

Research article

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A New Chuvash–Common Turkic Cognate and its Relation to Tocharian: Evidence for Zetacism in Turkic

<https://doi.org/10.33063/os.v74.647>

Abstract: This study proposes a new cognate relationship between Chuvash *věre-* ‘to boil’ and Common Turkic **özä-* ‘to suffer’. Both can be traced back to Proto-Turkic **ör₂ā-* ‘to burn (intransitive), be hot’, derived from **ör₂V-*. The semantic shift from ‘to burn’ to figurative meanings such as ‘to grieve’ or ‘to take pains’ is widely attested across languages. The Proto-Turkic form may itself be a loanword from an unattested Proto-Tocharian cognate **u^hər-* of Proto-Indo-European **uerh₁-* ‘to be hot’. This borrowing provides additional support for the rhotic nature of Proto-Turkic **/r₂/*. Furthermore, the paper connects Proto-Turkic **ör₂V-* to Common Turkic **ört* ‘flame’ and Chuvash *virt* ‘burning, fire’.

Keywords: Chuvash, Common Turkic, lexical cognate, Tocharian, loanword

1 Introduction

According to the widely accepted classification of Turkic languages, Proto-Turkic first split into Bulgar Turkic and Common Turkic. The former is represented by the Chuvash language, while the latter is the origin of all other Turkic languages, including Old Turkic. If the descendant forms of an etymon are found in both Chuvash and Common Turkic, especially Old Turkic, its presence in Proto-Turkic can be established. Therefore, it is important to identify all Chuvash–Common Turkic cognates. The Turkological literature to date provides most of these cognates. However, there are still a few correspondences waiting to be discovered and discussed.

The present study deals with a new Chuvash–Common Turkic lexical correspondence. This includes Common Turkic **(h)özä-* ‘to suffer’ and Chuvash *věre-* ‘to boil’. Although Common Turkic **(h)özä-* itself is not attested, it is preserved in several derivatives. In the following, the forms in Common Turkic and Chuvash are given in chronological order and their etymologies, as well as their internal and external connections, are discussed in detail.

It should be noted that Common Turkic forms are reconstructed with the onset **h-* if they occur in Khalaj in this way. If the cognate of the word in question is absent in Khalaj, it is given as **(h)-*. In contrast, Proto-Turkic forms are assumed to have had the onset **p-*. Uncertain onsets are indicated by **(p)-*.

Furthermore, every Proto-Turkic verb is reconstructed with a final vowel when the descendant form ends in a consonant in Common Turkic. The Proto-Turkic final vowels are assumed to appear as the aorist and converb vowels in Old Turkic. The verb forms ending in a vowel in Common Turkic can be traced back to Proto-Turkic forms ending in a long vowel.

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2 Linguistic evidence

2.1 Common Turkic **(h)özä-*

The data on **(h)özä-* and its five derivatives are presented below.

**(h)özä-g+län-* ‘to exert oneself; to be impatient; to be sorry, suffer; to sob’

- Turkish dialectal (Kars) *özelen-* ‘çabalamak’ [to strive, struggle, exert oneself] (DS 3370).
- Turkish dialectal (Ağrı) *özelen-* ‘sabırsızlık etmek’ [to be impatient] (DS 3370).
- Azerbaijani dialectal (Çənərbərək) *özələmməx /özələn-/* ‘təəssüflənmək’ [to regret; to be sorry about (a sad factor/event)] (Axundov 2007: 390).
- Uzbek–Oghuz *özälän-* ‘тузалмок, соғайиб кетмок’ [to recover, get well] (Abdullaev 1961: 72).
- Turkmen *өзөленмек* *özelen-* ‘to pray, beseech’ (Allen & Touch-Werner 1999: 427).
- Karaim (Trakai) *өзялянь- özälän-* ‘тосковать, стремится душой | tęsknić, wyrywać się sercem’ [to long, yearn with the soul | to long, break out with the heart] (Baskakov et al. 1974: 438).
- Karaim (Halich-Lutsk) *эзэлэн- ezelen-* ‘стремиться; вырываться | dążyć; wyrywać się’ [to aspire; to break away | to aspire; to break out] (Baskakov et al. 1974: 655).
- Tatar *özälän-* ‘(bik tırıšib jörmäk) törekedni, iparkodni, vergödni | sich bestreben, sich bemühen’ [to strive, struggle | to strive, make an effort] (Bálint 1876: 30).
- Bashkir lit. *өзәләнеү ödälän-* ‘1. заботливо ухаживать, проявлять заботу; 2. сильно переживать, страдать’ [1. to look after carefully, show care; 2. to worry a lot, suffer] (Uraksin 1996: 480).
- Bashkir dialectal (Ырғыз, Эйек-Һакмар) *үзәләнеү üdälän-* ‘страдать’ [to suffer] (Dilmöhämätov 2002: 360).
- Kyrgyz *өзөлөн- özölön-* ‘sob, wail’ (Krippes 1998: 402).

**(h)özä-k* or **(h)özä-gäk* ‘hard-working’

- Turkish dialectal (Antalya, Muğla) *özek* ‘çalışkan’ [hard-working] (DS 3369, 4630).
- Turkish dialectal (Antalya) *özek* ‘çıkarcı için sırnaşarak istediğini elde eden’ [one who gets what s/he wants by cosying up for his own gain] (DS 3369).

**(h)özä-l-* ‘to suffer; to be sad’

- Kutadgu Bilig [1069–1070 CE] (678, 1096) *özäl-* (*özälü*) ‘ızdırap çekmek’ [to suffer] (Arat 1979: 371; Tezcan 1981: 57).
- Dīwān Luyāt at-Turk [1072–1074 CE] (107) <’UZAL-> *özäl-* (*özälür, özälümäk*) ‘to suffer and persist without relief’ (Dankoff & Kelly 1982–1985: 1/193).
- Hibat al-Ḥaqā’iq [12th or 13th c. CE¹] (242) *özäl-* (Topkapı ms. *özilä*, Groningen ms. *özilä*) ‘to suffer’ (Arat 1951: 59, 152–153; Çakmak 2019: 85).
- Rasulid Hexaglot [14th c. CE] (191C4) *arilmak* recte **arilmak* *özilmäk*² (corresponds to Arabic العناء ‘pains, trouble, toil, hardship, difficulty, distress’) (Golden 2000: 124).

1 Kamoliddin (2007) argued that *Hibat al-Ḥaqā’iq* of Aḥmad Al-Yuḡnakī, who lived in the first half of the 9th century, underwent changes and distortions and “reflects the language of one of late transmitters, who adopted the sense of *Adīb* Aḥmad’s sayings to his native dialect”. Thus, the language of the extant copies of *Hibat al-Ḥaqā’iq* does not reflect the original language of the poet.

2 The editors proposed the readings *arilmak* and *üzilmäk*, which are semantically incompatible.

- Ottoman *üzelmek* ‘faire une rechute (un malade) | einen Rückfall einer Krankheit bekommen’ [(of an ill person) to have a relapse | to have a relapse of an illness] (Zenker 1866: 121).
- Dobruja Tatar *özil-* ‘pragnać, dążyć’ [to desire, aspire] (Zajączkowski 1975: 114).
- Khakas *өзөлерге özel-* ‘тосковать; грустить’ [to be sad; to grieve] (Subrakova 2006: 321).
- Khakas *özöl-* [özölerge] ‘1. üzölmek, kederlenmek, kaygılanmak; 2. özlemek’ [1. to be sad, grieve, worry; 2. to miss] (HTS 354).

*(h)özä-n- ‘to take pains; to emulate, imitate; to desire, wish’

- Qissa-i Yūsuf [1233 CE] *özän-* ‘sich viel Mühe geben’ [to make a great effort] (Yaman 2012: 348).
- Bahjat al-ḥadā’iq [12th–13th c. CE] *özän-* ‘özenmek, taklit etmek’ [to emulate, imitate]³ (Canpolat 2018: 579).
- Qur’an translation TİEM 73 [13th c. CE?] *özän-* ‘özenmek’ [to take pains] (*özänigililär* translates Arabic فَارِهِينَ *fāriḥīn* ‘skilfully’) (Ünlü 2004: 615).⁴
- Diwān of Yunus Emre [1307 CE?] *özän-* ‘tamah göstermek, gıpta etmek, bir işte ihtimam göstermek’ [to desire with admiration, envy, show care in a job] (Tatçı 1990: 469).
- Diwān of Yunus Emre [1307 CE?] (Bursa ms.) *özän-* ‘taklit etmek’ (Kuybu 2015: 345).
- Ġarīb-nāma [1330 CE] (3237, 4455, 7894, 8751) *özän-* ‘to desire, wish’ (Yavuz 2000: 1/667, 1/903, 2/435, 2/599).
- Huršidnāma [1387 CE] (2785, 6408, 7543) *özän-* ‘to do one’s job diligently; to desire, wish’ (Ayan 1979: 233, 370, 414).
- Ferruḥ u Hüma [1398 CE] (4003, 8145) *özän-* ‘to emulate; to desire, wish’ (Tezcan & Aksoyak 2021: 187, 352).
- Diwān of Kadı Burhaneddin [1393–1394 CE] *özän-* ‘to care for something diligently’ (Ergin 1980: 326).
- Ḥazā’in as-Sa‘ādāt [ca. 1400–1450 CE] (39b) *özän-* ‘to desire’ (Şehsuvaroğlu 1961: 47).
- Diwān of Sehī Bäg [1536–1538 CE] *özän-* ‘to desire’ (Yekbaş 2010: 203, 239, 289).
- Diwān of Bāqī [before 1567 CE] *özän-* ‘to desire; to emulate’ (Küçük 1994: 146–147, 298).
- Dittionario della Lingua Italiana Turchesca [1641 CE] <Osenilmek> *özenilmek* ‘desiderio’ [desire, wish] (Święcicka 2020: 412).
- Thesaurus Linguarum Orientalium [1680 CE] *özenmek* ‘appetere, concupiscere, avidere desiderare & se applicare cum aviditate’ [to strive eagerly, covet, desire eagerly and devote oneself with passion] (Meninski 1680: 514).
- Lehce-i Osmānī [1876, 1890 CE] *özenmek* ‘cidd ü cehd, say, ikdam itina, içtihat etmek, ihtimam, iş güç edinmek, şevk ve ihtimam ile tekellüf, ihtiyar, külfet etmek, kuş yavrusu uçmaya hazırlanmak’ [to strive earnestly, work, take care in execution, exercise caution, work hard, strive with enthusiasm and care, desire, take pains, prepare to fly (of a baby bird)] (Toparlı 2000: 304).
- Redhouse [1880 CE] *üzēnmek* (aor. *üzēnir*) ‘to take great pains, and use one’s best endeavour (over any work)’ (Redhouse & Wells 1880: 436).
- Ottoman [1893 CE] *özүн* (v) *özün-* (probably a mistake for *özän-*) ‘работать изо всѣхъ силъ | sich aus allen Kräften anstrengen’ [to work hard | to make every effort] (Radloff 1893–1911: 1/1302).

³ The passages suggest the meanings ‘to take pains, try hard, make an effort’.

⁴ See Qissa-i Yūsuf (QY) *özän-* ‘to take pains’, Qur’an translation TİEM 73 (QT₃) *özänigililär* ‘painstaking’ (Boeschoten 2022: 226).

- Qāmūs-i Türki [1900 CE] *üzen-* ‘1. teklif ve ihtimamla çalışmak, ihtiyar-ı külfet etmek; 2. çabalamak, uğraşmak, hazırlanmak’ [1. to work with diligence, make an effort; 2. to strive, endeavour, prepare] (Sami 2012: 163).
- Turkish dialectal (Hatay) *üzen-* ‘özenmek’ [to take pains?] (DS 4085).
- Turkish dialectal (İzmir) *özen-* ‘çalışmak’ [to work] (DS 3371).
- Turkish dialectal (Mersin) *özen-* ‘çalışıp çabalamak, didinmek’ [to strive, toil] (Tor 2004: 301).
- Turkish dialectal (Eskişehir) *özen-* ‘beğendiği bir şey veya kimseye sahip olma, onun gibi yapma veya ona benzeme arzusu duymak, o yolda gayret sarfetmek’ [to have a desire to have something or someone one likes, to be like him/her, to make an effort in that way] (Doğru 2022: 1918).
- Gagauz *özenmää* ‘стремиться к чему-л., желать чего-л.’ [to strive for something, desire something] (Baskakov 1973: 354), *özenmää* ‘1. a aspira la ceva, a tinde spre ceva; 2. a fi pasionat’ [1. to aspire to something, strive for something; 2. to be passionate] (Baboglu & Baboglu 1998: 56).

*(h)özä-t- ‘to wrong, act wrongfully’

- Kitāb al-idrāk [1344 CE] *özän-* recte *özät-* ‘to wrong, ill-treat, oppress (*zalama*)’ (Caferoğlu 1931: 116, 13; Clauson 1972: 289; Özyetgin 2001: 601).
- Seyahatnâme of Evliya Çelebi [ca. 1685 CE] *jān özät-* ‘to take pains’ (Dankoff 1991: 21).

2.2 Chuvash *věre-* ‘to boil’ < *(h)ör₂ä-

- Chuvash [1856–1857] *wirés* ‘кипѣть’ [to boil, seethe], *wirení*, *wirní* ‘кипѣние’ [boiling] (Ahlqvist 2008: 1/21, 115; Ahlqvist 2023: 287).
- Chuvash [1900–1901] *vəre-* ‘forñi, fõni | siedən, kochen’ [to boil, cook | to simmer, boil] (Paasonen 1908: 199).
- Chuvash *věpe-* *věre-* ‘кипеть’ [to boil] (Ašmarin 1928–1950: 5/358).
- Chuvash *věpe-* *věre-* ‘1. кипеть; 2. бить, клокотать (напр. об источнике); 3. кишеть, сновать; 4. перен. кипеть, кипятиться, горячиться злиться; 5. перен. кипеть, разгораться, быть в разгоне’ [1. to boil; 2. to beat, bubble (e.g. about a source); 3. to swarm, scurry about; 4. figurative to boil, lose one’s temper, get angry; 5. figurative to boil, flare up, be in full swing] (Skvorcov 1982: 74).

Chuvash *věre-* also has the causative derivative *věret-* ‘1. кипятить; 2. варить’ [1. to boil (transitive); 2. to cook] (Skvorcov 1982: 75).

3 Etymology

3.1 Former etymologies

There are only a few etymological proposals regarding *özäl-* and *özän-*. Clauson (1972: 287) misinterpreted *özäl-* as *uzal-* and considered it to be the passive of *uza-*. Tezcan (1981: 57) disagreed with Clauson’s analysis and interpretation and proposed to connect it with Turkish dialectal *üzül-* instead and to read it as *üzel-*. However, it is usually assumed that *üzül-* is simply the passive of Common Turkic **hüz-* ‘to tear off, tear apart’, cf. Muqaddimat al-Adab *üzil-* ~ *üzül-* ‘(hastalıktan) acı ve elem duymak’ [to feel pain and anguish (from illness)] (Özçamkan Ayaz 2023: 867). Dankoff and Kelly (1982–1985: 3/50) included *özäl-* among the derivatives of **öz* ‘self’. Gülensoy (2007: 2/681) analysed Turkish *özen-* as *öz+e-n-* and considered it a derivative of *öz* ‘self’. Similarly, Nişanyan (2022: 675) derived *özen-* from *öz* ‘mind’ with the suffix *+(g)An-*. The etymologies presented are unconvincing due

to the weak semantic relationship between the nominal base and the verbal forms. Clauson (1972: 289) emended *özän-* ‘to act wrongfully, or tyrannically’ in the *Kitāb al-idrāk* to *öznä-* and identified it with *öznä-* ‘to rebel, be insubordinate’.

Sevortjan (1974: 512–513) treated *özlä-*, (†)*özkä-*⁵, *özän-*, *özäl-*, and *özälän-* under a single heading and, following the analysis of Radloff (1893–1911: 1/1304) for *özlä-* ‘to wish for oneself’, derived all of them from **öz*, which he compared with the Chagatay word *üzlik* ‘Trennung, Abschied; congé, séparation’ [parting, farewell; break, separation] (Vambéry 1867: 222). The latter, if it exists at all, is related to Common Turkic **hüz-* ‘to tear off, tear apart’. Radloff and Sevortjan’s etymology, deriving *özlä-* from *öz* ‘self’, may be correct. Stachowski (2019: 274) instead equated Turkish *özle-* with Khakas *öste-* ‘to moan’, deriving both from Common Turkic **öz* or **üz* ‘nostalgia, longing’, from which he derived the Chagatay word *üzlik*. Stachowski equated the base of the latter with Old Uyghur *üz* ‘hated’. Nevertheless, the verbs *özälän-* in Turkmen and Uzbek Oghuz and *özäl-* in the *Dīwān Luyāt at-Turk* have no vowel length in the first syllable. This argues against a derivation from *öz* ‘self’, which has a long vowel in the *Dīwān Luyāt at-Turk* and in Turkmen, and a diphthong in Yakut.

Paasonen (1908: 199) compared the Chuvash verb with the Altai noun (Radloff) *üzü* ‘heiss’ [hot]. This form goes back to Common Turkic **hisig* ‘hot, heat’ and cannot be cognate with *věre-*. Egorov (1964: 52) compared the Chuvash verb with Old Church Slavonic *върети* ‘бить ключом, бурлить, кипеть’ [to simmer, seethe, boil]. The verb in question is given by ESJS (18/1115–1116) as *vrěti* ‘vřít; sieden’ [to boil]. Slavic **vrěti* ‘to boil’ occurs only in Bulgarian as *vrja* ‘boil, seethe’ without a final consonant (Derksen 2008: 537), which is unlikely to have entered Chuvash. According to Egorov (1964: 52), N. J. Marr, on the other hand, linked the Chuvash word to Armenian *վառել* *vareł* ‘to set on fire, burn’, which we will discuss below in a different context.

3.2 New etymology

The above data demonstrates that Common Turkic had a verb *(*h*)*özä-*. Its passive, reflexive and causative forms are *(*h*)*özäl-*, *(*h*)*özän-*, and *(*h*)*özät-*, respectively. Turkish dialectal *özek* can be traced back to *(*h*)*özäk* or *(*h*)*özägäk*, or it may be considered a recent creation. Oghuzic *özälän-* is derived from *(*h*)*özä-* with the suffixes *-(X)g* (Erdal 1991: 172ff.) and *+lAn-* (Erdal 1991: 509ff.). The forms in the Kipchak languages, on the other hand, must be borrowings from the Oghuz languages. Turkish *özen* ‘pains, painstaking; care’ must be a backformation because it has only been attested since the second half of the 19th century.

It is likely that Common Turkic *(*h*)*özä-* and Chuvash *věre-* had an older, more concrete meaning like ‘to burn (intr.), be hot’. From these meanings, the figurative meanings in Common Turkic may easily have evolved. The semantic shift can be conceived as follows: (1) ‘to burn (intr.), be hot’ > (2) ‘to grieve, be distressed, burn with passion or envy’ > (3) ‘to take pains’ and ‘to desire, wish’. The shift is practically universal, so it needs no examples. Nevertheless, a few examples can be given from Dravidian: Kannada *ummalisu* ‘to be hot; to grieve, be distressed’, Tamil *vē* ‘to burn, be hot (as the weather), be scorched, be boiled, cooked (as rice), be refined (as gold), be distressed by grief or passion, be angry’ (Burrow & Emeneau 1984: 63, 502). Many Turkic verbs with the original meaning of ‘to burn’ or ‘to heat up’ also have similar figurative meanings: Old Uyghur *čon-* ‘to toil, be tormented’, *örtän-* ‘to worry, be distressed’ (Wilkens 2021a: 238, 541), Middle Turkic *köy- ~ küy-* ‘to have strong feelings, be aggrieved’ (Boeschoten 2022: 183), Chuvash *śun-* ‘to covet, aspire to something; to languish, suffer’ (Skvorcov 1982: 424).

We can thus reconstruct *(*p*)*ör₂ä-* ‘to burn (intr.), be hot’ for Proto-Turkic.

5 The oldest attested form of the verb is *öskä-* in the *Muqaddimat al-Adab* and *Xusrāv u Širīn* (Boeschoten 2022: 223). The noun *ösk* ‘wish, desire’ in the *Muqaddimat al-Adab* is possibly a backformation.

3.3 Internal connections

Proto-Turkic **(p)ör₂ā-* ‘to burn (intr.), be hot’ may be related to Common Turkic *(h)ört* ‘flame, conflagration’ (Clauson 1972: 201) and Chuvash *virt* ‘пал, пожар (лесной или степной)’ [burning, fire (forest or steppe)] (Skvorcov 1982: 80). The Common Turkic noun occurs as early as the Tuñuquq inscription but is unfortunately missing in Khalaj. Proto-Turkic **(p)örtö* can be derived from **(p)ör₍₂₎-* ‘to burn’ with **(U)tO* (> Old Turkic *-(U)t*). Erdal’s (1991: 310) etymology, which derived *ört* from *ör-* ‘to rise’, cannot be correct because the former occurs in Turkmen with a short vowel and the latter with a long vowel. The Ottoman hapax (16th century) *ord* ‘fire’ (TS 3013), cited by Clauson (1972: 201), which would argue in favour of **ört*, has been emended to *od* by Durbilmez (1998: 449). *Ört* lives on in the Adana and Osmaniye dialects of Turkish with the meaning ‘fire’ (Yıldırım 2006: 2/485).

For the neutralisation of the Proto-Turkic **/r/* and **/r₂/* before the voiceless obstruents */t k č/* in Common Turkic, the following examples can be given: *äsiz* ‘a word of sighing for a loss’ vs. *äsirkä-* ‘to regret the loss of someone or something’, *buz-* ‘to destroy’ vs. *burčintur-* ‘to disturb’, *iz* ‘trace, track’ vs. *irtä-* ‘to enquire, examine’, *iz* ‘trace, track’ vs. *irklä-* ‘to trample on’, *ikiz* ‘twins’ vs. *ikirčgü* ‘doubt’, *kapiz* ‘casket, coffin’ vs. *kapirčak* ‘container, casket, shrine’, *käz* ‘notch’ vs. *kärt-* ‘to notch’, *kiz* ‘girl, daughter’ vs. *kirkün* ‘maiden, young woman’, *täz-* ‘to run away, flee’ vs. *tärk* ‘quickly’. The same phenomenon can also be observed in suffixes: *+dXz* in *kündüz* ‘during daytime’ vs. *+dXr+tl/+dXr+tlIn*. The number of examples can be increased if modern Turkic languages are taken into account. The above and several other examples of zetacism can be found in Tekin (1969: 58–70), Tekin (1975: 276–280), Tekin (1979: 124–129), Xelinski (1986: 41–44), and Tekin (1991).

In Chuvash, we also find *vëri* *vëri* ‘1. жар, жара || горячий, жаркий || горячо, жарко; 2. перен. горячий, страстный, полный чувств; 3. перен. горячий, напряжённый, интенсивный’ [1. heat || hot || hot; 2. figurative hot, passionate, full of feelings; 3. figurative hot, tense, intense] (Skvorcov 1982: 75), which can be traced back to **öräy* or **örgäy*.⁶ These can be analysed as **ör-äy* or **örä-y* and **ör-gäy*, respectively. Although there is no deverbal formative *-gAy* in Common Turkic, a similar suffix with the forms *-KAi ~ -gAi* occurs in Mongolic (Poppe 1991: §148). This Mongolic suffix, which forms nouns designating qualities resulting from the action, was borrowed into some Turkic languages, e.g. Yakut *-KAy* (Károly 2013: 117–119), Dolgan *-kAy ~ -gAy* (Stachowski 1997: 46). It can be assumed that the Middle Bulgar Turkic form **ör-gäy* was formed after the Mongolic suffix had been borrowed into Chuvash as *-gAy*.

Another and more likely possibility is to posit a rare formative *-(A)y* in Turkic. There is limited but solid evidence for this suffix in Common Turkic: Old Uyghur *tükä-y* ‘complete’ < *tükä-* ‘to come to an end’, *yod-ay* ‘vain, mean, low’ < *yod-* ‘to obliterate’ (Wilkens 2021: 770, 908), Qışaš al-Anbiyā’ *ula-y* ‘eternally’ < *ula-* ‘to connect, join’ (Boeschoten 2022: 370). If Old Turkic *čig-an* ‘poor, destitute’ (< *čig-* ‘to tie up’) (Clauson 1972: 408–409) also belongs to this formation, the formative must be redefined as **(A)n*. In this case, **öräy* can be a derivative of either **ör-* or **örä-*.

In light of the argumentation above, Proto-Turkic **(p)ör₂ā-* appears to be secondary, derived from **(p)ör₂-* with the iterative suffix **-Ā-* (Berta 1996: 640–641). In an earlier study (Ünal 2022: 22), I also argued for the existence of *-A-* in Old Uyghur on the basis of the verbs *tar-* ‘to scatter, disperse’ and *tara-* ‘to be scattered; to scatter, disperse’ (Wilkens 2021a: 676). Old Uyghur **yevä-*, the base of *yeväg* ‘equipment’, *yevät-* ‘to be equipped; to equip’, and *yevätür-* ‘to cause to equip’, derived from *yev-* ‘to equip (with)’ (Wilkens 2021a: 895), is another possible example of this formation.⁷ The same applies to Old Turkic *ül-ä-* ‘to divide into shares and distribute’ (Wilkens 2021a: 822; Clauson 1972: 127;

6 This form would correspond to *özgäy* in Common Turkic. In fact, we find *özgäy* (4x) in Kutadgu Bilig, which, according to Arat (1979: 372), means ‘sâdik, vefâlî’ [faithful, loyal]. Erdal (1991: 165) analysed it as *öz+gäy* and derived it from *öz* ‘self’.

7 Erdal (1991: 218) wrote that “the joined effect of */y/* and */v/* was possibly responsible for the variants” with */i/* in the second syllable. This is a difficult argument to accept.

Boeschoten 2022: 379), derived from **(h)ül-* > Old Turkic *ülüg* ‘share, part; destiny, fate’, and Old Turkic *yast-a-* ‘to lean; to prop (someone) on a pillow’ (Wilkens 2021a: 874; Clauson 1972: 974; Boeschoten 2022: 403), derived from **yas-(i)t-* > Old Turkic *yast-ok* ‘cushion, pillow’. If Chuvash шыра- *šira-* ‘to seek, search’ can be traced back to and analysed as **šjör-ā-*, which is possibly the origin of Common Mongolic **sura-* ‘to ask’ (Nugteren 2011: 506), **-Ā-* can be reconstructed with confidence at the Proto-Turkic level.

3.4 External connections

3.4.1 Hungarian

In the light of Common Turkic **(h)özä-* ‘to burn; to suffer’, a new etymology can be proposed for Hungarian *űszög* [űsög] < **űseg*⁸ ‘(extinguished) fire, blaze’ (Benkő 1993: 1590). The Hungarian noun can be traced back to **özeg* with secondary devoicing of **z* and considered a loanword from Common Turkic **özä-g*, which probably meant ‘burning; burnt’ and is the base of **(h)özäglän-* discussed above. The etymology of Róna-Tas and Berta (2011: 984ff.) is unlikely, because Common Turkic *hīsīg* ~ *hisīg* (/hisI-g/, not /hisX-g/) would yield **išiγ* or **išiy* in West Old Turkic (cf. Chuvash *ăšă* ‘warm, warmth; hot, heat’). A Common Turkic form **isiγ* would also not fit as a donor form, as the vocalism of the Hungarian word suggests **ü-e*.

3.4.2 Tocharian

The Proto-Turkic forms **(p)ör₂V-* or **(p)ör₂ā-* do not seem to have been borrowed by other Altaic languages, but they have a striking similarity to Proto-Indo-European **uerh₁-* ‘to be hot’ (LIV² 689; Kloekhorst 2008: 924). Classical Armenian *var-* ‘to light up, kindle’ is a further cognate (Schmitt 2007: 70). The derivative վառել *vaṛel* ‘to set on fire, burn’ has been associated with the Chuvash verb *věre-* (see 2.1 above). The hypothetical Proto-Tocharian cognate **u¹ər-* of Proto-Indo-European **uerh₁-* (Hannes Fellner, personal communication, 13 May 2024) may have entered Proto-Turkic as **ör₂V-* with the expected substitution of **u¹ə-* by **ö-*. Similar substitutions are also known from later Turkic varieties: Arabic *waqt* ‘time’ > Old Ottoman *oxt* ‘time’, Persian *wayrān* ~ *wīrān* ~ *werān* ‘desert, desolate, ruined, depopulated’ > Dīwān Luyāt at-Turk (Oghuz) *örān* ‘bad, ruined’. The only problem with this etymology is the correspondence of Proto-Tocharian **r* to Proto-Turkic **r₂*. In another Proto-Tocharian loanword in Proto-Turkic postulated by me, **r* corresponds to **r*: Proto-Tocharian **tsər-* ‘to separate (tr.)’ (Peyrot 2013: 845) → Proto-Turkic **dzira-* > Common Turkic *yir-* ~ *yir-* (aorist *-ar* ~ *-är*) ‘to tear, split, to dig’, Chuvash *šir-* ‘to make furrows’. In contrast, Tocharian **r* corresponds to Turkic **r₂* in another loanword: Proto-Tocharian **pākre* ‘evident’ (Adams 2013: 390) or Tocharian A *pākār* ‘evident, clear, obvious’ (Carling & Pinault 2023: 267) → Proto-Turkic **bākr₂ä* or **bākir₂* > Old Uyghur *bākiz* ~ *b(ä)kiz* ‘manifest’ (Wilkens 2021a: 156).⁹

Similarly, we see that Armenian – a language with two rhotic phonemes – borrowed the Turkic /r/ as /r/ or /i/ randomly: (Nor-Nakhichevan) *aṛxan*, *aṛkan* ‘rope, cord’ ← Crimean Karaim *ar-qan* ‘cord, rope’ but (Nor-Nakhichevan) *artəx*, *ardəx* ‘already’ ← Crimean Karaim *artiḡ* ‘1. more; 2. already’ (Jankowski 2016: 231). Thus, it is possible that Proto-Tocharian **u¹ər-* was borrowed into Proto-Turkic as **ör₂V-*. From the latter, **ör₂ā-* was derived.

It has been assumed by many authors (Schneider 1940: 200–201; Pedersen 1941: 171; Mallory & Adams 2006: 260) that Tocharian A *wrātka-* means ‘to cook’ and is connected to Lithuanian *vérdū* ‘cook, boil’, and hence to Proto-Indo-European **uerh₁-*. Peyrot (2013: 176, fn. 60), on the contrary,

8 The word survives in the Csángó dialect as *űszök*, *űszög*, *űszeg*, *űszäg*, *űszkek*, *űszket* ‘1. burnt wood, remnants of cinder; 2. night-light, wick’ (Péntek 2016–2018: I.2/450). Among them, *űszeg*, which occurs in six settlements, is the most widely attested form.

9 Wilkens (2021b: 125–126) identified the origin of the Old Uyghur word as Tocharian A *pākār*.

deems the interpretation of *wrātka-* as ‘to cook’ to be very unlikely. In support of this, Carling and Pinault (2023: 453) give its meaning as ‘to cut, prepare, handle [of meat]’ in their dictionary.

4 Conclusion

The aim of this study has been to demonstrate the previously unidentified cognateness of the Common Turkic verbal base **(h)özä-* ‘to suffer’ and the Chuvash verb *věre-* ‘to boil’. Proto-Turkic **(p)ör₂ä-* ‘to burn (intr.), be hot’, which is the origin of these verbs, is brought into connection with the verbal base **(p)ör₍₂₎V-* ‘to burn’ of Common Turkic *(h)ört* ‘flame, conflagration’ and Chuvash *virt* ‘burning, fire (forest or steppe)’. Proto-Turkic **(p)ör₂ä-* is regarded as a derivative of **(p)ör₂V-*. The hypothesis was proposed that the latter may be a borrowing from an unattested Proto-Tocharian cognate **u¹ər-* of Proto-Indo-European **uerh₁-* ‘to be hot’. If this is correct, the root in Proto-Turkic must be reconstructed as **ör₂V-* ‘to burn (intr.), be hot’. The correspondence of Proto-Tocharian **/r/* to Proto-Turkic **/r₂/* supports the rhotic nature and zetacistic development of the latter.

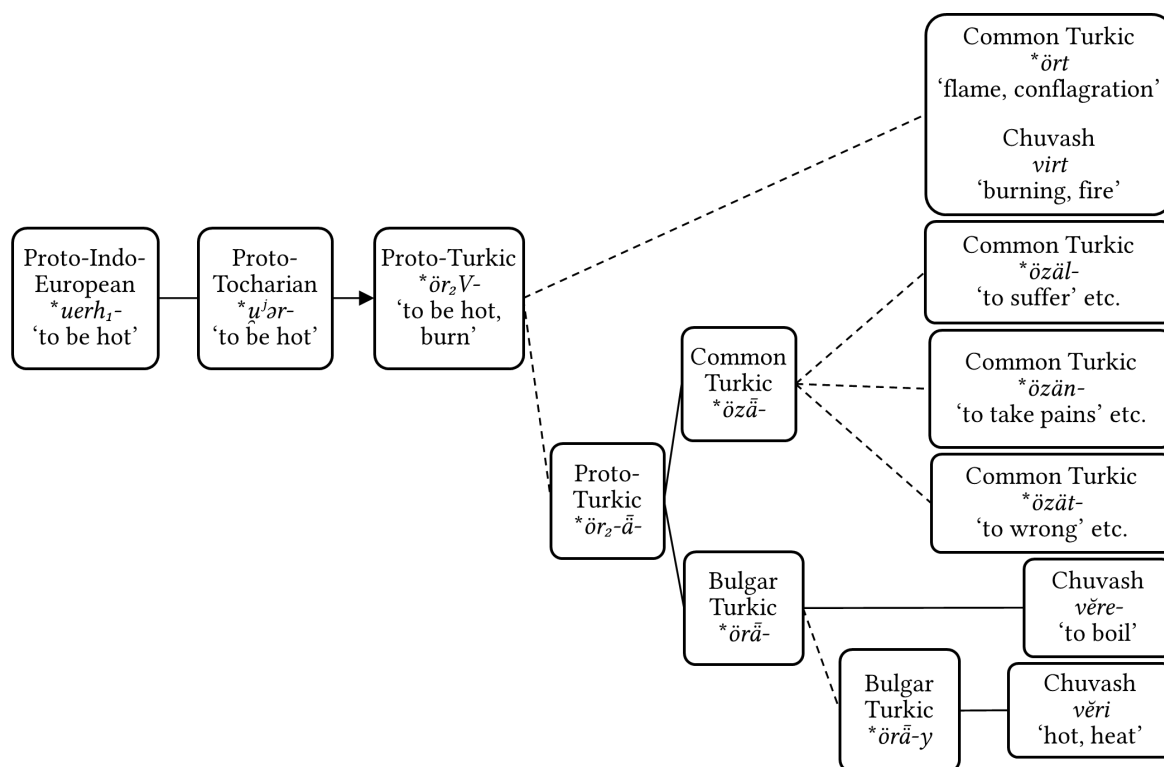


Figure 1: The path of Proto-Indo-European **uerh₁*- into Proto-Turkic (solid line: *phonetic change*, dashed line: *morphological derivation*, arrow line: *borrowing*)

Abbreviations

intr.	intransitive
ms.	manuscript
tr.	transitive

References

- Abdullaev, Fattax A. 1961. Хорезмские говоры узбекского языка. Taškent: Izdatel'stvo Akademii Nauk Uzbekskoj SSR.
- Adams, Douglas Q. 2013. *A Dictionary of Tocharian B. Revised and Greatly Enlarged*. Second Edition. Amsterdam/New York, NY: Rodopi.
- Ahlquist, August 2023. *Tschuwaschisches Dialektwörterbuch*. Klára Agyagási and Eberhard Winkler (eds.) Veröffentlichungen der Societas Uralo-Altaica 99. Wiesbaden: Harrassowitz.
- Ahlqvist, August 2008. *Tščuwaščiska: Tschuwaschischer Nachlass von August Ahlqvist*. I–II. Klára Agyagási, Eberhard Winkler (eds.) Studies in Linguistics of the Volga Region 4. Debrecen: Debreceni Egyetem Kossuth Egyetemi Kiadó.
- Allen, Frank J., and Touch-Werner (Tachmouradova), Jeren eds. 1999. *Turkmen-English Dictionary*. Kensington, Md.: Dunwoody Press.
- Arat, Reşit Rahmeti 1951. *Edib Ahmed B. Mahmud Yükneci. Atebetü'l-Hakayık*. İstanbul: Türk Dil Kurumu.
- Arat, Reşit Rahmeti 1979. *Kutadgu Bilig. III: İndeks*. Kemal Eraslan, Osman F. Sertkaya, Nuri Yüce (eds.). İstanbul: Türk Kültürünü Araştırma Enstitüsü.
- Aşmarin, Nikolaj Ivanovič 1928–1950. *Thesaurus Linguae Tschuvaschorum* = Словарь Чувашского Языка. 1–17. Kazan'/Čeboksary.
- Axundov, A. A. ed. 2007. *Azərbaycan Dilinin Dialektoloji Lüğəti A-Z*. Bakı: “Şərq-Qərb”.
- Ayan, Hüseyin 1979. *Hurşid-Nâme (Hurşid ü Feraḥşād): İnceleme-Metin-Sözlük-Konu Dizini*. Erzurum: Atatürk Üniversitesi Yayınları.
- Baboglu, Nicolae, and Baboglu, Ignat 1998. *Dicționar Găgăuz-Român Român-Găgăuz. Gagauzça-Romınca Romınca-Gagauzça Sözlük*. Chişinău: Editura Lumina.
- Bálint, Gábor 1876. *Kazáni-Tatár nyelvtanulmányok. II. füzet. Kazáni-tatár szótár*. Budapest: A M. T. Akadémia Könyvtára Hivatalában.
- Baskakov, Nikolaj Aleksandrovič ed. 1973. Гагаузско-Русско-Молдавский Словарь. Moskva: Sovetskaja Ėnciklopedija.
- Baskakov, Nikolaj Aleksandrovič, Zajončkovskij [Zajączkowski], Ananij [Ananiasz] and Šapšal [Szapszal], Seraja [Seraja] Markovič 1974. Караимско-Русско-Польский Словарь. Moskva: Russkij Jazyk.
- Benkő, Loránd ed. 1993–1997. *Etymologisches Wörterbuch des Ungarischen*. I–III. Budapest: Akadémiai Kiadó.
- Berta, Árpád 1996. *Deverbale Wortbildung im Mittelkiptschakisch-Türkischen*. Turcologica 24. Wiesbaden: Harrassowitz.
- Boeschoten, Hendrik 2022. *A Dictionary of Early Middle Turkic*. With the editorial assistance of John O'Kane. Handbook of Oriental Studies, Section One, Ancient Near East 169. Leiden/Boston: Brill.
- Burrow, Thomas and Emeneau, Murray Barnson 1984. *A Dravidian Etymological Dictionary*. Second edition. Oxford: Clarendon Press.
- Caferoğlu, Ahmet 1931. *Abû-Hayyân. Kitâb al-İdrâk li-lisân al-Atrâk*. İstanbul.
- Çakmak, Serkan 2019. *Edib Ahmed Yükneci: Atebetü'l-Hakayık. İnceleme-Tenkitli Metin-Tıpkıbasım*. Ankara: Türkiye Yazma Eserler Kurumu Başkanlığı.
- Canpolat, Mustafa 2018. *Behcetü'l-Hadâik fî Mev'izati'l-Halâik*. Ankara: Türk Dil Kurumu.
- Carling, Gerd, and Pinault, Georges-Jean 2023. *Dictionary and Thesaurus of Tocharian A*. Wiesbaden: Harrassowitz.
- Clauson, Sir Gerard 1972. *An Etymological Dictionary of Pre-Thirteenth-Century Turkish*. Oxford: Clarendon Press.
- Dankoff, Robert 1991. *An Evliya Çelebi Glossary. Unusual, Dialectal and Foreign Words in the Seyahatname*. Sources of Oriental Languages and Literatures 14, Turkish Sources XII. Cambridge, Massachusetts: Harvard University, Department of Near Eastern Languages and Civilizations.
- Dankoff, Robert, and Kelly, James 1982–1985. *Maḥmūd al-Kāşyarî. Compendium of the Turkic Dialects (Dīwān Luḡāt at-Turk)*. I–III. Sources of Oriental Languages and Literatures 7, Turkish Sources VII. Duxbury, Mass.: Harvard University.
- Derksen, Rick 2008. *Etymological Dictionary of the Slavic Inherited Lexicon*. Leiden Indo-European Etymological Dictionary Series 4. Leiden/Boston: Brill.
- Dilmöhämätov, M. I. ed. 2002. Дialeктологический Словарь Башкирского Языка = Башкорт Теленен Дialeкттары һүзлеге. Öfö: Kitap.
- Doğru, Fatih 2022. *Eskişehir İli Manav Ağızları*. Ankara: Türk Dil Kurumu.
- DS: *Türkiye'de Halk Ağzından Derleme Sözlüğü*. I–XII. 1993. 2nd edition. Ankara: Türk Dil Kurumu.
- Durbilmez, Bayram 1998. *Muhyiddin Abdal Divanı (İnceleme-Tenkitli Metin)*. Unpublished Ph.D. Dissertation, Fırat Üniversitesi, Elazığ.
- Egorov, Vasilij Georgievič 1964. Этимологический Словарь Чувашского Языка. Čeboksary: Čuvaškoe Kniznoe Izdatel'stvo.
- Erdal, Marcel 1991. *Old Turkic Word Formation: A Functional Approach to the Lexicon*. I–II. Turcologica 7. Wiesbaden: Harrassowitz.
- Ergin, Muharrem 1980. *Kadı Burhaneddin Divanı*. İstanbul: İstanbul Üniversitesi Edebiyat Fakültesi Yayınları.
- ESJS: Havlová, Eva (vols. 1–14) and Janyšková, Ilona (vols. 15–21) eds. 1989–2022. *Etymologický slovník jazyka staroslověnského*. 1–21. Praha: Academia, Nakladatelství Československé Akademie Věd (vols. 1–14), Brno: Tribun EU (vols. 15–21).

- Golden, Peter B. ed. 2000. *The King's Dictionary. The Rasulid Hexaglot: Fourteenth Century Vocabularies in Arabic, Persian, Turkic, Greek, Armenian and Mongol*. Translated by Tibor Halasi-Kun, Peter B. Golden, Louis Ligeti and Edmund Schütz, with introductory essays by Peter B. Golden and Thomas T. Allsen. Handbuch der Orientalistik, Achte Abteilung, Zentralasian 4. Leiden/Boston/Köln: Brill.
- Gülensoy, Tuncer 2007. *Türkiye Türkçesindeki Türkçe Sözcüklerin Köken Bilgisi Sözlüğü: Etimolojik Sözlük Denemesi*. I (A–N), II (O–Z). Ankara, Türk Dil Kurumu.
- HTS: Gürsoy-Naskali, Emine, Butanayev, Viktor, İsina, Almagül, Şahin, Erdal, Şahin, Liaisan, and Koç, Aylin 2007. *Hakasça-Türkçe Sözlük*. Ankara: Türk Dil Kurumu.
- Jankowski, Henryk 2016. Turkic Loanwords in Nor-Nakhichevan Armenian. *Iran & the Caucasus* 20/2, 223–235.
- Kamoliddin, Shamsiddin S. 2007. New Data on the Biography of Aḥmad Al-Yuḡnakī. *Oriente Moderno, Nuova serie*, 87/1 (Studies on Central Asia), 141–153.
- Károlyi, László 2013. *Deverbal Nominals in Yakut: A Historical Approach*. Turcologica 96. Wiesbaden: Harrassowitz.
- Kloekhorst, Alwin 2008. *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden Indo-European Etymological Dictionary Series 5. Leiden/Boston: Brill.
- Krippes, Karl A. 1998. *Kyrgyz-English Dictionary*. Kensington, Maryland: Dunwoody Press.
- Küçük, Sabahattin 1994. *Bâkî Divânı. Tenkitli Basım*. Ankara: Türk Dil Kurumu.
- Kuybu, Ebru 2015. *Yûnus Emre Divanı'nın Bursa Nüshası (Giriş-Metin-Dil İncelemesi-Dizin)*. Unpublished master's thesis. Uludağ University, Bursa.
- LIV²: Rix, Helmut 2001. *Lexikon der indogermanischen Verben. Die Wurzeln und ihre Primärstammbildungen*. Zweite, erweiterte und verbesserte Auflage. Wiesbaden: Reichert.
- Mallory, James Patrick and Adams, Douglas Q. 2006. *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World*. Oxford: Oxford University Press.
- Meninski, Franciscus à Mesgnien 1680. *Thesaurus Linguarum Orientalium Turcicae-Arabicae-Persicae*. I–III. Viennae.
- Nişanyan, Sevan 2022. *Nişanyan Sözlük. Çağdaş Türkçenin Etimolojisi*. 6. baskı. İstanbul: Liberus Kitap.
- Nugteren, Hans 2011. *Mongolic Phonology and Qinghai-Gansu Languages*. Linguistics in Leiden. Utrecht: LOT (Landelijke Onderzoekschool Taalwetenschap).
- Özcamkan Ayaz, Gülşen 2023. *Zemahşerî. Mukaddimetü'l-Edeb Paris ve Yozgat Nüshaları (Giriş-Metin-Dizin)*. Ankara: Türk Dil Kurumu.
- Özyetgin, Ayşe Melek 2001. *Ebû Ḥayyân. Kitâbu'l-İdrâk li Lisâni'l-Etrâk. Fiil: Tarihi-Karşılaştırmalı bir Gramer ve Sözlük Denemesi*. Ankara: KÖKSAV.
- Paasonen, Heikki 1908. *Csuvas Szójegyzek. Vocabularium Linguae Čuvašicae*. Budapest: A Magyar Tudományos Akadémia Kiadása.
- Pedersen, Holger 1941. *Tocharisch vom Gesichtspunkt der indoeuropäischen Sprachvergleichung*. Det Kgl. Danske Videnskabernes Selskab., Historisk-Filologiske Meddelelser, XXVIII, 1. København: Munksgaard.
- Péntek, János 2016–2018. *A Moldvai Magyar Tájnyelv Szótára*. I–II. Cluj-Napoca: Erdélyi Múzeum Egyesület.
- Peyrot, Michaël 2013. *The Tocharian Subjunctive. A Study in Syntax and Verbal Stem Formation*. Brill's Studies in Indo-European Languages & Linguistics 8. Leiden/Boston: Brill.
- Poppe, Nicholas 1991. *Grammar of Written Mongolian*. 4th unrevised printing. Wiesbaden: Harrassowitz.
- Radloff, Wilhelm 1893–1911. *Опытъ Словаря Тюркскихъ Нарѣчій = Versuch eines Wörterbuches der Türk-Dialecte*. Bd. 1–4. Sanktpeterburg: Nauka [reprint: 's-Gravenhage: Mouton 1960].
- Redhouse, James William and Wells, Charles 1880. *Redhouse's Turkish Dictionary*. Second edition. London: Bernard Quaritch.
- Róna-Tas, András and Berta, Árpád 2011. *West Old Turkic. Turkic Loanwords in Hungarian*. I–II. Turcologica 84. Wiesbaden: Harrassowitz.
- Sami, Şemseddin 2012. *Kâmûs-ı Türkî (Latin Harfliyle)*. Raşit Gündoğdu, Niyazi Adıgüzel, Ebul Faruk Önal (eds.) 2nd edition. İstanbul: İdeal.
- Schmitt, Rüdiger 2007. *Grammatik des Klassisch-Armenischen mit sprachvergleichenden Erläuterungen*. 2., durchgesehene Auflage. Innsbruck.
- Schneider, K. 1940. Zur Wortkunde und Grammatik des Tocharischen. *Indogermanische Forschungen* 57, 193–204.
- Şehsuvaroğlu, Bedi N. (1961). *Eşref Bin Muhammed. Hazâ'inü's-Saâ'dât (sic). 1460 (H. 864)*. Ankara: Türk Tarih Kurumu.
- Sevortjan, Ėrvand Vladimirovič 1974. *Этимологический Словарь Тюркских Языков. Общeturкские и Межтюркские Основы на Гласные*. Москва: Nauka.
- Skvorcov, Mixail I. ed. 1982. *Чувашско-Русский Словарь*. Москва: Russkij Jazyk.
- Stachowski, Marek 1997. *Dolganische Wortbildung*. Kraków: Księgarnia Akademicka.
- Stachowski, Marek 2019. *Kurzgefaßtes etymologisches Wörterbuch der türkischen Sprache*. Kraków: Księgarnia Akademicka.
- Subrakova, Olga V. 2006. *Хакасско-Русский Словарь = Хакас-орыс сөзтік*. Novosibirsk: Nauka.
- Święcicka, Elżbieta 2020. *Dictionary of Italian-Turkish Language (1641) by Giovanni Molino*. Transcribed, Reversed, and Annotated. Studien zur Sprache, Geschichte und Kultur der Turkvölker 23. Berlin/Boston: de Gruyter.
- Tatçı, Mustafa 1990. *Yunus Emre Divanı. Tenkitli Metin*. Klasik Türk Eserleri 14. Ankara: Kültür Bakanlığı.
- Tekin, Talât 1969. Zetacism and Sigmatism in Proto-Turkic. *Acta Orientalia Academiae Scientiarum Hungaricae* 22/1: 51–80.

- Tekin, Talât 1975. Further Evidence for «Zetacism» and «Sigmatism». Pp. 275–284 in *Researches in Altaic Languages: Papers read at the 14th Meeting of the Permanent International Altaistic Conference Held in Szeged, August 22–28, 1971*, ed. Louis Ligeti, Bibliotheca Orientalis Hungarica 20. Budapest: Akadémiai Kiadó.
- Tekin, Talat 1979. Once More Zetacism and Sigmatism. *Central Asiatic Journal* 23/1–2: 118–137.
- Tekin, Talat 1991. New Examples of Zetacism. *Türk Dilleri Araştırmaları* 1991: 145–150.
- Tezcan, Semih 1981. Kutadgu Bilig Dizini Üzerine. *Belleten* 45/2-178, 23–78.
- Tezcan, Semih, and Aksoyak, İsmail Hakkı 2021. *Muhammed. Ferruḥ u Hüma (Ferruḥnâme)*. Turkish Sources CXLVIII. The Sources of Oriental Languages and Literatures 148. [Cambridge, MA]: The Department of Near Eastern Languages and Civilizations, Harvard University.
- Toparlı, Recep 2000. *Ahmet Vefik Paşa: Lehce-i Osmânî*. Ankara: Türk Dil Kurumu.
- Tor, Gülseren 2004. *Mersin Ağzı Sözlüğü*. Türk Dilleri Araştırmaları Dizisi 38. İstanbul.
- TS: *XIII. Yüzyıldan Beri Türkiye Türkçesiyle Yazılmış Kitaplardan Toplanan Tanıklarıyla Tarama Sözlüğü* I–VIII. 21996. 2nd edition. Ankara: Türk Dil Kurumu.
- Ünal, Orçun 2022. *On *p- and Other Proto-Turkic Consonants*. Sino-Platonic Papers 325. Philadelphia: Department of East Asian Languages and Civilizations, University of Pennsylvania.
- Ünlü, Suat 2004. *Karahanlı Türkçesi Satır-Arası Kur'an Tercümesi* (TİEM 235v/3-450r7) (Giriş-Metin-İnceleme-Analitik Dizin). Doktora Tezi, Hacettepe Üniversitesi, Ankara.
- Uraksin, Zinnur Gazizovič ed. 1996. Башкирско-Русский Словарь. Moskova: Digora.
- Vambéry, Hermann 1867. *Čagataische Sprachstudien*. Leipzig: Brockhaus.
- Wilkens, Jens 2021a. *Handwörterbuch des Altuigurischen. Altuigurisch-Deutsch-Türkisch. Eski Uyğurcanın El Sözlüğü. Eski Uyğurca-Almanca-Türkçe*. Göttingen: Universitätsverlag Göttingen.
- Wilkens, Jens 2021b. *Uigurisches Wörterbuch. Sprachmaterial der vorislamischen türkischen Texte aus Zentralasien. III. Fremdelemente. Band 1: eč – bodis(a)v(a)tv*. Stuttgart: Steiner.
- Xelimskiĭ, E. A. 1986. Происхождение древнетюркского чередования *r~z* и дилемма «ротацизма-зетацизма». *Советская Тюркология* 1986/2: 40–50.
- Yaman, Hakan 2012. *Die Yūsuf-Legende in der Version von 'Alī. Nach dem Dresdener Manuskript Eb. 419*. Studien zur Sprache, Geschichte und Kultur der Türkvölker 11. Berlin: Klaus Schwarz Verlag.
- Yavuz, Kemal 2000. *Âşık Paşa. Garib-nâme*. I–II. İstanbul: Türk Dil Kurumu.
- Yıldırım, Faruk 2006. *Adana ve Osmaniye İlleri Ağızları*. I–II. Ankara: Türk Dil Kurumu.
- Zajączkowski, Włodzimierz 1975. *Język i folklor tatarów z Dobrudży Rumińskiej*. Wrocław/Warszawa/Kraków/Gdańsk: Wydawnictwo Polskiej Akademii Nauk.
- Zenker, Julius Theodor 1866–1876. *Türkisch-arabisch-persisches Handwörterbuch*. I–II. Leipzig: Wilhelm Engelmann.