In the fourth part of this series of papers the authors investigate the way how the Khitan Small Script rendered the dental stops in initial position. They conclude that the main opposition was between the postaspirated and not postaspirated dental stops.

Key words: Khitan, Khitan Small Script, Khitan dental stops.

In this paper we continue our former investigations on the Khitan Small Script (KSS). To begin, we accept the readings of Chinggeltei, Wu Yingzhe and Jiruhe (2017, hereafter CWJ) as they are presented in their recently published three-volume monograph. However, we also include the significant earlier readings and comments on cases where the readings of CWJ are—or may be—problematic. Our procedure is the same as in our earlier papers. First we give examples of the Khitan transcription in KSS of Chinese words (titles, personal names, geographical names). This is followed by Chinese loanwords in Khitan and finally some examples are introduced from the Khitan original lexical stock.

1 This paper has been written within the framework of the Silk Road Research Group of the Hungarian Academy of Sciences, the Eötvös Loránd University of Budapest and the University of Szeged. Moreover, this is the second paper written under the special co-operation between the above Research Group and the Khitan Research Group of the People’s Republic of China, led by Professor Wu Yingzhe (Höhhot, PRC). It is supported by the key program of Philosophy and Social Science ‘Collation and Study of Handed-down Documents in Khitan and Jurchen’ (14JZD036) of China’s Ministry of Education. For 3.1 (Labial Stops), see Wu and Róna-Tas 2019.

2 We offer our sincere thanks to the anonymous reviewers, many of their suggestions were of great help.

There exist three glyphs for <d>: ƙƙ (254), <d>ƙƙ (350) and <d>ƙƙƙƙ (089). Glyph (350) is an alloglyph of (254), nevertheless, CWJ did not give a reading. It is clear, however, from similar cases, that ƙƙ (350) should be read as <d2>. Similar pairs are, among others: <e>ƙƙ (109) and ƙƙƙƙ (348), <en>ƙƙƙƙ (100) and ƙƙƙƙƙƙ (361), <ge>ƙƙƙƙ (112) and ƙƙƙƙƙƙ (349). The glyph (089) was read by WJ\(^4\) as <zu> with question mark, and as <de> by Aisin Gioro (2012).

The glyphs for <da> are ƙƙƙƙ (171), ƙƙƙƙ (215) and ƙƙƙƙƙƙ (214). The glyphs (171) and (215), as it was already remarked by WJ, are identical, and the second is already absent from CWJ. The glyph (214) is transcribed as <da1> which should be <da2>, but for the time being we will not change the Romanisation.

The glyph for <dai> is ƙƙƙƙ (072), the one for <dau> is ƙƙƙƙ (119). The glyph ƙƙƙƙ (294) was known as the logograph for ‘SOUTH’, and is now read as <dele>. This is one of the very few glyphs which represent a bisyllable\(^5\).

For <deu> there existed four glyphs: ƙƙƙƙ (072), ƙƙƙƙ (101), ƙƙƙƙƙƙ (361.1) and ƙƙƙƙƙƙ (129). ƙƙƙƙ (072) is now read by CWJ as <dor2>, the glyph ƙƙƙƙ (101) as <deu> and ƙƙƙƙƙƙ (361.1) as <deu>. The glyph ƙƙƙƙ (129) was renumbered as 129.1 and has no reading in CWJ.

The syllable <di> is represented by ƙƙƙƙ (037), the syllable <do> by ƙƙƙƙ (091) <dor2> and ƙƙƙƙ (217). The glyph ƙƙƙƙ is the logograph for ‘SEVEN’ and read as <dol>. As we have seen, ƙƙƙƙ (072) was read by CWJ as <dor2> and is the logograph for ‘EAST’. There exists another logograph ƙƙƙƙ (218) with the meaning ‘SEAL’ and read by CWJ now as <dor>.

There exist more glyphs for <du>: ƙƙƙƙ (179) <dú>, ƙƙƙƙ (237) <du>, ƙƙƙƙ (249) <dú>, ƙƙƙƙ (304) <dau>, (304) was formerly <go2>.

The glyph ƙƙƙƙ had earlier the number (406) and was suggested to be read as <tumo>, CWJ renumbered it as (310.1) and read it as <dus>. According to Index, it occurs only once as initial in the inscription Gu25-17 in the word <dus.qo>. The context is:

\[
\text{Yaya ai dus.qo Taai Du Ngierie094 cier} \]

The expression <ia.iá ai> occurs in the inscription Gu25-17 in the word <dus.qo>. The expression also occurs here in the name of the person who wrote the Tu inscription. It runs as <ia.iá ai2 b.qo Ia.LUCK.n ci.er>.

\(\text{See the Abbreviations.}\)

\(\text{See (355) the logograph for ‘ORDO’, and read as <udu>.}\)

\(\text{(197) was earlier read as <alt>.}\)

\(^{4}\) See the Abbreviations.

\(^{5}\) See (355) the logograph for ‘ORDO’, and read as <udu>.

\(^{6}\) (197) was earlier read as <alt>.
Here we have <ia.iá b.qo> and it is clear that (310.1) stands in Gu25-17 for or is here a miswriting of (311) <b>. On the photo (p. 657) the glyph is well readable and the dot is absent. The word <b.qo> is well known, it is one of the most frequent words in the corpus and occurs 442 times. It has the meaning ‘son’. Thus we have to read here ai baqo, ‘son of the elder brother, the nephew’. In other cases, however, the reading <dus> for (310.1) may be correct.

The word <ia-ía> occurs in plural as <ia.iá.ń.er> in the inscriptions Nan6-7, Zhi10-26, Han10-6, Hui7-1.

Finally, (369) is the logograph for ‘FOUR’ and is read by CWJ as <dur>.

**Glyphs with Initial <T>**

The very frequent glyph for <t> is (247) with an alloglyph (260) <t>. The latter occurs as initial only seven times, out of which as part of <t.ur> five times, and seems to be practically identical with (247).

The glyph for <ta> is: (229) and the glyph (234) may be an alloglyph, but for (234) CWJ gives no reading.

The glyph for <tai> is (374). The glyphs (029) and (030) are read as <tau>; the second is a dotted alloglyph, and both are logographs for ‘FIVE’. The dot is an indicator of masculine gender.

For <te> we find (323), formerly read as <qi> and <te2> (356); finally, for <tir> we find (174).

Dentals occur in transcriptions of Chinese words, for instance, in the following cases:

**Khitan Transcriptions of Chinese Dental Initials**

<table>
<thead>
<tr>
<th>Romani-</th>
<th>Glyph</th>
<th>Chinese</th>
<th>LMCh</th>
<th>EMCh</th>
<th>LCh</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;d.ie.ēn&gt;</td>
<td>(254.327.073)</td>
<td>dian 殿 ‘rear of the army’</td>
<td>tian</td>
<td>ten</td>
<td>tien</td>
<td>K262, 7.009, 7.010⁷</td>
</tr>
<tr>
<td>&lt;t.ie.ēn&gt;</td>
<td>(247.327.073)</td>
<td>dian 点 ‘point’</td>
<td>t’ien</td>
<td>t’ien</td>
<td>K262, 7.017⁹</td>
<td></td>
</tr>
<tr>
<td>&lt;d.ém&gt;</td>
<td>(254.270)</td>
<td>dian 点 ‘point’</td>
<td>tiam</td>
<td>tem</td>
<td>tem</td>
<td>K262: 7011¹⁰</td>
</tr>
</tbody>
</table>

---

⁷ We omitted tones in the case of LMCh and EMCh.
⁹ 15 times in the following inscriptions: Lang, Yu, Guang, Hong,Tu, Tai, Song, Wu, DiX, Hu and Jue.
¹⁰ Five times in the following inscriptions: Zhong (twice), Song, Liang and Jue.
<table>
<thead>
<tr>
<th>Romanisation</th>
<th>Glyph</th>
<th>Chinese</th>
<th>LMCh</th>
<th>EMCh</th>
<th>LCh</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;du&gt;</td>
<td>fù (237)</td>
<td><em>du</em> ‘capital, chief’</td>
<td>tuš</td>
<td>tɔ</td>
<td>tu</td>
<td>K262: 7.009, 7.011</td>
</tr>
<tr>
<td>&lt;tu&gt; in</td>
<td>北 為 (083.202)</td>
<td>tu 徒11</td>
<td>thuš</td>
<td>dɔ</td>
<td>‘u’</td>
<td>DiX19-10/11, Xiang24-26</td>
</tr>
<tr>
<td>&lt;tu.up&gt;</td>
<td>劉 木 (202.345)</td>
<td>tong 統12</td>
<td>ṭʰəŋ</td>
<td>ṭʰəŋ</td>
<td>ṭ’h</td>
<td>DiX10-13/14</td>
</tr>
<tr>
<td>&lt;t.uŋ&gt;</td>
<td>今 木 (247.345)</td>
<td>tong 通</td>
<td>ṭʰəŋ</td>
<td>ṭʰəŋ</td>
<td>‘u’</td>
<td>K64</td>
</tr>
<tr>
<td>&lt;d&gt;</td>
<td>色 (254)</td>
<td><em>dai</em> ‘big, great’</td>
<td>ṭʰaj</td>
<td>daj</td>
<td>taj</td>
<td>Gu6-30</td>
</tr>
<tr>
<td>&lt;d.ai&gt;</td>
<td>久 木 (254.122)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Jue10-43</td>
</tr>
<tr>
<td>&lt;d.ai.i&gt;</td>
<td>久 木 (171.122)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dao2-11, Xuan2-11, Zhong19-35, Xu11-10, Zhen22-16, 23-6, 46-10, Wu5-27</td>
</tr>
<tr>
<td>&lt;d.ai.i&gt;</td>
<td>久 木 (171.122.339)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>K263, 7.02113</td>
</tr>
<tr>
<td>&lt;d.ai.i&gt;</td>
<td>久 木 (254.122.339)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>K264, 7.06214</td>
</tr>
<tr>
<td>&lt;t.ai&gt;</td>
<td>今 木 (247.122)</td>
<td>tai 太</td>
<td>ṭ’haj</td>
<td>ṭ’haj</td>
<td>‘aj</td>
<td>Yu59-53, Yong16-18, Cha20-20</td>
</tr>
<tr>
<td>&lt;t.ai.i&gt;</td>
<td>今 木 (247.122.339)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gu25-18, Yu41-6, Gung14-23, 33-21, Hong2-27, Nu15-18, Di4-35, Qing22-22,22-40 DiX13-26</td>
</tr>
<tr>
<td>&lt;tai&gt;</td>
<td>咱 (374)</td>
<td><em>tai</em> 泰15</td>
<td>ṭ’haj</td>
<td>ṭ’haj</td>
<td>‘aj</td>
<td>K264, 7.051 361 times in the Index</td>
</tr>
<tr>
<td>&lt;tai&gt;</td>
<td>咱 (374)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DiX20-1</td>
</tr>
</tbody>
</table>

11 In: *situ* 司徒 ‘master of the foot soldiers’.
12 In: tongjun shixiang 统军使相 ‘military governor’.
13 Zhong21-5.
14 Zhong27-11, Tu9-12, Jue34-35.
15 In the name of the Taizhou prefecture, ‘great, excessive’.

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As a rule Khitan <d-> transcribes a non-aspirated Chinese dental stop and <t> a post-aspirated dental stop. But where we have enough material, Khitan <t> and <d> are almost in free variation. The Chinese originals of the Khitan transcriptions in the case of dai 大 and tai 太 are not always clear and we plan to deal with them in a separate paper.

**Khitan Words with Initial d-**

The glyphs <d> (254) and <d2> (350) are heteroglyphs. The first occurs in a few Khitan words as:

- **dur** 多 (368) ‘four’ | Mo dörben, Da durube ‘four’, DaE durbu, durbun. The word occurs as an ordinal number with another writing:
  - **durer** 多優 (254.236.341) <d.ur.er> ‘fourth, masc.’ (Zhong6-45, Xu49-11 Zhuo9-2, Zhi8-12, Jue32-36, in Hai4-13 <d.ur.oi> has to be read as <d.ur.er>), and
  - **turer** 多爾 (247.236.131) <t.ur.én> ‘id.’ 7× in the Index.
  - **duren** 多倫 (254.236.361) <d.ur.én> ‘fourth, fem.’ (Hu52-30, Zhi12-22) and
  - **turen** 多倫 (247.236.131) <t.ur.én> ‘id.’ 7× in the Index.

A form

- **turuğ** 多爾 (247.236.172) <tu.ur.uh> occurs only once in Yu66-33.
  - The heteroglyph <d2> (350) is rare and occurs, according to Index, only in the words <d2.bir> (2×), <d2.bi.r2> and <d2.u.ji>.
  - The three glyphs for <da> are: <da> 大 (171), <da2> 大 (214), <da> 大 (215)19 which all look like alloglyphs. Some words with <da> 大 (171):
  - **dalu** 大力 (214.312) ‘seven’ (K72, 115) | Mo dolugan, Da doloo, DaE dolb, dolb: ‘seven’, see further Mo dalan, (<*daluan*) ‘seventy’. There exists a logogram 大 (141.1). A numeral with <da-> 大 occurs only in the ordinal form:

16 In the name of the Emperor Daozong 道宗.
17 In the title zhaotao 招討 ‘punitive comissioner’.
18 Among others in the name Dezu 德祖, father of Abaoji/Taizu’ written as 大 太 (254.020.258.018) <d.zi z.in>, genitive case.
19 There is no word beginning with (215) in Index; it is practically deleted.
daluer (214.312.341) <da3.lu3.er> (Yong3-1, Guo7-19, Qing4-22, Liang2-7, 4-29, Xian3-24, Jue4-33, Hui2-32) also daluer (214.313.341) <da3.lo3.er> (DiX3-3, see also K72, 115) ‘seventh, masc.’ Mo dolodugar.

daluen (171.312.361) <da3.lu3.en>. According to Index only in: Dao14-5, ‘seventh, fem.’

*daga- (171.051) <da3.ha>. This is a very productive stem in Khitan. It is also written daga (214.051) <da3.ha>. The basic meaning is unknown, but it may be in past perfect tense in:

daga'ar (214.051.123) <da3.ha.ar>, past tense in –ar (Index 24×). The word is written also as daga (214.051.123) <da3.ha> (Index 12×).

It is frequent in the verbal phrase daga ol-

xomur daga'ar oliga'aju 大行 久 之 乃 灵 (057.220.341 171.051.123 186.149×5,05.189.386 <xo.mi.er da3.ha.ar o3.la.ajau> ‘the coffin (xomu+acc -r) had been closed’ (DiX39-14/16).

Further derivations are: <da3.ha.ar o.on> (DiX47-17), <da3.ha.ar o.o> (DiX50-19), <da3.ha.ar o.n> (Xiang44-16), <da3.ha.ar o.ju.ha.ar> (Xiang33-40).

The syllable <da3.hu> written with (119) occurs in the transcription of a Chinese name:

Dawu Suŋ hoŋdi 独 之 聚 號 提 (119.131 241.346 075.037) <da3.u s.uŋ hoŋ.di> ‘the Emperor Daozong 道宗’ (K49).

Furthermore it appears as a verbal stem. Though in the latter case its meaning is yet unclear, it may be of interest to see some of the derivations:

*dawu- which occurs with a causative extension:

*dawul 右 (119.366) <da3.ul-> (Index 1×), causative stem; a further derivation is:
*dawulga- 右 (119.366.051) <da3.ul.ha> (K148), factitive stem with further derivations:


dawulga’ar 右 (119.366.051.123) <da3.ul.ha.ar> past tense (Index 3×),

dawulga’a’ar 右 (119.366.051.189.123) (Index 3×), same as above,

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20 Index has also <da3.lu3.oi> (214.312.347), but <oi> is a mistake for <er>.

21 Index has <da3.313.er>. Observing the photo on p. 806 the glyph is written in cursive handwriting, and the strokes are not certain. (313), which does not occur as initial, may be read as <lo> or <lu>, see also K72, WJ268.

22 On the details, see Róna-Tas 2016: 128.

23 Its functions are reminiscent of Old Turkic yap- ‘to cover, to put together’.

24 The glyph (149) was earlier read as <ju>, but it is read now by CWJ as <l>.

25 See au’ulgai <au3.ul.ha.ai> in Róna-Tas 2017: 143.

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The glyph occurs also in a loanword:

26 The glyph (076) was earlier read <ho>, the word as <dau.ul.ó.o.ho>.

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Finally the glyph occurs in Khitan words such as:

- **dawur** 兎 (119.097) <dau.úr> ‘middle’ (Index 4×), 兎 (029.097), <tau.úr> (Index 1×), 兲 (029.097.273) <tau.úr.un> (Index 1×). WJ 87, Sh2 dau| Mongolian has dumda, Da duande ‘middle’, DaE dwand, dwanna. Its connection with Khitan dawur is unclear. Dawur has the same meaning as Ch zhong 中, as middle, the Middle, China 中國. On dagur = Khitan, see Kane 162–165.28 This word occurs in the expression <GREAT dau.úr.un xu.rá qid.un.i> ‘The great Central Liao State-GEN’. Thus <dau.úr> denoted not only the word ‘middle’ in space or time, but also the centre of the world, and thus the Central Empire, the Empire of the Middle, as zhong in Chinese zhongguo. This may be the origin of the ethnic name Dagur, Dahur, Daur. Ivanovski (1894) registered the form Daýür, Poppe (1930) Dagür, Dayur, Muromskij (Kałużyński 1969–1970) dahuru, Martin (1961) Daoure. In the Dagur language the Common Mongolic –aγu- bisyllable became -au-, see LM daγu ‘voice’ > Da dau. The ethnic name is written in the Uygur-Mongolian script as नाγ्य but maybe, this is a modern form of the ethnic name. Enkhbat (1984) is cautious, though in all other similar cases he gives a written Mongolian form, in the case of Dagur he does not. The modern Chinese transcription is dawoer 达斡尔 which represents a pronunciation [dawur] or [dawor]. Though we have to pay attention to the notions of Muromskij and Poppe, respectively, for the time being we cannot decide whether the sequence <u.u> in <dau.úr> denoted a long vowel or not, i.e. we have to reconstruct dawur or *dawūr.

- **dawur-ir ü’il 兲米及又 平 (119.097.144 131.366) <dau.úr:ir 2 u.u l> ‘mid winter (month)’ (K:3, 22, 107, 49,189 L11, DiX30-4, Xiang42-7). Index read (144) as <ir2>, the earlier reading was <un>, it occurs 23×.

- **dawuruji 兲米及又 (119.097.131.152) <dau.úr.u.ji> (Jue46-22). It looks as if the final –r would disappear in some declinated forms:

In the dative-locative case:

- **dawdu 兲多 (119.249) <dau.dū> ‘in the middle, the middle one, etc.’29 with the loss of –r, or at least without an overt <r> (Index 35×),

  - **dawdu ai 兲多又 (119.249 122) <dau.dū ai> ‘the middle uncle’ (DiX13-6. 16-23, Xiang1-4),

27 -ar is here not past tense marker, but the suffix of the instrumental case.

28 A similar idea was formulated by G. Kara in one of his lectures at the Hungarian Academy of Sciences.

29 According to Shi Jinmin and Yu Zemin (2001), 兲多 (119.249) <dau.dū> means ‘middle’. According to Jishi (2012) 兲多 (119.249) <dau.dū> corresponds to Mongolian ded ‘second’. This is possible if there are three items, and the middle is then the second.
We suppose that the final -ur in dawur is the same petrified locative suffix as in u'úr 'north', and omur 'east'. This may have the same origin as the suffix -r in Mongolian in: gadar 'outside' cf. gadaga 'outside', gadana 'outer' etc. and perhaps an element of the suffixes in degere 'on above', dotora 'within', inaru 'before', ĉinaru 'after' (Poppe 1964: 59).

The glyphs for <de> are: <de> (204)30, <de> (205)31. There are yet no lexical units beginning with <de> with an identifiable meaning.

The glyph <deu> (101) may have an alloglyph (072), but this is uncertain.32 The glyph (101) is used as a logograph, the reading of which we know:

- ya deu (335.101) <ia deu> 'elder and younger brother' (Index 89×).
- deu ay (101.122) <deu ai> 'uncle, younger brother of the father' (K124).
- dew-un (101.273) <deu.un> 'genitive case of deu’ (DiX12-20, 13-5, 16-22, 16-31, 24-8, 26-11, many times in the expression (335.101.273) <ia deu.un> ‘XY of the junior brother(s)’ (e.g. in Zhong12-33, 28-39) (Index 69×).
- dew-ur (101.097) <deu.ur> 'in association with’ dew 'younger brother’ and the instrumental-sociative –Úr (Index 50×), e.g. in:
  - dewur MANAGEMENT (101.097 142.339) <deu.ur MANAGEMENT.i> (K47, WJ75) perhaps ‘to manage in association, co-manage “with the siblings”’ (DiX14-11).
  - dewli MANAGEMENT (254.067.206 142.261.051.189.290) <d.eu.li MANAGEMENT.i.a.án> (DiX8-7/8) in: <m.ci.e2 d.eu.li MANAGEMENT.i.a.án> with a similar meaning.

The glyph <do> (217) occurs as initial in Index in a geographical name:

- Dou (217.131) <Do.u> ‘name of an unidentified city’ in:

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30 Identified as an allograph of (205) by Zaycev 2015, Aisin Gioro 2012: shi ?, but reading is unknown according to Index.
31 There occur a few words beginning with (205) in Index, <de.i> 10×.
32 The glyph (072) looks like an alloglyph of (101), but Index read <dor>.
The region of Dou (DiX14-13).

The glyph 堡 (218) SEAL was read by Kane (2009, 61) as <doro>, by Aisin Gioro (2012) as <dor>.

The region of Dou 堡 (218) ‘SEAL’, read by Index as <dor>. Its meaning may be ‘rite, ritual, official’ | Mo 티로 ‘law, order, government’

The official coffin (DiX39-13).

The glyphs for du are: <du> (237), <dú> (179), <dū> (249), the second and the third glyphs are rare as initials in the material. The glyph for du (237) occurs as the transcription or loan for Chinese 都 ‘capital, main etc.’, LMCh tu, EMCh tu (Index 51×), the glyph occurs in transcriptions as in:

The title dujian 都監 ‘chief supervisor’ (Xiang 10-3, WJ 159),

Du-ung (237.345) ‘a part of the personal name of the Grand Preceptor [M.ri.g.ún] Du ung Ge’ (Xiang15-13, Index 7×).

Khitan Words with Initial t-:

The two glyphs for <t> are: <t> (247), <t₂> (260), they are alloglyphs, the second is, according to Kane (K66) only found in <tᵽ.ᵽr.en> ‘fourth’. According to Index, $<t₂>$ (260) occurs once alone, once in $<t₂.j₁>$ and 5× in $<t₂.ᵽᵽr>$.

The glyph <t> (247) is one of the most frequent graphs used as initial. As we have seen in the section on the vowels (Róna-Tas 2017: 148) the plural of the demonstrative pronoun e is et, but written with a simple <t>:

The title duiian 都監 ‘chief supervisor’ (Xiang12-2) ‘[he was] with these titles rewarded’. A few words with <t> (247):

Tabu (247.196) <t.abu> (Index 9×), CWJ read ठब (196) <abu>, earlier <bu>.

Tabuy (247.196.020) <t.abu.y> a name Tabuye, in the Liaoshi Tabuye 撻不也 and the like (K59) (Index 14×).

33 On possible Turkic parallels, see Róna-Tas and Berta 2011: 944–947.

34 K read <dditu>, Aisin (2012) <du, ud>, Wu <dū>. Index has <dū>, <dū.i> 3×, <dū.iau> seemingly in transcriptions of Chinese.

35 Index has <dū> 2×, <dū.u>, <dū.i> and <dū.er>.

36 The text was also published in WJ on p. 164, but there with ठ (347) <oi> instead of ठ (341) <er>, a misprint corrected in CWJ on p. 1475. The glyph ठ (149) was earlier read as <un> now it is read by CWJ as <l₂>.

37 WF 424 mentions a person with that name of the royal clan who surrendered to the Jur-chen in 1116.
**tabuyer** 今生百籽 (247.196.020.269) <t.bu.y.er> ‘tiller of fields’ according to the Jinshi glossary (K59, Index 17×).

**tado’or** 今亦及札 (247.099.186.076) <t.ad.o.or> ‘fifth, masc.’ (Index 10×), Mo tabudugar, also:
- **todo’or** 今亦及札 (247.016.186.076) <t.od.o.or> (Index 10×),
- **dodo’or** 今亦及札 (254.016.186.076) <d.od.o.or> (Index 1× in Xu5-1519).

**tado’on** 今亦及齿 (247.099.186.322) (Index 5×) <t.ad.o.ón>,
- **todo’on** 今亦及齿 (247.016.186.322) <t.od.o.ón> (Index 6×) ‘fifth, fem.’. As we can see also here TA-, TO-, DO- initials render the same Khitan initials.

**tar** 今 (247.123) <t.ar> ‘next, later’ in:
- **tar ojuha’ai** 今亦及子生亡 (247.123 186.149.051.189.122) <t.ar o.ju.ha.a:ai> ‘[the tomb] later having been closed’ (K131), cf. Mo dara(ga), Khalkha daraa ‘late, next’. Index has only this one case, Yu60-49.

*te- 今 (247) <te> ‘to say’ in the form:
- **tegu** 今 (247.165) <t.e.gu> ‘(the inscription) says, introducing a quotation as Chin yue 月’ (K54, Index 55×) | ← OT te- ‘to say’ (Vovin 2013: 622–623), perhaps honorific, cf. Mo ge-, keme-, kele-. Some examples:
  - usug tegu 共九今 (068.334 247.165) <us.g t.gu> ‘the scripture says:’ (Xiang35-5-6).
  - RECORDgen tegu 亜九今 (052.1-334.361 247.165.1) <RECORD2.g.én t.gu 2> ‘the text (or poem) says [poem follows]’ (DiX42-1/2).

*tege- 今 (247.349) <t.ge> ‘moving upwards, die’ in:
- **tege'er** 今亦及仔 (247.349.269/341) <t.ge.e.r> ‘went up, died masc.’ (Index 24×, among them: DiX11-8, 23-5, 35-8), | cf. Mo *dege- ‘to go, move upwards’, see degedü ‘upper, previous etc.’, degere ‘on, above, high’, DaE: dr ‘above, upper’, also:
  - **dege'er** 今亦及仔 (254.349.341) <de.ge.e.r> ‘what is above, former, late’ (once in: Jue1-6)
- **tege'en** 今亦及仔 (247.349.361) <t.ge.e.n> ‘deceased (fem.)’ (K41, 64, 90, Index 26×, among them Xiang32-18),
- **dege'en** 今亦及仔 (254.349.361) <d.ge.e.n> (Index 6×).
- **tegey** 今亦及仔 (247.349.020) <t.ge.y> ‘having deceased’ (Index 14×),
- **degey** 今亦及仔 <d.ge.y> ‘having deceased’ (Index 5×).

**teqo’a** 今ㄌ (247.168.189) <t.qo.a> ‘chicken’ (K55, 58, 64, 88, Index 15×), also 今ㄉㄌ (247.169.189) <t.qo.a> (Index 18×), 今ㄜㄌ (247.169) <t.qo.a> (Index 43×)40. | Mo takiya, Da deest || The initial Khitan graph (247) may be read

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38 The glyph <076> was earlier read as <ho>.
39 See Róna-Tas 2016: 128, who read with Kane there <t.od.o.ho>.
40 Index has also <t.qo.a.as> (247.169.189.174), in Yu65-57,61-43 both occur.

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as t-, or te- or ti-. A simple t- can be here excluded, and only te- or ti- are possible. The final -o’a is reflecting a diphthong, resulting from an earlier -*agu, the -o’a later changed to –o. The aberrant vowel sequence e-a is going back to an earlier *tiqō <**tiqagu. The three reconstructed forms PKhitan *tikagu, PMo *takiga, PT *takigu <*tikagu are old variants by partial metathesis. *tikagu is also reflected by Jurchen tixo (< Khitan *tikē <*tikagu) and Manchu čoko (< tiq). The word is further reflected by the original West Old Turkic form of the Hungarian tyūk (t’ük) < Old Hungarian tik and tiuk (see Róna-Tas and Berta 2011: 965–967) which goes back to a West Old Turkic *tiyuk <*tigaguk-k, that is the same as the PKhitan form with an additional diminutive -k (see in the Addenda of Róna-Tas and Berta 2011: 1493). The Mongolic word is either of Old Turkic origin (*takigu), or both are rooted in a very early Eurasian word.

‡ tem- ףי (247.133) <t.m> (Index 12×), ףי (247.257) <t.em2> ‘to grant a title’ (K100 earlier only <em>; the latter in Index occurs only in derivations and in conjugated forms), dem ףי (254.133) <d.m> (Index 2×), also ףי (254.257) <d.em2>. In Index only in derivations and conjugated forms | cf. Mo temdeg-, Ma temgetu’sign’, temgetule- ‘confer a mark of distinction’, Da temedehe ‘a mark, a spot’.

‡ tемеi ףי (247.257.020) <t.em2.ei>, demеi ףי (254.257.020) <d.em2.ei> ‘having granted’ converb in -ei (Di37-6, 40-2, 50-16, Xiang39-32, Index 25× with <t->, and 18× with <d-> as in):

✓ mod-en tемеi RECORD.g-un uyil <mo.d2.en t.em2.ey RECORD.g.ún ui.l> ‘the case of the recording of the grant given to the ladies’ (DiX40-2).

‡ temer ףי (247.257.341) <t.em2.er> ‘appointed to, got the title’, past tense in -er (Index 15×), demer ףי (254.257.341) <d.em2.er> (Index 2×).

✓ tai ba temer ףי (374.311 247.257.341) <tai.ba t.em2.er> ‘was appointed as taiťao 太保 ‘Grand Guardian’ (DiX20-9), see also Xiang25-32.

‡ temji ףי (247.257.087) <t.em.ji> ‘having been awarded’ with the marker of the converbal –ji (X30-17).

‡ теmle-/деме- <t/d.em.le.g.ei> ‘to be enfeoffed, to be awarded an honorary title’ causative stem (K21) in:

‡ теmleği <t/em.le.g.ei> conversal suffix –ei, (DiX10-18, 10-22, 14-3, 14-8, 14-23, Xiang27-11). In Index 14× with <ge> and 52× with <ge> (349) <ge>,

‡ демлеği <d.em2.l.ge.ei> (Index 15×).

‡ теmlejer <t/l.em2.ge.ei> (247.257.112.341) (Index 12×),
We can see that the te- and de- are in free variation.

- Demleger Jvm ¼ (254.257.261.112.341) (Index 10×) ‘having granted, enfeoffed’ with the past tense marker –er (K64, 66, 100, Xiang2-27).
- Temlegen Jvm ¼ (247.257.253.349.361/100) (Index 8×)
- Demlegen Jvm ¼ (254.257.261.112.361) (Index 1×)
- Temlegelir Jvm ¼ (247.257.261.112.144) (Index 14×), ¼ (247.366.131.097) (Qing22-19, DiX36-16, Jue42-37) | Mo tulgaguri, tulgur ‘pillar’,
- Demlegelir ¼ (254.257.261.144) (Index 1×)

The two glyphs <ta> (029) and <ta> (030) may or may not be two allographs, the first with a dot, the second with a dash. According to Index, the glyph (029) occurs isolated 111 times, while the dotted variant only 10 times.

FOUR ta’aden sengun po’or ¼ (368 229.051.099.140244.175.273 295.186.255) <FOUR ta.ha.ad.en s.eng.un p.o.or> ‘was appointed/became the Field Marshal of the Four Tents’ (Xiang27-34/37).

The glyphs for <tau> are (029) and (030), the second is a dotted variant. It is also the logograph for the number five. According to Index, the glyph (029) occurs isolated 111 times, while the dotted variant only 10 times.
Some Khitan words with **taw**:

- **taw** (029) <tau> (030) ‘five’ (K19, 24, 34, 38, 98) (Index 111×) | Liaoshi tao 討, LMC, EMCh *taw*, Mo *tabun*, Da *tau*, DaE *ta:wu*(n). 46 | For details, see Róna-Tas 2016: 130–131. See also <tau.un> (234.144) (Xiang29-17).
- **tawlia** (029.206.189) <tau.li.a> ‘hare, rabbit’ (K2, 19, 20, 38, 38, 58, 101, 112, Index 10×), | Liaoshi taoli, Mo taule, DaE taul, *tauli*.
- **taw***su* (029.041) ‘to advance’| Mo dabsi- ‘to advance’, dabsigul- caus. of dabsi- in:
  - **taw**suou**i** (029.041.090.262) <tau.su.ó.ui> ‘advancing’ (Xian2-14, 3, 17, 24-6)
  - **taw**suou**ul**gai (029.041.090.366.51.122) <tau.su.ó.ul.ai> ‘to let advance’ (DiX9-20, 11-5).
  - **taw**suou**ul**gai awu**ul**gai pü**res-e ui-de 兀卡平生羔 erteui 兀平羔 erteui <tau.su.ó.ul.ai au.ul.ai p.úr.s.en.ui.de> (DiX9-20/23).
  - **taw**suou**ul**gu 兀卡平生 (029.041.090.151) <tau.su.óul.hu> (Xian37-23).

The glyph tir (074) <tir> was read by C as <tel>, by A as <tael> and as <tir> by Index. It occurs, among others, in such names as:

- **Tir**bir (074.288) <tir.bir> ‘a name, Tirbir’ (DiX12-9) (read by C and A as Taelbun, WJ Tirbun), Wu read (288) as <bir>, in this case **Tir**bir (Index 5×). Also **Tir**bir (074.311.14457) <tir.bir> 2×.

The glyph to (213) <to> occurs 29 times. The glyph to (287) was former read as <to> now by Index as <har>. The glyph (213) occurs in such names as:

- **Toon**i (213.154.222) <to.on.í> ‘a part of a name of a Grand Prince (daiwang), a common ancestor of Xiao Dilu and Xiao Tuguci’ (DiX3-19), perhaps Chin tuoning 駝寧 (Index 7×).

The glyph <ti> (202) occurs among others in the name:

- **Tu Nu taisí** (202.251.131 374.) <tu.nu taisí> ‘the Grand Preceptor Tu Nu’ (DiX24-14), as a part of name it occurs in the Index 34×.

The glyph occurs in Khitan words such as:

- **tu**ur (202.097) <tu.ur> ‘to pass away, die’ | Mo diigur- ‘to expire, finish, end’, Da duure- ‘to be full’, DaE du:r. 45
  - **tu**urbi (202.097.131.14450) <tu.ur.bi> (Index 4×), 46 **lu** (202.097.288) <tu.ur.lí> (Index 23×) ‘died, passed away’ (also K59, 91, 204),
  - **tu**urboł (202.097.311.222) <tu.ur.bó> (Index 7×), past time,

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46 There exists a unit <ta.u> (229.131), also <ta.u.en> the meaning of which is not clear to us (D29-16, X32-26, 34-3, X4-8). According to Index, the reading of (229) is unknown.
47 The glyph 144 was earlier read as <un>.
48 Read by A as <qa>.
49 Sh17, 374 suggested to compare it with Mo türü- ‘to be born’, this is hardly acceptable.
50 Glyph (144) was earlier read as <un> by WJ, <tir, ti> by A, <bo> by Sh17.
tu’urbońer 努尔布尔 （202.097.311.222.341）<tu.úr.b.ń.er> (Index 1×),
tu’ursii 努尔死 北 （202.097.244.080）<tu.úr.s.ii> ‘after he had died’ (K150.-151, WJ 73) in:
  ✓ tu’rbir udur tu’ursii 努尔死 再努尔死 北 （202.097.288 092.097202.097.244.080）<tu.úr.bir ud.úr tu.úr.s.li₂> ‘he died [and the] first [moment] he had died…[was the will of Heaven and Earth]’ (DiX7-15/17).

Two glyphs were earlier read as tum: <tum> (406, new number 310.1), and (312). The second is a dotted variant of the first. The glyph (310.1) was read by Index as <dus> (see above) and (312) is read now as <lu₃> instead of the former <tum>. It is interesting to see that we have three similar glyphs: (310.1) <b>, (311) <b> and (312) <lu₃>. Further research is needed to clear up the situation.

A logograph the reading of which we now know and has to be read with t- is:
  ❍ tum 腹 (187) ‘TEN THOUSAND, myriad, read by Index as <tum>’ | Mo tümen, Da tume, DaE tum || Only Dahur has the word without final –n. In the Index it occurs 55× as an independent word. See further:
tumen 腹 (187.140) in:
tumen ewur 腹尤 (187.140 067.097) <tum.en eu.úr> ‘ten thousand years’ (Liang15-5) and
tumun emu boden oreyir 腹女毛国与北万艾 (187.273 026 309.100 076.020.144) <tum.un emu bod.en or.y.ir₂> (Zhong45-25) ‘thousand and one times…(?).’

**Summary**

As we can see from the above material, in Khitan the graphical representation of the dental stops is alternating between <d> and <t>. The same word is sometimes written with <t-> and in other cases with <d->. This is an orthographical problem and is not representing a phonological one. If we look into the Khitan representations of the Chinese contemporary phonemes, we can see the following:

<table>
<thead>
<tr>
<th>Khitan phoneme</th>
<th>Khitan glyph</th>
<th>Middle Chinese phonemes</th>
<th>Modern Chinese pinyin</th>
</tr>
</thead>
<tbody>
<tr>
<td>/tʰ/</td>
<td>&lt;t&gt;</td>
<td>/tʰ/, /tʃ/</td>
<td>&lt;t&gt;</td>
</tr>
<tr>
<td>/t/ [D]</td>
<td>&lt;d&gt;</td>
<td>/t/, /d/</td>
<td>&lt;d&gt;</td>
</tr>
</tbody>
</table>

In general, we can state that Khitan <d> may reflect a non-aspirated dental stop, maybe /t/. There is no direct indication for its voiced character, it may also have been either an unvoiced lenis /D/ or a voiced variant /d/. Khitan <t> is signalling a postaspirated dental stop /tʰ/. The main opposition was between *postaspirated* and *not post-
aspirated stops. Yet we find many words in which the initial <d> and <t> alternate. This may mean that the aspiration was not very strong or this alternation may be due to the inability of the Khitan Small Script to articulate this opposition. In any case, the situation is the same as with the bilabial stops (Wu and Róna-Tas 2019).

(To be continued)

Signs used

♦ Independent base
❖ Derived morpheme
✔ Example

Abbreviations

A = Aisin Gioro (2012)
CWJ = Chinggeltei, Wu Yingzhe and Jiruhe (2017)
Da = Dahur, according to Martin 1961
DaE = Dahur, according to Enkhbat 1984
EMCh = Early Middle Chinese according to Pulleyblank (1991)
Index = The Index of CWJ
K = Kane (2009)
KSS = Kithan Small Script
LCh = Liao Chinese
LMCh = Late Middle Chinese according to Pulleyblank (1991)
Ma = Manchu
MMo = Middle Mongolian
Mo = Mongolian
Sh17 = Shimunek (2017)
WJ = Wu and Janhunen (2010).
WOT = Róna-Tas and Berta (2011)

The sigla of the inscriptions can be found in Wu and Róna-Tas (2019) and Apatóczky and Róna-Tas (2019).

References


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