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Turkic words for ‘steel’ and ‘cast iron’

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As a continuation of an earlier article dealing with Turkic and Mongolian words for gold, silver, copper, bronze, brass, tin, lead and iron, the following article examines the Turkic words for steel and cast iron, namely *qurč*, *čelik*, *bulat*, *gang* and *čodšin*, as well as certain word formations used to form the names of these metals. Mongolian and Tungusic words have only been included where they are common with Turkic ones. The distribution of the words for steel and cast iron is twofold. *Bulat* and *čodšin* have a wide distribution; *bulat* being known from Turkic, Mongolian, Iranian and Caucasian, *čodšin* from Turkic, Iranian and Caucasian languages. *Gang* and *čelik* have limited distribution, and these words occur only in Turkic languages situated closely to the donor languages Chinese and Persian. The word *qurč* is well attested in Middle Turkic times; presently its distribution is restricted to the South-East and Volga Turkic languages. The word is known in Mongolian with a different meaning. All of the afore-mentioned words are loanwords from Chinese or Iranian and, surprisingly, no genuine Turkic words for steel and cast iron are known.

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In an article entitled “Bemerkungen zur türkischen und mongolischen Metallterminologie” and published in *Studia Orientalia* 73 (1994), 193-251, I dealt with the Turkic and Mongolian words for gold, silver, copper, bronze, brass, tin, lead and iron. As a continuation of my *Studia* article, I now present the reader with an article addressing the semantics, distribution and etymology of Turkic names for steel and cast iron. Where they are common with Turkic names, Mongolian and Tungusic names for steel and cast iron have also been included in this article. The Mongolian-Tungusic word *širemün* ‘copper; cast iron; brass, bronze,

ore' has been excluded and may be treated in another article dealing with Tungusic(-Mongolian) metal terminology.

Steel terminology

The Turkic and Mongolian cultures know four widely distributed names for 'steel': *qurč*, *bolat*, *čelik* and *yaŋ*. As closer observation will reveal, all of these names seem to be loanwords from the languages of the surrounding cultures. In addition to these four terms, some languages use *tämür* for 'steel': Kip. *tämür*, *tämür*; *demür* 'Eisen, Stahl' (Houtsma 1894: 68, 74); Mgh. *timür* 'Stahl' (Weiers 1975: 162). Some Mongolian languages use word compounds of the type "steel-iron" to denote steel. In Turkic this kind of word formation is found only in Tuvian as a loanword from Mongolian: Tuv. *qaŋ tämir* 'Stahl' (RII 80); MoL *yang temür* (Lessing 1960: 348); Khal. *gan tömör* 'steel' (Hangin 1986: 111); Bur. *gan temür* 'of steel' (Čeremisov 1973: 145); Kal. *gaŋ tömr*, *bold tömr* 'Stahl' (Ramstedt 1935: 407a, 50a). This formation could be a loan translation from Chinese *tie gang* 'iron-steel = steel, pure steel' (Mathews 1975¹³:6332/80), also found in Dungan *gonte* (Russko-dunganskij slovar' III.212) and Korean *kangch'öl* 'steel' (Kwon 1978: 447, 2231).

Turkic *qurč* 'steel', Mongolian *qurča* 'keen, sharp, acute'

The word *qurč* can be found in both the Turkic and Mongolian languages, but is absent in the Tungusic languages, cf. MT, Rozycki (1994). With the meaning 'steel; bronze, copper', *qurč* appears in Turkic languages: Uigur, SE- and NW-languages, Volga-Tatar languages and Chuvash 'steel', Karaim 'copper' and Uzbek 'bronze'; in Mongolian languages *qurča* only has the adjective meaning 'keen, sharp, acute'. A similar meaning, 'tough, hard', is obtained in Uigur, Karakhanid, Karaim, Kumyk and the Altai-Turkic languages. In the latter two the semantics 'steel' are unknown and the words have to be considered as loanwords from Mongolian, as the same semantics are visible there. From Uzbek and Turki the word spread into some East Iranian languages and Burushaski.

Taj. *qurč* 'firm, compact' (Rahimi & Uspenskaja 1954: 492). Shug. *kārč* (Morgenstierne 1938: 55*); Wakhi *qurč* (Shaw 1876: 257), *qürč* (Grünberg &

Stéblin-Kamensky 1988: 219); Srk. *qurč* 'steel' (Shaw 1876: 257). *Bur. *qurč* 'a kind of hard iron' (Lorimer 1938: 300).

Uig. *qurč* 'dur; acier' (Hamilton 1986: 236). Turco-Sogd. *qurč* [xwřč] 'PN' (Sims-Williams & Hamilton 1990: 87). Krkh. *qurč* 'tough, hard', *qurč tämür* 'steel' (Clauson 1972: 647). Kip. *kurč* (Houtsma 1894: 88); Cum. *qurč* 'Stahl' (Grønbech 1942: 203). KarT, KarL *qurč* 'steel' (RII 952), KarT *qurč* i) '(of) steel', ii) 'firm, hard; sharp', KarH *kurc* 'copper' (Baskakov & Zajoňkovskij & Šapšal 1974: 349). Uzb. *qurč* 'bronze' (Borovkov 1959: 632), Sart *qurč* 'Stahl' (RII 952). Turki *qu(r)č* (Raquette 1927: 113), *qu(r)č*, *quruč*, *qujuč* 'steel' (Jarring 1964: 256); *xuruč* 'materials; condiments, reasonings; flavoring' (Schwarz 1992:385); TurkiT *xuruč*, *xuruč* 'gutes Eisen (Stahl?)' (Le Coq 1910:91). Chuv. *xurša* 'steel' (Sirotkin 1961: 510); *xorža*, *xurža*, *xurəs* 'Stahl; Stärke (des Bieres etc.)' (VEWT 303, Paasonen 1974: 52-53). Tat. *qorıč* (Golovkin 1966: 285), *qöröč* (RII 677), TatET *qurət*f (Chen & Ilchen 1986: 160); Bash. *qoros* (Axmerov et al. 1958: 339); TatT *quruc* 'Stahl' (RII 935). Bar. *qurc* 'scharf' (RII 956). KrBl. *qurč* 'steel' (Tenišev & Sujunčev 1989: 427). Kum. *qurč* 'vigorous, strong; brave, able, fit, clever; bold' (Bammatov 1969: 207-208). Kaz. *qorış* (Maxmudov & Musabaev 1954: 477), *quruś* (VEWT 303); Kir. *qurč* 'steel' (Judaxin 1965: 451). Oit. *qurč* 'sharp, pointed; cutting; smart' (Baskakov & Toščakov 1947: 96). Alt., Tel. *kurč* 'scharf', (Alt.) 'stark, tapfer, mutig, scharfsinnig' (RII 952). Tubakiži *qurč* (Baskakov 1966: 132); Kmd. *qurč* 'sharp, pointed' (Baskakov 1972: 228). Leb. *qurč* 'strong, vigorous, powerful, mighty; compact, hard; brave, courageous, bold; shrewd, sagacious; ingenious, spirited; witty, funny' (Baskakov 1985: 171).

MMoM *qurca* 'scharf (Gesetz, Kampf)'; *Qurcaqus*, *Qurcaqus Buyiruy Qan* 'PN' (Haenisch 1939: 72, 177). MMoS *qurca* 'scharf' (Haenisch 1957: 31, 815; Haenisch 1952: 53). MoL *qurča* (Lessing 1960: 987); Khal. *xurc* 'sharp, acute; alert, keen; intelligent; bright; very oily, greasy, rich (of food)' (Hangin 1986: 692). BurT *xurse*, BurH *xursa*, BurS *xurca* 'scharf' (Castrén 1857b: 128); Bur. *xursa* 'sharp, pointed; bright, clear; oily; spicy, aromatic; exact, precise; keen' (Čeremisov 1973: 602-603). Bur., BurB *xurs*; Bar. *xurtfin*; ChrZ *xurtf*; ChrD *xurtfin*; ChrS *gurtf* 'sharp, acute, keen' (MYYC 391). Ord. *yurtš'a* 'tranchant, aigu' (Mostaert 1941-1942: 316b). Khmn., OirE, OirD, OirH *xurtf*; Shr. *qurtfa* 'sharp, acute, keen' (MYYC 391). Muo. *xudža* 'sharp, pointed', MuoM *xudža* (Todaeva 1973: 377); Muo. *xud'žičä* 'tranchant, aigu, pointu, pénétrant' (Smedt & Mostaert 1933: 174), *xudžadä* 'sharp, acute, keen' (MYYC 391). Oir. *xurca* 'sharp, pointed' (Krueger 1978-1984: 300). Kal. *xurts^a* 'scharf, beissend' (Ramstedt 1935: 119).

The word *qurč* / *qurča* has generally been considered a Turkic word; Ramstedt (1935: 119) even thought that the Turkic and Mongolian words to be “urverwandt”. Dispute occurred only over the question whether the original meaning of Turkic *qurč* was ‘hard, tough’ or ‘steel’, the former point of view being taken by Clauson (1972: 647), Menges (1959: 179-180, 1983: 129) and Räsänen (VEWT 303), the latter by Doerfer (TMEN #1455). The starting point of the discussion was Karakhanid, where *qurč* means ‘tough, hard’, and ‘steel’ is called *qurč temür*. In this connection one should remember the above-mentioned word formations of the type “steel-iron”, as well as the following Mongolian word formations consisting of two steel names: MoL *yang bolud* (Lessing 1960: 118), Khal. *gan bold* ‘steel’ (Hangin 1986: 111); Ord. *gaŋ Bolot* ‘n. p. m.’ (Mostaert 1941-1942: 291); Bur. *gan bulad* (Čeremisov 1973: 145), Kal. *gaŋ bold* ‘Stahl’ (Ramstedt 1935: 50a). These show that a formation “sharp / hard iron” to denote ‘steel’ is not known. The formation “steel-iron” or “steel-steel”, on the contrary, is quite frequent, so that this may also be the meaning of the Karakhanid word formation, and the original meaning of *qurč* may well be ‘steel’.

The origin of the word *qurč* has not been addressed, but I would like to consider *qurč* a loanword from an East Iranian language. The word is not very widespread among Turkic languages; the distribution on the Mongolian side points to the fact that the word is a loanword from Turkic there. I take *qurč* to be a loanword from Iranian **kārti* ‘knife’, as the word is originally found only in Turkic languages situated closely to East Iranian languages, where the sound change *-rti* > *-č* is attested (Morgenstierne 1927: 19, 21), cf. also Balochi *kārč* < **kārti*, Middle Persian *kārt* ‘knife’ < **kār-tya-* / *kārtī* (Elfenbein 1991: 83). With a similar change in semantics, Middle Persian *kārt* ‘knife’ has been borrowed into some Finno-Ugrian languages, where *kort*, *kēr*, *kert*, etc. denote ‘iron’ (Joki 1973: 273).

Turkic *čelik* ‘steel’

The word *čelik* is attested only in westernmost Turkic languages, and as a loanword from Turkic in some Caucasian languages. Probably *čelik* is a loanword in these western Turkic languages; its origin, however, still remains unknown. Menges (1959: 180-181, 1983: 130) connected *čelik* with similar words in Slavic and Romanic languages: Slavic *oceli* ‘steel’, French *acier* ‘steel’, Latin *aciarium*, as well as Armenian *aceli* ‘razor’, nevertheless unsure of the origin. As a loanword from Old

Croatian, Slovenian or Slovak *acel* can be found in the forms *acél*, *acil*, *acel*, *acilus*, *ahel* (dialect form *acěl*) as a personal name in Hungarian in sources from 1135 onwards (Benkő 1967-1976; Benkő & Honty 1992: 4-5). Benkő & Honty consider *acel* a loanword from Old High German *echil* 'steel'. To the last-mentioned wordgroups I would like to add Middle Persian [Z, M], New Persian *čēlān* [cyl'n] 'dagger', *čēlāngar* [cyl'nl] 'swordsmith' (Mackenzie 1986: 22); Middle Persian [M], Parthian [M] *čīlān* [cyl'n] 'dagger' (Boyce 1977: 32). According to Piggot (1985: 627) *čēlāngar* means 'one who makes small ironware'. This last group may well be the source of the Turkic words.

Caucasus: Abadzexian *čelik*; Šapsugian *šilič'*, *šilikj*; Lazian *čelik*, *čelighi* 'steel' (Erckert 1895: 132, 329)

Chag. *čälik* (RII 1978); KarK *čèlik*, *čèluk* (Baskakov & Zajoňkovskij & Šapšal 1974: 349); Gag. *čelik* (Doğru & Kaynak 1991: 55); Otm. *čelik* 'steel' (Redhouse 1983: 246). Tu. *čelik* '(of) steel' (Heuser & Şevket 1962: 110-111).

Turkic, Mongolian *bulat* 'steel'

Turco-Mongolian *bulat* 'steel' is one of the most widely diffused metal names, found in nearly all Turkic and Mongolian languages. Only the languages of the frontier areas do not seem to know the word. In the earliest Turkic and Mongolian sources from the 13th and 14th centuries, *bulat* occurs only as a male personal name: Uig. *Bulat Tämür* (Zieme 1985: 173), *Bulat* (Zieme 1977: 161, 6; 162; Yamada 1993: 53, 153, 72), *Bulat Buqa* (Yamada 1993:12); Byzantino-Turcica *Qarapolat* 'tatarischer Heerführer (ca. 1322)' (Moravcsik 1983:152); Kip. *Qara-Pulat*, *Aq-Pulat* (Sauvaget 1950: 37, 52); MMoU *Bolad* (Ligeti 1972a: 256, 273; Doerfer 1975: 206), *[Tü]men Bolad Qiy-a* (Ligeti 1972a: 227), *Bolad-qy-a* (Ligeti 1972a: 210), *Bolodbuq-a* (Ligeti 1972a: 71); MMoS *Bolot* (Haenisch 1952: 59; Ligeti 1972b: 150) and as a place name (?): MMoU *Bold-örö-te бүкүй-дүр* 'während des Aufenthalts in Bold-örö', *Bolad-a бүкүй-дүр* 'während des Aufenthalts in Bolad' (Ligeti 1972a: 223, 213). The earliest sources showing *bulat* 'steel' are Sino-Uigur and Sino-Mongolian from about the 14th century.

Caucasus: Udian *pholad*; Čečenian *buölat*; Ingiloi *folad*, *pholad*; Budux *polat*; Georgian *foladi*, *pholadi*; Mingrelian *fulandi*, *foladi*; Svanetian *polad* 'Stahl' (Erckert 1895: 132, 325). Oss. *bolat* '(of) steel' (Abaev 1958: 265);

bulat, OssT *bolat* 'Stahl' (Hübschmann 1887: 121-122). NArm. *poɣpat*, *poɣpat*, *p'oɣpat*, CArm. *poɣovat*, *poɣopat* (10th century) 'steel' (Menges 1959: 181).

Psh. *fulād* (Lebedev & Jacevič & Konarovskij 1983: 663), *fūlād*, *pūlād* (Zudin 1950: 123, 388), *folād*, *fulad*, *polād*, *pulād* (Aslanov 1966: 193, 634); Yid., Mnj. *pūlād*, *pūlōd*, *fūlād*, *fālād* (Morgenstierne 1938: 237); Sng., Ish., *fūlād* 'steel' (Morgenstierne 1938: 392). Wakhi *pūlōd* 'steel' (Morgenstierne 1938: 533); *fālod* 'acier, fer' (Grünberg & Stéblin-Kamensky 1988: 161). Shug., Bat., Baj., Shd., Rsh., Yaz. *pulod* (Sköld 1936: 302); *Kal. *polat* (Morgenstierne 1973: 129); *Bur. *fulad* y. 'steel' (Lorimer 1938: 155).

MP [Z] *pōlāwad* [pwl'pt] 'steel' (MacKenzie 1986: 69), *pōlāvatēn* [pwl'ptyn] 'made of steel', < *pōlāvat* 'steel' (Nyberg 1974: 162). MP [M] *pōlāwad* [pwl'wd] (Boyce 1977: 75); Kur. *polat* (Amîrxan 1992: 371), *pola*, *polad* (Kurdoev 1960: 621), KurA *pōta* (MacKenzie 1966: 104), KurdS *pōta* (Kurdoev & Jusupov 1983: 108); ENP *pōlād* 'steel' (MacKenzie 1986: 69). Pers. *pūlād* 'the finest Damascus steel, which, with that of Qūm, is esteemed the best in the East; steel generally, a sword; name of a demon and a famous warrior; a club'; *pūlādi hindī* 'an Indian sword'; *fūlād* 'steel' (Steingass 260-261, 942). Taj. *pūlod* (Rahimi & Uspenskaja 1954: 316); Dari *fōlād* (Lebedev & Jacevič & Konarovskij 1983: 663); Par. *fūlād* (Morgenstierne 1929: 252); Orm. *pōlād* (Morgenstierne 1929: 404); Bal. *pulād*, *pūlāt*, *p'ulāt* (Geiger 1892: 457); *Brahui *fōlāt*, *pōlāt* 'steel' (Bray 1978: 110, 241).

Tib. *p'o-lād* 'steel' (Jäschke 1977: 346; Laufer 1916: 479, 125).

UigS *bolut* (pou-lou) (Ligeti 1966: 144); Otm. *pulad* [lrd.] (Redhouse 1983: 940); Tu. *pulat(-d)* [veraltet] (Heuser & Şevket 1962: 508); Az. *polad* (Orudžev 1956: 659); Trkm. *polat* (Baskakov & Karryev & Xamzaev 1968: 531), *pulat* 'steel' (RIV 1374). Uzb. *pūlat* 'steel' (Borovkov 1959: 335), *būlat* 'dial. for *pūlat* in Tašbūlat <male personal name>' (Laude-Cirtautas 1980: 134), UzbB *fulāt* (Olufsen 1905: 18), Sart *pulat* 'Stahl' (RIV 1374). Turki *palat* (Jarring 1964: 223), *pūlāt* (Le Coq 1910: 86), *polat* (Zhao & Zhu 1985: 224), *polat* (Schwarz 1992: 130-131), *pālāt* (Raquette 1927: 113), TurkiKh *pulat* (Malov 1961: 146), Tar. *polat* (RIV 1278); Lop. *polot* (Malov 1956: 156); Chuv. *bulat* (Skvorcov 1985: 62); Tat. *bulat* (Golovkin 1966: 83), TatET *polat* (Chen & Ilchen 1986: 160); Bash. *bulat* (Axmerov et al. 1958: 117); TatK *polat* 'Stahl' (RIV 1278). KrBl. *bolat* '(of) steel' (Tenišev & Sujunčev 1989: 155). Kum. *bolat* 'steel' (Bammatov 1969: 80). Nog. *bolat* '(of) steel' (Baskakov 1963: 84). Kaz. *bolat* (Maxmudov & Musabaev 1954: 96); Kkp. *polat* (Baskakov 1958: 535); Kir. *bolot* 'steel' (Judaxin 1965: 143). Oit. *bolot* '(of) steel' (Baskakov & Toščakov 1947: 33). Altai-kiži *bolot*

(Baskakov 1964: 730), *polot* 'Stahl' (RIV 1279). Tuba-kiži *bolot* (Baskakov 1966: 109); Kmd. *bolot*, *polot* '(of) steel' (Baskakov 1972: 207, 242). Leb. *polot* (RIV 1279, Baskakov 1985: 189); Tel. *qara molot* (RII 137), *polot* (RIV 1279); Shor *molat* (RIV 2126); Khak. *molat* (Baskakov 1953: 109); Koi. *môlat*, KoiK *môlat* (Castrén 1857a: 159), *molat* (RIV 2126); Kam. *bolat* (Joki 1952: 96); Sag. *molat* (RIV 2126); *Kot. *bolat*, (Pl.) *bolataŋ* (Castrén 1858: 224), *KotAr *molát*, *KotAs *balát* 'steel' (Joki 1952: 96). Tuv. *bolat* '(of) steel' (Pal'mbax 1955: 209), Soy. *môlat* 'Stahl' (Castrén 1857a: 159). Krg. *bolât*, Tai. *bolátta* 'steel' (Helimski 1987: 59). Yak. *bolot* i) 'altertümliches kurzes Schwert, Damaszener Stahl; zweischneidige Waffe, Degen, Säbel', ii) 'Keule, Streitkolben' (Pekarskij 1917-1927: 494). Dol. *bolot* 'Schwert', *Bulat* 'Name eines Pferdes' (Stachowski 1993: 62, 65).

MMoS *bolo[t]*; *bolo[t]* *fulat* 'fine steel' [Kara 1990: 285, 295]. MoL *bolud* (Lessing 1960: 118), *bolod* (< *bolad*) 'steel' (Poppe 1987: 109); *Bolud* 'PN' (Schubert 1971: 81). Khal. *bold* (Hangin 1986: 67), *bollât* 'steel' (Poppe 1987: 109); *Bold* 'PN' (Schubert 1971: 81). Bur. *bulad* (Čeremisov 1973: 110), BurN, BurT *bolet*, BurH, BurS *bolot* (Castrén 1857b: 169); BurIM, BurB *bold* 'steel' (MYYC 156). Dag. *bolto* [bolot] '(of) steel' (Todaeva 1986: 127). Bar., ChrS *bold*; ChrZ *bolod* 'steel' (MYYC 156). Ord. *Bolot* 'n. p. m.' (Mostaert 1941-1942: 291); *bolod* (Poppe 1987: 109), OrdO *bold* 'steel' (MYYC 156). OirE *bold*; OirD *bolod*; OirH *bold* 'steel' (MYYC 156). Oir. *bolod* 'steel, sword' (Krueger 1978-1984: 351). Kal. *bold* 'steel' (Iliškin 1964: 682); *bol'D* 'Stahl; (stählernes) Schwert' (Ramstedt 1935: 50a).

Evk. *bolot* 'Stahl' (Castrén 1856: 95, Vasilevič 1958: 60).

The word *bulat* in Turkic and Mongolian is a loanword from Early New Persian. Possibly the word was spread as a result of the Mongolian conquests in the 13th century, as already noted by Laufer (1919: 575). The origin of the word is unknown, according to Menges (1983: 129) *pūlād* is foreign in Persian. Abaev (1958: 96) also was unsure of its origin, but he refers to F. E. Korš (*Drevnosti Vostočnye* 4, 1912), who considered *pūlād* to be of Indian origin.

There are reasons why this last hypothesis seems acceptable. In earliest times Persian *pūlād* denoted damascene steel. The ingots from which damascene steel was produced, were, at least since the Islamic era, imported from South-Central India. But Alexander the Great had already received 100 talents of Indian steel as a tribute. After +115, when Parthians were importing steel from Margiana, Romans called this im-

ported steel *ferrum sericum*. Here *seres* may refer to China, but an identification with Southern India is also not impossible. Later sources stress the quality of the Indian ingots. After the 17th century, when the English became acquainted with these ingots, they were called *wootz*, a term of Dravidian origin (Piggot 1985: 628-630).

Secondly *pūlād* is not the oldest Iranian name for steel, this being *haosafna*, attested in the Young Avesta (Bartholomae 1904-1906: 1737). In modern East Iranian languages the meaning of *haosafna* has changed to 'iron' (Morgenstierne 1927: 12, 107-108; Bailey 1979: 487).

In a book dealing with Indian arms and armours, a special kind of sword, originating in the early 17th century, is called *pulowar* (Pant 1980: 66-67). This word cannot be connected with any Indo-Aryan language. Strangely enough, the word resembles the Middle Persian form of *pūlād*.

In Karakhanid the word *arūbāt* 'tamarind', structurally similar to *pūlāvad*, occurs. Clauson (1972: 200) considered *arūbāt* to be an Indian loanword. In an Uigur text *arvuud* "Name einer Droge in einem Rezept" is found, but no explanation is given for this word (Röhrborn 1981: 219). It is difficult to find a direct Indian source for *arūbāt*, *arvuud*, there are, however, some words that may be connected with the two words: Skt. *ālu*, dialectical also *āru* 'esculent root of *Amorphophallus campanulatus*'; *āluka*- 'a kind of fruit', *āruka*- 'a medicinal fruit of a Himalayan tree' (Turner 1966: #1388, 1389; KeWbAi I: 78, 81). It may be that the Indian word was transferred to Turkic through Khotanese, as we find in the later *aruva*, pl. *aruve*; Late Khotanese *arva*, pl. *arve*, *arve* 'medicament' (Bailey 1979: 8). Possibly this Indian word entered Karakhanid and Uigur through Sogdian mediation, cf. Sogdian [B] *'rwrh*, *rwrh*, [M] *rwr* 'remedy, medicine', = **rūra* < Avestian *urvarā*; *'rwrwyš'k* 'medicinal herb', < *'rwr-* + *wyš* 'grass' (Mackenzie 1976: 86).

Turkic, Mongolian *gang* 'steel'

Gang 'steel', of Chinese origin, occurs in nearly all Mongolian and Tungusic languages. On the Turkic side the word is known only from those languages, having very close contacts with Chinese, namely Turki, Sari Uigur and Salar. In Tuvian the word has to be considered a Mongolian loanword.

ArCh **kang*, ACh **kâng* (Karlgren 1957: 697h); YMCh *kaŋ*, LMCh *kaŋ*, EMCh *kaŋ* 'steel' (Pulleyblank 1991: 103). Chin. *gang* 'hard, strong, tough; steel' (Mathews 1975¹³: 3272). Dun. *gom*, *gonte* (Russko-dunganskij slovar' III: 212); Sino-Kor. *kang*, kor. *kangch'öl*; Sino-Jap. *kō* 'steel' (Kwōn 1978: 447, 2231).

Turki *gañ* (Schwarz (1992: 839); Sar. *kaŋ* (Tenišev 1976b: 200), *gaŋ* (Chen & Lei 1985: 158); Sal. *kaŋ*, *kaŋur*, *kaŋuř* (Tenišev 1976a: 200); Tuv. *kaŋ* 'steel' (Tenišev 1968: 225, Pal'mbax 1955: 209).

MoL *yang* '(made of) steel' (Lessing 1960: 348). Khal. *gan(g)* '(of) steel; (fig.) strong, durable' (Hangin 1986: 111). Bur. *gan* (Čeremisov 1973: 145), BurIM *gaŋ* (MYYC 282); BurB *gaŋ* 'steel' (MYYC 282). Dag. *gan* 'steel' (Martin 1961: 148, MYYC 282), *gaŋ* '(of) steel' (Todaeva 1986: 130), DagET *gaŋgu* 'Haken' (Kałużyński 1969: 133). Bar., Khm., ChrS, ChrZ, ChrD *gaŋ* 'steel' (MYYC 282). Ord. *gaŋ* 'acier, punishment, coups (par plaisanterie)' (Mostaert 1941-1942: 291b), OrdO *gaŋ* 'steel' (MYYC 282). OirE, Shr., OirD, OirH, Muo. *gaŋ* (MYYC 282); San. *gan* (Todaeva 1961: 114); Bao. *gaŋ* 'steel' (MYYC 282). Kal. *gaŋ* (veraltet) 'Stahl, stählern' (Ramstedt 1935: 144a).

Evk. *gandi*, *gani*, *ganri* 'ognivo, metalličeskoe točilo' (Cincius & Rišes 1975: 319, Rozycki 1994: 95); EwkM, EwkIM *gaan* 'steel' (Hu & Hu 1986: 171). Orcn. *gang* (Sa 1981: 35), *gā(n)* (Rozycki 1994: 95); *Ghil. *q'a /xa/* (Savel'eva & Taksami 1965: 407), *ka* (Grube 1892: 54141); Neg. *gan* (Schmidt 1923b: 17); Sol. *gaā*, SolO *gaŋ* (Aalto 1974: 62); Orc. *ga* (Schmidt 1923b: 17), *gā(n)* (Avrorin & Lebedev 1978: 171); Ude. *gaŋa* (Rozycki 1994: 95); Nan. *gā* (Rozycki 1994: 95), *gañ* (Grube 1900: 32; Schmidt 1923b: 17, 1927: 33), *gan* (An 1986: 87); Uch. *gān* (Petrova 1936: 123), *gā(n)* (Sunik 1985: 181); Ma. *g'ang* (Hauer 1952-1955: 400); Sibe *gaŋ* 'steel' (Li & Zhongqian 1986: 144).

Salar *kaŋ*, *kaŋur*, *kaŋuř* 'steel' (Tenišev 1976a: 200) is very interesting as we find the suffix *-r* here, a suffix producing names, also visible in such words as *baq+ir* 'copper' and *tām+ir* 'iron' (Rybatzki 1994: 220-221, 241-242).

Räsänen, in his VEWT (232), lists the following group of words occurring in Salar and South Siberian languages, together with Tuvian *qaŋ* 'steel', writing Lebed *qaŋ* 'Zinn' < Mongolian *yaŋ* 'Lötung, Löt-material' < Chinese *kaŋ*:

Sala *kän* 'tin', *qara kän* 'black (raw, impure) tin', *ax kän* 'white (usual) tin' (Tenišev 1976a: 377); *ken* 'tin' (Lin 1985: 118). Khak. *xaŋ* 'tin' (Baskakov 1953: 272). Tel. *kaŋ* 'Metall (Zinn); Lot, Bindemittel beim Löten' (RII 80). Leb. *kaŋ* (Baskakov 1985: 157, RII 80); Koi., Sag. *kaŋ* 'Metall (Zinn); Lot, Bindemittel beim Löten' (RII 80).

Kal. *gaŋ* 'die Lötung; das Lötmaterial: Harz oder Salmiak' (Ramstedt 1935: 144a).

Radloff also (RII 80) seemed to consider these words identical to *gaŋ* 'steel' as he writes "*kaŋ* bedeutet unter den Sojoten des Kemtschik, Eli-kem und Schaganar Stahl, stählern, aber unter den Tel., Leb., Sag. und Koi. bezeichnet *kaŋ* Metall (Zinn); Lot, Bindemittel beim Löten". Misled by these explanations I, too, (Rybatzki 1994: 230) connected these words to each other, considering *qaŋ* 'solder' a loanword from Chinese *kang* 'steel'. This equation is definitely wrong. In fact, Ramstedt (1935: 144a) already made a distinction between Kalmuk *gaŋ* 'steel' < Chinese *kang* 'steel', and *gaŋ* 'solder' < Chinese, although no Chinese word was given as a source for the latter word. Mongolian *qaŋ* 'tin, solder', derives from Chinese *han* 'to solder; greaves' (Mathews 1975¹³: 2026), and Altai-Turkic *qaŋ* 'tin, solder' thus has to be considered a loanword from Mongolian, although the Chinese loanword is found as a substantive only in Kalmuk. In Classical Mongolian and Khalkha there is an occurrence of the verb *yangna-*, *gagnax* 'to solder, to join or make fast' (Lessing 1960: 349, Hangin 1986: 104); for other forms of the verb cf. MYYC 278. Salar *ken* 'tin' seems to be a direct loanword from Chinese.

Cast iron terminology

Besides French and English loanwords for 'cast iron', the westernmost Turkic languages have *dökme demir* [Tu. *dökme* 'Gießen; ausgegossenes Metall; Gelbguß' < *dökmek* 'ausschütteln; verschütten; ausgießen, vergießen; gießen (Metall)' (Heuser & Şevket 1962: 154)] and *ölü demir* [Tu. *ölü* 'Tote, Gefallene; tot' < *ölünmek* 'irgend e-s Todes sterben' (Heuser & Şevket 1962: 486)] as a designation for 'cast iron'. Both word formations are to be regarded as loan translations from German or English: Gag. *ölü demir* 'cast iron, dökme demir, fon' (Doğru & Kaynak 1991: 71; Baskakov 1973: 138). Otm. *dökme demir* (Redhouse 1983: 310); Tu. *dökme demir* 'Gußeisen' (Heuser & Şevket 1962: 154).

Another possibility to form the word for cast iron is the connection of *temir* 'iron' with *qara* 'black', this often serving as a distinction from *aq temir*, which denotes 'sheet iron': Otm. *kara dämür* 'Gußeisen' (RIII 1699), *kara demür* 'wrought iron' (Redhouse 1983: 600); TuK *kara dämür* 'Gußeisen'. Az. *kara dämür* (RIII 1699); Tel. *qara külär* (RII 137); Kal. *xara tsō* 'Gußeisen' (Ramstedt 1935: 168a). In Telenghit cast iron is called *tämit*, this being the pl. of *tämür* 'iron'; cf. also Sino-Mongolian *temüt quya'ud-i* '(pl.-acc.) Eisenpanzer' (Ligeti 1972b: 139, 10r; Haenisch 1952: 10).

In some South Siberian Turkic languages *küler* means 'bronze, cast iron; steel'. This word is a Mongolian loanword. In the Mongolian languages the word only has the meaning 'bronze', the shift in the semantics, visible in the South Siberian Turkic languages, is secondary (Rybatzki 1994: 229).

Turkic *čodīn* 'bronze' > 'cast iron'

The most widely diffused name for cast iron in the Turkic world is *čodīn*, attested in different forms since Karakhanid times. The word has not spread into Mongolian languages, but can be found in some Iranian and Caucasian languages. The origin of some of these words is uncertain. The Caucasian words stem from Oghuz and Kipchak Turkic languages. The Persian word is most probably a loanword from Middle Turkic; the East Iranian words with -y- stem from Uzbek / Uigur / Tajik; the words with -d- are likely of Pashto origin. A Persian origin for these words is unlikely, as Persian *čodan* is a rare word.

In Karakhanid *čodīn* meant 'bronze', in Cuman 'ore', later the meaning changed to 'cast iron'. The meaning 'ore' is still found in some South Siberian languages. A secondary meaning of the word is 'kettle'. From *čodīn* the words *čuyun* and *čajyun* have to be separated, as these are of a different origin than *čodīn*. This differentiation has not always been made, leading to much confusion about the origin of these words and their possible connection. *Čuyun*, having a much smaller distribution than *čodīn*, meant originally 'kettle made of cast iron'. With this meaning, the word can be found in a number of Turkic languages. From Oghuz and Kipchak Turkic *čuyun* was borrowed into Caucasian languages and Russian. In Russian the semantics changed and *čuyun* denotes 'cast iron' there. With this secondary meaning the word has been reborrowed into some Turkic and Tungusic languages. In the Caucasian languages *čuyun* appears with the semantics 'kettle' as well as 'cast

iron', The last word *čajjun*, found only in some languages, is a recent borrowing from Chinese *chaguan* 'tea-canister' (Mathews 1975¹³: 3574: 5).

i) *čođin*. Caucasus: Georgian (dial.) *čina*; Avar *čojen*; Vajnachian *čuina* (Abaev 1958: 318-319); Čečenian *ču'jna* 'cast iron' (Karasaev & Maciev 1978: 698). Avar *čojen-xhag*; Andi *xagi-čujenthli*; Laki *čuën-naral-khunkhur*; Čečenian *čuina-jai* 'Kessel (gußeiserner)' (Erckert 1890: Nr. 203).

Psh. *čudan* (Lebedev & Jacevič & Konarovskij 1983: 740, Zudin 1955: 1003); Shug. *čōyan* (Paraškevov 1976: 107), *čuyan* 'cast iron' (TMEN #1149). Yaz. *tšadan* (Sköld 1936: 329); Yid. *zäxč'i'din* 'kettle' < *zäx* '?' + *č'i'din* 'kettle' (Morgenstierne 1938: 276). Ish. *čüdan*, *čudan* 'cooking-pot' (Morgenstierne 1938: 387). Wakhi *čəyan* 'fonte' (Grünberg & Stéblin-Kamen-sky 1988: 148). Khv. *čid'in* 'brass kettle' > Klsh. *čidh'in* (Morgenstierne 1935-1937: 665, 1973: 90b). *Bur. *čian*, *čian'* *čumar* 'cast iron'; *čian'* *tiš* 'cast iron ploughshare' (Lorimer 1938: 97); *čían* 'Gußeisen', ys. *čían* (Berger mss 57); *čidin*, *čidin*, pl. *čidiyo x* 'metal cooking-pot (of Kashgari or Indian origin)' (Lorimer 1938: 98); *čidín*, hz.ng. *-dío* 'metallener Kochtopf aus Indien oder Kashgar', ys., sh., *čidín* (Berger mss 57).

KurT *čodan* 'Gußeisen; gußeiserner Kessel, gußeiserner Topf' (Paraškevov 1976: 105). Pers. *čodan* (Lambton 1954: 213), *chaudan* (Steingass 402); Taj. *čūjan* (Rahimi & Uspenskaja 1954: 448); Dari *čōdan*, *čavan* 'cast iron' (Lebedev & Jacevič & Konarovskij 1983: 740).

Krkh. *čođin* 'bronze' (Dankoff & Kelly 1982: 311). Cum. *čojun* 'Erz' (Grønbech 1942: 75). KarK *čujun*, KarH *cojun* 'kettle', KarT *čojun*, *cojun* 'cast iron, vessel, kettle', KarK *čüjün* 'cast iron, kettle' (Baskakov & Zajoňkovskij & Šapšal 1974: 633, 614, 630, 634). Gag. *čüven*, *čüen* 'kettle; (of) steel' (Baskakov 1973: 553-554). Otm. *choyan*, *tchoyan* 'cast iron' (Redhouse 1921: 741); the word does not occur in Redhouse (1983). Tu. *čövgen* (Dmitriev 1962: 551), TuK *čojun* (VEWT 113); Az. *čudan*, *čudän*; Trkm. *čojun* 'cast iron' (Baskakov & Karryev & Xamzaev 1968: 737). Chag. *čüjen* 'gegossenes Eisen' (Vámbéry 1867: 281), *čoyin* (San. 215v: 11) 'unsmelted iron' (Clauson 1972: 403), *čujun* 'cast iron' (Dmitriev 1962: 551). Uzb. *čujan* 'cast iron' (Borovkov 1959: 531). Turki *čöjün* (Katanov-Menges), *čojun* 'cast iron' (Jarring 1964: 76); TurkiK *čōyun* 'geringes Eisen' (Le Coq 1910: 90); Tar. *čöjün* 'Gußeisen' (RIII 2039). Lop. *čujun* 'Gegenstand aus Gußeisen' (Malov 1956: 192). Tat. *čuen* (Golovkin 1966: 641), *čaun* (RIII 1831), *čojin* (RIII 2171); Bash. *sujin* 'cast iron' (Axmerov et al. 1958: 484). Bar. *cojin* 'Gußeisen' (VEWT 113), *čojin* 'Topf aus Gußeisen'

(RIV 202). TatTm *cujin* (RIV 211); KrBl. *čojun* (Tenišev & Sujunšev 1989: 737); Kum. *čojun* (Bammatov 1969: 360); Nog. *šojin* (Baskakov 1963: 414); Kaz. *šojin* (RIV 1027), *šojun* (RIV 1026), *čujin* (VEWT 113); Kkp. *šojin* (Baskakov 1958: 738); Kir. *čojun* (Judaxin 1965: 869), *čujun* (Dmitriev 1962: 551); Oit. *čoj* (Baskakov & Toščakov 1947: 179); Altai-kiži *čoj* (Baskakov 1964: 840); Tuba-kiži *čoj* (Baskakov 1966: 165); Kmd. *čöj*, *čöjün* 'cast iron' (Baskakov 1972: 269). Leb. *čojin* 'cast iron' (RIII 2017), *čojin* 'iron ore; cast iron' (Baskakov 1985: 222). Tel. *čoj* 'Gußeisen, Eisenerz' (RIII 2003); *šoj* 'Gußeisen' (RIV 1002); *čö* 'Gußeisen, Erz' (VEWT 113). Shor *šojun* (RIV 1027), *sojin*, *šöjün* (VEWT 113); Khak. *sojin* (Baskakov 1953: 192); Koi. *soj* (RIV 512); Sag. *soj*, *sojin*, *söjün* (RIV 512, 535, 580); Tuv. *šoj* (Tenišev 1968: 577); Soy. *šoj* 'cast iron' (VEWT 113).

Oir. *cöi* 'cast iron' [Rudnëev *cö*] (Krueger 1978-1984: 638). Kal. *cö* 'cast iron' (Iliškin 1964: 775), *tsö* 'Gußeisen, Erz' (Ramstedt 1935: 432b).

ii) *čugun*. Caucasus: Oss. *cigon*, *cwan* 'gußeisern, gußeiserner Topf' (Abaev 1958: 311). Lezgian *čuyeni* 'cast iron' (Abaev 1958: 318-319). Lazi *čukani* 'Kessel (kupferner)' (Erckert 1890: Nr. 204). Jassen (Hungarian Alans) *chugan* 'kettle' (Németh 1964: 17). Oss. *cwan*, *ciwan*; Megrelian *čuvani*, *čivani*; Lezgian *čuveni*; Svanian *čweni*; Vejnachian *čuon*, *čon*; Kabardinian *šuan*; Ubyhish *čuwan*; Abhasian *čwan*; Abazinian *čuan* 'cast iron' (Abaev 1958: 318-319). Abadzexi *šuan*; Lazi *čveini*, *čuveni* 'Kessel (gußeiserner)' (Erckert 1890: Nr. 203). Svanian *čvein-kardal*, *cvei-cxvad* 'Kessel (kupferner)' (Erckert 1890: Nr. 204).

Psh. *čugun* (Zudin 1955: 1003); Kur. *çigün* 'cast iron' (Farizov 1957: 754).

Tu. (dial.) *çögen* 'Eigentümlicher, von den Tscherkessen zum Kuchenbacken verwendeter, gußeiserner Kochtopf mit rundem Boden' (Derleme sözlüğü III 1968: 1279). Az. *čuyun*, *čugun* (Orudžev 1959: 879); Chag. *čügen* 'cast iron' (Vámbéry 1867: 281). TurkiKh *čögün* 'gußeiserne Kanne', TurkiT *čoğun* 'Teekanne', TurkiT, TurkiKh *čuyun* 'gußeiserne oder kupferne Kanne' (Malov 1961: 173); TurkiT *čögün* 'Teekanne', qum *čögün* 'Teekanne aus schwerer schwarzer Sanderde, in Sirqip (zw. Turfan und Pi-čang) hergestellt' (Le Coq 1910: 90). Chuv. *čukun* (Sirotkin 1961: 541), *čukän* 'cast iron' (Paraškevov 1976: 113); *čuyun*, *čogon* 'Guß-, Roheisen' (VEWT 113). Tat. (dial.) *čögen*, *čögən* 'gußeiserner Topf' (Paraškevov 1976: 108). Bar. *cügün* 'Gußeisen' (RIV 213). KrBl. *coğun* 'Kessel' (Paraškevov 1976: 110). Khak. *čugun* 'cast iron' (Baskakov 1953: 323). Kyz. *šuyun*, 'šuyun' 'steel' (Joki

1954: 30). Yak. *čugūn* [Russ.] = *jugūn* 'cast iron' (Pekarskij 1917-1927: 3680).

Evñ. *čugun* 'cast iron, ore' (Halen 1978: 200). Evk. *čugun* (Vasilevič 1958: 321); Nan. *čugūni* 'cast iron' (Onenko 1980: 516).

iii) *čajγun*. Bar. *cäjgün* 'kupferne Teekanne, Gefäß zum Händewaschen' (RIV 197). Tar. *čöjgün* 'eiserne Wasserkanne' (VEWT 113). Sar. *čayan* (< *ča* + *γan*) (Malov 1957: 139); Oit. *čojγon* 'Teekanne' (VEWT 113). Tel. *čojγon* 'der eiserne Topf', *čöjgön* 'Teekessel' (VEWT 113).

OirH *tfy:gen* 'kettle, pot; teapot' (MYYC 379, 199). Kal. *tsüügñ* 'Teekanne' (Ramstedt 1935: 436).

TurkiT *čāi-ğöš* 'Teekanne' (Le Coq 1910: 90). Bur. *čajúus*, ng. *jajúus* 'Art kupfener Teekessel'; Kabuli-pers. *čajōs* (Berger mss 53). Wakhi *čo(y)juš* 'petite casserole pour faire bouillir le thé; bouilloire de cuivre' (Grünberg & Stéblin Kamensky 1988: 145).

There have been a good number of works dealing with the origin of *čodīn*, *čuyun* and *čajγun*, but due to the above-mentioned reasons their explanations have not been convincing—partly they have been wrong. I will now give a short survey of the main opinions about the origin of the three words, followed by my own considerations.

Räsänen (VEWT 113) distinguished between *čoj* < Chinese *zhu* 'cast metal, coint' and *čodīn*, *čugun*, *čajγun* < Chinese *zhu* + *kang* 'steel'. Doerfer (TMEN #1149) commented on this etymology, showing that *čoj* is a secondary development of *čojīn* (< *čodīn*). The suffix *-īn* has been considered a 3. p. sg. acc. possessive suffix which was dropped. The same morphological development is visible in languages of the Volga region and Western Siberia, cf. e.g. Tat. *quryaş(yn)*, Bash. *quryaş*, TatT *qoryaş* 'lead (metal)'. Furthermore Doerfer stated that the first part of *čodīn* is *zhu*, but that the second part *-dīn* can hardly be connected with Chinese *kang*. A similar view is taken by Menges (1983: 127). Doerfer tried to connect *čodīn* with Chinese *zhujian* 'gegossenes Stück, Gießware'. He does not deal with *čoyun* but considers *čojγun* a contamination of *čodīn* and *čoyun*. A thorough study dealing with all former works on the words *čodīn*, *čuyun* and *čajγun* was undertaken by Paraškevov (1976), who clearly differentiated between *čodīn* – *čuyan*, *čoyun* – *čojγun*. He connects these terms with the following Chinese words: *čodīn* (> *čoyīn*, *čoy*) < Chinese *zhujian* or *zhutong*; *čuyan*, *čoyun*

(> *čuvan*, *čuan*) < Chinese *zhugang*; *čojγun* = contamination of *čodšin* and *čoyun*.

In my opinion none of the mentioned etymologies is fully convincing. The three words have to be separated from each other and connected with three different Chinese words. *čodšin* (> *čoyin*, *čoy*), originally meaning ‘bronze’, is a loanword from Chinese *zhutong* (Mathews 1975¹³: 1372 + 6623) [YMCh *tšy-tʰuŋ*; LMCh *tšyâ-təwŋ*; EMCh *tʰuâ-dəwŋ* (Pulleyblank 1991: 415, 310)]. The meaning of *čuyun* (> *čuvan*, *čuan*) was originally ‘kettle, pot made of cast iron’. This is the primary meaning in Turkic languages; words with the meaning ‘cast iron’ are loanwords from Russian. The word is a loanword from Chinese *zhuguan* ‘jar, pot made of cast iron’ (Mathews 1975¹³: 1372 + 3574) [YMCh *tšy-[kəŋ]*; LMCh *tšyâ-kuan*; EMCh *tʰuâ-kwan*^h (Pulleyblank 1991: 415, 114)]. The last of the three word, *čojγun*, meaning mainly ‘teapot’, is a recent loanword from Chinese *chaguan* ‘tea-canister’ (Mathews 1975¹³: 3574/5). The vocalism of this word may be influenced by *čuyun*; on the other hand, *čai* ‘tea’ is sometimes pronounced *čoj*, cf. e.g. Weiers (1971: 168). With a different suffix, *-γuś*, *čojγun* is attested in Uigur and in some East Iranian languages.

In Mongolian *čodšin* is attested only in Kalmuk and Oirat. The morphological form *čö*, *čöi*, as well as the semantics ‘cast iron, ore’, point to the fact that the word is a loanword from some Altai-Turkic language. As the oldest known living places of the Oirat were in Southern Siberia—the Oirat started to move westwards at the beginning of the 17th century—*čöi* may be a comparatively old loanword in Oirat. From a morphological point of view, the word could also be a loanword from some Tatar dialect of Western Siberia or the Volga region.

All five Turkic words for steel and cast iron are loanwords from Iranian—*qurč*, *čelik*, *bulat*—and Chinese—*gang*, *čodšin*. This fact is not surprising when one considers the high standard of Persian steel and Chinese cast iron traditions. Only two of these words, *bulat* and *čodšin*, have a wide distribution, being found since Middle Turkic times in nearly all Turkic languages. From Turkic, *čodšin* spread further into Caucasian and East Iranian, *bulat* into Mongolian and Caucasian languages. Two words, *čelik* and *gang*, have a very small distribution, occurring only in languages living in a very close cultural relationship with the donor language. Chinese *gang*, however, has a wide distribution in Mongolian and Tungusic languages. *Qurč* had a large diffusion in Middle Turkic times; presently the word occurs only in South-East and

Volga Turkic languages. During the Middle Turkic period, *qurč* spread into Mongolian languages, where it has a compact and uniform distribution. No older, genuine Turkic words are known to me, with the exception of *qaraluy*, which is attested in Old Russian sources and denotes some kind of steel. This situation is somehow surprising, as at least the Old Turks were famous ironsmiths, and one would expect at least some genuine Turkic words.

Distribution of the Turkic (Mongolian and Tungusic) words for 'steel' and 'cast iron'

	<i>qurč(a)</i>	<i>čelik</i>	<i>bulat</i>	<i>gang</i>	<i>čođin</i>	<i>čoj</i>	<i>čuγun</i>
Uig.	±		—				
UigS			+				
Krkh.	±				*		
Kip.	+		—				
Cum.	+				*		
Kar.	±*	+			±		
Gag.		+			±		
Otm.		+	+		+		
Tu.		+	+		+		—
Az.			+		+		+
Trkm.			+		+		
Chag.		+			+		+
Uzb.	±*		+		+		
Turki	+		+	+	+		—
Lop.			+		—		
Sar.				+			
Sal.				+			
Chuv.	±		+				+
Tat.	+		+		+		—
Bash.	+		+		+		
KrBl.	+		+		+		—
Kum.	—		+		+		
Nog.			+		+		
Kaz.	+		+		+		
Kkp.			+		+		
Kir.	+		+		+		
Altai-k.	—		+			+	

Tuba-k.	—	+		+	
Kmd.	—	+		+	+
Leb.	—	+		+	
Tel.	—	+		+	
Khak.		+		+	+
Koi.		+		+	
Kam.		+			
Tuv.		+	+	+	
Yak.		+			+
MMoM	—				
MMoS	—	±			
MoL	—	±	+		
Khal.	—	±	+		
Bur.	—	+	+		
Dag.		+	+		
Bar.	—	+	+		
Chr.	—	+	+		
Ord.	—	±	+		
Shr.	—		+		
OirD	—	+	+		
OirH	—	+	+		
Muo.	—		+		
San.			+		
Bao.			+		
Mgh.					
Oir.	—	±*		+	
Kal.	—	±*	+	±*	
Evn.					±*
Evk.		+	+		+
Orcn.			+		
Neg.			+		
Sol.			+		
Orc.			+		
Ude.			+		
Nan			+		+
Uch.			+		
Ult.					
Ma.			+		
Sibe			+		

<i>qurč(a)</i>	+ 'steel'	– 'sharp, keen'	* 'copper, bronze'
<i>čelik</i>	+ 'steel'		
<i>bulat</i>	+ 'steel'	– 'personal name'	* 'sword'
<i>gang</i>	+ 'steel'		
<i>čod̄in</i>	+ 'cast iron'	– 'kettle'	* 'ore, bronze'
<i>čōj</i>	+ 'cast iron'	– 'kettle'	* 'ore, bronze'
<i>čuyun</i>	+ 'cast iron'	– 'kettle'	* 'ore, bronze'

Abbreviations

Indo-European languages

Arm.	Armenian	MP	Middle Persian
B	Buddhist texts	NArm.	New Armenian
Baj.	Bajui	Orm.	Ormuri
Bal.	Balochi	Oss.	Ossetic
Bat.	Batangi	Par.	Parachi
*Bur.	Burushaski	Psh.	Pashto
CArm.	Classical Armenian	Pers.	Persian
ENP	Early New Persian	Rsh.	Roshani
Ir.	Iranian	Shd.	Shahdara
Ish.	Ishkashmi	Skt.	Sanskrit
Khv.	Khovar	Sng.	Sanglechi
Klsh.	Kalasha	Sogd.	Sogdian
Kur.	Kurdish	Srk.	Sarikoli
KurA	Avroman dialect of Kurdish	Shug.	Shugni
KurS	Sorani dialect of Kurdish	Taj.	Tajik
KurT	Kurdish of Turkmenia	Yaz.	Yazgulami
M	Manichaean texts	Yid.	Yidgha
Mnj.	Munji	Z	Zoroastrian texts

East Asian languages

ACH	Ancient Chinese [Karlgren = EMCh]	Jap.	Japanese
ArCh	Archaic Chinese [Karlgren]	Kor.	Korean
Chin.	Chinese	LMCh	Late Middle Chinese [Pulleyblank]
Dun.	Dungan	Tib.	Tibetan
EMCh	Early Middle Chinese [Pulleyblank = ACh]	YMCh	Early Mandarin of the Yuan period [Pulleyblank]

Turkic languages

Az.	Azerbaijani	Lop.	Lop-nor
Bash.	Bashkir	Nog.	Nogai
Chag.	Chagatai	Oit.	Oirot
Chuv.	Chuvash	Otm.	Ottoman Turkish
Cum.	Cuman	Sag.	Sagai
Dol.	Dolgan	Sal.	Salar
Gag.	Gagauz	SalA	Altiyuli dialect of Salar
Kam.	Kamass	Sar.	Sari Uigur (S-Yugur)
Kar.	Karaim	Soy.	Soyot
KarH	Lodz-Galician dialect of Karaim	Tai.	Taighi
KarK	Krim dialect of Karaim	Tar.	Taranchi
KarT	Troki dialect of Karaim	Tat.	Tatar
Kaz.	Kazak	TatET	Tatar of Eastern Turkestan
Khak.	Khakas	TatK	Küärik dialect of Tatar
Kip.	Kipchak	TatT	Tobol dialect of Tatar
Kir.	Kirghiz	TatTm	Tyumen dialect of Tatar
Kkp.	Karakalpak	Tel.	Telenghit
Kmd.	Kumandi	Trkm.	Turkmen
Koi.	Koibal	Tu.	Turkish
KoiK	Kandov dialect of Koibal	TuK	Krim dialect of Turkish
*Kot.	Kottic	TurkiK	Turki of Kara-Khoja
*KotAr	Arinian dialect of Kottic	TurkiKh	Turki of Khotan
*KotAs	Assanian dialect of Kottic	TurkiT	Turki of Turfan
KrBl.	Karachai-Balkar	Tuv.	Tuvinian
Krg.	Karagas (Tofa)	Uig.	Uigur
Krkh.	Karakhanid	UigS	Uigur in Chinese characters
Kum.	Kumyk	Uzb.	Uzbek
Kyz.	Kyzyl	UzbB	Uzbek of Bukhara
Leb.	Lebed	Yak.	Yakut

Tungusic languages

Evk.	Evenki (Tungus)	Orc.	Oroch
EwkIM	Evenki of Inner Mongolia	Orcn.	Orochen (Elunchun)
EwkM	Evenki of Manchuria	Sol.	Solon
Evn.	Even (Lamut)	Solo	Ongkor Solon
*Ghil.	Ghilyak (Nivkh)	Uch.	Ulcha
Ma.	Manchu	Ude.	Udeghe (Udehe)
Nan.	Nanai (Gold, Hejen)	Ult.	Ulta (Orok, Uilta)
Neg.	Neghidal		

Mongolian languages

Bao.	Baoan	Khal.	Khalkha
Bar.	Barin	Khrn.	Kharchin
Bur.	Buriat	Mgh.	Moghol
BurB	Bargu-Buriat	MMoM	Middle Mongolian of the Secret History
BurH	Hori dialect of Buriat	MMoS	Middle Mongolian in Chinese characters
BurIM	Buriat of Inner Mongolia	MMoU	Middle Mongolian in Uigur script
BurN	Nizhneudin dialect of Buriat	MoL	Classical Mongolian (Written Mongolian)
BurS	Selenghe dialect of Buriat	Muo.	Monguor
BurT	Tünhe dialect of Buriat	MuoM	Minhe dialect of Monguor
Chr.	Chakhar	Oir.	Oirat
ChrD	Darhan, western dialect of Chakhar	OirD	Oirat of the Köke nur, Dulan dialect
ChrS	Sünid, central dialect of Chakhar	OirE	Ejine dialect of Oirat (Alashan-Oirat)
ChrÜ	Üjümüchin, eastern dialect of Chakhar	OirH	Oirat of the Köke nur, Hejing dialect
ChrZ	Zhenglan dialect of Chakhar	Ord.	Ordos
Dag.	Dagur	OrdO	Otog dialect of Ordos (Southern Ordos)
DagET	Dagur of East Turkestan	San.	Santa
Kal.	Kalmuk	Shr.	Shera Yogur

References

- Aalto, P. 1974. G. J. Ramstedts onkor-solonisches Wörterverzeichnis. *Rocznik Orientalistyczny* 39, 55-84.
- Abaev, V. I. 1958-1989. *Istoriko-etimologičeskij slovar' osetinskogo jazyka* 1, 2, 4. Moskva: Nauka.
- Amîrxan 1992. *Kurdisch-Deutsch*. Ismaning: Max Hubert Verlag.
- An Jun 1986. *Hezheyu jianzhi*. Beijing: Minzu Chubanshe.
- Aslanov, M. G. 1966. *Afgansko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Avrorin, V. A. & Lebedev, L. P. 1978. *Oročskie teksty i slovar'*. Lenin-grad: Nauka.
- Axmerov et al. 1958 = Axmerov, K. Z. & Baišev, T. F. & Bikmurzin, A. M. & Kajumova, U. M. *Baškirsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Bailey, H. W. 1979. *Dictionary of Khotan Saka*. Cambridge: Cambridge University Press.
- Bammatov, Z. Z. 1969. *Kumyksko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Bartholomae, C. 1904. *Altiranisches Wörterbuch*. Strassburg: Verlag von Karl J. Trübner.
- Baskakov, N. A. 1953. *Xakassko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Baskakov, N. A. 1958. *Karakalpaksko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Baskakov, N. A. 1963. *Nogajsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Baskakov, N. A. 1964. *Russko-altajskij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Baskakov, N. A. 1966. *Dialekt černevyx tatar (Tuba-kiži)*. Moskva: Nauka.
- Baskakov, N. A. 1972. *Dialekt kumandincev (Kumandy-kiži)*. Moskva: Nauka.
- Baskakov, N. A. 1973. *Gagauzsko-russko-moldavskij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Baskakov, N. A. 1985. *Dialekt lebedinskix tatar – čalkancev (Kuu-kiži)*. Moskva: Nauka.

- Baskakov, N. A. & Toščakov, T. M. 1947. *Ojrotsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Baskakov, N. A. & Karryev, B. A. & Xamzaev, M. J. 1968. *Turkmen-sko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Baskakov, N. A. & Zajoňkovskij, A. & Šapšal, S. M. 1974. *Karaim-sko-russko-pol'skij slovar'*. Moskva: Russkij Jazyk.
- Benkő, L. (ed.) 1967-1976. *A magyar nyelv történeti – etimológiai szótára* 1-3. Budapest: Akadémiai Kiadó.
- Benkő, L. & Honty, L. (eds.) 1992. *Etymologisches Wörterbuch des Ungarischen*. Budapest: Akadémiai Kiadó.
- Berger, H. *Die Burushaski-Sprache von Hunza und Nager*. Teil 3: Hunza-Wörterbuch. [Manuscript]
- Borovkov, A. K. 1959. *Uzbeksko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Boyce, M. 1977. *A word-list in Manichaean Middle Persian and Parthian*. (Acta Iranica 9a.) Leiden: Brill.
- Bray, D. 1978². *The Brahui language 3: Etymological vocabulary*. (Brahui Academy, Quetta Publication No. 11.) Karachi: Ayub Packages.
- Castrén, A. M. 1856. *Grundzüge einer tungusischen Sprachlehre, nebst kurzem Wörterverzeichniss*. St. Petersburg.
- Castrén, A. M. 1857a. *Versuch einer koibalischen und karagassischen Sprachlehre nebst Wörterverzeichnissen aus den tatarischen Mundarten des Minussinsker Kreises*. St. Petersburg.
- Castrén, A. M. 1857b. *Versuch einer burjatischen Sprachlehre nebst kurzem Wörterverzeichniss*. St. Petersburg.
- Castrén, A. M. 1858. *Versuch einer jennissei-ostjakischen und kotischen Sprachlehre nebst Wörterverzeichnissen*. St. Petersburg.
- Čeremisov, K. M. 1973. *Burjatsko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Chen Zongzhen & Ilchen 1986. *Tataeryu jianzhi*. Beijing: Minzu Chubanshe.
- Chen Zongzhen & Lei Xuanchun 1985. *Xibu Yuguyu jianzhi*. Beijing: Minzu Chubanshe.
- Cincius, V. I. 1982. *Negidal'skij jazyk*. Leningrad: Nauka.
- Cincius, V. I. & Bugaeva, T. G. 1979. K ètimologii nazvanij metallov i ix splavov v altajskix jazykax. In: *Issledovanija v oblasti ètimologii altajskix jazykov*. Leningrad. 18-52.

- Cincius, V. I. & Rišes, L. D. 1952. *Russko-ëvenskij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Cincius, V. I. & Rišes, L. D. 1975-1977. *Sravnitel'nyj slovar' tungusoman'čžurskix jazykov* 1-2. Leningrad: Nauka.
- Clauson, G. 1972. *An etymological dictionary of pre-thirteenth-century Turkish*. Oxford: Clarendon Press.
- Dankoff, R. & J. Kelly. J. 1982, 1984. Maḥmūd al-Kāšgarī, Compendium of the Turkic dialects (Dīwān luḡāt at-Turk) 1-2. (Sources of Oriental languages and literatures 7.) Harvard: Harvard University Printing Office.
- Derleme 1968 = *Derleme sözlüğü* 3. Ankara: Türk Dil Kurumu.
- Dmitriev, N. K. 1962. *Stroj tjurkskix jazykov*. Moskva: Izdatel'stvo Vostočnoj Literatury.
- Doerfer, G. 1975. Mongolica aus Ardabīl. *Zentralasiatische Forschungen* 9, 187-264.
- Doerfer, G. & Hesche, W. & Scheinhardt, H. 1980. *Lamutisches Wörterbuch*. Wiesbaden: Harrassowitz.
- Doğru, A. & Kaynak, I. 1991. *Gagauz türkçesinin sözlüğü*. (Türk Kültür Bakanlığı yayınları 1294.) Ankara.
- Elfenbein, J. 1990. *An anthology of Classical and Modern Balochi literature 2: Glossary*. Wiesbaden: Harrassowitz.
- Erckert, R. von 1895. *Die Sprachen des kaukasischen Stammes*. Wien.
- Farizov, I. O. 1957. *Russko-kurdschij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Geiger, W. 1892. *Lautlehre des Balūčī mit einem Anhang über die Lehnwörter im Balūčī*. (Abhandlungen der Philosophisch-Philologischen Classe der Königlich Bayrischen Akademie der Wissenschaften 19.) München.
- Golovkin, O. V. 1966. *Tatarsko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Grube, W. 1892. *Giljakisches Wörterverzeichnis nebst grammatischen Bemerkungen*. (Dr. Leop. v. Schrenck's Reisen und Forschungen im Amur-Land, Anhang zum dritten Bande.) St. Petersburg.
- Grube, W. 1900. *Goldisch-Deutsches Wörterverzeichnis*. (Dr. Leop. v. Schrenck's Reisen und Forschungen im Amur-Land, Anhang zum dritten Bande.) St. Petersburg.
- Grønbech, K. 1942. *Komanisches Wörterbuch*. (Monumenta Linguarum Asiæ Maioris 1.) Kopenhagen: Einar Munksgaard.

- Grünberg, A. L. & Stéblin-Kamensky, I. M. 1988. *La langue wakhi 2. Essai grammatical et dictionnaire wakhi-français*. Paris: Fondation de la Maison des sciences de l'homme.
- Haenisch, E. 1939. *Wörterbuch zu Manghol un Niuca tobca'an (Yüan-ch'ao pi-shih)*. *Geheime Geschichte der Mongolen*. Wiesbaden: Harrassowitz.
- Haenisch, E. 1952. *Sino-mongolische Dokumente vom Ende des 14. Jahrhunderts*. (Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Sprachen, Literatur und Kunst, Jahrgang 1950, Nr. 4.) Berlin: Akademie Verlag.
- Haenisch, E. 1957. *Sino-mongolische Glossare 1. Das Hua-I ih-yü*. (Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Sprachen, Literatur und Kunst, Jahrgang 1950, Nr. 4.) Berlin: Akademie Verlag.
- Halén, H. (ed.) 1978. *Westlamutische Materialien. Aufgezeichnet von Arvo Sotavalta, bearbeitet und herausgegeben von Harry Halén*. (Mémoires de la Société Finno-ougrienne 168.) Helsinki: Suomalais-ugrilainen Seura.
- Hamilton, J. 1986. *Manuscripts ouïgours du IX^e-X^e siècle de Touen-houang*. Paris: Peeters.
- Hangin, G. 1986. *A Modern Mongolian-English dictionary*. (Uralic and Altaic Series 150.) Bloomington: Indiana University, Research Institute for Inner Asian Studies.
- Hauer, E. 1952-1955. *Handwörterbuch der Mandschusprache*. Wiesbaden: Harrassowitz.
- Helinski, E. 1987. Two Mator-Taigi-Karagas vocabularies from the 18th century. *Journal de la Société Finno-ougrienne* 81, 49-132.
- Heuser, F. & Şevket, İ. 1962. *Türkisch-deutsches Wörterbuch*. Wiesbaden: Harrassowitz.
- Houtsma, M. T. 1894. *Ein türkisch-arabisches Glossar*. Leiden: Brill.
- Hu Zengyi & Hu Ke 1986. *Ewenkeyu jianzhi*. Beijing: Minzu Chubanshe.
- Hübschmann, H. 1887. *Etymologie und Lautlehre der ossetischen Sprache*. (Sammlung indogermanischer Wörterbücher 1.) Strassburg: Verlag von Karl J. Trübner.
- Hübschmann, H. 1897. *Armenische Grammatik 1: Armenische Etymologie*. (Bibliothek der indogermanischen Grammatiken.) Leipzig: Breitkopf & Härtel.

- Iliškin, I. K. 1964. *Russko-kalmyckij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Jarring, G. 1964. *An Eastern Turki-English dialect dictionary*. (Lunds Universitets Årsskrift. NF. Avd. 1, Bd. 56, Nr. 4.) Lund: CWK Gleerup.
- Jäschke, H. A. 1977². *A Tibetan-English dictionary*. London: Routledge & Kegan Paul Ltd.
- Joki, A. J. 1952. *Die Lehnwörter des Sajansamojedischen*. (Mémoires de la Société Finno-ougrienne 103.) Helsinki: Suomalais-ugrilainen Seura.
- Joki, A. J. 1954. Wörterverzeichnis der Kyzyl-Sprache. *Studia Orientalia* 19:1, 1-47.
- Joki, A. J. 1973. *Uralier und Indogermanen*. (Mémoires de la Société Finno-ougrienne 151.) Helsinki: Suomalais-ugrilainen Seura.
- Judaxin, K. K. 1965. *Kirgizsko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Kałużyński, S. 1969. Dagurisches Wörterverzeichnis 1. *Rocznik Orientalistyczny* 33, 103-144.
- Kara, G., 1963. Un glossaire üjümčin. *Acta Orientalia Hungaricae* 16, 1-43.
- Kara, G. 1990. Zhiyuan yiyu. Index alphabétique des mots mongols. *Acta Orientalia Hungaricae* 44, 279-344.
- Karasaev, A. T. & Maciev, A. G. *Russko-čečenskij slovar'*. Moskva: Russkij Jazyk.
- Karlgren, B. 1957. *Grammata Serica Recensa*. (Bulletin of the Museum of Far Eastern Antiquities 29.) Stockholm.
- KeWbAi I = Mayrhofer, M. 1956. Kurzgefaßtes etymologisches Wörterbuch des Altindischen 1. Heidelberg: Carl Winter – Universitätsverlag.
- Krueger, J. R. 1978-1984. *Oirat-Mongolian dictionary* 1-3. Bloomington: The Mongolia Society.
- Kurdoev, K. K. 1960. *Kurdsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Kurdoev, K. K. & Jusupov, Z. A. 1983. *Kurdsko-russkij slovar'*. Moskva: Russkij Jazyk.
- Kwon Hyogmyon 1978. *A basic Chinese-Korean character dictionary*. Wiesbaden: Harrassowitz.
- Lambton, A. K. S. 1954. *Persian vocabulary*. Cambridge: Cambridge University Press.

- Laude-Cirtautas, I. 1980. *Chrestomathy of modern literary Uzbek*. Wiesbaden: Harrassowitz.
- Laufer, B. 1916. Loan-words in Tibetan. *T'oung Pao* 17, 403-552.
- Laufer, B. 1919. *Sino-Iranica*. (Field Museum of Natural History publications 201.) Chicago.
- Lebedev, K. A. & Jacevič, L. S. & Konarovskij, M. A. 1983. *Russko-pušto-dari slovar'*. Moskva: Russkij Jazyk.
- von Le Coq, A. 1910. *Sprichwörter und Lieder aus der Gegend von Turfan*. (Baessler Archiv, Beiheft 1.) Leipzig-Berlin.
- Lessing, F. D. 1960. *Mongolian-English dictionary*. Berkeley, Los Angeles: University of California Press.
- Lewicki, M. 1959. *La langue mongole des transcriptions chinoises du XIV^e siècle. Le Houa-yi yi-yu de 1389 2: Vocabulaire index*. (Travaux de la Société des Sciences et de Lettres de Wrocław, seria A, Nr. 60.) Wrocław: Państwowe wydawnictwo naukowe.
- Li Shulan & Zhongqian 1986. *Xiboyu jianzhi*. Beijing: Minzu Chubanshe.
- Ligeti, L. 1966. Un vocabulaire sino-ouïghour des Ming. Le Kao-tsch'ang-kouan yi-chou du Bureau des Traducteurs. *Acta Orientalia Hungaricae* 19, 117-201, 257-316.
- Ligeti, L. 1972a. *Monuments préclassiques I, XIII^e et XIV^e siècles*. (Monumenta Linguae Mongolicae Collecta 2.) Budapest: Akadémiai Kiadó.
- Ligeti, L. 1972b. *Monuments en écriture 'phags-pa * pièces de chancellerie en transcription chinoise*. (Monumenta Linguae Mongolicae Collecta 3.) Budapest: Akadémiai Kiadó.
- Lin Lianyu 1985. *Salayu jianzhi*. Beijing: Minzu Chubanshe.
- Lorimer, D. L. R. 1938. *The Burushaski language 3: Vocabulary and index*. (Institutet for Sammenlignende Kulturforskning serie B, Nr. 29, 3.) Oslo: H. Ascheboug & Co (W. Nygaard).
- Mackenzie, D. N. 1966. *The dialect of Awroman*. (Historisk-filosofiske Skrifter udgivet af Det Konglige Danske Videnskabernes Selskab, bind 4, no. 3.) København: Einar Munksgaard.
- Mackenzie, D. N. 1976. *Buddhist Sogdian texts of the British Museum*. (Acta Iranica 10.) Leiden: Brill.
- Mackenzie, D. N. 1986². *A concise Pahlavi dictionary*. London: Oxford University Press.
- Malov, S. E. 1956. *Lobnorskij jazyk*. Frunze: Izdatel'stvo AN Kirgizskoj SSR.

- Malov, S. E. 1957. *Jazyk želtyx ujgurov*. Alma-Ata: Izdatel'stvo AN Kazaxskoj SSR.
- Malov, S. E. 1961. *Ujgurskie narečija Sin'czjana*. Moskva: Izdatel'stvo Vostočnoj Literatury.
- Martin, S. E. 1961. *Dagur Mongolian grammar, texts and lexicon*. (Uralic and Altaic series 4.) Bloomington: Indiana University.
- Mathews, R. H. 1975¹³. *Chinese-English dictionary*. Shanghai: China Inland Mission, Presbyterian Mission press.
- Maxmudov, X. & Musabaeu, G. 1954. *Kazaxsko-russkij slovar'*. Alma-Ata: Izdatel'stvo AN Kazaxskoj SSR.
- Menges, K. H. 1959. Schwierige slavisch-orientalische Lehnbeziehungen. *Ural-Altaische Jahrbücher* 31, 177-190, 503.
- Menges, K. H. 1983. Etymologika zu den altajischen Bezeichnungen von Metallen, Haustieren und Gewächsen. *Ural-Altaische Jahrbücher* N. F. 3, 102-165.
- Moravcsik, G. 1983³. *Byzantinoturcica* 2. Leiden: Brill.
- Morgenstierne, G. 1927. *An etymological dictionary of Pashto*. (Skrifter utgitt av Det Norske Videnskaps-Akademi i Oslo, Hist.-Filos. Klasse 1927, No. 3.) Oslo: Jacob Dybwad.
- Morgenstierne, G. 1929. *Indo-Iranian frontier languages 1: Parachi andOrmuri*. (Instituttet for Sammenlignende Kulturforskning; serie B: skrifter 11.) Oslo: H. Aschehoug & Co (W. Nygaard).
- Morgenstierne, G. 1938. *Indo-Iranian frontier languages 2: Yidgha-Munji, Sanglechi-Ishkashmi and Wakhi*. (Instituttet for Sammenlignende Kulturforskning; serie B: skrifter 35.) Oslo: H. Aschehoug & Co (W. Nygaard).
- Morgenstierne, G. 1973. *Indo-Iranian frontier languages 4: The Kalasha language*. (Instituttet for Sammenlignende Kulturforskning; serie B: skrifter 40, 58.) Oslo-Bergen-Tromsø: Universitetsforlaget.
- Morgenstierne, G. 1974. *Etymological vocabulary of the Shugni group*. (Beiträge zur Iranistik 6.) Wiesbaden: Dr. Ludwig Reichert Verlag.
- Mostaert, A. 1941-1942. *Dictionnaire Ordos*. (Monumenta Serica, monograph 5.) Peking: The Catholic University.
- MT = Doerfer, G. 1985 *Mongolo-tungusica*. (Tungusica 3.) Wiesbaden: Harrassowitz.
- MYYC = *Menggu yuzu yuyan cidian*. Xining: Qinghai Renmin Chubanshe. 1990.
- Norman, J. 1978. *A concise Manchu-English lexicon*. Seattle, London: University of Washington Press.

- Németh, J. 1959. *Eine Wortliste der Jassen, der ungarländischen Alanen*. (Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin. Klasse für Sprachen, Literatur und Kunst. Jahrgang 1958, Nr. 4.) Berlin: Akademie Verlag.
- Nyberg, H. S. 1974. *A manual of Pahlavi 2*. Wiesbaden: Harrassowitz.
- Olufsen, O. 1905. *The second Danish Pamir expedition: A vocabulary of the dialect of Bokhara*. København: Gyldendalske boghandel, nordisk forlag.
- Onenko, S. N. 1986. *Nanajsko-russkij slovar'*. Moskva: Russkij Jazyk.
- Orudžev, A. G. 1956-1959. *Russko-azerbajdžanskij slovar'* 1-2. Baku: Izdatel'stvo AN Azerbajdžanskoj SSR.
- Paasonen, H. 1974. *Tschuwaschisches Wörterverzeichnis*. (Studia Uralo-Altaica 4.) Szeged: Universitatis Szegediensis de Attila József Nominata.
- Pal'mbax, A. A. 1955. *Tuvinsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Pant, G. N. 1980. *Indian arms and armour 2*. New Delhi: Army Educational Stores.
- Paraškevov, B. 1976. Zum Problem der türkischen Vorlage von russ. čugun. *Studia Orientalia* 45, 101-124.
- Pekarskij, Ė. K. 1917-1927. *Slovar' jakutskogo jazyka*. Leningrad: Izdatel'stvo AN SSSR.
- Petrova, T. I. 1936. *Ul'čskij dialekt nanaiskogo jazyka*. Moskva, Leningrad: Gosudarstvennoe Učebno-Pedagogičeskoe izdatel'stvo.
- Piggot, V. C. 1985. āhan, iron, from prehistory to the ethnographic present. In: *Encyclopaedia Iranica* 1. London, Boston, Henley: Routledge & Kegan Paul. 624-633.
- Poppe, N. 1974³. *Grammar of written Mongolian*. (Porta Linguarum Orientalium, N. S. 1.) Wiesbaden: Harrassowitz.
- Poppe, N. 1987². *Introduction to Mongolian comparative studies*. (Mémoires de la Société Finno-ougrienne 110.) Helsinki: Suomalais-ugrilainen Seura.
- Pulleyblank, E. G. 1991. *Lexicon of reconstructed pronunciation in Early Middle Chinese, Late Middle Chinese and Early Mandarin*. Vancouver: UBC Press.
- Rahimi, M. V. & Uspenskaja, L. B. 1954. *Tadžiksko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.

- Ramstedt, G. J. 1935. *Kalmückisches Wörterbuch*. (Lexica Societatis Fenno-Ugricae 3.) Helsinki: Suomalais-ugrilainen Seura.
- Raquette, G. 1927. *English-Turki dictionary*. (Lunds Universitets Årsskrift. NF. Avd. 1, Bd. 23:4.) Lund, Leipzig: CWK Gleerup, Harrassowitz.
- Redhouse, J. W. 1921. *A Turkish and English dictionary by Sir James W. Redhouse*. Constantinople: American Board Mission.
- Redhouse, J. W. 1983⁶. *Redhouse yeni türkçe-ingilizce sözlük*. Istanbul: Redhouse Press.
- Rozycki, W. 1994. *Mongol elements in Manchu*. (Uralic and Altaic series 157.) Bloomington: Indiana University, Research Institute for Inner Asian Studies.
- Russko-dunganskij slovar'* 1-3. Frunze: Ilim. 1981.
- Rybatzki, V. 1994. Bemerkungen zur türkischen und mongolischen Metallterminologie. *Studia Orientalia* 73, 193-252.
- RI-IV = Radloff, W. 1893-1911. Versuch eines Wörterbuches der Türkdialekte 1-4. St. Petersburg.
- Röhrborn, K. 1981. *Uigurisches Wörterbuch* 3. Wiesbaden: Franz Steiner Verlag.
- Sa Xirong 1981. *Jianming hanyu elunchunyu duizhao duben*. Beijing: Minzu Chubanshe.
- Sauvaget, J. 1950. Noms et surnoms de mamelouks. *Journal Asiatique* 238, 31-58.
- Savel'eva, V. N. & Taksami, Č. M. 1970. *Nivxsko-russkij slovar'*. Moskva: Sovetskaja Ėnciklopedija.
- Schmidt, P. 1923a. The language of the Olchas. *Acta Universitatis Latviensis* 8, 229-288.
- Schmidt, P. 1923b. The language of the Negidals. *Acta Universitatis Latviensis* 5, 1-38.
- Schmidt, P. 1927. The language of the Oroches. *Acta Universitatis Latviensis* 7, 17-62.
- Schubert, J. 1971. *Paralipomena Mongolica*. Berlin: Akademie Verlag.
- Schwarz, H. G. 1992. *An Uyghur-English dictionary*. Bellingham: Western Washington University.
- Shaw, R. B. 1876. On the Ghalchah languages (Waxi and Sariqoli.) *Journal of the Asiatic Society of Bengal* 45:1, 139-278.
- Sims-Williams, K. & Hamilton, J. 1990. *Documents turco-sogdiens du IX^e-X^e siècle de Touen-houang*. (Corpus Inscriptionum Iranicarum 2, 3.) London: School of Oriental and African Studies.

- Sirotkin, M. J. 1961. *Čuvašsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Sköld, H. 1936. *Materialien zu den iranischen Pamirsprachen*. (Skrifter utgivna av Kungliga Humanistiska Vetenskapssamfundet i Lund 21.) Lund: CWK Gleerup.
- Skvorcov, M. I. 1985. *Čuvašsko-russkij slovar'*. Moskva: Russkij Jazyk.
- Smedt, A. de & Mostaert, A. 1933. *Dictionnaire mongour-français*. Pei-p'ing: Université Catholique de Pékin.
- Stachowski, M. 1993. *Dolganischer Wortschatz*. Kraków: Uniwersytet Jagielloński.
- Steingass, F. 1930. *A Persian-English dictionary*. London: Crosby Lockwood and Son.
- Sunik, O. P. 1985. *Ul'čskij jazyk*. Leningrad: Nauka.
- Tenišev, Ė. R. 1968. *Tuvinsko-russkij slovar'*. Moskva: Sovetskaja Enciklopedija.
- Tenišev, Ė. R. 1976a. *Stroj salarskogo jazyka*. Moskva: Nauka.
- Tenišev, Ė. R. 1976b. *Stroj saryg-jugurskogo jazyka*. Moskva: Nauka.
- Tenišev, Ė. R. & Sujunčev, X. I. 1989. *Karačaevo-balkarsko-russkij slovar'*. Moskva: Russkij Jazyk.
- TMEN = Doerfer, G. 1963-1975. *Türkische und mongolische Elemente im Neupersischen*. Wiesbaden: Franz Steiner Verlag.
- Todaeva, B. X. 1961. *Dunsjanskij jazyk*. Moskva: Izdatel'stvo Vostočnoj Literatury'.
- Todaeva, B. X. 1973. *Mongorskij jazyk*. Moskva: Nauka.
- Todaeva, B. X. 1986. *Dagurskij jazyk*. Moskva: Nauka.
- Turner, R. L. 1966. *A comparative dictionary of the Indo-Aryan languages*. London: Oxford University Press.
- Vámbéry, H. 1867. *Čagataische Sprachstudien*. Leipzig: F. A. Brockhaus.
- Vasilevič, G. M. 1958. *Ėvenkijsko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.
- Verbickij, P. V. 1884. *Slovar' altajskago i aladagskago narėčij tjurkskago jazyka*. Kazan.
- VEWT = Räsänen, M. 1969. *Versuch eines etymologischen Wörterbuchs der Türksprachen*. (Lexica Societatis Fenno-Ugricae 17:1.) Helsinki: Suomalais-ugrilainen Seura.
- Wagner, D. B. 1992. Iron and steel in Ancient China. In: *Handbuch der Orientalistik* 4/9. Leiden: Brill.

- Weiers, M. 1971. Das Moghol-Vokabular von W. R. H. Merk. *Zentralasiatische Forschungen* 5, 157-190.
- Weiers, M. 1975. *Schriftliche Quellen in Moğolī* 2. (Abhandlungen der Rheinisch-Westfälischen Akademie der Wissenschaften 59.) Opladen: Westdeutscher Verlag.
- Yamada, N. 1993. *Sammlung uigurischer Kontrakte*. Osaka: Osaka Daigaku Chuppansha.
- Zhao Xiangru & Zhu Zhining 1985. *Weiwueryu jianzhi*. Beijing: Minzu Chubanshe.
- Zieme, P. 1977. Drei neue uigurische Sklavendokumente. *Altorientalische Forschungen* 5, 145-70.
- Zieme, P. 1980. Uigurische Pachtdokumente. *Altorientalische Forschungen* 7, 197-245.
- Zieme, P. 1985. *Buddhistische Stabreimdichtung der Uiguren*. (Berliner Turfantexte 13.) Berlin: Akademie Verlag.
- Zudin, P. B. 1950. *Kratkij afgansko-russkij slovar'*. Moskva: Gosudarstvennoe Izdatel'stvo Inostrannyx i Nacional'nyx Slovar'ej.