

## Turkish *dirsek* ‘elbow’, Yakut *tühürges* ‘knee’ and some connected words

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### 1.

The present study is aimed at clarifying interrelations among some Turkic names for ‘knee’ and ‘elbow’ (and some other derivatives with more or less altered meanings). The interrelations are to be examined within two frames of reference. Whereas one of them includes only Yakut data, the other one connects data of Yakut and those in some of the remaining Turkic languages.

### 2.

The first section of our analysis begins with three Yakut words:<sup>1</sup>

[2a] *tühürges* (Pek. 2926) ~ *sühürges* (Pek. 2417) ‘knee; forepart of hip/thigh’;

[2b] *tühex* (Pek. 2923) ‘knee; forepart of hip/thigh’;

[2c] *tihex* (Pek. 2686) ‘end (of an object)’.

As can be easily seen, [2b] *tühex* semantically corresponds to [2a], phonetically to [2c]. The etymological analysis of *tihex* is quite easy. It was already E. Piekarski who recognized its connection with Tkc. *tiz* ‘knee’ (Pek. 2923). Thus, Yak. *tihex* < \**tizek*<sup>2</sup> ← Proto-Tkc. \**tīz* (? ~ \**tīz̄*) ‘knee’ > Old Tkc. *tiz* id. (only in *Irk Bitig* [Tekin 1993: 64], otherwise in the derivative:

<sup>1</sup> Since there is no narrow *e* in Yakut, and, consequently, no *e* : *ä* opposition exists, we use the letter <e> for Yakut [ä] here (unlike in our previous writings). – The sign  $\tilde{\text{}}$  stands for ‘contaminated with’; the letters <y> and <ȳ> are for [i] and [ī], i.e. velar equivalents of [i] and [ī]; <j> = [j]; <w> = [w].

<sup>2</sup> Shortening of long stem-vowels in the word formation process which makes the closed first syllable open is well attested in Yakut, e.g. Yak. *tühē-* ‘to dream, have a dream’ < \**tūšē-* < Proto-Tkc. \**tūš* ‘dream’ (GJV § 44.3), and so on.

*tizlig* ‘having knees’ [Tekin 1968: 382]) = Trkm.lit. *d̄yδ* ~ dial. *d̄īδ* id. (GJV § 32.3).<sup>3</sup>

Apart from the labialized vowels that will be explained below, *tühex* differs from *tihex* semantically. Since ‘knee’ is the standard meaning of all words in this family, there can be no doubt that the meaning ‘end (of an object)’ is secondarily abstracted from ‘knee’.

As for *tühürges*, one may assume that its labial vowels probably have the same origin as those in *tühex*. If, then, *tühex* is a labialized variant of *tihex*, the word *tühürges*, too, is expected to have once had the original non-labial variant *\*tihirges*. If we now reconstruct its Proto-Yakut form as *\*tizirkeč*, its morphological structure becomes reasonably clear. The stem is *\*tiz* < Proto-Tkc. *\*tīz* ‘knee’; it is followed by a verbal suffix *\*(y)rkā-*<sup>4</sup> and a nominal one *\*-č*.

Yakut verbs with the suffix *\*(y)ryā-* < *\*(y)rkā-* sometimes have the meaning ‘to be like X, to resemble X; to be characterized by X’, e.g. Yak. *atas* ‘friend’ → *atahyryā-* ‘to be like somebody’s friend; to treat somebody like a friend’. Cf. also Old Tkc. *alpyrkan-* ‘sich wie ein Held betragen’ < *alp* ‘Held’ (ATG § 96). The same is true of the verb *\*tīz+irkē-*. Its meaning was probably something like *\*‘to be like a tīz, to resemble a tīz’*.

The (not very productive) deverbal nominal suffix *-č* is used in some Turkic languages. Its chief function is formation of nomina instrumenti, as in Baraba-Tat. *tabac* ‘palm (of a hand)’ < *taba-* ~ Tat., Kzk. *tapa-* ‘1. to rumple, crumple; 2. to trample’ (Pomorska 2004: § 2.3.2); Tksh. *kaynaç* ‘geyser’ < *kayna-* ‘to boil, churn’; Tksh. *sıralaç* ‘file (box), card tray’ < *sırala-* ‘to arrange’.<sup>5</sup>

<sup>3</sup> Turkmen is the only language with the velar *-ȳ-* instead of the expected *-ī-*. The situation cannot possibly be explained by means of regular phonetic development; nor do the neighboring consonants *t-* and *-z* usually trigger vocalic changes. Nothing but the Trkm. *d̄yδ* (~ *dyjδ*, see ÈSTJa 3: 336) weighs in favour of Proto-Tkc. *\*-ȳ-*. On the other hand, the Proto-Tkc. variant with *\*-ī-* cannot possibly explain the Trkm. vowel. Nevertheless, Proto-Tkc. *\*tīz* is to be regarded as the standard reconstruction.

<sup>4</sup> For the discussion of long vowels in Proto-Turkic verb stem-final position see GJV § 5.8.

<sup>5</sup> The suffix *-č* is usually attached to verbal stems in *-n-*, e.g. Tksh. *sevinç* ‘joy’ < *sevin-* ‘to be glad/happy’; Karaim *išanč* ‘trust’ < *išan-* ‘to trust’ (Zajaczkowski 1932: 88), and so on. Thus, it seems reasonable to assume a formation like *\*tīz+irkē-n-č*, rather than *\*tīz+irkē-č*. The simultaneous existence of both *\*tīz+irkē-* and *\*tīz+irkē-n-* with the same meaning is fully realistic, since we have, for instance, both *kihirgē-* and *kihirgen-* ‘to boast, brag’ in modern Yakut. However, the modern reflex of the intervocalic *\*-VnčV-* is *-VnñV-* (e.g. *\*sančyg* > Yak. *anñy* ‘push, hit’, Stachowski

The next two questions in this context are: (a) How is the vowel labialization in *tühex* and *tühürges* to be explained?; (b) From what does the word-initial *s-* in *sühürges* originate?

As it seems, the answer to both questions can be easily found if one takes into consideration the influence of another Yakut word that is semantically very similar to (albeit etymologically different from) our words: *sühüöx* ~ *söhüöx* (Pek. 2415) ‘1. joint; 2. knee; 3. *bot.* node; 4. bend, curve’ (and many other, secondary meanings) < Old Yak. *\*jüsiek* < Proto-Tkc. *\*jüz+gek* (GJV § 8.6c) < *\*jüz* ‘joint’ (ĖSTJa 4: 260).

Thus, a two-stage evolution of our *\*tīz* derivatives can be imagined:

Stage I:

- [2d] *\*tīz* > Old Yak. *\*tīs* → *\*tisek* ‘joint; knee’ (> *tihex* ‘end of an object’);<sup>6</sup>  
 [2e] *\*tīz+irkē-č* > Old Yak. *\*tisirges* ‘knee; forepart of hip/thigh’;  
 [2f] *\*jüz+gek* > Old Yak. *\*jüsēk* ‘joint; knee’ (> *\*jüsiek* > modern Yak. *sühüöx* id.).

Stage II:

- [2g] *\*tisek* [∅ *\*jüsēk*] > Old Yak. *\*tüsek* > modern Yak. *tühex* ‘knee; forepart of hip/thigh’;  
 [2h] *\*tisirges* [∅ *\*jüsēk*] > *\*tüsürges* ~ *\*jüsürges* > modern Yak. *tühürges* ~ *sühürges* ‘knee; forepart of hip/thigh’.

One and the same answer can be given to both questions above: A contamination of Old Yakut forms *\*tisek* and *\*tisirges* with Old Yakut *\*jüsēk* produced both the variants with labial vowels and the one with initial *s-*. One might, however, ask why there is only one *s-* form (cf. [2h] with [2g]). The (*\*j-* >) *s-* counterpart of *\*tüsek* (> *tühex*) had to be *\*jüsek*, and, thus, it was almost identical with *\*jüsiek* < *\*jüzgek*, and the result of this situation was that *\*jüsek* (< *\*tisek* ∅ *\*jüsiek*) has probably been eliminated from the language.

The *s-* reflex (in *sühürges*) is extremely important in this context, since it points to the necessity of assuming contamination. The existence of labial and non-labial variants as such can be illustrated by some other Yakut word pairs, too, as for instance Yak. *tier-* ‘to turn around/over’ vs. *tüör-* ‘to dig

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1995: 178), whereas the 3rd person possessive form of the modern Yak. *tühürges* is *tühürgehe*, not *\*tühürgenne* which points to an original *-s* < *\*-č*, as in Yak. *ikkis* ‘second’, poss. *ikkihe* < *\*ikki+č*; cf. also Yak. *altys* ‘sixth’, poss. *altyha* < *\*alty+č(+a)* versus Yakut *altynny* ‘October’ (lit. ‘[the] sixth [month]’) < *\*alty+nč+y* (ibidem 179). This is why we feel compelled to reconstruct the Yakut word as *\*tīz+irkē-č*.

<sup>6</sup> See GJV § 5.9 regarding shortening of original long vowels in Yakut.

up'; *timex* 'button' vs. *tümük* 'knot' (GJV § 0.3). If there were no *s*-variant, the labial forms *tühex* and *tühürges* could be connected with the idea of mixture of at least two originally different Proto-Yakut dialects, that usually is offered as the explanation of the word pairs above (ibidem).

### 3.

The next question is that of the relation between Yak. *tühex*, *tühürges* 'knee' and their Proto-Turkic root word *\*tīz* on the one hand, and Tksh. *diz* 'knee' and *dirsek* 'elbow' on the other. It is beyond all doubt that Tksh. *diz* is a direct reflex of Proto-Tkc. *\*tīz* and that it, by the same token, belongs together with both Yakut words to the same word family. Tksh. *dirsek* 'elbow' is, by contrast, a different thing.

One might think that one of the possibilities below is right:

- [3a] The first syllable of Tksh. *dirsek* is *dir+* which is a reflex of the rhotacistic counterpart of *\*tīz*. The second syllable is *+sek* which is a palatal variant of the suffix *+sak*, sometimes used to form body part terms, e.g. Tksh. *bağırsak* 'intestines, entrails' < *bağır* '1. intestines; 2. chest, breast; 3. heart' (Zajaczkowski 1932: 38; ÈSTJa 2: 18, 22); Trkm. *kursak* 'stomach' < *kur* 'waist' (Zajaczkowski ibidem; ÈSTJa 6: 164);
- [3b] Tksh. *dirsek* is a phonetically altered and morphologically somewhat different counterpart of Yak. *tühürges* (< *\*tīz+irkē-č*), i.e. Tksh. *dirsek* < *\*tirskek* < *\*tirzige* < *\*tizirge* < *\*tīz+irkē-k*.

However, Ottoman-Turkish philological data contradict both possibilities. Although Ott.-Tksh. *dirsek* was in this form attested in a source dated 1514-15 (Verburg 1997: 51) an apparently older variant of this word appears in another source, one written in 1587-88, more than seventy years later: Ott.-Tksh. *diregsek* 'elbow' (Adamović 1977: 41). And this variant does not fit either [3a] or [3b].

In this situation, one has to start from the Proto-Tkc. verb *\*tīrē-* (> Trkm. *dīre-*, Yak. *tirē-*) '1. *trans.* to support, hold up; 2. *intrans.* to lean' (ÈSTJa 3: 237). Among its derivatives, it has two synonymous formations: very popular *-k* substantives (e.g. Tksh. *direk* 'support, prop, beam, post') and less popular *-g* ones (e.g. Khakas *tīreg* id.; cf. also Uzb.dial. *dīrāw* < *\*dīreg* id., [ibidem 239]; Ott.-Tksh. 16th c. *dirīg* 'refusal' [Yıldız 1993: 281]). A trace of a *-g* derivative in Tksh. certainly is Ott.-Tksh. *dirgen-* 'to oppose, resist' (ibidem 240) which we would like to explain as a continuation of *\*dīreg+en-*. As for semantics, one can easily imagine the evolution 'to lean'

> ‘to oppose’, cf. Trkm. *diren-* ‘to lean’ (incidentally, the Polish verb *opierać się* has both meanings: ‘1. to lean; 2. to oppose, resist’).

Phonetically, *\*direg+en-* was turned into *dirgen-* due to elision of the medial syllable of the originally three-syllable word, which is quite a frequent phenomenon in Turkic (e.g. Tksh. *orda* < *orada* ‘there’, and so on). Exactly the same process took place after *\*tīreg* ‘prop, beam’ had been extended by the suffix of body part terms *\*+sak*, i.e. Ott.-Tksh. *direg+sek* > *\*dirgsek*.<sup>7</sup> However, a three-consonant cluster is – even in the word-medial position – a rather unusual group in a Turkic language and it normally tends to being shortened to a two-consonant cluster: > *dirsek*. This is what happened in Ottoman-Turkish linguistic history, probably long before the beginnings of the sixteenth century (the form *tirsek* ‘elbow’ is already attested in Old Uyghur, see DTS 563a), which – as our 1587-88 record suggests – still, if only sporadically, witnessed occurrences of the older variant *diregsek*.

As can be seen, there is in actual fact no substance to the allegation that Tksh. *diz* ‘knee’ and *dir+* (in *dirsek* ‘elbow’) reflect two phonetic variants of a Proto-Altaic *\*tīr̄*, which generally meant a ball-shaped joint, no matter if in an arm or leg.

#### 4.

The Khākānī (11th c.) word *tirsgek* ‘1. a swelling which emerges on the eyelids; 2. elbow’ (Clauson 1972: 553b) can be explained in two ways:

[4a] It results from metathesis of *\*tīrgsek* which was a formation phonetically parallel to Ott.-Tksh. *\*dirgsek*, see § 3;

<sup>7</sup> Németh (1970: 168) was of the opinion that the author of a text written in the Bosnian-Turkish dialect in 1668 confused *direk* ‘beam, post’ with *dirsek* ‘elbow’ while writing <kapu dirszeğy> ‘limen’ (= *kapu dirsegi* ‘threshold’), and he corrected it by saying: «es handelt sich wohl um *kapu diregi* ‘Türpfosten’» (ibidem). This explanation is distinctly feasible, indeed. However, the notation is not a hapax. At another place in this source, the word <dirszek> = *dirsek* appears independently and once more with the Latin translation ‘trabs’, i.e. ‘beam’. Therefore, one should also reckon with another explanation: the word *dirsek* has, in the seventeenth century Bosnian-Turkish, possibly had two meanings: ‘elbow’ and ‘beam’ which would strengthen our hypothesis concerning its etymological connection with the verb *\*tīrē-* ‘1. to support; 2. to lean’. – There exists also another possibility: the literal meaning of the collocation *kapu dirsegi* ‘doorpost’ was *\*‘door elbow’*, which, however, does not appear absolutely convincing for semantic reasons, and, besides, it cannot be used to explain the existence of the separate attestation <dirszek> ‘trabs’.

[4b] It was in reality pronounced [-rsk-], and thus it was identical with \**tirskek* < \**tirzigek* < \**tizirgek* < \**tīz+irkē-k*, see [3b].

Tuvin. *diskek* ‘knee’ (Ölmez 2007: 141) seems reasonably similar to Khākānī *tirsgek* ‘elbow’. However, both its meaning and morphological structure suggest direct derivation from \**tīz+gek* < Proto-Tkc. \**tīz* ‘knee’. The word is another example pointing to the necessity of keeping the meanings ‘knee’ and ‘elbow’ apart.

Since a mixing of both meanings is present in [4b], it seems safer to assume that [4a] is correct.

## 5.

The most important issues discussed above can be summarized as follows:

### \**tīz* ‘knee’:



- a) Old Tkc. *tiz*, Trkm. *d̄ȳδ*, Tksh. *diz* ‘knee’;
- b) \**tīz+gek* > Tuvin. *diskek* ‘knee’ (§ 4);
- c) \**tīz+ek* >> Yak. *tihex* ‘end (of an object)’ ~ *tühex* ‘knee’ [2d, g];
- d) \**tīz+irkē-č* > Old Yak. \**tisirges* >> modern Yak. *tühürges* ‘knee’ [2e, h].

### \**tīrē-* ‘1. trans. to support, hold up; 2. intrans. to lean’:



- a) Old Tkc. *tire-*, Tksh.dial. *dire-* ‘to support’ ~ Trkm. *dīre-* ‘1. to support; 2. to lean’
- b) \**tīrē-k* > Tksh. *direk* ‘support, prop, rest’ (§ 3);
- c) \**tīrē-g* > Khak. *tīreg*, Uzb.dial. *dīrāw* ‘support, prop, rest’ (§ 3);
  - ↓
  - d) \**tīrē-g+en-* >> Ott.-Tksh. *dirgen-* ‘to oppose, resist’ (§ 3);
  - e) \**tīrē-g+sek* (>> Ott.-Tksh. *dirgsek* > *dirsek* ‘elbow’) > \**tirgsek* (> Khākānī *tirsgek* ‘elbow’) (§ 3, 4).

One conjecture still remains to be mentioned here. If \**tīz* (Altaistically speaking) goes back to \**tīr*, and \**tīrē-* can morphologically be viewed as an \*+*ē-* derivative, nothing seems to prevent us from assuming a Proto-Altaic \**tīr* and its derivative \**tīr+ē-*. However, according to Helimski’s (1986: 47) rule (\*-*Vr(V-)* > -*z(-)*; \*-*Cr-*, \*-*rC-* > -*r-*), one would expect the protoform \**tīr+ē-* to yield \**tize-*, rather than *tire-* in the modern Turkic languages.

Both words (*diz* and *dirsek*) were, as a matter of fact, more than once associated with each other. Still, authors focusing on the question of Rhotacism or Zetacism paid little attention to the philologically attested history of the words, their semantics and morphological structure. Tekin (1969: 65) analyses the Kaşgari record *tirsgək* ‘elbow’ as *tir-s-gek* and identifies its first syllable *tir+* with Proto-Altaic *\*tīr* > Tkc. *tīz* ‘knee’ without even mentioning the morphological function of the mysterious element *-s-*, historical philological data or the semantic discrepancy (‘elbow’ vs. ‘knee’), which is so extraordinarily regular in Turkic.

Finch (2003: 144) tried to explain the *-s-* in a way that contradicts much of what we know of Turkic word formation. His analysis of the ‘elbow’ word as a sequence like: “*tir* + (? derivational) *s* + (derivational) *ge* + (dual) *k*” poses a few problems. The function of *-s-* still remains obscure, since Finch suggests that the Turkic dual marker *-z* has, at least in some cases, resulted from *\*-rs-*, which is a smart reference to Pritsak’s (1964) idea, albeit without citing Pritsak in this context. Actually, Pritsak suggested *\*...r+ti*, not *\*...rs* (ibidem 344, § 4.11). Besides, the combination “*+s+ga+k*” seems to be absent from any other derivative in any Turkic language. Pritsak’s element *+ti* was a “Suffix des Individualis” (ibidem 341, § 2.1) which means that: (a) it could not stand before a derivational suffix, i.e. only *\*+ge+s* would be possible, not Finch’s *\*+s+ge*; (b) the simultaneous occurrence of an “Individualis” *+s* and a dual marker *+k* probably makes no sense. Finch writes among other things (ibidem): “The word *dirsek* ‘elbow(s)’, itself a dual in /-K/, is in OT (= Old Tkc.) *tirsgäk* (*tir-s-gä-k*) [...] and the preservation of *s* after *r* in OT *tirsgäk* might be due to rules of syllabification from an earlier *\*tir-se-ge-k*”. Now, apart from varying vocalism in Finch’s transcription (*-gäk* < *-gek* ?), especially the last part of this formulation appears totally obscure – we do not think we have ever heard of a Turkic syllabification rule that causes “the preservation of *s* after *r*” (or that of any other consonants). Moreover, the meaning ‘elbow(s)’ (as Finch puts it) is wrong – all the words in this family have the singular meaning ‘elbow’, the English plural marker *-s* being apparently only added to make a connection between this word and the idea of a dual formation more readily acceptable.

Besides, it would be a rather challenging task to explain why a verbal derivative of ‘knee’ has the meaning ‘to support; to lean’ instead of, say, ‘to knee’ or ‘to kneel’. And on the other hand: It is anything but easily understandable why the Proto-Turks expressed both verbal meanings (‘to

support, hold up' and 'to lean') by resort to 'knee', rather than, for instance, to 'elbow', 'hand', 'beam', 'stone' or alike.

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