# ZETACISM AND SIGMATISM IN PROTO-TURKIC[1]

### BY

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It has long been established that Common Turkic *z* and *š* correspond to *r* and *l* in Chuvash,[2] e.g.:

> Com. Turk. *toquz* «nine»: Chuv. *tăχăr, tăχχăr* id.
> Com. Turk. *tāš* «stone»: Chuv. *čul* id.

These sound correspondences were first called and are still referred to as «Rhotacism» and «Lambdacism», because, at the beginning, it was generally believed that Chuvash *r* and *l* had originated from Turkic *z* and *š* respectively.[3] Later on, when it was discovered that Common Turkic *z* and *š* are represented by *r* and *l* also in Mongolian and Manchu-Tungus, an exactly opposite theory on the priority problem was put forward by Ramstedt, the founder of Altaic comparative linguistics.[4] According to Ramstedt, Chuvash and Mongolian *r* and *l* were older than Turkic *z* and *š*, and the latter had developed from *r* and *l*. In support of his theory, which may better be called «Zetacism» and «Sigmatism», Ramstedt argued as follows: In exactly the same words, Common Turkic *z* and *š* correspond to *r* and *l* in Mongolian and Manchu-Tungus as well as in Chuvash. Yet, Chuvash is a Turkic language, and by no means Mongolian or Tungusic. Therefore, we cannot think of a systematic sound shift from Turkic *z* to Chuvash/Mongolian/Manchu-Tungus *r*, or from Turkic *š* to Chuvash/Mongolian/Manchu-Tungus *l*. In these languages, «Rhotacism» and «Lambdacism» could not have taken place either jointly or independently from each other.[5]

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[1] This article is an expanded form of a paper read in the Central Asian and Altaic Studies Section of the XXVII International Congress of Orientalists at Ann Arbor, Michigan, U.S.A., on August 15, 1967.

[2] W. Schott, *De lingua Tschuwaschorum*, Berlin (1841?), chap. II, pp. 7—15.

[3] W. Radloff, *Phonetik der nördlichen Türksprachen*, Leipzig 1882, §§ 192, 286 and 288; E. N. Setälä, *Zur finnisch-ugrischen Lautlehre: FUF*, Vol. II, Part III (1902), p. 273; Z. Gombocz, *Zur Lautgeschichte der altaischen Sprachen: KSz*, Vol. XIII (1912/13), pp. 1—22.

According to Setälä, Turkic *l* originated from *š*, not from *š*.

[4] G. J. Ramstedt, *Zur Frage nach der Stellung des Tschuwassischen: JSFOu* XXXVIII, 1 (Helsinki 1922), p. 26 ff.

[5] *Op. cit.*, p. 26 and 28.

There was also linguistic evidence supporting Ramstedt's theory: Old Chuvash (Proto-Bulgarian, or West Turkic) loan-words in Hungarian,[6] e.g. *iker* «twin» = Chuv. *yěkěr* «double, paired, twin» < *\*ikir* = Turk. *ikiz* «twin», Hung. *kölyök* «pup, young dog» < *\*köläk* = Turk. *köšäk* «young camel»; Pre-Turkic (Vortürkisch) elements in Samoyed, e.g., Southern Samoyed (Kamass) *šili* «sable» < *\*čili* < *\*kili* = Old Turk. *kiš* id.,[7] Yak. *kis* id. < *\*kiš*, Yurak Sam. *yur* «hundred» = Com. Turk. *yüz* id.,[8] Yak. *süs* id. < *\*yüz*; West Turkic (Proto-Bulgarian) and East Turkic (Hsiung-nu, Hunnic) words, proper names and titles found in ancient Byzantine and Chinese sources, e.g. Danube Bulg. *tvir*(= *tivir*) «nine» < *\*tovir* < *\*toqir* = Chuv. *tǎχǎr* id. < Volga Bulg. *toχur* = Com. Turk. *toquz*,[9] *qolovur* «leader» < *\*qolobur* < *\*qolabur* ⧧ Middle Turk. *qolabuz, qolavuz* «guide»,[10] IV c. Hsiung-nu *tayliqan* or *taliqan* «march off!» = Old Turk. *tašiqïn* id.,[11] etc.

In the face of such evidence Ramstedt assumed that Turkic *z* and *š* were not primary, but only secondary sounds, having developed from Altaic *\*r* and *\*l* respectively.

Although it is more convincing than the old theory, Ramstedt's view is by no means shared by all the turcologists and altaicists of our time. On the contrary, there are quite a few scholars today who still adhere to or simply accept the old theory, that is, the theory of «Rhotacism» and «Lambdacism»,[12] and heated arguments are still going on between the supporters of the two theories.

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[6] Zoltán Gombocz, *Die bulgarisch-türkischen Lehnwörter in der ungarischen Sprache* (= *MSFOu* XXX), Helsinki 1912.

[7] Ramstedt, *op. cit.*, p. 30; cf. also Kai Donner, *Zu den ältesten Berührungen zwischen Samojeden und Türken*: *JSFOu* LX, 1 (Helsinki 1924), p. 5, and Aulis J. Joki, *Die Lehnwörter des Sajansamojedischen* (= *MSFOu* 103), Helsinki 1952, p. 290, 291.

[8] Ramstedt, *Über die Zahlwörter der altaischen Sprachen*: *JSFOu* XXIV, 1, p. 19; cf. also Kai Donner, op. cit., p. 6.

[9] J. J. Mikkola, *Die Chronologie der türkischen Donaubulgaren*: *JSFOu* XXX, 33, p. 16; Omeljan Pritsak, *Die bulgarische Fürstenliste und die Sprache der Protobulgaren*, Wiesbaden 1955, p. 49.

[10] Mikkola, op. cit.; cf. also Jos. Markwart, *Chronologische Data für den bulgarisch-türkischen Rhotazismus*: *UJb* 9 (1929), p. 90, and K. H. Menges, *Altaic Elemente in the Proto-Bulgarian Inscription*: *Byzantion*, Vol. 21, pp. 85—118.

[11] Ramstedt, *JSFOu* XXXVIII, 1, p. 31, *Einführung in die altaische Sprachwissenschaft*, I: *Lautlehre* (= *MSFOu* 104), Helsinki 1957, p. 104.

[12] Johannes Benzing, *Tschuwaschische Forschungen* II: *ZDMG* 94 (1940), pp. 391—398, *Die angeblichen bolgartürkischen Lehnwörter im Ungarischen*: *ZDMG* 98 (1944), pp. 24—27, *Tschuwaschische Forschungen* V: *ZDMG* 104 (1954), pp. 386—390, *Das Hunnische, Donaubolgarische und Wolgabolgarische*: *Fund.* I, Wiesbaden 1959, p. 694; Gerard Clauson, *The Case against the Altaic Theory*: *CAJ* 2 (1956), pp. 181—187, *The Earliest Loanwords in Mongolian*: *CAJ* 4 (1959), pp. 174—187, *The Turkish Elements in 14th Century Mongolian*: *CAJ* 5 (1960), pp. 301—316, *Turkish and Mongolian Studies*, London 1962

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Recently three more hypotheses have been added to these by Omeljan Pritsak, A. Biyishev, and A. M. Shcherbak. In his very interesting article[13] Pritsak maintains that the problem is not phonetic or phonologic, but a morphophonemic one. According to him, Turkic *z* and *š* did not originate from a single *r* and *l*, but, as a result of fusion, they developed from the sound groups *\*rti* and *\*lti* respectively. The element *\*ti* in these sound groups was, according to Pritsak, a long-lost hypothetical suffix of *individuality*, parallel in function to the Mongolian suffix [*sUn*], and was added to the *Genusform* of a word, as, for example, the collective suffix [*GIn*] < [*GUn*] in Middle Turkic *qïrqïn* «girls, groups of girls» was added. Thus, Pritsak believes that Turkic *qïz* «girl», being an *individual* form, comes from *\*[qïr]* PLUS the *individual* suffix; in other words, *z* in *qïz* is the result of the fusion of *r* with the sound group *\*ti*.[14]

It is evident that in putting forward such a theory, Pritsak has mainly been inspired by the correspondence of Turkic *š* to Mongolian *lč* and *lǰ* in such equations as Turk. *ǎšyǎk, ǎšgǎk* «donkey, ass» = Mong. *elǰigen* id., Turk. *ašuq* «knuckle, knuckle-bone» = Mong. *alču* «one side of an ankle-bone, depression on the side of an ankle-bone», Turk. *-š-* (rec., coop.) = Mong. *-lča-* / *-lče-* (coop.), etc. While these equations are acceptable to almost every turcologist and nobody would like to argue about the soundness of them, several objections could be raised to Pritsak's theory:

1) It is not very likely that Turkic *z* and *š* could have developed from such sound groups as *\*rti* and *\*lti*. The sound groups *rt* and *lt* are among the soundest and most durable consonant clusters in Turkic. In his comparative grammar of the Altaic languages, Poppe states that the Altaic sound group *\*rt* before *i* and and *i* has resulted in *rči* in Mongolian, but has preserved itself as *rt* in Turkic.[15] Poppe's examples are the following: Mong. *kerči-* «to cut, carve; to make incisions, to notch» < *\*kerti-* = Chuv. *kart-* «to make incisions, to notch», Oir. *kärt-* «to cut», Mong. *arči-* «to clean» < *\*arti-* = Kum. Uig. Osm. *arït-* < *\*art-* < *\*artï-*. To these examples other etymologies can be added: Mong. *türči-* «to clean, wipe off, rub» < *\*türti-* = Middle Turk. *türt-*

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pp. 210—247; *A postscript to prof. Sinor's «Observations on a new comparative Altaic phonology»*: *BSOAS* XXVII (London 1964), pp. 154—156; Gerhard Doerfer, *Türkische und mongolische Elemente im Neupersischen*, Bd. I: *Mongolische Elemente im Neupersischen*, Wiesbaden 1963, pp. 51—105.

For a defense of the Altaic theory see Nicholas Poppe, *Introduction to Altaic Linguistics*, Wiesbaden 1965, pp. 125—156.

[13] Omeljan Pritsak, *Der «Rhotazismus» und «Lambdazismus»*: *UAJb* 35, Fasc. D (1964), pp. 337—349.

[14] *Op. cit.*, p. 341.

[15] Nicholas Poppe, *Vergleichende Grammatik der altaischen Sprachen*, Wiesbaden 1960, p. 87.

«to smear, rub, spread» (oil, etc.), Mong. *jorči-* «to walk, go; to travel, set out, start for» < *jortï-* = Middle Turk. *yort-* «to walk; to set out, start for», etc. In the face of such examples it can hardly be maintained that Common Turkic *buz-* «to destroy, break», for instance, goes back to an Altaic *burtï-*, as suggested by Pritsak[16]. Such a form would have resulted in *burt-* in Proto-Turkic, not in *buz-*.

2) If such a suffix had existed, it would have been added also to other *Genusforms* ending in a consonant other than *r*, *l* and *n*,[17] and — of course — to those ending in a vowel. What phonetic results have been obtained from various other combinations like *bti*, *dti*, *čti*, *γti / gti*, *qti / kti*, *mti*, etc., and where are they?

3) The existence of an *individual* suffix in Mongolian alone does not enable us to assume that Pre-Turkic or Common Altaic, too, possessed such a suffix. It is a well-known fact that in Old Turkic a noun meant both one item from that class and the entire class of that item, e.g., *at* «a horse; horses», *balïq* «a city; cities», etc. In other words, there was no such opposition as singular: plural or individual: collective. This is evident from the extremely limited use of plural or collective forms like *bäglär* «lords, Turkish aristocracy», *äkälär* «elder sisters», *ärän* «men», *oγlan* «children», etc. Instead of the opposition singular: plural or individual: collective Old Turkic had the opposition indefinite: definite, e.g., *at* «a horse; horses»: *atï* «his horse(s), their horse(s)», or *atïγ* «the horse(s)» (acc.), etc.

A. Biyishev's approach to the century-old problem is similar to that of Pritsak's. In his article[18] Biyishev maintains that the problem is not phonetic, but morphologic. He, therefore, does not see an alternation *r* ~ *z* in such pairs as Kazakh *semiz* «fat»: *semir-* «to grow fat», MK *qutuz* «rabies»: *qutur-* «to be attacked by rabies». According to Biyishev, in such cases we are confronted with two different suffixes, i.e., an adjectival suffix *-z* in *semiz* and *qutuz*, and a verbal suffix *-r-* in *semir-* and *qutur-*.[19] His examples, however, do not seem supporting this point of view. We do know that Modern Kazakh *semir-* is only a metathetical form, going back to an older *sämri-* (see MK; Nuig. *sämri-*, Tuv. *semiri-* < *sämri-*, Turkm. *semre-* < *sämri-*). The same is true of the verb *qutur-* (< *qütru-*), as we are going to explain further below. Therefore, we have every reason to believe that these word pairs display an alternation *r* ~ *z*.

As for the origin of Turkic *z*, Biyishev is of the opinion that the correspondence *r* || *z* is genetically related to the correspondence *d* || *t* || *y* || *z* || *r*, and all these sounds go back to an old *δ*. He argues as follows: «In Proto-Turkic there were two suffixes sounding *-δ*: 1) the plural suffix in personal pronouns, personal endings and possessive suffixes, and 2) a derivational suffix forming nouns from verbal stems. Already in the Proto-Turkic period both *δ* sounds had begun to change into *z* in the Turkic languages. But the Mongolian languages borrowing Turkic words, perceived the sound *δ* as *-r*. In this manner, there occurred a transition from *δ* to *z* in the Turkic languages, and in Mongolian *δ* > *r*. Our assumption about the borrowing is confirmed by the fact that the correspondence *-r* || *-z* manifests itself in the Mongolian languages only in lexical units, and the grammatical categories number and person do not participate in it.»[20]

As is seen, A. Biyishev regards every Mongolian word having an *r* (corresponding to *z* in Turkic, of course) as a loan-word borrowed from Turkic. Such an assumption cannot stand on its feet in the face of Turco-Mongolian etymologies like Turk. *yaz-* «to write» = Chuv. *šïr-* id. < *yïr-* > Hung. *ír-* id. = Mong. *jiru-* id., Turk. *yüz* «face, surface» < *yǖz* (cf. Yak. *süs* id. < *yüz*) = Mong. *niγur* id., Khal. Kalm. *nūr* id., Turk. *süz-* «to filter» < *sǖz-* (cf. Bukh. *šūs-*, *syūs-*[21] id. < *sǖz-*) = Mong. *sigür-*, *šügüre-* «to filter through, to percolate» < *sigüre-* (cf. Khak. *sū-* «to filter» = Mong. *sigü-* id.), etc. Mongolian *jiru-*, *niγur* and *sigüre-* cannot be Turkic loan-words, neither can Turkic *yaz-*, *yüz* and *süz-* be borrowings from Mongolian.

Biyishev's efforts to unite the Altaic correspondence *r* || *z* with the Chuvash-Turkic correspondence *d* || *t* || *y* || *z* || *r* are vain and futile, because, contrary to what he thinks, Proto-Turkic already possessed both *d* (or *δ*) and *z* as two different phonemes, e.g., *bod* «stature»: *boz* «gray» (= Mong. *boro* id.), *kād-* «to wear, put on»: *kāz-* «to roam, wander» (= Mong. *kerü-* id.), *adïγ* «bear»: *azïγ* «molar, molar tooth» (= Mong. *araya* id.), etc.

The third hypothesis has been put forward by A. M. Shcherbak. In his article on the nature of the lexical interrelations of Turkic, Mongolian and Manchu-Tungus,[22] Shcherbak, after giving his evidence for the correspondences *r* || *z* || *s*, *r* || *z* or *r* || *s* in Mongolian, Manchu-Tungus and Turkic, comes to the conclusion that the sounds *z*, *r* and *s* in the Turkic languages go back to the allophones of Proto-Turkic (*s*) — a lax *s*, occurring after long vowels in monosyllabic words and after any vowel in dissyllabic or polysyllabic words. According to Shcherbak, this lax *s*, during the period of Common Turkic or

[15] Nicholas Poppe, *Vergleichende Grammatik der altaischen Sprachen*, Wiesbaden 1960, p. 87.

[16] O. Pritsak, *op. cit.*, p. 342.

[17] Pritsak believes that this suffix has resulted in *č* after *n*, e.g., *birinč* «first» < *birin* PLUS *ti* (see p. 348).

[18] A. Biyišev, *Sootvetstvie -r || -z v altajskich jazykach: Issledovanija po ujgurskom jazyku — Ujgur tili bojiča täksürüslär*, Alma-Ata 1965, pp. 192—205.

[19] *Op. cit.*, p. 197.

[20] *Op. cit.*, pp. 202, 203.

[21] O. Olufsen, *A Vocabulary of the Dialect of Bokhara*, ed. by Vilh. Grønbech, Nordisk Forlag 1905, p. 51.

[22] A. M. Shcherbak, *O charaktere leksičeskich vzaimosvjazej tjurkskich, mongoljskich i tunguso-manjčžurskich jazykov: Voprosy Jazykoznanija* 1966, No. 3, pp. 21—35.

after its branching out into various dialects, preserved its voicelessness in one group of dialects, developed into $z$ ($\delta$) in a second group, and in a third, it first changed to $z$ ($\delta$) and later to $r$.[23]

This assumption of Shcherbak's does not seem very convincing, because, contrary to what he believes, Common Turkic or Proto-Turkic already possessed *s* and *z* as two different phonemes, e.g., *\*ās* «sable»: *\*āz* «few», *\*qïs-* «to shorten» (cf. Turkm. *ɣïsɣa* «short»): *\*qïz* «girl», *\*yās* «loss; mourning»: *\*yāz* «spring», etc

As we have seen, none of these theories is strong enough to challenge Ramstedt's theory. In fact, the theory of «Zetacism» and «Sigmatism» still remains as the most convincing one of all the theories which have been advanced so far. Nevertheless, Ramstedt's theory, too, has some deficiencies. First, he assumed that the palatalization of the sounds -*l*- and -*r*- in Common Altaic, which later was to cause these sounds to result in -*z* and -*δ* in Turkic, had taken place in medial position and before the vowel *i*.[24] Yet, in the great majority of examples he gives for «Zetacism» and «Sigmatism», *z* and *δ* occur in final position. Furthermore, there is not an *i* after the sounds *r* and *l* in most of the Mongolian and Manchu-Tungus cognates. A second deficiency in Ramstedt's theory is that it does not and cannot explain satisfactorily the existence of a number of word pairs displaying the alternations $r||z$ and $l||\delta$ in both historical and present—day Turkic languages, e.g., Middle Turk. *qïz* «girl»: *qïrqïn* «group of girls», *bāδ* «boil, wound»: *balïq-* «to be wounded», etc. The existence of such pairs cannot simply be attributed to the difficulties which native speakers might have had in distinguishing between -*l*- and -*l*- (i.e., between normal and palatalized *l*), and -*r*- and -*r*-, nor can it be explained by the dialect differences, as Ramstedt suggested.[25]

To sum up: Ramstedt's theory, although expanded and developed considerably by Poppe,[26] his pupil and chief supporter, needs some alterations and further corroborations. In this paper of mine, I am going to present linguistic evidence from within the Turkic languages to prove that Ramstedt's theory of «Zetacism» and «Sigmatism» is fundamentally correct, i.e., Chuvash

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[23] *Op. cit.*, p. 31.

[24] Ramstedt, *Lautlehre*, p. 103.

[25] Ramstedt, *JSFOu* XXXVIII, 1, p. 29.

[26] Nicholas Poppe, *Čuvašskij jazyk i ego otnošenie k mongoljskomu i tjurkskim jazykam: Izvestija Rossijskoj Akademii Nauk*, VI Serija, XVIII (1924), pp. 289—314, *Türkisch-tschuwassische vergleichende Studien: Islamica*, Vol. 1, (1925), pp. 409—427, *Die tschuwassische Sprache in ihrem Verhältnis zu den Türksprachen: KCsA*, Vol. 2 (1926), pp. 65—83, *Altaisch und Urtürkisch: UJb.*, Vol. 6 (1926), pp. 94—121, *Die türkischen Lehnwörter im Tschuwassischen: UJb.*, Vol. 7 (1927), pp. 151—167, *On Some Altaic Loanwords in Hungarian:* in *American Studies in Altaic Linguistics*, Bloomington 1960, pp. 139—147, *Vergleichende Grammatik der altaischen Sprachen*, Teil I, *Vergleichende Lautlehre*, Wiesbaden 1960, *Introduction to Altaic Linguistics*, Wiesbaden 1965.

(also Mongolian and Manchu-Tungus) *r* and *l* are older than Turkic *z* and *δ*, and that the sound changes *\*r > z* and *\*l > δ* took place in Proto-Turkic only in final position.

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My evidence will consist of word pairs taken from Old Turkic, Middle Turkic and Modern Turkic languages and dialects.

I will begin with the Middle Turkic pair *sämüz* «fat»: *sämri-* «to grow fat».

With our present-day knowledge of Turkic it is almost impossible to analyze the adjective *sämüz* «fat», but the verb *sämri-* «to grow fat» can be analyzed easily and satisfactorily. It is evident that *sämri-* is a denominal verb derived with the suffix -*i*-, simply because there is no such verb-forming suffix as -*ri*- in the Turkic languages.[28] Now, the noun (adjective) from which *sämri-* is derived with the suffix -*i*- cannot be anything but *\*sämir / \*sämür*, because Turkic does not possess such final consonant cluster as -*mr*, and the dropping of short narrow vowels in medial position and before a sonant is usual and expectable. As for the meaning of this reconstructed *\*sämir / \*sämür*, there can be no doubt that this was an adjective meaning «fat, fleshy», because it is the function of the suffix [*I*] to form intransitive verbs from adjectives, e.g., *bay* «rich», *bayï-* «to become rich», *qur* «dry» (MK), *qurï-* «to dry up», *öl* «moist», *öli-* «to become moist, to get wet», etc. This grammatical analysis leads us to assume that the reconstructed ancient adjective *\*sämir* might have been the prototype of Middle Turkic *sämüz / sämiz*. Indeed, there is no reason for maintaining that we are confronted here with two different suffixes, nor is there any need for assuming such complicated phonetic developments as *\*rti > z*. The explanation of the alternation $r||z$ displayed in this pair is simple: Pre-Turkic (Vortürkisch) *\*r* developed into *z* in Proto-Turkic, but this sound change took place only in final position; in all other positions, i.e., in intervocalic position and in the positions *rC* and *Cr*, it lost its particular quality and converged with the «normal» *r*.

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[27] This original and non-metathetical form of the verb has survived only in the following languages: Nuig. *sämri-*, Tuv. *semiri-*, and Turkm. *semre- < sämri-*. The more common *sämir-* has come into existence as a result of metathesis.

[28] C. Brockelmann's examples for the establishment of such a suffix (*Osttürkische Grammatik der islamischen Literatursprachen Mittelasiens*, Leiden 1954, pp. 221, 222) do not seem sound and satisfactory. The verbs *inčrün-* «sich beruhigen», *tinčrün-* «Frieden finden» and *yünčrün-* «schwach werden» may be explained as *inč-r-ü-n-*, *tinč-r-u-n-* and *yünč-r-ü-n-* respectively.

In his *Materialien zur Morphologie der türkischen Sprachen*, Helsinki 1957 (= *Studia Orientalia* XXI), Martti Räsänen explains *sämri-* both as a denominal verb in -*ri*- (p. 149) and as a deverbal verb in -*i*- (p. 152)! One of the two explanations must have entered the work as a result of forgetfulness. Neither, however, seems to be correct.

The pair *sämäz* : *sämri-* is not unique. I have collected about forty such examples all displaying zetacism, i.e., the sound change *r* > *z* in final position. Observe, for example, the following pairs of exactly the same type:

MK *yawuz* «bad» : *yawri-* «to become bad or worse; to lose much flesh»

MK *tuwuz* «large, huge» : *tuwra-* «to become large»

Here again it is obvious that *yawri-* and *tuwra-* are denominal verbs formed with the suffixes -*i*- and -*a*- respectively. The nouns (adjectives) from which *yawri-* and *tuwra-* are derived with these suffixes, then, cannot be anything but *\*yawir* and *\*tuwur*. These reconstructed words, in their turn, are probably nothing but the more archaic forms of Middle Turkic *yawuz* (Orkh. *yabïz*) and *tuwuz*.

More curious is the following Middle Turkic pair:

MK *qutuz* «having hydrophobia, mad» : *qutur-* «to become mad or unmanageable»

In this pair, unlike in the above-discussed pairs, both *z* and *r* occur in final position; in other words, the verb occurs as *qutur-*, not as *qutru-!* Although this pair seems to be a strong example contradicting what I am trying to establish, it is not so. In fact, there is a rather simple explanation of the puzzling structure of the verb *qutur-*, and we owe this explanation to Turkmenian *ǧudura-* «to be wild with joy, to become rude and naughty, to become unruly and unmanageable».[29] Turkmenian *ǧudura-* evidently goes back to *\*qūtru-*. The latter must be the original and non-metathetical form of the verb in question. Middle Turkic *qutur-*, then, is nothing but a metathetical form of an older *\*qūtru-*. The existence of a long *u* in the first syllable may explain the rather early occurrence of metathesis in this verbal stem: *\*qūtru-* > *\*qū-tur-* > Turk. *qudur-*, Az. *ǧudur-*, etc.

We may now pass to the examples.

### Zetacism

1. Com. Turk. *biz* «awl» < *\*bïz*, Turkm. *biδ* id., Chag. Uzb. *bigiz* id., Nuig. *begiz* id. < *\*bigir*.[30]

|| Yak. *bürgäs* id. < *\*bür-gäč* (dim.) < *\*büwür* < *\*biwür* < *\*bigir*; for the phonetic development, cf. Yak. *sürbä* «20» < *\*yigirmi*; and for the suffix, cf. MK *quśyač* «sparrow» < *quš* «bird».

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[29] *Türkmen diliniŋ sözlügi*, Türkmenistan SSR İlimlar akademiyasïnïŋ korrespondent-členi M. Ya. Xamzayeviŋ umumï redaktsiyasï bilen, Ashkhabat 1962, p. 201. *ǧuduzla-*, Turkmenian word for «to be attacked by rabies» is, of course, a new formation derived from *ǧuduz* «having rabies» < *\*qūtuz*.

[30] Biyishev equates Turk. *biz* «awl» with Chuv. *pări* (op. cit., p. 199). This equation is incorrect. Chuv. *pări* seems to be taken from *atpări* «awl» which is a compound consisting of *ată* «boots» < *\*ătük* and *pări* < *păra* «auger, perforator» PLUS 3rd p. poss.

2. Com. Turk. *boyaz, boyuz* «throat» < *\*boyur* = Chuv. *pïr* id. < *\*boyur*.[31]

|| MK *boyrul* «having white on the throat» (of animals) (I, 481—12; not listed in Dizin !) < *boyur-ul*; for the suffix cf. MK *bašïl* «having white on the head» < *baš* «head», *bögrül* «having white on the flank» < *bögür* «flank», *boymul* «having white on the neck» < *\*boynul* < *boyun* «neck», etc.

|| AH *boyurdaq* «throat, gullet, pharynx» (p. 33; not listed in the index !) < *boyur-daq*, Bašk. *boyarδaq* «windpipe, trachea» < *\*boyurdaq*, Nog. *boyïrdaq* «throat» < *\*boyurdaq*; cf. IM *boyuzdaq* «windpipe», Tuv. *bōstä* «throat, gullet» < *\*boyuztaγ*.

3. Com. Turk. *boz* «gray» < *\*bor*.

|| Kirg. *borbaš* «a big gray shrike» < *bor baš* «gray headed»; cf. Kirg. *boz baš* «name of a bird of prey».

|| Chag. *borčin* «(gray) duck» < «grayish»[32], Kirg. *borčun* «gray duck» (wild) < *\*bor-čin*; cf. Mong. *boroyčin* «gray» (of female animals), Khalkha *boroγčin* id.

|| Turk. (dial.) *bortaq* «kind of wild duck»; cf. Kaz. *bozdaq* in *bozdaq tüö* «gray camel»[33]

|| Turk. (dial.) *boran* «wild pigeon».

Cf. Mong. *boro* «gray»; Tuv. *bora*, Khak. *pora* «gray» < Mong., Yak. *boroŋ* id. < Mong.

4. Com. Turk. *äz-* «to crush, trample on; to press, oppress; to knead; to dilute» < *\*är-* = Chuv. *ir-* id. < *\*er-*.[35]

|| MK *ärklä-* «to crush, trample on, tread on» (III, 443) < *är-klä-* (freq.); cf. Khak. *körgle-* «to keep looking» < *kör-* «to look at, see».

5. Mid. Turk. *äz-* «to scrape, scratch» < *\*är-*.

|| Turk. (TTS IV, 305) *ärsin, ärsün, äršün* «an iron tool used to scrape dried pieces of dough from the trough», Turk. dial. (Anad. 127) *ärsin* id. < *är-sin*; for the suffix, cf. MK *tügsin* «kind of knot» < *tüg-* «to make a knot».[34]

Cf. Mong. *ürü-* «to grate, file».

6. Tat. *izan* «border; furrow», Bašk. *iδan* id. < *\*izan* < *\*ïran* < *ïr-an* = Chuv. *yăran* «border; furrow; garden bed» < *\*ïran*.[36]

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suffix. Chuv. *păra* goes back to *\*burayu* and is cognate with Tat. *boraw*, Kirg. *burδ*, etc., as V. G. Yegorov explains in his dictionary (pp. 147, 148).

[31] Poppe, *Altaisch und Urtürkisch: UJb.*, Vol. 6, p. 110.

[32] For the suffix of MK *kökšin* «grayish, whitish» < *\*kökčin*, etc.

[33] Ilse Laude-Cirtautas, *Der Gebrauch der Farbbezeichnungen in den Türkdialekten*, Wiesbaden 1961, p. 93.

[34] Räsänen, *Morphologie*, p. 141.

[35] Poppe, *Verg.*, p. 103, equates Chag., Osm. *äz-* «reiben, zerkleinern» with Mong. *erü-* «graben» and Ew. *eri-* «ausgraben».

[36] Gombocz, *KSz* XIII, p. 3, and Poppe, *UJb.* 6, p. 111, equated Chuv. *yăran* with Mong. *iraya* «Spur, Furche, Spur auf dem Wasser». Furthermore, Poppe equates it with Turkm. *iz* «Spur» (*Verg.*, p. 115).

|| Kar. Balk. *irźi* «border, boundary-line», Yak. *irbi* «furrow, a long narrow track cut by a plow», Nog. *yiranaq* «ravine».

7. Mid. Turk., Az. Turk. Kaz., Kirg. *iz* «trace, track», Turkm. *ïδ*, Kum. *hïz*; Nog. Kar. Balk. *ïz*, Gag. *yiz*, Sar. uig. *yiz, yez*, Uig. (Sink.) *yäs* id. < *ïz* < *ïr* = Chuv. *yěr* id. < *ïr*.

|| MK *irtä-, irdä-* «to look for, seek, search, trace» < *ir-tä-*, Yak. *ïrdiä-* «to follow, follow in the tracks; to examine, search» < *ïrtä-*; cf. MK *istä-* «to look for, seek, search» < *ïztä-*, Tarǰ. *izdä-* id., Khak. *iste-* «to watch, follow, look after», Tuv. *iste-* «to follow in the tracks».

Cf. Mong. *eri-* «to look for, seek, search».[37]

8. Turk. *gäniz* «nasal passage» < *käniz < *känir*.

|| Kaz. *keŋirdek* «windpipe» < *käŋir-däk*; cf. *boyuz, boyurdaq*.

|| Kirg. *keŋilǰer* «nasal frame» < *käŋir-ǰär* (suffix unknown).

|| Yak. *käŋiri* «base of the nose, nasal bridge» < *käŋirig*.

|| MK *qaŋraq* «nasal passage» < *qaŋïr-aq* (dim.), Tel. *qaŋïrïq* id., Sar. uig. *qaŋrïq, qarïq, qarq* «nose, nostril» < *qaŋïrïq*, Alt. *qanrïq* «nasal passage» < *qaŋrïq < qaŋïr-ïq* (dim.).

|| Yak. *χaŋïrï, χoŋurū, χoŋorū* «nasal bridge» < *qaŋïrïγ*, Khak. *χārïγ* < *qaγrïγ < *qaŋïrïγ < qaŋïr-ïγ*.

Cf. Mong. *qabar, qamar* «nose, muzzle, snout, trunk of an elephant».[38]

9. Com. Turk. *köküz* «breast, chest» < *kökür < *kökür* = Chuv. *kăGăr* id. < *kökür*.[39]

|| Kaz. *kökrek*, Kirg. *kökürök*, Nog. *kökirek*, Tat. Bašk. *kükräk*, Turkm. *kükrek* id. < *köküräk < kökür-äk* (dim.), Tuv. *χörek* id. < *kögräk < *kögüräk*.

|| Tarǰ. *kökürdaš* «foster-brother» < *kökür-daš*.

Cf. Mong. *kökü(n)* «female breast, nipples; udder»[40] (see Poppe, *Verg.* 108).

10. Tarǰ., Turk. *omuz* «shoulder» < *omur* = Chuv. *ămăr* «chest, breast» < *omur*.

Tuhf. *omrav* «collar-bone, clavicle» < *omrayu*, Kaz. Nog. *omiraw* «chest, breast, bosom, bust» < *omurayu / omrayu*, Kirg. *omurō* id. < *omurayu / omrayu*, Tat. Bašk. *umïraw* «collar-bone, clavicle» < *omurayu < omur-*

[37] Turk. *iz* is equated with Mong. *eri-* «to look for, seek, search» by Ramstedt (*Lautlehre*, p. 111). Poppe equates Turkm. *ïz* with Mong. *iraya* «Spur, Furche, Spur auf dem Wasser» (*Verg.*, p. 115).

[38] According to Poppe, *Introduction to Mongolian Comparative Studies*, (= MSFOu 110), Helsinki 1955, p. 131, Mong. *qabar ~ qamar < *qaŋar*.

[39] Poppe, *UJb.*, Vol. 6, p. 112.

[40] Poppe, *Verg.*, 108. A real cognate of Turk. *köküz* and Chuv. *kăGăr* is Ev. *xukur* «female breast» (cf. G. Doerfer, *Mongolische Elemente im Neupersischen*, Wiesbaden 1963, p. 482).

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*ayu*, Khak. *omïrïγ* «front part of the chest» (of horses) < *omuruγ*, Sag. *omïr* «chest of a horse» < *omru*, Alt. *ōmür* «breast, chest» < *omur < *omru*, Nuig. *murä* «shoulder» < *mura < *omura*.

Cf. Mong. *omuruyu(n)* «sternum, clavicle; breast», *omuruyubči* «shoulder-piece of armor, breastplate».[41]

11. MK *qäš, qäz* «bark of a tree» < *qawaz < *qawïz*, Turk. *qawuz* «husk» (of grain, seeds), Kaz. *kawïz* id. < *qawïr*.

|| MK *qabïrčaq* «coffin», IM *qabïrčaq* «chest, coffer, box», AH *qaburčaq* «an inkpot or a box made from bark», AH *qaburčaqlï baya* «tortoise», Tuv. *χäržaq* «box, case; coffin» < *qawïrčaq*, Yak. *kuorčaχ* id. < *qōrčaq < *qowurčaq* < *qaburčaq*.

Cf. Hung. *koporsó* (= *qoporšō*) «coffin, casket» < Old Chuv. *qopurčay*;[42] Mong. *qayurasun* «chaff»,[43] *qayurčay, qayïrčay* «small box, chest».

12. Com. Turk. *qazan* «large kettle, cauldron», Tarǰ. *qazan, qazγan*, Chag. *qazγan* id., Turkm. *ğazan* id. < *qāzγan < *qāz-γan* (dim.) < *qār-* Chuv. *χuran* id. < *qarγan*.

|| Yak. *χārbaχ* «cauldron, kettle, overburned metal container or pot» < *qārmaq*; cf. Tungus *χarbaχ* «kettle» < Yak.[44], Kyzyl *χōsbaχ* id. < *qāzmaq*.

Cf. Mong. *qayiba* «large kettle» < *qariba*; also cf. Mong. *qayari-* «to fry, grill, roast; to singe with a hot iron, cauterize», Kirg. *qārï-* «to burn with a hot iron, cauterize, brand; to fry, grill, roast», Yak. *χarïy-* id. < Mong.

13. Com. Turk. *qaz-* «to dig», *qazï-* < *qaz-ï-* «to dig lightly, scrape», Turkm. *ğaz-* «to dig», *ğaza-* «to scrape» < *qazï-*, Turk. Tat. *qazma* «pickax; spade» < *qazma*, Turkm. *ğazğič* id. < *qaz-* < *qar-* = Chuv. *χïr-* id. < *qur-*.

|| Yak. *χayγïa, χoyγuo* «pickax with a pointed end, pick» < *qarγay < qarγay*; cf. Yak. *χas-* «to dig» < *qaz-*, *χasïy-* «to scrape» < *qazï-*.

Cf. Mong. *qaru-* «to scrape, plane»; Yak. *χarïy-, χoruy-* «to dig, scrape» < Mong.[45]

14. Com. Turk. *qïmïz* «kumiss, fermented mare's milk» < *qïmïr*.

|| Kaz. *kïmïran* «thin, watery sour milk», Kirg. *kïmran, kïmïran* «(sour or sweet) boiled milk thinned with water», Tuv. *χïmïrān* «watery tea enriched with milk» < *qïmïrān*.

Cf. Mong. *kimura-* «to fall into decay, deteriorate; to be upset, be disorderly», Kalm. *kimrān* «boiled milk thinned with water».[46]

[41] Poppe, *UJb.* 6, p. 112, *Verg.*, p. 68, 129.

[42] Gombocz, *MSFOu* XXX, p. 98.

[43] Poppe, *Verg.*, p. 131.

[44] Ramstedt, *JSFOu* XXXVIII, 1, p. 28.

[45] Gombocz, *KSz* XIII, p. 8, Poppe, *UJb.* 6, p. 111, Ramstedt, *Lautlehre*, p. 111, Poppe, *Verg.*, p. 17, 82.

[46] Poppe, *Verg.*, p. 68, 130.

15. Com. Turk. *qïz* «girl», Turkm. *ǧïð*, Yak. *kïs* id. < \**qïz* < \**qïr* = Chuv. *hĕr* id. < \**qïr*.[47]

|| MK *qïrqïn* «female slave», *qïz qïrqïn* «female slaves», Chag. *qïrqïn* «girls; daughters; female slaves», Kirg. *kïrkïn* in *kïz kïrkïn* «girls; daughters» < \**qïrqïn* < \**qïrqun* (coll.); for the suffix -*qïn*, cf. Orkh. Turk. -*yun* / -*gün* in *tayyun* «sons» (lit.: «young horses, colts»), *kälingün* «daughters-in-law» < *kälin-gün*, Volga Bulg. *hïryum* «female slaves»[48] < \**qïrqum* < \**qïrqun*.

|| Yak. *kïrǧït* in *kïrǧït-tar* < \**kïrǧït-lar* pl. of *kïs* < \**qïryut* pl.

|| MK, Tarj., IM, AH, Chag. *qïrnaq* «female slave» < *qïr-naq* (dim.); for the suffix -*naq*, cf. Turk. *baǰanaq* «husbands of sisters» < \**bāǰanaq*, Turkm. *bāǰa* id.

16. Com. Turk. *qïz*- «to become heated, get red-hot; to get excited, get angry», Kirg. *kïzï*- «to get excited, get angry» < *qïz-ï*-, Yak. *kïs*- «to become red» < \**qïz*- < \**qïr*- = Chuv. *χär*- «to become heated, to get angry» < \**qïr*-.[49]

|| MK *qïrya*- «to get angry at someone and to turn away from him».

|| Kaz. *kïrtïy*- «to get angry, to pout».

17. Orkh. *qoduz* «girl, woman», MK *qoðuz* «widow» < \**qodur*.

|| MK *qoðurčuq* «doll, puppet» < *qoður-čuq* (dim.), IM *qoyurčaq* id., Tuhf. *qawurčaq* id. < \**qowurčaq* < *qoyurčaq*, Turk. dial. (Anad. 211) *qawurčaq* id., Chag. *qoyurčaq*, *qoyïrčaq* id. < \**qowurčaq* < *qoyurčaq*, Nuig. *qorčaq*, Kaz. Nog. *qurčaq*, Kirg. *qïrčaq*, Tat. *qurčaq*, Bašk. *qïrsaq* id. < *qoyurčaq* < *qoðurčuq*.

18. Com. Turk. *qoŋuz* «bug, beetle, dung-beetle», Chag. *qoŋuzyan*, *qoŋuzlan* id. < \**qoŋur* = Chuv. *χämär* «bee» < \**qoŋur*.[50]

|| Yak. *χomurduos*, *χomurduos* id. < \**qoŋur-ï-yač* (dim.).

19. AH, Tuhf., Bulg. *qoquz* «hollow place, depression, gully, ravine», IM *qoqus* «hollow, cavity» < *qoquz*, Kaz. Nog. *quwïs* «hollow place, depression: ravine, slit trench» < \**qoyuz* < \**qoyur*, *qoqur*.

|| Turk. *qoqurdam* «depression, gully, ravine» < *qoqur-dam*.

Cf. Mong. *qoŋqur* «hollow place, depression, gully», Kirg. *qoqtu* «ravine», *qoŋul* «hollow, cavity, depression» < Mong. *qoŋgil* «hollow; narrow ravine, gorge»; Cf. also Com. Turk. *qoyuš* «hollow, empty; hollow place», MK *qowï*, *qowuq* «hollow, empty; hollow place, cavity».

20. Com. Turk. *qutuz* «having hydrophobia, mad», Turk. *quduz*, Az. Turkm. *ǧuduz* id. < \**qütuz* < \**qütur*.

|| Com. Turk. *qutur*- «to be attacked by rabies, to go mad» < \**qütru*-,

Turkm. *ǧüdura*- «to be wild with joy; to be come rude and naughty, to become unruly and unmanageable» < \**qütru*- < *qütur-u*-.

21. Com. Turk. *sämiz* «fat, fleshy» < \**sämir* = Chuv. *samăr* id. < \**sämir*.[51]

|| Com. Turk. *sämir*- «to grow fat» < *sämri*-, MK, Nuig. *sämri*- id., Tuv. *semiri*- id., Turkm. *semre*- id. < *sämri*-.

|| MK *sämürgük* «kind of bird resembling the nightingale» < *sämürgük* (dim.).

22. Com. Turk. *säz*- «to feel, sense, perceive, be aware of through the senses» < \**sär*-.

|| Chag. *sergäk* «awake; a being awake», Kaz. Kirg. *sergek* «sensitive, aware, awake, vigilant, lively, vivacious», Tuv. *sergek* id. < \**sär-gäk*.

Cf. Mong. *sere*- «to awaken, revive; to recover consciousness; to become sober», *seregün* «awake, vigilant», etc.[52]

23. Com. Turk. *sïz*- «to leak, ooze, drip», MK *sïz*-, *sïz*- id., Turkm. *sïz*- id. < \**sïz*- < \**sïr*- = Chuv. *sur*- id. < \**sar*-.

|| MK *sarq*- «to leak, ooze, drip» < *sar-q*- (intens.), *sarqur*- «to cause to drip» < *sarq-ur*-, *sarqïndï* «dripping, that which drips», Kaz. Tat. *sarq*- id., Bašk. *harq*- id., *harqïndï* «drippings, oozings» < \**sarqïntï*, Kirg. *sarïq*- «to leak, ooze, drip», Turkm. *sarq*- id., *sïrïq*- id. < *sïr-ïq*- (intens.), Turk. dial. (Anad. 339) *sïrq*- id., *sïrqïntï* «drippings, oozings».

Cf. Mong. *sari*- «to drip, leak».

24. Com. Turk. *sïzla*- «to ache, hurt, suffer pain», Khak. *sïsta*- id. < \**sïzla*-, Tuv. *ïsta*- id. < \**sïzla*- < *sïz-la*- (freq.) < \**sïr*- = Chuv. *sur*- id. < \**sar*-.

|| Turkm. Kaz. *sïrqïra*- id. < *sïr-qïra*-, Tuv. *sarǧï*- id. < \**sarqï*-; cf. Kaz. *sïrqat* «sickness, illness» < *sïrqa-t*, Kaz. Nog. *sïrqaw*, Tat. *sïrqaw*, Kirg. *sïrqō* id. < \**sïrqay* < *sïrqa-y*.

Cf. Mong. *sirkire*-, *sirkira*-, *šarkira*- «to bite, sting (as pain or sensation produced by eating hot pepper, etc.); to feel pain as from rheumatism»; cf. also Mong. *sïrqa(n)* «wound; sore; injury», *sïrqad*- «to become wounded or injured», *sïrqala*- «to become wounded or injured».

25. Com. Turk. *taz* «bald, lacking hair on the head, lacking the natural covering» < \**tar* = Hung. *tar* id. < Old Chuv. \**tar*.[53]

|| Kaz. *tarbaqa* «frog, toad»[54] < *tar baqa*; cf. MK *taz qoy* «hornless sheep». Cf. Mong. *taraqay*, *tarqay* «scattered, dispersed, spread, disseminated», *tarbalǰi* «sparrow hawk; tawny eagle» = Com. Turk. *taz baš* «bald-headed eagle».[55]

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[47] Gombocz, *MSFOu* XXX, p. 202, Poppe, *UJb.* 6, p. 111, Ramstedt, *Lautlehre*, p. 104.

[48] Pritsak, *UAJb* 35, p. 349.

[49] Ramstedt, *Lautlehre*, p. 112.

[50] Poppe, *UJb.* 6, p. 111.

[51] Poppe, *op. cit.*, p. 112.

[52] Gombocz, *KSz* XIII, p. 6, Poppe, *UJb.* 6, p. 112, Ramstedt, *Lautlehre*, p. 113.

[53] Gombocz, *MSFOu* XXX, p. 127, Poppe, *UJb.* 6, p. 112, Ramstedt, *Lautlehre*, p. 111.

[54] Boris N. Shnitnikov, *Kazakh—English Dictionary*, The Hague 1966, p. 193.

[55] Ramstedt, *Lautlehre*, p. 111.

26. MK *taz* «multicolored, varicolored» (III, 148—25, 149—2) < *\*tar*.

|| MK *taryïl* id. < *tar-γïl* (dim.); cf. Kirg. *qïzyïlt* «reddish» < *qïz-γïl-t*, *qïzïl* «red».

|| Kaz. Kirg. *tarlan* gray (of horses) < *tarïl-an*; cf. Yak. *sïär* «roan or light chestnut» (of horses) < *\*yägir*, Orkh. *yägrän* id. < *yägir-än*.

|| Kaz. *tarman* «white with yellow circles» (of horse coat) < *tar-man* (dim.).

Cf. Mong. *tarlan, tarïlan* «spotted, speckled, flecked; varicolored, streaked»; Kirg. *tazïl* in the phrase *qïzïl-tazïl* «various kinds of red objects» < *taz-ïl*.

27. Uig. *tägzin-, täzgin-* «to turn around, circle around, to roll», MK *täzgin- < tägzin-* id., Tuhf. *dägzin-* id., Chag. *tegzin-, teksin-* id., Tuv. *deskin-* id. < *täzgin- < tägzin- < tägiz-in-* (refl., medium) < *tägir-*.

|| Uig. *täglir-* «to be turned around» < *\*tägril-* (pass.), *tägriklä-* «to encircle» < *tägir-iklä-* (freq.), Uig. MK *tägrä* «around», Tat. *tirä* id. < *tägrä* < *tägir-ä* (ger.), Uig. *tägirmän* «mill», MK *tägirmän* «mill; millstone» < *tägirmän*, Uig. *tägirmi* «round about, all around, surrounding» MK *tägirmä* «round, circle» < *tägir-mä*, MK *tägräk* «ring, circle» < *tägir-äk*.

Cf. Mong. *tögerig, tögürig, tügürig* «circle, disk; circular, round».

28. Orkh., Uig., MK *täz-* «to run away, flee», Tuv. *des-* id. < *\*täz-*, Turkm. *tez-* «to run or flee in panic», Uig. *täzgin* «fugitive, runaway», *täzük* «fugitive, fleeing», MK *täzgäk, täzik* id., *täzgi* «panic» < *täz- < \*tär-* = Chuv. *tar-* «to flee, run away» < *\*tär-*.[56]

|| Uig., MK *tärk* «quick, fast» < *tär-k*, MK *tärkin* «quickly, fast» < *tärk-in* (instr.), MK, IM, AH *tärklä-* «to quicken, hasten, to cause to be quick», Tarj. *tärklät-* id. < *tärk-lä-t-*, IM *tärklig* «one who hurries» < *tärk-lig*.

Cf. Mong. *tergele-* «to run swiftly, rush, dash»,[57] *türgen* «quick, swift, rapid, speedy», *türgele-* «to speed up; to hurry, hasten».

29. Com. Turk. *tïgïz* «dense, thick; solid, firm; taut, tight, narrow; thickset, stocky, sturdy, squat», Kirg. Nog. *tïyïz* id., Turkm. *dïgïz* id., Turk. *tïgïz* «short and thick, thickset, fleshy», Tat. Kaz. Kklp. *tïyïz* «compact, solid, firm; tight, narrow; pressing, urgent», Bask. *tïyïd* id. < *tïgïz* < *\*tïgïr*.

|| Kirg. *tïyïrčïq* «of short stature, short and thickset, stocky» (of human beings and animals) < *\*tïgïrčuq* < *tïgïr-čuq* (dim.).

Cf. MK *taquzmaq, tayuzmaq* «short and thickset» < *taquz | tayuz-maq* (dim.?), Kirg. *tïqïs* «short and thick» < *tïgïz, tïqčïy-* «to become short and thick, be thickset and stocky», *tïqčïyïy* «thickset, stocky» (of men).

30. Com. Turk. *tiz* «knee», Turkm. *dïz* id. < *\*tïz*, Alt. Kaz. Kirg. *tize* id. < *tiz-ä*, Uzb. *tiz, tizzä* id. < *\*tïz-ä*, Khak. *tizek* id. < *tiz-äk* (dim.), Sag. *tize-*

[56] Poppe, *UJb.* 6, p. 113.
[57] Poppe, *Verg.*, p. 14.

*nek* id. < *tiz-ä-näk* (dim.), Khak. *tistenek* id. < *\*tissänäk < \*tizzänäk < \*tizänäk < tiz-ä-näk < \*tir* = Chuv. *čĕr* id. < *\*tir* > Hung. *tér-d* id.[58]

|| MK *tirsgäk* «elbow» < *tir-s-gäk* (dim.), Turk. Az. *dirsäk* id., Turkm. *tirsek* id., Kaz. *tirsek* «shin», Kirg. *tirsek* «tendon of Achilles», Khak. *tirsek* «knee of the hind leg» (of animals), Tuv. *diskek* «knee» < *tirsgäk*.

Cf. Mong. *türey, türüy* «bootleg, boot-top», Tung. *turaksa, turekse* id.[59]

31. Com. Turk. *toquz* «nine» < *\*toqur* = Chuv. *tâχăr, tăχχăr* id. < *Volga* Bulg. *toχur* < *\*toqur*, Danube Bulg. *tvir* (= *tïvir*) < *\*tovir* < *\*toyïr* < *\*toqur*.

|| AH *toqurčin* «kind of game resembling chess», Turk. (TTS, XVI c.) *toqurǰun* «a chess-like game played with nine small stones», (Bud.) *toqurčin, doqurčin* «kind of game played with nine small stones or shells», (Redh.) *toqurčin* «kind of game played with small stones or shells», (Sami) *doqurǰun* «kind of game played with beads», (Vef.) *doqurǰun* id., (Anad. 106) *doqurǰun* (Edirne) «a chess-like game played with nine small stones», *doqurǰum* (G. Antep) id. < *\*toqurčin < toqur-čin* (adj.).

32. Com. Turk. *toz* «dust», MK (III, 123), Turkm. *tōz* id. < *\*tōz < \*towuz*[60] < *\*towur*.

|| Com. Turk. *topraq* «dirt, earth, soil» < MK *topra-* «to dry up, to wither up» < *\*towra- < towur-a-*, MK *topraš-* «to dry up and become dust», MK *topurγan* «soft and dust-like earth» < *\*topruγan < topru-γan < \*towru- < towur-u-*.

Cf. MK *toy* «dust» < *\*tow*, Kirg. *topon* dust» < *\*topan < \*towan*;

33. MK *tuwuz* «large, huge» < *\*tuwur*.

|| MK *tuwra-* «to become large» < *tuwur-a-*.

34. Orkh. *yabïz* «bad», Uig. *yabïz, yawïz*, MK *yawuz, yafuz* id. < *\*yabïr*.

|| MK *yawrï-* «to become bad, become worse; to lose much flesh or weight» < *yawïr-ï-*, Orkh. *yabrït-* «to rout, ruin, defat» < *yabïr-ï-t-* (caus.).

35. Chag. (Rūmī) *yalduz* «gilded», Osm. Krm. *yalduz, yaldïz* «gilding; gilt», Turk. *yaldïz* id. < *\*yaltuz < \*yaltur*.

|| Uig. *yaltrï-, yaltïr-* (< *yaltrï-*) «to shine, glitter, glow» < *\*yaltur-ï-*, MK *yaldrï-, yaldra-* id., *yaldrïg, yaldruq* «polished, shiny, lusterous» < *yaltrï-q*, Bulg. *yaldrïm* «glass» < *\*yaltrïm < yaltrï-m*, Chag. Osm. Turkm. *yaldïra-* «to shine, glitter, glow, sparkle», Alt. Tat. Bask. Nog. *yaltïra-*, Kirg. *ǰaltïra-*, Kaz. Kklp. *žaltïra-*, Khak. *čaltïra-* id. < *\*yaltïra- < \*yaltra- < yaltur-a-*.

Cf. Tel. *yaltïn* «luster, brilliance, brilliancy» < *yaltï-n, yaltïn* «sparkling, twinkling, glitter» < *yaltï-η*. See below.

36. Com. Turk. *yulduz* «star», Tarj. *yalduz* id. < *yulduz*, Bulg. *yalduz, yaldïz* id. < *yulduz < yultuz < \*yultur* = Chuv. *śălDăr < \*yultur*.

[58] Gombocz, *MSFOu* XXX, p. 129.
[59] Ramstedt, *Zur Verbstammbildungslehre der mongolisch-türkischen Sprachen* *JSFOu* XXVIII, 3, p. 78; Poppe, *UJb.* 6, p. 113.
[60] Louis Ligeti, *Les voyelles longues en turc:* *JA* CCXXX (1938), p. 201.

|| MK *yuldra-, yuldrï-* «to shine, glitter, glow» (of metal and jewel), AH *yuldura-* «to lighten, flash» (of lightning), CC *yïltra-* id. < *\*yultra-, yïltramaq* «lightning», Turk. (TTS IV) *yïldura-, yïldïra-, ïldïra-* «to shine, glitter, glow, sparkle», Turkm. *yïldïra-,* Kirg. *jïltïra-,* Kaz. Kklp. *žïltïra-,* Khak. *čïltïra-* < *yïltra-* < *\*yultra-* < *yultur-a-,* AH *yuldurum* «glass lightning» < *\*yuldrum* < *\*yultrïm* < *yultrï-m,* Tarj. *yuld(u)r(u)m* «lightning» (Turkm.), *yuldïrïm* «lightning; glass», Khwar. (NF, HS) *yïldïrïm* «lightning» Turk. Turkm. Kar. T. L. *yïldïrïm* id., Az. *ïldïrïm* id., CC *yïltrïn* «glass; lightning» < *\*yïltrïm* < *\*yultrïm* < *yultrï-m.*

See 35.

37. Com. Turk. *-sïz / -siz* «-less, without» < *\*-sïr / -sir* = Chuv. *-sǎr / -sér* id. < *\*-sïr / -sïr.*[61]

|| *-sïra- / -sïrä* (< *-sïr-a- / -sïr-ä-*) in Orkh. *ilsirä-* «to become landless» < *il-sirä-, qayansïra-* «to become rulerless» < *qayan-sïra-,* Khak. *öksire-* «to become an orphan» < *\*ögsirä- < ög-sirä-* (cf. Khak. *öksis* «motherless, orphan» < *\*ögsiz*), etc.

= Mong. *-sar / -ser* «-less, without»[62]

38. Com. Turk. *-tüz* in *küntüz* «daytime; by day, during the day», Yak. *künüs* «day, daytime» < *\*küntüz* = Chuv. *kǎnDǎr* «noon, midday; daily; south, southern» < *\*küntür.*[63]

|| *-düri* in Uig. *kündüri* «in the south» ⪦ *kün* «day, sun, south», *öŋdüri* «in the east» < *öŋ* «front», etc.

= Mong. dative-locative suffix *-dur / -dür, -tur / -tür.*[64]

If one takes the above-given evidence into consideration, he comes to the conclusion that the Chuvash / Turkic *r* in these examples is older than the Turkic *z,* and the latter goes back to the former. In other words, there is no «Rhotazismus» or «Rhotacism» here, but only «Zetacism»! Another conclusion at which one arrives simultaneously is that this zetacism took place only in final position; in all other positions this particular *r* lost its distinctive nature and converged with the «normal» *r.* Finally, in the face of linguistic evidence taken from Chuvash, one also concludes that the zetacism or the sound change *\*r > \*z* took place at the end of the Pre-Turkic (Vortürkisch) stage or at the beginning of the Proto-Turkic period. In fact, this sound change, together with the change *\*l > \*š* which will be dealt with further below, marks the end of the Pre-Turkic period and gives rise to the emergence of two ancient dialects, i.e., the *z-* and *r-*dialects, or, more precisely, Proto-Turkic and Proto-Chuvash.[65]

[61] Poppe, *UJb.* 6, p. 112.
[62] Ramstedt, *Morphologie,* p. 244.
[63] Poppe, *UJb.* 6, p. 112.
[64] Räsänen, *Morphologie,* p.
[65] Poppe, *Verg.,* p. 155.

However, it should be noted that it is not very likely that the zetacism could have stopped suddenly at a certain point of time in the past. The sound change *\*r > \*z* could not have possibly been completed in a relatively short period of time like the end of the Pre-Turkic or the beginning of the Proto-Turkic period. The process of transition from *\*r* to *\*z* must have taken a considerably long time and archaic pronunciations of some words must have been preserved for some time in the speech of certain communities or individuals after the sound change had essentially been completed. The occurrence of the form *baltïr* «younger sister-in-law»[66] instead of the expected form *\*baltïz* in Uigur may testify to this assumption.

On the other hand, and being more important than the preservation of some archaic forms in *-r* in Old and Middle Turkic, «Zetacism» must have continued to be effective sporadically during and after the Proto-Turkic period, for we possess a number of examples in *-z* which do not got back to Proto-Turkic, but only to Old Turkic, or, to be more exact, to certain dialects of Old Turkic, e.g., Turk. Az. *büz-* «to pull together; to constrict, contract, wrinkle», Turkm. *büz-, bür-* id., AH *büz-* id., MK, Com. Turk. *bür-* id., Chag. *tïrgüz-* «to bring to life, to resuscitate; to enliven», MK, Uig. *tïrgür-* id., etc. In Kāšγarī we find such alternative forms as *altur-* «to cause to take» || *alduz-* id. (cf. AH *altuz-* id.), *bïltür-* «to make known, notify» || *bildüz-* id., etc. According to Kāšγarī the forms *alduz-* and *bildüz-* belong to the Oguz dialect. These forms must have come into existence much earlier, for they also occur in Orkhon Turkic and Uigur, e.g., Orkh. *alt(ï)z-* «to cause to catch», Uig. *bïltïz-* «to make known, notify». As is known, the suffix *-tïz- / -tiz-* is a compound suffix consisting of two elements, i.e., *-t-* and *-z-.* Although causative stems in *-tïz- / -tiz-* (later *-duz- / -düz-*) may be regarded as relatively new or dialectal forms for the Old Turkic and Middle Turkic periods, the causative suffix *-z-* is by no means new. It occurs in such Common Turkic forms as *ämiz-* «to suckle», *tamïz-* «to cause to drip», etc., therefore it goes as far back as the Proto-Turkic period. However, in Kāšγarī we also find certain forms in *-z* which do not occur elsewhere or do not go back to Proto-Turkic, e.g., *quzï-* «to become dry» (III, 264), *quzut-* «to make dry» (II, 306). Kāšγarī's examples for the use of these verbal stems are the following: *anïŋ boyzï ašqa quzïdï* «His throat became dry for food, i.e., he became very hungry, eager to eat, etc.», *ol anïñ boyzïn quzuttï* «He made his throat dry, i.e., he whetted his appetite». It is evident from these examples that *quzï-* and *quzut-* are nothing but the alternative forms of the verbs *qurï-* and *qurut- / qurït-.* Moreover, we do possess Kāšγarī's

[66] W. Bang and A. von Gabain, *Analytischer Index zu den fünf ersten Stücken der türkischen Turfan-Texte,* Berlin 1931, p. 13. The meaning «ältere Schwägerin» should be corrected.

remarks on these puzzling and problematic forms in -z. As a matter of fact,
we owe these corrected and restored forms to his explanations in III, 264 and
II, 306. On *quzï*- Kāšγarī comments as follows: «This is what is in use. The
correct form is the one in *r* without a dot. This is an exception to the rule, just
as the word *ämüz*- in the sentence *süt ämüzdi* «she suckled» is». In II, 306, on
the form *quzut*- he makes the following remark: «The origin of the letter *z* in
this word is *r*». Thus, we also possess Kāšγarī's affirmation of the theory of
zetacism dating from the XI century. The occurrence of *z* in medial position
in *quzï*- and *quzut*- can be explained easily: The verb *qurï*- is a denominal stem
derived from the adjective *qūr* «dry». The latter occurs twice in MK, first as
an entry (III, 122-12), then in the example, as the first element of the com-
pound noun *qūrbaqa* «toad» (ibid., line 16). (For the length of the vowel *u*, cf.
Turkm. *ğūra*- «to become dry» < *\*qūrï*-, *ğūrï* «dry» < *\*qūrïγ* < *qurï-γ*). It
follows, then, that the forms *quzï*- and *quzut*- do not go back to *qūrï*- and
*qurut*-; they must have been derived from the alternative form *\*qūz* of the
adjective *qūr*. The former has not been attested anywhere. It is very likely
that it once existed in one dialect, but soon became obsolete. The verbal
stems derived from it, however, managed to survive until the XI century,
as is seen from the examples in Kāšγarī. This ancient dialect in which the
zetacism must have been effective for some time after the Proto-Turkic period
had actually ended, was, in all likelihood, the Oguz dialect. Later, however,
the center of density of this tendency toward zetacism must have shifted to
the Kipchak dialect, as will be seen from the frequent occurrence of the
causative suffixes in *z* in the languages descending from it.

Below is given an incomplete list of examples belonging to this «late
zetacism».

### Late Zetacism

1. Az. Turk. *büz*- «to pull together, constrict, contract, wrinkle; to make
folds, to stitch pleats», Turkm. *büz*-, *bür*- id., IM, AH *büz*- id.
   || MK, Com. Turk. *bür*- id., Tat. Bašk. *bör*-, Khak. *pür*-, Nuig. *pürü*-
< *bür-ü*-, Yak. *bür*, *bürčüy*- id. < *\*bürči*- < *bür-či*-.

2. Az. Turk. *čöz*- «to untie, undo, loosen, untangle; to solve», Turkm.
*čöz*-, *čöš*- id., AH, HS, Chag. *čöz*- id.
   || MK *yör*- «to untie, unwrap», Yak. *söör*- «to untie, undo, loosen, untangle»
< *\*yör*-; for the sound change *y* > *č*, cf. Az. Turk. *čiy* «raw, uncooked», Turkm.
*čig*, Khak. *čig* id. < MK *yig* id.
   Note: Turkm. *čöš*-, etc. must have come into existence as a result of
contamination: cf. Com. Turk. *säš*- «to untie, undo, loosen, untangle» (= Chuv.
*salt*- id. < *\*sält*- < *säl-t*-).

3. Tuhf. *iz*-, *ir*- «to melt, dissolve, become liquid».
   || MK, Com. Turk. *äru*-, *äri*- id., Uig. *ärgüz*- «to melt, dissolve, make
liquid» < *är-güz*-, Yak. *ir*- «to melt» < *\*är*-, *iriär*- caus. < *\*ärgär*-.

4. Uig. *közün*- «to be seen, appear», MK (Argu) *közün*- id., Tarj. *közin*- id.
< *közün*- < *köz-ü-n*- (pass., refl.), Uig. *köznäk* «reflection» < *\*közünäk* < *közün-
äk*, *közüngü* «mirror», MK *közüngü*, *közngü* id., Khak. Tuv. *közül*- «to be seen,
appear, seem» < *köz-ü-l*- (pass.), Uig. *közkiš*- «to see each other, be seen mutually»
< *\*köziküš*- rec. of *közik*- «to be seen», Nog. *közik*- «to become noticeable»,
Kirg. *közük*- id. < *köz-ü-k* (pass.), MK *közgär*- «to cause to see» < *köz-gär*-, NF
(Brock. 208) *közgit*- «to show» < *köz-git*-, Khak. *köskülen*- «to appear fre-
quently» < *\*közgülä-n*- < *köz-gülä*- (freq.), *közüt*- «to show» < *\*közüt*-, *közidig*
«demonstration, show; instruction, direction, index» < *\*közütüg*, *közidim*
«example, sample, model» < *\*közütüm*.
   || Com. Turk. *kör*-, *körül*-, *körün*-, *körtür*-, *körtkür*-, *körküt*-, *körsät*-, etc.

5. MK *qazanqu* «tangled» < *qaz-anqu*, *\*qaz*- «to mix up, tangle, mingle».
   || MK (Oguz) *qar*- «to add, mix, mix up», Turk. *qar*- id., Turkm. *ğar*- id.
< *\*qār*-, Uzb. *qār*- «to add, mix; to mix up, mingle, tangle, blend; to involve,
entangle», etc.

6. MK *quzï*- «to become dry», *quzut*- «to make dry».
   || MK, Com. Turk. *qurï*-, *quru*- «to become dry», Turkm. *ğūra*- id. < *\*qūrï*-
< MK *qūr* «dry», Turkm. *ğūrï* «dry» < *\*qūrïγ*, Yak. *kūr*- «to dry, wither up»
< *\*qūrï*-, etc.

7. Kirg. *maz* «gay, lively; glad, joyous, joyful; satisfied, content», *maz
bol*- «to take pleasure, to obtain satisfaction».
   || Kirg. *marï*- «to take pleasure, to obtain satisfaction» < *\*imarï*- < *\*ama-
rï*-; cf. Mong. *amura*-, *amara*- «to rest, relax; to feel contentment or joy; to be
relieved, Tuv. *amïra*- «to be contented, to console oneself, to take comfort, to
be comforted or consoled; to be glad, to rejoice».

8. MK *munduz* «mad, wild, uncontrolable» < *\*muntur* < *mun*- «to wander
about, to move here and there, to go astray, to lose the way».
   || Uig. *muntru-muntuz* «mad, wild, uncontrolable» < *muntur muntuz*
(hend.); cf. Turk. *dälik däšik* «full of holes», *döl döš* «progeny, descendants», etc.

9. Tuhf. *salyaz* «saliva, spittle» < *salyar* < *sal yar* (hend.).
   || Uig. *yar* id., MK *yār* id., *yar suδ*- «to spit», Turk. (TTS IV) *yar, ayïz
yarï* id., *salyar* id.
For *sal* cf. Mong. *silüsün* «saliva, spittle, slaver, slobber», *silüsde*- «to
moisten with saliva», etc.

10. Tuhf. *sïzya* «earring», (margin) *isïrqa* id.
   || AH *sïrya, isïrya, isïrya* id., IM *isïrya*, Tarj. *isïryaq* id., Com. Turk.
*sïrya* < *isïrya*, Yak. *ïtïrğa, ïtarğa* id. < *\*isïrya*.

11. Kaz. *ïz*- «to sew», *ïzïl*- «to sew together, to be interlaced, to interlace
(intr.), to be sewed together», *ïzba* «narrow ribbon sewed with thread of twisted

wool (belonging to a yourta), ribbon for braiding the hair, woven of colored silk twisted thread» < *izma < iz-ma < *siz-.

|| Com. Turk. siri-, sir- «to stitch, quilt, sew», MK siri- «to sew, stitch», Kar.-Balk., Kaz., Tel. sir- id., MK sirmaq «coarse stitches on a donkey's saddle» < sir-maq, Kaz. sirmaq «padded warm jacket; quilted», Turk. sirma «lace of silver, silver-gilt thread» < sir-ma.

Cf. Mong. siri- «to quilt, stitch».

12. Tuhf. tartaz «quail».

|| MK tartar «a bird resembling the turtle-dove», Bulg. tartar «kind of quail», Kaz. tartar «crake, corncrake, landrail», Kirg. tartar id.

13. MK yumuz, yumiz «fleshy, plump, stout».

|| MK yumurla- «to make round» < yumur-la-, kirg. jumur, Kaz. žumïr «round; well-fed» < *yumur, Kaz. žumirla- «to make round» < yumurla-, MK yumur «third stomach of ruminants», Kirg. jumur id., Kaz. žumir, žumiršaq id. < *yumurčaq, MK yumurtya «egg; testicles» < yumur-t-ya (dim.), Tuhf. yumrutqa «egg» < yumurtya, yumrutla- «to lay eggs» < yumurt-la-.

### In Suffixes

Zetacism is also observed in the following suffixes: -r- || -z-, -tur- || -tuz-, -γur- || -γuz-, -γar- || -γaz- and -ar- || -az-,[67] and the suffix -γar- || -γaz- of denominal verbs.

### A. -z-

The occurrence of the suffix -z- is quite rare and limited to the following stems in Old and Middle Turkic:

1. Khwar., Chag. (Brock.) aquz- «to let flow», Chag. (Sang.) aγïz-, Tat. Bašk. Kaz. Kklp. Kirg. aγïz-, Tuv. Khak. aγïs-, Uzb. āqiz-, Nuig. (Hami) egiz- id. < aγïz-, Nog. aγïst- id. < aγïz-t-; cf. Orkh., Uig. aqït-, MK aqït-, aqtur- Turk. Turkm. aqït-, Az. aγït- id.

2. Chag. (Brock.) baqïz- «to allow to look», Uzb. (Kon.) bāqiz- «to make look»; cf. MK baqït-, baqur-, Com. Turk. baqït-, baqtur- id.

3. MK ämüz- «to suckle», IM ämiz-, Chag. (Sang.) emiz-, Kaz. Kklp. Kirg. Nuig. (Hami) emiz-, Tat. imez-, Bašk. imeð-, Sar. Uig. emiz-, Nog. emiz-, emizt- id., Tarj., AH, Tuhf., Turk. (TTS) ämzür- id. < ämüz-ür-, Turk. Tuv. ämzir-, Uzb. emzir- id., Az. ämizdir-, Uzb. emizdir- id.; cf. Nuig. (Jar.) emit-, emit-, imit-, Nuig. emit-, ämgüz-, Turkm. emdir-, Yak. ämnär-, ämtär- id. < *ämtür-. = Chuv. ĕmĕrt- «to suckle, nurse» < *ämürt- < äm-ür-t-, ĕmter- id. < *ämtär-.

4. Chag. (Rad.) qorquz- «to frighten, scare», Nuig. (Hami) qorquz-, qorqaz-,

Turkm. ġorquz-, Az. ġorxuz- id.< qorq-uz-, Nog. qorqïst- id. < qorquz-t-; cf. MK, Com. Turk. qorqït-, qorqut- id.

5. Chag. (Brock.) ötüz- «to let pass»; cf. Uig. ötkür- «to penetrate, go into». MK ötkür-, ötür- id.

6. Uig. tamïz- «to cause to drip», MK, Chag. (Brock.) tamuz-, Chag. (Sang.) tamïz- id., Tat. Kaz. Kklp. Kum. Kar.-Balk. Kirg. Alt. tamïz-, Bašk. tamïð-, Uzb. tāmiz-, Az. damïz- id., Turk. (TTS) damzur- id. < tamuz-ur-, AH tamzum «drop» < tamuz-um; cf. Nuig. (Jar.) tamït-, taemit-, temit- «to drop, drip», tamdur- «to cause to drip», Turkm. damdir- id., Nuig. tamġuz-, Nog. tamġïst- id. < tamyuz-t-, tamdïr- id.

7. MK tapïz-, tapuz- «to ask a riddle» (< «to make find») < tap- «to find, solve a riddle», tapuzyuq, tapzuyuq < tapuzyuq, tapzuy «riddle» < tapuz-uy, Tuv. tïvïzïq id. < *tapuzuq.

8. Chag. (Brock.) tägüz- «to cause to touch, reach, or arrive», Uzb. tegiz-, Nuig. (Jar.) tegüz- id., Tuv. degis- «to touch; to hit the target» < *tägiz-, Uzb. tegizdir- caus. of tegiz-; cf. Uig., MK tägür- «to cause to touch, reach, or arrive», Chag. (Sang.) tegür-, CC teyir-, Kirg. tiyir-, Turk. deyir- id.

9. Orkh. tut(u)z- «to cause to catch», Uig., MK tutuz- «to hand over, deliver», Az. tutuzdur- ind šillä t.- «to give smb. a slap on the face»; cf. MK tuturyu «that which should be ordered and carried out» < tutur-yu, tutruy «will, testament» < tutur-uy, Tat. totrïq «stability, firmness» < *tuturuq, Uzb. tuturiq «coherence» < *tuturuq.

10. Uig. tuyuz- «to make understand, make known»; cf. MK tuytur- id., Turk. duyur- «to make known».

11. Uig., Tuhf. tütüz- «to smoke, fume, fumigate», Uig. tützük, tütsük «fumigating stick» < tütüz-ük, Turk. (TTS) tütüzdür-, dütüzdür- «to cause to smoke, to fume, fumigate».

= Chuv. tĕtĕr- «to cause to smoke» < *tütür-, tĕtre «mist, fog» < *tütrüg.

12. Orkh., Uig. uduz- «to lead, conduct» < ud- «to follow»; cf. Mong. udurid- id. < uduri-d-.[68]

13. Uig., Tuhf. utuz- «to make other person win, to lose», Turk. (TTS) utuz-, ütüz- id., Az. uduz- id. < ut- «to win» (at play), Uig. utzuq-, utsuq- «to lose» < utuz-uq-; cf. Com. Turk. uttur- «to lose».

This suffix also occurs in comparatively new constructions like the following:

Khak. artïs- «to retain, keep, reserve» < *artïz- < art- «to remain over».

Kirg. jayïz- «to cause to please» < jaq- «to please» | yaq-.

Kirg. juyuz- «to paste» < juq- «to stick» < yuq-.

Az. dadïz- «to let taste», dadïzdïr- id.; cf. Turkm. dādïr- id. < *tätïr-, Turk. tadïr- id.

Az. *doyuzdur-* «to cause to give birth; to assist delivery» || *doyur-* id. < *doy-* «to give birth».

Tat. *qabïz-* «to light, kindle, set on fire» < *qap-* «to catch fire, be on fire». Kaz. Kklp. Nog. Kar.-Balk. Kirg. *tamïz-* «to kindle», Khak. *tamïs-* id. < *tam-* «to burn, be alight, catch fire», Kaz. Kklp. Kar.-Balk. *tamïzïq* «kindling», Kirg. *tamïzğï* id., *tamïzdïr-* id. «to cause to kindle»; cf. MK *tamtur-*, *tamdur-* «to kindle, ignite, light, set a fire», Uig. *tamtur-* id., MK *tamduq* «flaming fire; kindling» < *tam-duq*, Uig. *tamtul-* «to catch fire, be on fire» < *tamut-ul-*.

Kirg. *uγuz-* «to make understand» < *uq-* «to understand», etc.

## B. *-tuz-*, etc. < *-t-z-*

1. Orkh. *alt(ï)z-* «to cause to capture», MK (Oguz) *alduz-* «to let smb. rob oneself», AH *altuz-* «to cause to take»; cf. MK, Com. Turk. *altur-*.

2. Uig. *artïz-* «to deceive, cheat» (sic!) < *ar-* id.

3. Uig. *biltiz-* «to make known, to notify», MK (Oguz) *bildüz-* id.; cf. MK, Com. Turk. *biltür-*.

4. MK *bulduz-* «to cause to find»; Com. Turk. *bultur-* id.

5. Khak. *körtis-* «to let see, to show» < **körtüz-*; Khak. *körgis-*, *körgüs-* id. | *körgüz-*, *kördir-* id. < *körtür-*, *közit-* id. < **közüt-*.

6. Uig. (Hami) *otuz-* «to seat, establish» < **oltuz-* < *ol-tuz-*; cf. Orkh. *olur-* «to sit, live, inhabit» < *ol-ur-* (middle verb), MK *olγut-*, *olχut-* «to seat» < *olγut* < *qut-* (caus.), Kirg. *olut* «seat, chair» < *ol-ut*.

7. Az. *yedizdir-* «to feed» || *yedirt-*, *yedirtdir-* id.

## C. *-γuz-*, etc. < *-γ-z-*

1. Chag. *arquz-*, *harquz-* «to tire, fatigue, exhaust» < *ar-* «to get tired»; cf. MK *arγur-* caus. of *ar-*.

2. Chag. (Brock.) *bütkäz-* «to carry out, perform», Uig. (Jar.) *pütküz-* «to cause to make ready, to arrange, finish»; Uzb. *bitkäz-*, *bükär-* id. cf. Com. Turk. *bütür-*, Kirg. *bütär-*, *bütkör-* id. < **bütkär-*.

3. Uig. *ärgüz-* «to melt»; cf. MK *ärgür-* id. < *ärü-*, *äri* «to melt» (intr.), Yak. *ir-* id. < **är-*, *iridär-* caus. < **ärgär-*; Com. Turk. *ärit-*, MK *ärüt-* id.

4. Chag. *kirgüz-* «to let enter, introduce», Nuig. *kirgüz-*, Kaz. Kklp. Kirg. Uzb. *kirgiz-* id., Turkm. *gïrïz-* id. < **kirgiz-*, Nog. *kirgist-* id. < *kirgiz-t-*; cf. Uig. *kirgür-* id., *kigür-* id. < *ki-gür-*, MK *kirtür-* id.

5. IM, AH, Tuhf., Chag. *körküz-* «to let see, show», CC *körgüz-* id., Alt. *körgüs-*, Khak. *körgüs-*, *körgis-*, Uig. (Hami) *kügüz-* id. < *körgüz-*, Kklp. *körgizbe* «exhibition» < *körgüzmä*, Tuhf. *körkäz-* «to show», Turkm. *görkez-*, Kirg. *körgöz-*

< *körgäz-*, Uzb. *korgöz-* id. Nuig. *körgüzmä* «exhibition», Tat. *kürgäz-* «to show», Nog. *körgist-* id. < *körgäz-t-*.

6. CC *olturguz-* «to seat» (also *olturt-*), Uig. (Hami) *olturğuz-* id.

7. AH *örgüz-* «to cause to grow or sprout» < *ör-* «to rise».

8. Chag. (Brock.) *ötkäz-* «to let pass» < *öt-* «to pass», Uzb. *otkiz-*, Kirg. *ötköz-* < *ötkäz-* (also *ötkör-*), Uig. (Hami) *ötküz-*, *ötkür-*, MK *ötkür-* id.

9. Chag. (Brock.) *tartquz-* «to cause to suffer» < *tart-* «to suffer».

10. Chag. (Brock.) *tegürgüz-* «to cause to reach» < *tegür-* id. < *täg-*.

11. Chag. (Brock.), Muk. *tirgiz-* «to bring to life, to resuscitate, enliven», CC *tirgiz-* id., Uzb. Kirg. Alt. *tirgiz-*, Khak. *tirgis-*, Tuv. *dirgis-*, Tat. *tergäz-* Nuig. (Jar.) *tirgüz-*, Nuig. (Hami) *türgüz-* id. < *tirgüz-* < *tir-* «to live»; cf. Uig., MK *tirgür-*, IM *tirgir-* «to bring to life».

12. Chag. (Brock.) *tolγaz-* «to fill», Kirg. *tolγaz-*, Uzb. *tolğaz-*, *tolğaz-*, Nuig. (Jar.) *tolğaz-*, *tošquz-*, *tošğaz-*, *tošqar-* id.; cf. MK *tošγur-*, *toltur-*.

13. IM, Tuhf., Chag. (Brock.) *turγuz-* «to make stand», Muk. *turγuz-*, *turquz-* id., Nuig. Kirg. Kar.-Balk. Kar. L. T. *turğuz-* Tuv. *turğus-*, Az. *durğuz-*, Kaz. Kklp. Nog. *turğis-*, Uzb. *turğiz-*, Khak. *turğis-*, Tat. *torğiz-*, Bašk. *torğod-*, Turkm. *turuz-*, *duruz-* «to cause to stand, to cause to stop < *turγuz-*, *durzul-* «to be stopped»; Nog. *turğist-* «to set up, make stand, erect» < *turguz-t-*; cf. Uig., MK *turγur-* «to cause to stand, to make stand, to erect».

14. Chag. (Brock.) *tutγuz-* «to cause to catch», Uzb. *tutqiz-*, *tutqaz-* «to hand over, deliver», Kirg. *tutquz-*, *tutqur-* id. < **tutγur-*.

15. Chag. (Brock.) *yatγuz-* «to cause to lie down, to put to bed», Nuig. (Jar.) *yatquz-*, *yatğiz-*, Tat. *yatqïz-*, *yatqïr-* Uzb. *yätqïz-*, Kirg. *ǰatqïz-*, *ǰatqïr-* Kaz. Kklp. *žatqïz-* id. < *yatγuz-*, Nog. *yatγist-* < *yatγuz-t-*; cf. MK *yatγur-*, Muk. *yatqur-* id.

16. Chag. (Brock.) *yitgüz-* «to cause to arrive, to cause to reach», Nuig. (Raq. *yitgüz-*, Nuig. (Hami) *yätküz-*, *yätkür-*, Nuig. (Jar.), *yetkuz-* id., *yetkur-* «to bring, to fulfil», Uzb. *yetkiz-*, *yetkäz-*, *yetkär-* «to cause to reach», Tat. *jütkez-*, *jütker-*, Kirg. *ǰetkiz-*, *ǰetkir-*, Kaz. *žetkiz-* id., etc.; cf. CC *yetkir-* id. < **yätgür-*, Uig. *yitir-* id., MK *yätür-* in *yätrül-*, *yätrüš-*, etc.

Causative stems formed with the suffix *-γuz- / -güz-* and its variants are very common today in Uzbek and in the languages belonging to the Kipchak group. Such stems, however, frequently alternate with those formed with *-γur- / -gür-* and other causative suffixes:

Uzb. *bilgiz-* || *bildir-* | *bitkiz-*, *bütkäz-* || *bütkär-*, *bitir-*; *ičkiz-* || *ičir-*; *ketkiz-*, *kiygiz-* || *kiydir-*; *korgiz-* || *korsät-*; *otkiz-*, *otkäz-* || *otkür-*; *sätqiz-* || *sät-tir-*; *toyγiz-*, *toyğäz-* || *toydir-*; *yegiz-* || *yedir-*; *yetkäz-* || *yetkär-*; *yurgiz-* || *yurit-*, etc.

Kirg. *atqiz-* || *attïr-*, *aytğiz-* || *ayttïr-*, *barğiz-* || *bardïr-*, *bergiz-* || *berdir-*, *bezgiz-* || *bezdir-*, *bilgiz-* || *bildir-*, *buğuz-* || *büdür-*, *burğuz-* || *burdur-*, *ǰatqïz-* || *ǰatqïr-* || *ǰegiz-* || *ǰedir-*, *ǰetkiz-* || *ǰetkir-*, *ǰüğuz-* || *ǰüdür-*, *ǰürgüz-* || *ǰürdür-*, *kir-*

*giz-* || *kiyir-* (< *kigür-*), *körgöz-* || *körsöt-*, *oyǧuz-* || *oydur-*, *ötköz-* || *ötkör-*, *say-ǧïz-* || *saydïr-*, *tolǰaz-* || *toltur-*, *toyǧuz-* || *toydur-*, *turǧuz-* || *turdur-*, *tutquz-* || *tutqur-*, *urǧuz-* || *urdur-* etc.

Kaz. *aytǧiz-*, *atǧïz-* || *attïr-*, *bilgiz-* || *bildir-*, *ilgiz-* || *ildir-*, *iškiz-* || *išir-*, *žatǧïz-*, *žegiz-*, *žetkiz-*, *žutǧïz-*, *žürgiz-*, *kigiz-*, *körgiz-* || *körset-*, *küygiz-* || *küydir-*, *ötkiz-*, *süygiz-* || *süydir-*, *teskiz-* || *testir-* etc.

Tat. *belgez-* || *belder-*, *kergez* || *kert-*, *kigez-* || *kider-*, *kürgez-* || *kürsät-*, *tergez-* «to enliven» || *terelt-*, *tergez-* «to acquire, get; to build», *torǧiz-*, *tötkäz-* || *tötkär-* «to provide, suffice», *ütkäz-* || *ütkär-*, *yatqïz-* || *yatqïr-*, etc.

Nog. *aǧïst-* || *aqtïr-*, *barǧïst-* || *bardir-*, *bilgist-* || *bildir-*, *emgist-* (also *emiz-*, *emizt-*) || *emdir-*, *kirgiz-*, *kirgist-*; *körgist-* || *körset-*, *küygist-* || *küydir-*, *tamgist-* || *tamdir-*, *turǧiz-*, *turǧist-*, *yatqïst-* || *yatqar-*, *yutqïst-* || *yuttïr-*, *yürgist-* || *yürit-*, etc.

### D. -az- < -ar-

Only in Uzb. *čïqaz-* «to take out» || *čïqar-*; MK *čïqar-* < *tïšïqar-* < *ta-šïqar-*.

### E. -γaz- < -γar-

1. Kirg. *atqaz-* || *atqar-* «to cause to mount; to send off; to carry out» < MK *atγar-* «to cause to mount» < *at-γar-*.

2. Nuig. *qutqaz-* «to save, rescue», Uzb. Kirg. *qutqar-* || *qutqar-* id., Tat. (dial.) *qotqaz-* || (lit.) *qotqar-* id. < CC *qutγar-* < MK *qutγar-* < *qut-γar-*.

3. Kirg. *otqoz-* || *otqor-* «to pasture» < MK *otγar-*.

I would like to conclude this chapter about zetacism with a few remarks on the Pre-Turkic *\*r*, its quality and distinctiveness. There can be no doubt that the Pre-Turkic *\*r* was a different phoneme, i.e., different from the «normal» *\*r*. It occurred in various morphemes like the plural (originally dual?) suffix *\*-r*[69] (e.g. *\*biz* «we» < *\*bi(n)*«I», *\*sir* «your» < *\*si(n)* «thou», *\*ēkir* «twin, double, paired» < *\*ēki* «two», etc.), denominal nominal suffix (diminutive?) *\*-r* (e.g. *\*baltïr* «younger sister-in-law» < *\*baltï*, cf. Bar. *baldï* id., Khak. *pastï* id. < *\*baltï*, etc.),[70] deverbal nominal suffix *\*-r* (e.g. *\*boγur* «throat» < *boγ-* «to constrict, suffocate, choke», *\*ūr* «skillful, master; art, skill» < *\*ū-* «to be able», etc.),[71] and the causative suffix *\*-r-* (e.g. *\*ämir-* «to suckle», *\*tamir-* «to cause to drip», *\*udur-* «to cause to follow, to lead», etc.).

What was the quality of this Pre-Turkic *\*r*? As is known, Ramstedt assumed it to have been a *\*ŕ*, i.e., a palatalized *r* occurring before an *i*.[72] According to Poppe, Altaic *\*r* was not a palatalized *r*, but perhaps a *\*ŕ* of the

[69] Räsänen, *Morphologie*, p. 55.
[70] *Ibid.*, p. 113.
[71] *Ibid.*, p. 143.
[72] Ramstedt, *Lautlehre*, p. 103.

type of Czechish *ř*.[73] For reasons I have already stated, I am rather inclined to agree with Poppe. Pre-Turkic *\*r* was probably a voiced fricative of the type of Modern Turkish final *-r* heard in such words as *bir* «one», *gelir* «he comes», etc. The *ž*-like quality of his sound is immediately noticed by foreigners. It is very curious that this quality of the *r* in question is not peculiar to Modern Turkish only. In the Kashgar and Yarkand dialects of Modern Uigur the word *bir* is very often pronounced *brž*, *bž*, *bži*, and *bži*.[74] It may be assumed that a *ž*-like sound played the role of an intermediary in the transition from *\*r* to *\*z*. The occurrence of such forms as *ayuž* «biestings, colostrum», *köwiž* «rotten, decayed, crumbly (of inner part of a tree)» (cf. MK *köwrä* «to become weak, loose or crumbly» < *köwir-ä-*),[75] etc. in MK may testify to such an assumption; for these can be best explained as residual forms in *-ž*.

In connection with the quality of the Pre-Turkic *\*r*, I would also like to draw the attention to the alternation *r ~ s* in Mongolian and Turkic, e.g., Mong. *kerü-* «to roam, wander» ~ *kesü-* (= Com. Turk. *käz-* id.), Mong. *muruyi-* «to bend, be crooked; to turn, meander» ~ *muski-* «to turn, twist, twirl» (cf. Com. Turk. *bur-* id.), Mong. *tor-* «to be stopped, be delayed», *torya-* «to stop, hold, catch; to retard, impede», *toryayuli* «hindrance, obstacle, barrier» ~ *tos-* «to receive, encounter, go to meet someone who is coming; to catch something moving toward the object», Kirg. *toro-* «to bar, stop, block», *torγo-* «to hinder, prevent, block the way, detain, delay, hold» ~ *tos-* / *toz-* «to bar, block the way, stop», *tosqōl* «hindrance, obstacle», Com. Turk. *kär-t-* «to cut, make incisions, to notch» (= Chuv. *kart-* id. = Mong. *kerči-* id. < *\*kerti-*),[76] MK, AH *kärki* «adze», Kirg. *kerki* id. ~ *käs-* «to cut» (= Chuv. *kas-* id.), etc.

Finally, it should be noted that the Pre-Turkic *\*r* is not the only source of Common Turkic *z*. In certain cases, Common Turkic *z* goes back to a final or intervocalic *\*s*. Observe the following examples:

CC, Chag., Az., Turk. *qoz* «nut, walnut» < *\*qos*, Alt. *quzuq*, Khak. *χuzuχ* id. < *\*qusuq*, cf. MK *qosïq*, *qosuq* «hazelnut» (= Mong. *qusiyan* «nut, walnut; testicles»).

MK, Tarj., Tuhf. *biläzük* «bangle, bracelet», IM, AH *biläzik* id. < *\*biläsük* < *\*bilä-* «to encircle the waist, wrist or ankle» + *-sük*, Sart (Rad.) *bilärzük*, Chag. (Sang.) *bilärzik*, Kirg. (dial.) *bilerizik* id. < *\*bilärsük* < *bilär-sük*, cf. MK *ilärsük* «band for holding up trousers», Tuhf. *ilärsik* id. < MK *ilär-t-* «to fasten, attach» (causative of *il-* «to be fastened»), MK *boγsuq*, *boχsuq* «iron ring put around the neck of a slave» < *boγ-*, etc.

[73] Poppe, *Verg.*, p. 80.
[74] Martin Hartmann, *Ein türkischer Text aus Kašgar*: KSz, Vol. 6, p. 64; Gunnar Jarring, *Studien zu einer osttürkischen Lautlehre*, Lund 1933, p. 125, *An Eastern Turki-English Dialect Dictionary*, Lund 1964, p. 56.
[75] Pritsak, *op. cit.*, p. 345.
[76] Poppe, *Verg.*, p. 87.

. Sigmatism

«Sigmatism», i.e., the sound change *l > *š, is a phonetic phenomenon parallel to «Zetacism» in all respects. A particular Pre-Turkic *l became *š in Proto-Turkic; but this sound change, too, occurred only in final position. In all other positions, this particular *l lost its distinctive nature and converged with the «normal» l.

Below are given some examples testifying to this assumption.

1. Uig. ašuq- «to hurry, be quick», HŠ ašuq-, ašïq-, Chag. ašuq-, CC, Tuhf. ašïq-, Tat. Bašk. Kirg. Kar.-Balk. ašïq-, Kaz. Kklp. Nog. asïq-, Uzb. ǰšïq- id. < ašïq- < aš-ïq-, Tuhf. aštïq- id. < aš-tï-q-.

|| Tar. (Rad.) aldïra- «to hurry, be quick», East Turk. (Jar.) aldïra-, aldïrä, aldïya- id., Nuig. aldiri- id. < aldïra- < al-dï-ra-.

|| Sar. uig. aldam, altam «fast, quick(ly), rapid(ly), with speed» < aldam, Kirg. ïldam id. < *aldam, East Turk. yïldam, yildam id. < *ïldam < *aldam, Uzb. ildam id. < *aldam.

|| Turkm. alṇasa- «to hurry, be quick».

2. MK bāš «boil; wound», Tarj., AH, HŠ, NF, Turk. (TTS) baš id., IM bašla- «to wound», Atab. bašïqtur- id. < baš-ï-q-tur-, Turkm. bāš «boil, abscess», Yak. bās id., Karag. bayš id. < *bāš < *bāl.

|| MK bālïy «wounded» (I, 192, 252, 407), «boil; wound» (I, 242), Uig. (Xuast.) balïy «wounded» in the hend. balïy bašlïy, Khak. palïy «boil, wound», Alt. balu id., Koyb. bāleχ «wound» < bālïy < balï-γ.

|| MK balïq- «to be wounded» < bal-ï-q-; cf. Atab. bašïq- id. in bašïqtur- «to wound».

3. Uig., MK buš- «to be bored, be annoyed, be sick of, be disgusted with», MK bušaq «annoyed, bored, sad, grieved», bušyan id., bušuy «boredom, bušur- «to bore, annoy, make sick of», IM buš- «to be bored, get angry», AH buš- «to get angry», bušaq «angry, mad; sad, grieved», Tafs. buš- «to become excited, get angry», Nuig. puš- id., pušuq «angry, agitated, excited» < buš- < *bul-.

|| MK bulya- «to bore, annoy» < bul-ya- (caus.), bulyan- «to become angry» < bulya-n- (pass.).

4. Orkh., Uig., MK, Atab., Tarj., IM, AH, Chag. üküš «many, numerous», Yak. ügüs, äṇüs «many, numerous, abundant; abundance, multitude» < *üküš, üksä-, üksüö- «to grow in number, to increase, multiply» < *ükšä- < üküš-ä-, ükšüy- id. < *ükši- < üküš-i-, üksüt- caus.

|| Uig., MK ükli- «to increase, multiply» < ükül-i-, üklit- caus., Šor (Rad.) üktü- «to grow in number, to increase, multiply» < *üklü-, Yak. üktüy- id. < *üklü- < *üklï-.

Residue: MK (Kipč.) ükil «many, numerous».

*

«Sigmatism» like the sound change *r > z, did not come to a sharp end at a certain point of time in the past. On the contrary, it continued to be effective sporadically during and after the Proto-Turkic period. We have a number of examples which do not go back to Proto-Turkic, but only to certain dialects of Old Turkic. In the Orkhon inscriptions we find at least two examples which testify to this assumption; qiš- ~ qil- «to make, perform» and išgärü «forward, eastward» (generally ilgärü). The former did not survive in any of the Turkic languages, but the latter has preserved itself as isker in Khakas: cf. isker «east; to the east, eastward(s)», iskertin «from the east», iskerki «belonging or pertaining to the east, eastern», etc. We, thus, have clear evidence for the fact that «Sigmatism» was still effective in Orkhon Turkic of the 8th century.

Below are given these and other examples belonging to this «late sigmatism».

Late Sigmatism

1. Orkh. (BQ N 11) išgärü «forward, eastward»,[77] Khak. isker «east; to the east, eastward» < *iškäri < išgärü, iskertin «from the east», iskerki «eastern», etc.

|| Orkh., Com. Turk. ilgärü «forward, eastward, to the east».

2. Orkh. qiš- «to make» in the phrase yoq qiš- «to annihilate».[78]

|| Orkh., Com. Turk. qil- «to make, perform», Yak. kïn- id. < *qil-.

3. MK köši- «to cover, shut out, shade», köšit- id., köšik «cover, curtain; shade», köšiklik «shade, shady place», köšikä «light shade», Kirg. köšögö «curtain, blind» < *köšäkä < *köšikä.

|| Uig. kölit- «to shade», MK kölik «shade», köliklik «shade, shady place», kölikä «shade, dark shade», Tarj. köläk, kölägä, CC kölägä id., AH, Bulg. kölgäy «shade, shadow», Tuhf. köläk, kölätkä «shade», Turkm. kölege, Yak. külük id. < *kölik, Kaz. köleṇke, Kirg. kölöṇkö id. < *köläṇkä, Tat. Bašk. külägä id., Turk. Az. gölgä id., etc.

Cf. Mong. köši- «to prevent, impede; to block, prop up», kösige(n) «curtain, blind; canopy».[79]

4. Tuhf. öyüš «damp, moist» in öyüš bol- «to become moist» < *öš.

|| MK, Turkm. öl «wet, moist», Yak. üöl id. < *öl, Az. höl, Turk. (TTS) öl id., MK, AH öli- «to become wet», Tuhf. ölü- id., MK, IM ölit- «to make wet», etc.

5. Com. Turk. täš- «to pierce, bore, perforate, make a hole», täšük «hole», MK täšil- «to be pierced», täšuk «pierced, perforated».

[77] BQ (Bilgä Qaуan), N 11; Thomsen regarded this as a scribal error, cf. Inscriptions de l'Orkhon, p. 39; note 1.

[78] KT (Kül Tigin), E 32, 34; BQ, E 25. This verb also occurs as qiš- in Ton. W 5, 6, S 4, E 4.

[79] Gombocz, KSz, Vol. XIII, p. 19.

|| Orkh., MK, IM, Tuhf. *täl-* «to pierce, bore, perforate, make a hole», AH, Turk. *däl-* id., Sar. uig. *telin-* «to be pierced», MK *telik* «hole», Tuhf. id., Chag. *telük*, Sar. uig. *telik*, AH *dälük*, Turk. *dälik* id.

6. MK *tošyur-* «to fill» < *toš-yur-*, Tar. *tošqar-* id. < *toš-yar-*, *tošqaz-*, *tošquz-* id., Uig. (Hami) *toš-* «to become full, be completed».

|| Com. Turk. *tol-* «to become full», *toltur-* «to fill», Nuig. *tol-* «to get full, be filled», *toldur-*, *tolyuz-* «to fill, fulfil», etc.

7. Turk. *döš* in the hend. *döl döš* «descendants, offsprings», TTS (XVIc.) *döl döš* id., *döllü döšlü* «having children and descendants».

|| Com. Turk. *töl* «descendants, offspring», MK *töl* «offspring» (Oguz), *tölä-* «to have offsprings, to lamb» (Oguz).

8. Com. Turk. *tüš* «dream», Turkm. *düyš* id. < *tüš*, Uig., MK *tüšä-* «to dream», Yak. *tühüö-* id. < *tüšä-*.

|| Uig. *tül* «dream», Yak. *tül* id., Sar. uig. *tel* id., *tel tüse-* «to dream» < *tüšä-*, Tat. (Rad.) *tölör-*[80] «to slumber, doze, snooze, take a nap» < *tülär-*.

= Chuv. *tělěk* «dream»[81] < *tülük* < *tül-äk*, *těllěn-* «to dream» < *tülä--n-*, *tělěr-* «to dream; to doze, slumber» < *tülär-*.

As for the quality of this Pre-Turkic *l*, Ramstedt assumed it to have been a palatalized *l* occurring before the vowel *i*.[82] According to Poppe, it probably was a voiceless fricative *l* similar to Ostyak λ.[83] I agree with Poppe on this assumption of his. In Old Turkic even the «normal» *l* was to some extent voiceless, e.g., *iltä*, *yolta*, *köŋültä*, etc. In connection with this, here I also would like to draw the attention to the alternation *l ~ s* in both Turkic and Mongolian, e.g., Com. Turk. *qïsya* «short» ~ Yak. *kïlǧas* id., *kïlǧä-* «to become short», MK *yasï* «flat», *yasul* id. ~ *yalpï* id., Kirg. *ǰalpï* id., *ǰalpay-* «to become wide and flat», Nog. *yalpaq* «flat», Kaz. *žalpaq* id., Khak. *čalpax* id., MK *altïn* «below, beneath; under» ~ *astïn* (vulg.) id., *asra* (< *as-ra*) id., Mong. *aldal* «omission, mistake, error, fault» ~ *aldas* id., *alki-* «to beat, hit, strike» ~ *aski-* id., *alǰiyal* «fatigue, weariness; worry, trouble» ~ *alǰiyas* id., etc.

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Pre-Turkic *l* is, of course, not the only source of Proto-Turkic *š*. There are at least two more origins of Common Turkic *š*: 1. the affricate *č* and 2. the sound groups *lč* and *lǰ*. As is known, this *š* is represented by *š* in Chuvash. Below are given some examples illustrating these sound correspondences.

[80] Ramstedt, *JSFOu* XXXVIII, 1, p. 29.
[81] Poppe, *UJb.*, 6, p. 115.
[82] Ramstedt, *Lautlehre*, p. 103.
[83] Pdope, *Verg.*, p. 76.

## A. *š* < *č*

1. Com. Turk. *biš-* «to cook» < *bič-*, Yak. *bus-* «to boil, cook» < *buš-* < *buč-* = Chuv. *piš-* id. < *bič-* < *bič-* = Mong. *buča-l-* id.[84]

2. Com. Turk. *qurša-* «to gird; to surround, encircle», *quršan-* «to gird oneself», *quršay*, *quršaq* «girdle; hoop», etc. = Alt. Kirg. *qurča-* «to gird, surround», *qurčan-* «to gird oneself», etc., Khak. *xurča-* «to gird», *xurčan-* «to gird oneself», *xurčay* «the girding; hoop», etc. < *qur* «belt, girdle» + *ča-*; cf. Yak. *kurdä-* «to gird» < *qurlä-*.

3. Com. Turk. *yapïš-* «to stick, adhere» < *yapïč-*, Uig. *yapšïn-*, MK *yapšun-* id. < MK *yapčïn-*, *yapčun-*, *yawčun-*, MK *yapšur-* «to cause to stick» Uig. *yapsur-*, *yafšur-* id. < MK *yapčur-*, *yawčur-* < *yapïč-ur-* = Chuv. *šïpaš-* «to stick, adhere» < *yapïč-*, *šïpšan-* id. < *yapčïn-*.

4. Com. Turk. *yawšan* «thorny, spiny, veronica» < MK *yapčan*, *yawčan* id.

5. Com. Turk. *yïmša-* «to become soft», *yïmšaq* «soft» < *yïmša-q* < *yïmča-*, Tuv. *čïmča-* «to become soft» < *yïmča-*, *čïmčaq* «soft» < *yïmčaq* = Chuv. *šemše* «soft», dial. *šamša* id. < *yïmčaq*.

6. Suff. *-š* (deverbal nouns) = Chuv. *-š* = Mong. *-ča*:[85]

Com. Turk. *äniš* «going down, descending» = Chuv. *anǎš* «sunset, west» < *an-* «to go down, descend» < *än-*.

Com. Turk. *čïqïš* «going up, rising» = Chuv. *tuxaš* id. < *tux-* «to go up, rise» < *talq-* < *talïq-* (= Old Turk. *tašïq-* «to go out, come out»).

## B. *š* < *lč*, *lǰ*

1. Com. Turk. *ašuq* «knuckle, knuckle-bone» = Mong. *alču* «one side of an anklebone, depression on the side of an anklebone».[86]

2. Com. Turk. *baš* «head; beginning» = Chuv. *puš* id. < *bač* < *balč*.[87]

3. MK *äšgäk*, *äšyäk*, *äšäk* «donkey, ass» = Mong. *elǰige(n)* id.[88]

4. Com. Turk. *qašya* «blaze, white spot on the head or face of an animal» < *qaš-ya* = Mong. *qalǰa(n)* «bald-headed; blaze on the forehead of a horse, ox, etc.»[89]; Chuv. *xuška* id. < Tat. *qašqa*.

5. Com. Turk. *qašï-* «to scratch» = Chuv. *xïš-* id. < *qač-* < *qalč-* Mong. *qalči-* «to remove unevenness, to level off; to remove hair from skin or fur; to scrape off».[90]

[84] Ramstedt, *Lautlehre*, p. 0000.
[85] Ramstedt, *Formenlehre*, pp. 126—130.
[86] Ramstedt, *Lautlehre*, pp. 108, 109; Poppe, *Verg.*, p. 86.
[87] Ramstedt, *Lautlehre*, p. 109.
[88] Gombocz, *KSz* XIII, p. 18, Poppe, *Verg.*, p. 86.
[89] Gombocz, *KSz* XIII, p. 14, 15, Poppe, *Verg.*, p. 86.
[90] Gombocz, *KSz* XIII, p. 14.

6. MK *qoruyšïn* «lead» < *qoruyšïn* < *qoryušïn*, Tuhf., CC, Kum. *qoryašïn*, Tarj., Chag. (Sang.), Kar.-Balk. *qoryašun*, Uzb. *qoryǟšïn*, Kirg. *qoryošun*, *qoryošum*, Kaz. Kklp. Nog. *qoryasïn*, Az. *ġurġušun*, Tat. (coll.) *qurġašïn* id. < *qoryašïn*, Tat. Bašk. *qurġaš* id. < *qoryaš* = Mong. *qoryolǰi(n)* id. < *qoryalǰïn*, (Muk.) *qorqaršun* id. < *qoryalčïn*; cf. Nog. *qorgay* id. < *qoryal*.

7. Com.Turk. *kišnä* «to neigh», Turkm. *kišŋe-* id., Kirg. *kišene-* id. = Chuv. *kěšen-* id. < *kičän-* < *kilčänä-*; cf. Mong. *inčaya-*, *ingčaya-* id., (Muk.) *inqilčaqa-* id.

8. Com.Turk. *sïš-* «to swell», Tuv. *iš-* id. < *sïš-*, Yak. *is-* id. < *sïš-*, Kaz. *is-* id., Kirg. *šiši-* id. < *sïši-* < *sïš-i-* (freq.), Nuig. *išši-* id. < *sïši-* < *sïš-i-* = Chuv. *šiš-* id. < *sïč-* < *sïlč-*; cf. Mong. *selkü-* «to swell» < *sel-kü-*, *selkün* «swelled».[91]

9. Com.Turk. *yašï-* «to shine, flash, lighten» < *yaš-ï-* (freq.), Uig. *yašla-* id. < *yaš-la-* (freq.), *yašïn* «lightning» < *yaš-ï-n* = Chuv. *šiδ-* «to shine, flash, lighten» < *yïč-* < *yïlč-*, *šiδěm* «lightning» < *yïčïn* < *yïlčïn*; cf. Mongr. (Muk.) *ǧilčayi-* «to shine, flash» < *ǧilča-yi-*, *ǧilči-* id.

10. Suff. -*š*- of cooperative and reciprocal stems = Chuv. -*š*- = Mong. -*lča-* / -*lče-*:[92]

Com.Turk. *čapïš-* «to hit each other, to fight» = Chuv. *šapǎš-* id. < *šap-*
Com.Turk. *ūruš-* «to hit each other, to fight» = Chuv. *vǎrš-* id. < *vǎr-*
Com.Turk. *ülǟš-* «to distribute, divide» = Chuv. *valeš-* id. < *vale-*
Com.Turk. *ǧarïš-* «to mix together» = Mong. *qarilča-* «to be connected or related to each other; to establish connection» < *qari-*
Com.Turk. *qošuš-* «to add together» = Mong. *qolilča-* id. < *qoli-*.

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[91] Ramstedt, *Lautlehre*, p. 110.
[92] Ramstedt, *Über die Konjugation des Khalkha-Mongolischen* (= *MSFOu* XIX), Helsinki 1903, p. 98.

# LES MANUSCRITS INÉDITS DE KOSSUTH SUR LA LANGUE TURQUE

PAR

SUZANNE KAKUK

Après la défaite de la guerre d'indépendance hongroise de 1848, Louis Kossuth, son chef avait dû fuir en Turquie. Son projet original avait été de se rendre en Turquie et de là en Europe Occidentale, en Angleterre, mais les gouvernements autrichien et russe ne l'entendaient pas ainsi. Aussi Kossuth passa-t-il deux pénibles années en Turquie, soi-disant comme hôte du sultan, en réalité en tant que prisonnier de l'empereur d'Autriche et du tzar.

Les Turcs lui avaient rendu les honneurs et l'entouraient de toutes les marques de l'amitié. Le sultan Abdul Mecid, au risque de se mettre à dos ces deux puissances, refusa de le livrer. Dans les projets politiques que Kossuth échafauda au cours de la première période de l'émigration, la Turquie jouait un rôle important. Cependant la situation en matière de politique étrangère ayant pris une tournure défavorable, il se vit contraint de renoncer à ses projets antérieurs et chercha à quitter le territoire turc où il se sentait prisonnier. Toutefois, il ne put le faire qu'en 1851.

La première station des émigrés en Turquie avait été Vidin. Kossuth y passa deux mois et demi en tout. L'accueil chaleureux que lui avait réservé les Turcs, ainsi que les sujétions de la vie en émigration lui firent dès lors envisager la nécessité d'établir un rapport linguistique direct avec les Turcs. Pour réaliser son idée, il dut cependant attendre d'être arrivé à Šumla (Šumen, aujourd'hui Kolarovgrad) où des conditions de vie plus normales lui permirent de commencer à organiser la vie en émigration; c'est alors qu'il rendit obligatoire à tous les émigrés d'apprendre le turc. Lui-même avait le don des langues: il connaissait toutes les grandes langues européennes, et ne tarda pas à apprendre aussi le turc. Au témoignages des sources de l'émigration, il était en Turquie depuis 4 ou 5 mois à peine qu'il parlait, lisait et écrivait le turc.

Obéissant à une pression étrangère, les Turcs furent obligés de transférer Kossuth et ses compagnons à l'intérieur de l'empire ottoman. C'est ainsi que Kossuth passa environ 18 mois en Anatolie, dans la ville de Kütahya, où il poursuivit ses études de langue, termina la grammaire commencée à Šumla et mit au point un petit vocabulaire en quatre langues dont le turc.

L'émigration de Kossuth en Turquie n'a été étudiée jusqu'à présent que