi "Stiefelschaft" = Chuv konči

Chuvash -ü = Votyak -i̯ /-i/

Vty ki̯rśi̯, kirśi "Schwager" = Chuv kərü, kürü /34/

Vty t́śu̯t́śi̯ "eine Art Hautkrankheit" = Chuv t́śu̯t́śü

No examples that would illustrate Ziryene borrowings have been
found either in this or the previous correlative groups.

Chuvash -ə = Votyak -i̯, -i   Ziryene -∅

Vty t́śipi̯, Zr t́śip "Küchlein" = Chuv t́śəᴃə /33/

Vty ju̯si "Herzensbitterkeit" = Chuv jüźə /32/

Chuvash -ȧ̃ = Votyak -i̯, e Ziryene -i̯, -i

Vty śeri̯, śire, Zr śuri̯, śuri "Spullrolle" = Chuv śȧ̃m, śarə,
śürü, śur, syrry• /34, 35/

The last correspondence has this as the only example. Word-final
vowel correspondences between Chuvash and the Permian languages
do not necessarily mean a direct derivational connection. Some-
times it is difficult to point out the word-final vowel that words
ended in until they were adopted by the Permian languages, on

account of dialectal differences and because early Chuvash forms adopt-
ed are not exactly known. Chuvash loan-words existing in both Ziryene
and Votyak were generally taken over in the Proto-Permian period
/TLPS 139/.

Rédei and Róna-Tas state in their article cited earlier that the
literature on the Bulgar-Turkic /Middle Bulgar = MB/ loan-words of the
Permian languages needs revision, for Proto-Permian words that were
certainly borrowed from MB in the Common Permian period have not
been separated from later borrowings. "In the material examined so
far there are a large number of words that do not belong to Chuvash
words of Turkic origin or such contemporary Chuvash words were used
as a starting point as are borrowings in contemporary Chuvash itself --
perhaps from other Turkic languages" /op. cit. 281/. Only those are
regarded as Proto-Permian loan-words: 1. that occur in the Northern
Ziryene material, 2. in which the MB form can be reconstructed with
the help of the historical phonetics of Turkic and do not stand in oppo-
sition to the results of the historical phonology of the Permian languages.
Thus, according to them, the following MB loan-words can be found in
Proto-Permian /Cf. op. cit. 283 ff, with literature/.

1. Zr čarla "Sichel" | Vty šurlo id. -- PP ^{x}čarla $\sim$ ^{x}šarla $\longleftarrow$ MB
    ^{x}čarla $\sim$ ^{x}šarla > Chuv šurla "scythe"

2. Zr gob "Pilz" | Vty gubi "Schwamm, Pilz" -- PP ^{x}gombi $\longleftarrow$ MB
    ^{x}gümbä $\longleftarrow$ Slav ^{x}goьba > Chuv kămpa, kŏmpa, kămpo "mushroom"

3. Zr karta "Pferde- und Kuhstall im Erdgeschoß des Gebäudes" --
    PP ^{x}karta $\longleftarrow$ MB ^{x}kärtä > Chuv karta "hedge, garden, yard"

4. Zr keč "Hase" | Vty keč, keč "Ziege" -- PP ^{x}keč $\longleftarrow$ MB ^{x}käči .
    Chuvash kača, kačaka, kačak "goat, crook" is a loan-word.

5. Zr kolta "Garbe" | Vty kulto id. -- PP ^{x}kolta $\longleftarrow$ MB ^{x}kültä >
    Chuv kŏlte, kělte "sheaf"

6. Zr kud "Korb von Rinde" | Vty kudi id. -- PP ^{x}kundi ← MB
^{x}χundi ~ PT ^{x}qomdï. The forms konıtă, kunta etc. "basket made
of bark" are loan-words in Chuvash.

7. Vty kudiri, izzi k. "Gebräme, Rand, Besatz /an Mützen/" ← MB
^{x}χundïr -i /< ^{x}qumdur/ > Chuv χŏntŏ, χăntăr "beaver, beaver fur,
beaver fur hem". The -i of Votyak kudiri is identical with the
Middle Bulgarian possessive personal suffix.

8. Zr kuže, kuže "Waldgeist" | Vty kužo "Wirt, Hausherr" -- PP
^{x}kuʒa ← MB ^{x}χuʝa ~^{x}χuža /← Persian χᵃaʝa > Chuv χuša "master,
proprietor"/

9. Zr śuri, P śuri· "Weberspule, Spulrolle" | Vty śeri, śire id. --
PP ^{x}śuri /Zr/, ^{x}śori /Vty/ ← MB ^{x}sürü ~ ^{x}süre > Chuv śĕrĕ,
śŏrŏ, "spool, reel"

It is conspicuous from the quoted examples, too, that open word-
final vowels of MB have been preserved in the Permian languages. -a
in Votyak, if preceded by o or u in the first syllable changed into -o.
With Wichmann no MB loan-word occurs which would certainly end in
-ä; Rédei and Róna-Tas, however, reckon with three such words. Sound
replacement is assumed in these at the end of the words concerned /cf.
also below/. In a MB loan-word in Proto-Permian, which manifests the
lack of a word-final vowel in both Ziryene and Votyak, Lakó reconstructs
a Proto-Chuvash form taken over with a final -ä: Vty keťś "Ziege, Hase"
< Proto-Chuvash ^{x}kăčä /cf. Lakó 55; TLPS 26, 73/. This reconstruction,
however, can be considered doubtful on the basis of the TLPS, too, for
among the Chuvash forms there are also such as lost their final vowel
/TLPS 73; KESK/. Consequently, forms without a final vowel could also
get into Permian. Or, it is also possible that -ä /> -a/ was lost for
morphological reasons: it was felt to be a suffix and therefore was dropped.
It has been seen that Rédei and Róna-Tas reconstruct as ^{x}kăči the MB

form, which was taken over by Proto-Permian. It is more correct from the viewpoint of general linguistics, too, not to separate the changes of -ä -- for the sake of a strongly disputable etymology -- from the changes of -a and no longer to reckon with the disappearance of -ä at the beginning of the MB influence. In later Chuvash loan-words that found their way into Votyak, Chuvash -ä may correspond to Votyak -a, too.

Closed word-final vowels have generally been retained in Votyak; Ziryene, however, has lost them. With respect to Proto-Permian, the TLPS records three MB loan-words ending in -i̯ /word-final vowel correspondences are represented in all three by PP -i̯ : Votyak -i̯ /-i/, Ziryene -∅/. Of these Rédei and Rónai-Tas do not regard the Votyak t́śipi̯ "Küchlein" | Ziryene t́śip id. wordpair as Proto-Permian and Votyak gubi "Pilz" | Ziryene gob id. are not traced to ˣkundi, but to a MB form ˣgümbä. As far as the antecedent of Votyak ket́ś "Ziege" | Ziryene ket́ś "Hase" is concerned, however, the form ˣkäči is given as opposed to Wichmann's solution. Again, unlike Wichmann, they do not derive the word-final vowel of Votyak kudi̯ri by analogical completion /cf. TLPS 34/, but from the MB form. According to Rédei and Róna-Tas, PP -i̯ disappeared in MB loan-words in Ziryene, whereas in Votyak it remained in three cases and disappeared in one /ket́ś/. In one borrowing, in Ziryene šuri̯ "Spulrolle" the word-final vowel was preserved; this, however, must in all probability be a late borrowing which was able to find its way into Ziryene through the intermediary of Permyak /TLPS 99; Lakó 63; Rédei-Rónai-Tas: op. cit. 296/. In later Chuvash loan-words of Votyak -i̯ /-i/ remained; -ü, however, -- as no such sound exists in Votyak -- was replaced by -i̯ /cf. TLPS 32/.

2.2.4. From the viewpoint of word-final vowels, the Veps-Karelian loan-words of Ziryene behave like Chuvash borrowings. These are treated

here on the basis of Lytkin's article entitled "Vepssko-karel'skie zaimst-
vovanija v komi-zyrjənskyx dialektax" /numbers in brackets refer to
page numbers of this article/. The period of contacts between the Ziry-
enes and the Veps-Karelians lasted approximately from the 10th century
until the middle of the 13th century /Lakó 64/. A large number of Veps-
Karelian loan-words were taken over only by neighbouring Ziryene dialects.

Word-final -a of Veps-Karelian loan-words has been preserved in
Ziryene /188/:
e. g. Ud keˌla "molotilo, cep /dlja rži/" < Veps-Karelian ˣkola, cf.
Finnish kola /184/
Ud łuˌska "ložka", cf. Veps lužik, Karelian lužikka, Finnish lusikka
/185/

In one or two words Ziryene manifests the lack of a final vowel as opposed
to the   -a of several Baltic-Finnic languages. These were borrowed
from Veps, in which the -a disappeared if the first syllable contained
a long vowel /188/:
e. g. Ud nut: nuta nut "polnyj nevod, nevod c ryboj" < ˣnôt < Veps-Kare-
lian ˣnot /nôt, nôt/; cf. Veps not, Finnish nuotta, Eston noot /185/
Vm łod, Iž łod, Lu łod "bljudo" < ˣłôd < Veps-Karelian ˣbłod or
ˣbłod; cf. Veps błöd, Karelian błuodo, Liv błuodu /184-185/.

In most borrowings word-final -i disappears. The disappearance
of -i could equally take place in Veps or in Ziryene, since Veps reveals
forms without a final vowel unlike Karelian forms, which end in -i /188/:
e. g. in the Ziryene word /folk-lore/ bajar "bojarin", cf. Veps bajar,
Karelian bajari /183/
Iž, Ud kožaľ "prjalka, prjalica" < Proto-Komi kôzaľ < Veps-Kare-
lian ˣkozaľ or ˣkozałi /kôzałi/; cf. Veps kožaľ, Liv kuožałi /184/
The disappearance of -i must have taken place in Ziryene in all
probability, since all the Baltic-Finnic forms reveal a final vowel.

Lu-Le kaś "koška" < Veps-Karelian [x]kaš or [x]kaši; cf. Karelian kaśi,
Lud and Liv kaži, Veps kaži /183, 184/

-i must have disappeared in another word in Ziryene again, which is
mentioned by Lytkin later:

Vm solanteg, Ud solandek, I solanteg "Salzfaß" < Veps-Karelian
[x]solan-tohi or [x]solan-tuohi; cf. Veps solan "soli" /Genetive/ and tohi
"beresta" /UAJ 31: 165; KESK/

Word-final -i has been retained in two loan-words:

Ud alli "nazvanie odnoj plavajuščej pticy", cf. Finnish alli, Liv alli,
Karelian alli /182/

LV, Ud sabri "stog sena" < Veps-Karelian [x]sabri; cf. Veps sabri,
Liv sābru, Lüd suabre, Karelian suabra and suabra /186/

Uotila considers alli an onomatopoeic word of inner development /Vir
1936: 203/ and his opinion is accepted by the SKES, too /16/. Accord-
ing to Lakó, it was phonetical position that retained the word-final vow-
el in the two words above /Lakó 65/. Lytkin, in turn, assumes that
the word sabri was adopted after the disappearance of Ziryene -i /188/.

2.2.5. After this survey of Veps-Karelian loan-words I am going
to examine the language contacts between Ziryene and the Ob-Ugric lan-
guages. Of peoples speaking Permian languages it was mainly the Ziryenes
who had contacts with the Ob-Ugrians. Toivonen /SLO/ and Rédei
/SLW/ carried out a study of borrowings between them. Direct contacts
between the Ziryenes and the Ob-Ugrians were initiated in the tenth
century /but were to become more intense only later/ when the Ob-Ug-
rians lived west of the Ural mountains. Later on, a section of the
Ziryene population moved east and north and met anew the Voguls and
Ostyaks who had migrated there earlier /SLW 76-77; SLO 148-152/.
The earlier layer of Ziryene loan-words entered into Vogul in the 10th—

15th centuries and the later layer mostly in the 18th and 19th centuries.
The internal Ziryene-Ostyak and Ziryene-Vogul contacts possibly lasted
up to the 13th-14th centuries and up to the end of the 16th century res-
pectively /Fokos: NyK 55: 49/. The extent to which loan-words spread
in various dialects also allows us to draw conclusions as to the time of
the borrowing. Those Ziryene loan-words are generally the earliest in
Vogul that occur in the largest number of dialects, both in the southern
and in the eastern language area. The latest ones in turn, are represented
by those taken over only by Northern Vogul /SLW 52, 79/. The earliest
Ziryene loan-words of Ostyak are those which occur in all the three --
eastern, southern and northern -- groups of dialects as well as those
that can be found in either the southern or the northern group of dia-
lects besides the eastern /SLO 162-163/. The same is true the other
way round: recent Ob-Ugric loan-words of the Ziryene language, taken
over after the 16th-17th centuries and especially in the second half of
the 19th century, usually come from Northern Vogul and Northern Ostyak
and are manifest only in the Ižma dialect /Rédei: NyK 66: 14/.

The few Ob-Ugric loan-words in Ziryene usually retained their
word-final vowels, which exhibit the following correspondences: Ostyak
-a : Ziryene -a; Ostyak, Vogul -i : Ziryene -i, Ostyak -ə/-i,
-ɪ/ : Ziryene -∅, -i /cf. Rédei: NyK 66: 3-13/.
E. g. /word entries are abridged, e. g. not all dialectal forms are al-
ways given/:

I t́śukri "thin, long, knife", I, Peč t́śukri purt, Ud t́śukɪr purt "uz-
kij dlinnyj nož"< Vog N śoχri "Messer" /Rédei: ibid. 11/
I /Ob/ mašja: mašjaa voni "prijti v bezvyxodnoe položenie"< Oty
Ni mašiə, Kaz mašiə' "versperrt, verschlossen /Haus, Kiste/"
/Rédei: ibid. 5-6/
Two words lack a final vowel in Ziryene:
I ńuk "verxnjaja pokryška čuma iz olenjix škur mexom naružu"<
Oty C ńo·ɢə "Fausthandschuh /aus Fell/ ... Trj ńökɪ "zur Bedek-

kung des Zeltes angewandte, aus Renntierfellen genähte Scheibe
/20-25 Felle/" /Rédei: op. cit. 8/

/Wied/ pež "junges, ungehörntes Renntier"; ... pež: I, Peč pežgu,
Vm pežku "pyžik, škura novoroždennogo telënka-olenënka do pervoj
linki"< Oty Kr pḛ̆t͜š̩ "Wildrenntier im ersten Jahr", ... Ni pēž͜ʒ̩,
Kaz pḛ̆ž̃ "/zahmes/ Renntierkalb /im ersten Jahr, bis zum nächsten
Wurf/". /Rédei: ibid. 9/

A good many Ziryene loan-words of the Ob-Ugric languages preserved
their final vowels /cf. SLW 52; SLO 139-145, the tabular demonstra-
tion of the correspondences of Ziryene and Vogul vowels in second syl-
lables cf. SLW 52/.

E. g. Vog N pāl̮a "Lamm", UL pāl̮a "ovečka", So pāl̮a "Lamm"< V, Lu,
    I, Ud, P bal̮a "Schaf", /V, I auch "Lamm"/ /SLW 131/; Vog
    N rusi, P rus "Franse"< /Wied/ ryzy: P r.-byzy "Fetzen, Lum-
    pen" /SLW 143/

    Oty Ni śur'n̩ȧ', Kaz śo·r'n̩ĩ, Ko śo· r̩ni "Rübe"< V, Ud śorkni,
    V, Peč, Le, I śortni, S, Lu, P śortni "Rübe" /SLO 76/

    Oty DN pe·rnȧ, Koš pè·rnå, Č pè·rnà "Kreuz" < V, S, Lu, P
    perna, I pẹrna "Halskreuz" /SLO 52/

Several words contain Ostyak word-final -ȝ, -ə, -i and Vogul -i res-
pectively, as opposed to Ziryene word-final -∅:

    Oty DN məɣȝ : t͞ǟa·t sȯt͜ m. "altes Bett eines Flusses", DT
    mä̆ɣȝ "Biegung /eines Flusses, selt. eines Weges/ ... ' V mḛ̆ɣi·
    "Knick, Biegung /eines Flusses/" ... < Lu, Ud meg "Fluss-
    krümmung", I mèg "Halbinsel mit Wiese am See" /Vty mog/
    /SLO 40/

    Oty DN t̮ərȝ "blattförmige Türangel, Sogom", Kr t̮ərȝ "Schar-
    nier, Angel /von jeder Art/, Angelstange", V, Vj t̮əri "Türangel,
    Stange an der Kante der Tür /an der sich die Tür bewegt/ ..."

< V. S, Lu, U, P dźir, dźīr "Angel, Türangel" /Vty dźirị/
/SLO 75/

Vog /Čerń/ mokari "gorb"; N mokari id. < Ud, P mịkịr "gebückt,
buckelig /gew. Mensch, auch Pferd od. Kuh/" /SLW 122/

Vog N säni "Nasenloch"; N säni "Nasenloch des Bären"< P zịn
"Gestank"; PO zen id. /SLW 151/

In the above examples and in one or two loan-words exhibiting sim-
ilar correspondences, the Ostyak and Vogul words must have taken up
the word-final vowel by analogy /Gulya: NyK 62: 47; SLW 52/. Of the
loan-words borrowed mutually there are only two sounded without a
word-final vowel in Ziryene on the one hand, as opposed to the exist-
ing word-final vowels of the Ob-Ugric forms belonging to earlier bor-
rowings on the other /the above quoted Ostyak maɣз "altes Bett eines
Flusses" and Ostyak tɘrз "blattförmige Türangel"/ /cf. Rédei: NyK 66:
14, SLW 52; SLO 155/.

2.2.6. The Votyaks who lived more towards the south, had hardly
any contacts with the Ob-Ugrians. When the Tartars overthrew Magna
Bulgaria in 1236, the Votyaks came under Tartar supremacy. The coexist-
ence with the Tartars and the Bashkirs led naturally to the borrowing of
numerous loan-words, too /Jemeljanov, A. I., Grammatika votjackogo ja-
zyka. Leningrad, 1927. 22; FgrNNy 225/. The Tartar and Bashkir loan-
words of Votyak cannot usually be separated on the basis of phonetic
criteria /EFUS 145-146/. These loan-words have not been studied close-
ly as yet. Examples illustrative of correspondences of their word-final
vowels have been found in VotjChr and Wichmann's work entitled "Zur
Geschichte des Vokalismus der ersten Silbe im Wotjakischen..."
/Helsinki, 1897/ /numbers in brackets refer to page numbers of the lat-
ter/.

Tartar -ï   :   Votyak -i, -ị /-ě/

E. g. U šaksị, M šakšị, K šakšě "hässlich, unrein" < Tart šaksï /27/

U tàri "Hirse", MU tari, M taṛi < Tart tarï /4/

Tartar -ö   :   Votyak -ị

MU iŕgị "Muster" < Tart ölgö /WotjChr 59/

Tartar -ü   :   Votyak -ị /ʊ/

G ʊgʊ, MU ịgị "Uhu" < Tart ögü /WotjChr 60/

Tartar -a   :   Votyak -a, -o

G, J, MU puto "Gürtel" < Tart puta /WotjChr 98/

U, MU, J, M, G taba, K, S taba "Pfanne" < Tart taba /2/

Tartar -ä   :   Votyak -ä, -a, -ě

K kürkä "Truthahn" < Tart kürkä /12-13/

U tšịịa, MU tšịịě, IslJ tšịịa, K čija "Kirsche" < Tart čijä /27/

Tartar -o   :   Votyak -o

U, MU, J, M, S, K uko "Tresse, Silberfaden" < Tart uko /9/

Tartar -e   :   Votyak -e, -a

U màskàrà "Hohn, Spott", J, M, K, S maskara < Tart mäskäre
/5/

K mäñge "ewig, unvergänglich" < Tart mäñge /5-6/

It can be seen that the word-final vowels of Tartar words usually re-
mained unchanged in Votyak. The existence of various correspondences
to Tartar -ä, besides dialectal differences, is also explained by the age
of the borrowing: -ä was replaced by -a in early Tartar loan-words,
whereas afterwards the -ä was retained /5/. Tartar -a may also have
a corresponding vowel in -o if the first syllable of the word contained
o or u. Tartar ö and ü were replaced by ị in Votyak.

As Wichmann treats few Tartar loan-words and in his investigation does not go beyond the vocalism of the first syllable, the above demonstration must only be considered an illustration. No Tartar words got into the Ziryene language.

2.2.7. At about the time of the Tartar influence on the Votyaks, the Ziryenes established contacts with the Russians. They may have met as early as the 11th century, but the penetration of the chief bulk of Russian loan-words into Ziryene started only after the 14th-15th centuries or still later /Fokos: NyK 55: 11-12/.

Russian loan-words in Ziryene all retain their final vowels, mostly without changes. E. g. meža "Grenze" < Ru meža id.; tsudö "Wunder" < Ru čudo; P ńobo "Gaumen" < Ru ńebo; eššö "noch" < Ru ješče; gusli "liegende Harfe" < Ru gusli /cf. Kalima, RLW, the word-list/. The only essential difference between the corresponding Russian and Ziryene word-final vowels is that Russian -o was replaced by -ö /e̮/ in Ziryene. The Permyak dialect, however, preserved the Russian -o unchanged. There   is a similar correspondence in the first syllable, too /RLW 25/. Formerly, Lytkin believed that word-final -i disappeared in two earlier borrowings from Russian /IstGramm 72/:

Zr liž "lyži, obitye škuroj" < Ru *liži, cf. Ru lyži; Zr gač "štany" < Ru gači. He himself, however, points out in the KESK that the first Russian word also had a form without a final vowel /lyž•/ and as far as the second is concerned it was the plural genitive form ending in a consonant that was taken over.

2.2.8. Russian loan-words could enter Votyak from the 15th-16th centuries on /cf. FgrNNy 225; Csúcs: NyK 74: 46/. As in Ziryene, word-final vowels of Russian loan-words adopted by Votyak did not nor-

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   lučče "eher"< Ru lučše

    T   srazu "suddenly"< Ru srazu

    G   ješli "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 lin-
guistic 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 indentical with their contemporary counterparts /cf. the voca-
bulary in Lytkin's Drevnepermskij 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. Tendencies of Phonetic Development in Permian Word-Final Vowels

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 Rédei /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 ^{x}-a, Collinder also asserts something along these lines: "In Permian -a has changed into y in the second syllable, as a rule" /CompGr 584/. In case of word-final ^{x}-e and ^{x}ę 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 -į /-i/. This leads to the conclusion that the disappearance of word-final vowels was preceded by raising and PFU ^{x}-a, ^{x}-ä and ^{x}-e /? ^{x}-ę/ first changed into closed -į and -i respectively, to disappear afterwards in the overwhelming majority of cases. According to Lytkin, in late Proto-Permian we can reckon with ^{x}-į in the second syllable, and this *-į, then, depending on individual dialects and phonetic position became -į or -i /VokPerm 236-238/. Bubrich, however, derives -i from -į /Istoričeskaja fonetika udmurtskogo jazyka. Iževsk, 1948. 57, 64/. On the analogy of changes in the first syllable, Rédei assumes that the elevation of word-final vowels resulted in ^{x}u and ^{x}-ü, which became -į later through ^{x}-ü /NyK 70: 42/.

As has been seen, Indo-Iranian, Proto-Iranian and Old Iranian loan-words of Proto-Permian, which ended in -a /-ä/ have likewise lost their word-final vowels and we find word-final -i and -i̯ 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 disappearance afterwards. Chuvash loan-words preserve the final vowel -a /cf. also IstGramm 69/, and MB ˣä 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 ˣgobi̯ < MB ˣgümbä Rédei and Róna-Tas think of the possibility, too, that "the phonetic change ä̲ > i̯ 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 -ä was replaced by -i̯ after the PP phonetic change -ä > -i̯ had taken place /op. cit. 296/. Insofar as it is necessary to start from the MB form ˣgümbä, I am of the latter opinion myself and I should only like to add that an -ä > -a > -i̯ 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 -i̯ having a similar function. It is also an argument in favour of the sound replacements that -ä 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 -i̯ of Chuvash loan-words adopted at the end of the PP period has generally been preserved in Votyak. As the close word-final vowel /-i̯, -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 ta-
ken place before the borrowing of Chuvash loan-words /and perhaps
at the beginning of it, cf. Votyak keč/. The completion of the -ǟ > -i̯
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 -ä > -i̯ that had taken place in ancient words by that time,
but the disappearance of -i̯ that developed in this way, too. The pro-
cesses of raising and disappearance themselves took some time to take
place, so the time of the beginning of the process of raising cannot pos-
sibly 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-Per-
mian period /the PP period lasted from 1500 B.C. --800 A.D./, and
the -i̯ and -i 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 Pro-
to-Permian period /op. cit. 159/. Rédei partly shares this view and
dates the sounds ^{x}-u and ^{x}-ü, 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 -ä > -a 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 tämä, ta-; Zr naja /nyje/ "these" ∾ Finn nämä, nä-.
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 p o s s i b i l i t y 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 una | Vty uno, 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]-a /[x]-ä/ respectively /NyK 71: 95-99/. In the first part of the Ziryene compound ñelamịn "forty", too, an -ä > -a development can be postulated, for here Ziryene ñela- goes back to PFU [x]neljä. 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: -ị and -i /according to Lytkin only -ị/, 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 conclu-
sion /56/. This picture of the system of late Proto-Permian word-final
vowels, however, can he supplemented. As will be seen, in suffixed
forms -ε 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 follow-
ed the changes of the first syllable rather than those of the last. It is
doubtless, however, that the final vowels of monosyllabic words also be-
long to the system of word-final vowels.

2.3.2. Intervocalic PFU *-k-, *-t- and *-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 monosylla-
bic words, too, mainly among pronouns. According to the reconstructed
Permian base forms of the KESK, apart from *-a, and *-i occur-
ring 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: *u, *ů, *o, *ô, *o̦, *ε, *o̧, *ε̧, *ou /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/. Gen-
erally these vowels themselves are the results of certain changes that
had taken place in the first syllable. These results can mostly be account-
ed for by the transformation of the original Proto-Permian /and Finno-
Ugric/ vertical vowel harmony into a horizontal one as well as by labiali-
zation /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-establish-ed etymology and that have had their Permian base forms reconstruct-ed 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 reconstruc-tions turned out to be false. Nevertheless, the picture thus formed gives a certain guidance and confirms the results hitherto achieved in the in-vestigation. 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: ^{x}-i /37; 4,03 %/ ^{x}-a /34; 3,70 %/, ^{x}-з /19; 2,07 %/, ^{x}-u /16; 1,74 %/, ^{x}-ы /12; 1,31 %/, ^{x}-ú /10; 1,09 %/, ^{x}-ọ /4; 0,43 %/, ^{x}-ÿ /4; 0,43 %/, ^{x}-ọ̇ /3; 0,32 %/, ^{x}-є /2; 0,22 %/, ^{x}-ọ /1; 0,11 %/, ^{x}-ɛ /1; 0,11 %/, ^{x}-ou /1; 0,11 %/. 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 mono-syllabic ones. The KESK assumes an -a final vowel going back to PFU ^{x}-a or ^{x}-ä merely in the Permian reconstructed forms of Ziryene dẹra | Vty dera and Zr jala /dẹra < PFU ^{x}tыkыra, and jala < PFU ^{x}jäkälä/.

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

2.4.1.   If the word-final vowels of the Permian forms reconstruct-ed in the KESK are compared with their contemporary Ziryene and Vo-tyak 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 spearate life of the two Permian languages.

^{x}-u has been preserved in both Permian languages, while ^{x}-ú was delabialized and became -i. ^{x}-ọ yielded -o in Ziryene and -u in Votyak. Permian ^{x}-å developed into Ziryene -a and Votyak u respectively. Permian ^{x}-ɛ chánged into Ziryene -e and gave Votyak -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 mu "zemlja" | Vty mu id. -- Permian ^{x}mu

Zr pu "derevo" | Vty pu id. -- Permian ^{x}pu

Zr lị "kost'" | Vty lị id. -- Permian ^{x}lú

Zr tị "ozero" | Vty tị id. -- Permian ^{x}tú

Zr šo "sto" | Vty šu id. -- Permian ^{x}šọ

Zr to "vot, vot zdes'" | Vty tu: tupal "zarečnaja storona"

/tu- "ta"; pal "storona"/ -- Permian ^{x}tọ-

Zr ma "měd" | Vty mu id. -- Permian ^{x}må

Zr sa "saža" | Vty su id. -- Permian ^{x}så

Zr kɛ "jesli, koli" | Vty ke -- Permian ^{x}kɛ or ^{x}kọ /^{x}kọ/

Zr pɛ "govorit, govorjat" | Vty pe "deskat', govorit" -- Permian ^{x}pɛ

Monosyllabic words are also characterized by Permian ^{x}-i ~ Ziryene -i   : Votyak -i and Permian ^{x}-i ~ Ziryene -i correspondences:

Zr ki "ruka" | Vty ki id. -- Permian ^{x}ki

Zr li "mezga, kambij" | Vty li id. -- Permian ^{x}li

Zr ri "ryčag na rassoxe, žuravl' /kolodca/" -- Permian ^{x}ri

Permian -ɛ, -ọ, -ọu and -ọ are assumed as the antecendents of the following words:

Zr sessa "zatem, potom" /^{x}se "tot"/ -- Permian ^{x}sɛ

The Ziryene word is supplied with the ending of the Praeclusive.

Zr $\underline{so}$ "vot" | ? Vty $\underline{so}$ "on, tot" -- Permian $^x\underline{so}$

Zr $\underline{\check{z}ov}$ "kalina /jagoda/" | Vty $\underline{\check{s}u}$ id. -- Permian $^x\underline{\check{s}ou}$

Zr $\underline{ji}$ "led" | Vty $\underline{j\underline{e}}$ id. -- Permian $^x\underline{j\varrho}$

Zr $\underline{ji}$ "perevjaslo" | Vty $\underline{e}$ "remen'", reme$\check{s}$ok" -- Permian $^x\underline{j\varrho}$

Zr $\underline{terit}$ "v$\check{c}$era" /$\underline{te}$ "tot", $\underline{rit}$ "ve$\check{c}$er"/ | Vty $\underline{tu:}$ $\underline{tupal}$ "ta storo-
na" /$\underline{pal}$ "storona"/ -- Permian $^x\underline{t\varrho}$ or $^x\underline{t\varrho}$

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: $^x\underline{-i}$.
It can be seen in the table that Permian $^x\underline{-i}$ /but on the basis of Lakó's
treatise and works by other authors $^x\underline{-i}$ may also be reckoned with/ in
polysyllabic words and word-final vowels reconstructed as having uncer-
tain phonetic character has generally disappeared in Ziryene; in Votyak,
however, it has been preserved in the form of $\underline{-i}$. Therefore, in Ziryene
$^x\underline{-i}$ /$^x\underline{-i}$/ 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, $\underline{-i}$ has disappeared with the exception
of a single word. There are a few examples illustrating the preserva-
tion of $\underline{-i}$ in Karelian borrowings; the other loan-words ending in $\underline{-i}$
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-Kareli-
an 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 bro-
ken 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, Wich-
mann 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 assum-
ed   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 /-i/. 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 /-∅/, 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 in-
dividual 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 analo-
gical completion is more probable. In the Votyak equivalent /dźiri/ of
the Ziryene word dźir "Angel, Tür-" there is a word-final vowel even
today /Lakó 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 Zir-
yene must have taken place at the very beginning of Ob-Ugric and Zir-
yene 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 Zir-
yene without exception. A greater bulk of Russian loan-words made
their way into Ziryene only from the 14th-15th centuries on or still la-
ter, 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 most-
ly lost their final vowels, Lakó dates the beginning of the disappearance
of Ziryene -i̯ 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 texts of De adminis-
trando 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 vlasi > 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 /FgrNNy 212/. If this hypothesis is accepted, there is no need to distinguish three /Proto-Per-mian, Ziryene and Votyak/ different periods of the process of disappear-ance, as Lakó does, or two /Proto-Permian and Ziryene/ as Lytkin does /Lakó 57; IstGramm 74/, but the disappearance of Proto-Permian ^{x}-i /^{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 accord-ing 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 ^{x}-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 /Csúcs: NyK 74: 34-35/.

2.4.4. As compared with late Proto-Permian, it also points to a
change that Permian ^{x}-i and ^{x}-i̵ underwent a process of levelling in in-
dividual 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 conclu-
sions 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. More-
over, 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 ^{x}-a ~ Ziryene
-a : Votyak -i "correspondence" /Zr poča "serёžki ivy" | Vty puči
"verba, počka dereva" -- Permian^{x}poča/ we may think that -a was taken
for a diminutive suffix and was replaced by the suffix -i having a simi-
lar function in Votyak. It is even more likely that ^{x}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 ^{x}-a disappeared in
Ziryene, but was preserved in Votyak as -o /Zr -mon: šojmon "glinja-
naja kukla" | Vty muňo, miňo "kukla" -- Permian ^{x}moňa or ^{x}moňa/.
In this Ziryene -a disappeared perhaps under the influence of moň
"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 mor-
phology. Korenchy pointed out that raising and disappearance took place
in Ziryene absolute verb stems, too; in this the -i 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 iden-
tical with the stem form of the verb. In the Imperative of verbs /that
is in their stem forms/ two types can be distinguished: Ziryene ∅, i
/e. g. mun "go!", vetli "walk!"/, Votyak ∅, i /e. g. min "go!", likti

"come!", bastị "take!"/. "The -a of kora "cut!", vera "say!" is not a
preserved final vowel, but it is to be explained in the phonetic develop-
ment of the suffix of verbs suffixed with -al: koral, veral $>$ korại, verại
$>$ kora, vera" /Rédei: Bírálat/. In both Ziryene and Votyak, word-final
vowels appear in the Imperative only after consonant clusters, and ị ị̄
appearing in the stem form in certain Votyak dialects /G, Uf karị̈-nị̈, J,
MU karị-nị, M kar-nị "machen, tun", G, Uf mị̂nị̂-nị̂, J, MU mịnị-nị,
M mịn-nị "gehen"/ was lost in the Imperative /in absolute word-final po-
sition/. In Ziryene a stem ending in a consonant appears always in such
cases, after certain consonant groups, however, -ị was retained /Korenchy:
op. cit. 153 ff; Rédei: Bírálat/. Even if -ị were of secondary develop-
ment, it would not contradict the processes of raising and disappearance.
In this case it would have to be assumed that in verbal stems the dis-
appearance 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 Per-
mian languages ending in vowels can be fitted into the hitherto outlined
system of word-final vowels. Forms ending in -ị and -i present relative-
ly few difficulties. As has also been seen in the examination of base
words -ị /-i/ has not disappeared totally in Votyak; moreover, it has
been preserved in several words in Ziryene. In a number of suffixes
/Vty, Zr -ị, -i diminutive suffix, Vty, Zr -nị suffix of the infinitive,
Vty, Zr -lị ending of the Allative, Vty, Zr -ti ending of the Transiti-
ve, Vty, Zr Latives ending in -i, Vty Px1Pl -mị, Px2Pl -dị, -tị,
Px3Pl -zị, -sị, Vty, Zr Praet1Sg -i etc./ the -i, -ị has not disappear-
ed either because it had a function to fulfil, or the preceding conso-
nant 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 ~ [x]β /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/ -i̯/ 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 continuer of PFU [x]-k ~ [x]-ɣ 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 -s, Zr, Vty -ś, Zr, Vty -t, Zr, Vty z̧/< dz̧/, suffixes of PFU origin have the variants -sa, -śa, -ta, -dz̧a and the latter contain the -a nominal suffix according to Perm-Képz, 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 -i̯ and -i/.

Several Lative forms: e. g. Zr mysta, miśta "čerez", Zr aḽla,

ạzla, Vty ạzlo "vperjëd" /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 ^{x}-k /cf. Fokos: JSFOu XXX, 14; Beke: Nyr 55: 47-48/. This very same -a Lative ending exist in the -la ending of the Consecutive and in the -sa ending of the Praeclusive /IstMorf 27/.

The PFU ^{x}-m Accusative ending disappeared before the primary Zr -ẹ, -ɛ, Vty -ɛ endings of the Accusative /Lakó 40; IstGramm 84/. The same suffixes appear in the Px1Sg where similarly they got to the end of words after the disappearance of a PFU ^{x}-m /Lakó 41; IstGramm 86/.

The Zr -ẹ, -ɛ, Vty -ɛ Illative endings were originally followed by a PFU ^{x}-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 ^{x}-m personal ending originally following the Zr -a and Vty -o ending of the IndPraesVx1Sg 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 < munamnịm "my idëm"/. Then -m disappeared in the Vx1Sg /munam > muna "ja idu"/, and in the Vx3Sg the form with -s began to spread /IstGramm 85/.

IndPraesVx3Sg -ẹ, -as /-a/ in Ziryene and -ɛ in Votyak continue Proto-Permian ^{x}-a and ^{x}-ɛ, which appeared in word-final position after the disappearance of a ^{x}-k praesens suffix /Korenchy: op. cit. 159/.

The disappearance of the ^{x}-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 munam$\underline{e}$, Vty m$\underline{i}$nom$\underline{i}$ "pojdëm"$<$ [x]mΛnΛmΛk /IstGramm 87/.

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

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

Therefore, the testimony of the diachronic investigation of Ziryene 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 appeared in word-final position after the disappearance of a [x]-k or [x]-m element when the raising of Proto-Permian open and half-open word-final vowels had come to an end /cf. Lakó 42; Korenchy: 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 -$\underline{\varepsilon}$ 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 $\underline{e}$ /$<$ [x]-ȯ, [x]$\underline{\varrho}$/ had appeared in the first syllable, -$\underline{\varepsilon}$ gave -$\underline{e}$ in most dialects of Ziryene, and in Votyak as well as in the Upper Vičegda and Ižma dialects of Ziryene it resulted in -e /PermVok 236/. By the time of the first Ziryene language records the change -$\underline{\varepsilon}$ $>$-$\underline{e}$ 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 /Htört[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. *nooruute >
*nooruuti > *nooruusi > nuoruus; *kolmante > *kolmanti > *kolmansi >
*kolmans > kolmas /Papp I., Finn nyelvtan 28/. Finnish word-final -a
and -ä were also raised and became -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 dis-
cernible 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 vow-
els, as a part of overall load, in suffixes runs as follows /PermVok 235/.

	a	i	i̯	e̯	e/ɛ/	o	u
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 e̯ go back to Proto-Permian ˣɛ̣ and Votyak o -- insofar as it has -a as its equivalent in Ziryene -- to Proto-Permian ˣ-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 zänäg "malčik", 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 > tȯt > tôt /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 beṛa "opjat'" /< ˣberakʌ/, cf. Finn perä "zad, zadnjaja čast'"

Zr ńelamin "40", cf. Zr ńoĺ, Vty ńiĺ, Finn neljä "4"

Zr vetimin "50", cf. Zr vit, Vty vit, Finn viite- "5"

Zr kvajtimin "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 ^{x}-i final vowel, too.

E. g. Zr koat', 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' /< ^{x}t/ may be related to the palatalizing influence of the early Proto-Permian root-final vowel /PFU ^{x}-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 -1 and the Votyak suffix -li 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 õhh /Kálmán: NyK 60: 412/.

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

A linking vowel, mostly -i developed between members of word-final consonant groups. E. g. Zr turun "trava, seno" | Vty turin id.< Permian ^{x}turin < Pre-Permian ^{x}tarna, cf. Finn taarna "trava"; Zr kirim "ruka", | Vty kirim "grost'" < Permian ^{x}kurim < Pre-Permian < ^{x}kurma, cf. Cher kormiž "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 -j/-i/.

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 kịz "jëlka", kịzen "jëlkoj", kịzịn "v jëlke", 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 determiningProto-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[2] 18-24/, quickening of speech rate /cf. Kubínyi: MNy 54: 213-232/, and language function /cf. Papp I.: MNy 59: 393-408/.

Function not only prevents word-final vowels having a grammatical role to fulfil 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, Px1Sg, 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. ^{x}karɛ-kʌ > ^{x}karɛ-k > kar-ɛ "v 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, ? e/ 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 i/ could occur at the absolute word-end. If, then, a good proportion of Proto-Permian words all ended in i and i, 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 ^{x}-m and ^{x}-k -- also disappeared /e. g. ^{x}mʌnɜ-mɜ > men-ö "goes", cf. IstGramm 83-84/. Word-final vowels of suffixes were dropped earlier than those of root-words. Intervocalic ^{x}-p-, ^{x}-t- and ^{x}-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 t͡sabịr "Faust" | fK t͡sobrottoa "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 ^{x}-u ^{x}-ü and ^{x}-ü 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 loanwords 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.

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 Finnugor 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.

ArUgr = Jacobsohn, Hermann, Arier und Ugrofinnen. Göttingen, 1922.

Bírálat = Rédei, Károly. Bírálat Molnár Ferenc "A permi nyelvek szóvégi magánhangzóinak történetéről" c. egyetemi doktori értekezéséről [Critical commentary on Ferenc Molnár's university doctoral dissertation entitled "On the History of Word-Final Vowels in the Permian Languages"] Manuscript. Budapest, 1972.

EFUS = Décsy, Gyula, Einführung in die finnisch-ugrische Sprachwissenschaft. Wiesbaden, 1965.

FgrNNy = Hajdú, Péter, Finnugor népek és nyelvek [Finno-Ugric Peoples and Languages]. Budapest, 1962.

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

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Izv = Lytkin, V. I. : O nekotoryx zaimstvovanijax v permskix jazykax. Izvestija Akademii Nauk SSSR. Otdelenie litera-tury i jazyka. Tom X /1951/ № , 4 385.--392.

KESK = Kratkij ɜtimologičeskij slovar' komi jazyka [Written by] Lytkin, V. I., Guljajev, E. S., Moskva, 1970.

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

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

SLO = Toivonen, Y. H.: Die syrjänischen Lehnwörter im Ostjaki-schen. FUF 32 /1956/, 1--169.

SLW = Rédei, Károly, Die syrjänischen Lehnwörter im Wogulischen. Bp. 1970.

TLPS = Wichmann, Yrjö, Die tschuwassischen Lehnwörter in den per-mischen Sprachen. Helsinki, 1903. /MSFOu 21/

x   x   x

Harmatta, János: The Language of the Sarmatians[2]. In: János Harmatta, Stu-dies in the History and Language of the Sarmatians[2]. Szeged, 1970. 58--97.

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STUDIA URALO—ALTAICA

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HUNGARY