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17

Special Issue to Commemorate the Retirement of the ex-Director Professor Jiro Ikemami from Hokkaido University

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(∗=In Japanese with English Summary.)

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北海道大学文学部附属
北方文化研究施設

1985
On the Tunguz Numeral

Nadan ‘Seven’

Omeljan Pritsak

1. All Tunguz languages have for the numeral "seven" the same designation, which is ‘nadan’: Evenki, Even, Negidal nadan; Solon, Oroch, Ulcha, Nanai nadă (<nadan); Udihe, Orok nada (<nadan); Jurchen 納丹 nōh-tăn (=nadan); Manchu nordan; however, see the Santan form (EZ, from 1786) nata ‘7’, with –t–.

1.1. But for the number "seventeen," the oldest preserved Tunguz language, Jurchen, has another etymon: 奇兒欢 ta -ērh- kuan, i.e., darxan². It consists of two elements; the second, ~xan~~xoan, stands for "twenty", as was correctly recognized by Johannes Benzing⁴, since the syntax immediately


..."

19) The Japanese of the Tokugawa period (1603-1867) used the name Santan to refer to the lower Amur and its people, who went to Sakhalin to hunt or trade. Japanese travellers in Sakhalin compiled Santan words beginning in 1786.


4) Benzing, TaSpr, pp. 101–102. But, to identify the Jurchen ~xan~ in the Mongolian xorin ‘20’, as does Benzing, I propose, instead, *qojar > *kün > xor ‘20’, on the basis of the following hypothesis: The Mongolian numeral "two" qojar had a parallel form *qojar, "found in Mo. qojar ‘between, in the middle’" (W. Kottwitz, "NdN," pp. 160, 166; N. Poppe, Mo Comp St, p. 242); the structure of both has the singulative infix –r: *qojar, qojar; the corresponding prative infix was ~n, since *qojar ‘20’. On the infixes and their function see below.

indicates the involvement of so-called "Oberstufenzahlung", i.e., a system in which the numbers 1 to 9 are put in relation to "20". In such a system "1" with regard to 20 is "eleven", etc.

1.2. The Jurchen language has retained the "Oberstufenzahlung" system for all numbers of the second row (11–19), while Manchu has kept only four cases of it:

<table>
<thead>
<tr>
<th>Jurchen</th>
<th>Manchu</th>
</tr>
</thead>
<tbody>
<tr>
<td>11  anšo</td>
<td>omšon</td>
</tr>
<tr>
<td>12  jir-xon</td>
<td>jor-xon</td>
</tr>
<tr>
<td>13  gor-xon</td>
<td></td>
</tr>
<tr>
<td>14  dur-xon</td>
<td></td>
</tr>
<tr>
<td>15  tobu-xon</td>
<td>tofo-xon</td>
</tr>
<tr>
<td>16  n'ul-xon (~n'iru-)</td>
<td>n'ul-xun</td>
</tr>
<tr>
<td>17  dar-xon</td>
<td></td>
</tr>
<tr>
<td>18  n'u-xun</td>
<td></td>
</tr>
<tr>
<td>19  o-nu-xon</td>
<td></td>
</tr>
</tbody>
</table>

1.3. Hence, two Tunguz words for seven must be recognized: the common Tunguz *nadan*, which should be analysed as the root *nad-* and suffix /An/, and the Jurchen *dar-*.

2. The structure and origin of the Altaic numerals is still a mystery. But one thing seems certain: there are many inter-Altaic borrowings within that linguistic group.

2.1. Some data from the Mongolian numerals suggest that several numerals consist of three morphological elements: (1) the root, (2) the "infix," and (3) the suffix. So the numeral *γurban* "3" is to be analyzed as the root *γu-*, the infix *γr-* and the suffix *ban*, and the numeral *qoyar* "2" is to be analyzed as the root *qo-*, the infix *γr-* and the suffix *γar*. While the stem remains unchanged, the infixes and suffixes are interchangeable. We do not yet know most of the rules governing the system, but in some cases it is clear that it was used to express the opposition singular: plural: Singular *γu-γr- (ban) "3"; Plural *γr-γr- (in) > γu-γr- (in) "30", Singular *qo-γ-y- (ar) "2"; Plural *qo-γ- (in) "20".

The root *γu-* still occurs with the infix *γn-; γu-γn- (an) "the three-year old", while *qo-*, apart from *qo-γ- (ar) "two" originally doublet (basic?) to

qo-y-ar, also appears with the infix -l- (=Turkic -š-): qo-l-ba-ya ‘pair’; Turkic qo-š ‘id’ (/bA/ is a denominal verbal suffix; /GA/ is a deverbal nominal suffix; cf. qolba–qolbu– ‘to unite’). 6)

2.2. On the basis of the above, one can assume that the numerals for “seven” in Tunguz have the following structure:

<table>
<thead>
<tr>
<th>Root</th>
<th>Infix</th>
<th>suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>na-</td>
<td>-d-</td>
<td>(possible also -an</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-l- as in the Santan notations)</td>
</tr>
<tr>
<td>da-</td>
<td>-r-</td>
<td></td>
</tr>
</tbody>
</table>

As shown, the infixes occurring here are -d- and -r-.

2.3. The Jurchen words for the numerals 12 to 19 (i.e., those of the second row) seem to have been borrowed from the designations for 2-9 (i.e., the first numeric row) in a Proto-Mongolian language; they are completely different from the usual Jurchen, and rather close to Mongolian7):

<table>
<thead>
<tr>
<th>Jurchen Numbers 2-9</th>
<th>Numbers 2-9 in the second row</th>
<th>Written Mongolian Numbers 2-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 jo</td>
<td>jir</td>
<td>jir-t (&quot;Secret History&quot;)</td>
</tr>
<tr>
<td>3 ilan</td>
<td>gor</td>
<td>yur-ban</td>
</tr>
<tr>
<td>4 duyin</td>
<td>dur</td>
<td>dör-ben</td>
</tr>
<tr>
<td>5 sunja</td>
<td>tobu</td>
<td>tabu-n</td>
</tr>
<tr>
<td>6 nijju</td>
<td>niru-(&lt;nirγu&lt;*jirγu-)</td>
<td>jirγu-γan</td>
</tr>
<tr>
<td>7 nadan</td>
<td>dar</td>
<td>dol-u-γan</td>
</tr>
<tr>
<td>8 jakun</td>
<td>nū</td>
<td>nai-man</td>
</tr>
<tr>
<td>9 nyun</td>
<td>o-nu</td>
<td>yi-sun</td>
</tr>
</tbody>
</table>

2.4. The Common-Mongolian numeral dōluγan ‘7’ goes back to the form *dalurγan, the change a > o in Mongolian resulted from the assimilatory influence of the vocalism of the suffix in the aggregate -urγa-. The plural root, having another vocalism in the suffix (/An/), was not affected by the assimilation: dal-an (70)<.

Since the alternation -l-~r- in the final position of the stem is attested in both Mongolian and Tunguz—e.g., WMo čaγal-sun~čaγar-sun ‘paper’; Tunguz Nanai pal-an ‘floor’—Even har-an ‘id’—the forms da-l- and da-r-

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7) See Lauffer, "Numerals", pp. 112-115, Poppe, "O čisitel’nom, etc" (see fn. 4), pp 318-319, Kotwica, "Ndn", pp. 182-190, Benzing, TuSpr, pp 101-102, Poppe, Mo Comp St, pp 242-246

8) Poppe, Mo Comp St, p 245

9) Poppe, Mo Comp St, p. 158

10) Benzing, Tu Spr, p 44.
should be regarded as variants, based on the Proto-Mongolian generic grammar, which probably came into realization on Tunguz soil.

2.5. There is still another Proto-Mongolian variant for the numeral ‘seven’, which is preserved in the work of Rašid ad-Dīn (d. 1318) دوَتُوْن (dawtqun) do-t-aγun\(^{11}\). The suffix of the word exhibits the vocalic metathesis a-u<"u-a. In the vowel of the root one notes the repetition of the WMong. doγun< dalγan, i.e., doγan goes back over *doγan to *daγan, where *da- is the root, -t- is the infix, and ْγan is the suffix.

Thus the Mongolian (Proto-Mongolian and Written Mongolian) root da- for numeral ‘7’ occurs with three infixes:
- l- = dal (do-l-γan< dalγan; dal-an);
- r- = da-r- (dar-xuan);
- t- = *da-t- (do-tγan< *daγan)\(^{12}\).

2.6. The infix -t- as a Mongolian plural suffix is a variant of the archmorphoneme -*d-*, e.g., the plural suffix *D: WMong. morin ‘horse’, pl. mori-d; noγan ‘prince’, pl. noya-d; mun ‘he’, pl. mu-d. But the "Secret History" (along with the majority of living Mongolian languages, such as Urdus, Khalkha, Burjat and Mogol) usually has the variant -t, e.g., SH modun ‘tree’, pl. modu-t; qatan ‘woman’, pl. qatu-t; noγun ‘boy’, pl. noγu-t; noγan ‘prince’, pl. noya-t; mun ‘he’, pl. mu-t ‘they’ etc\(^{13}\).

3. In both Turkic (Tu) and Hunno-Bulgarian (H-B) there appears in a number of corresponding etymons ʒ-/γ- (\(=\)J) as an equivalent of the Mongolian (Mo) d-\(^{14}\), whereby there is sometimes a change in vocalism, e.g.:

Mo del ‘mane (of a horse)’ = Tu Jāl (e.g., OT yāl) ‘id.’ = H-B *ʒiβl- (\(=\)Cuw šil-xe<ʒiβl-kāi)\(^{15}\);

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Gerhard Doerfer included this word, with a question mark, thus "(?moγ?)”, in his Türkische und mongolische Elemente in Neupersischen, vol. 1 (Wiesbaden, 1963), p. 529, no. 202; his suggestion that Rašid ad-Dīn made an error here is not convincing. Already Kotwicz ("Ndn", p. 158, fn. 21) had correctly recognized the Mongolian word ‘7’ as dotaγan. Doerfer was unaware of Kotwicz’s contribution.

12) See also the Santan form na-t-a ‘7’ (fn. 2), and Mo ‘ra-t- ‘20’ (cf. § 2).


15) The details are given in Clauson, EDT, p. 916; M. Rasanen, EWT, p. 181; Egorov, EtCuw, p. 213; See also fn. 14.
Mo del-ën ‘udder (of animals)’ = Tu jel-in (e.g., OT yel-in) ‘id’
= H-B *țâl- (>Čuv. šil-ë)\(^{10}\).

It is possible, therefore, to reconstruct a common Turkic-Hunno-Bulgarian numeral root, namely, *Ja-d- (<*da-d-) ‘7’.

3.1. There are several instances where the Common Turkic-Hunno-Bulgarian J- was substituted by the Old Tunguzes with n-, e.g.:
Tu H-B *ǰam ‘a piece of dust; weeds’ (e.g., OT yām ‘dust’; H-B *țām ‘weeds’)>Hung. gyom [țām];>Chuv. šum (<*țām)\(^{17}\)>Tunguz *nām-, e.g., Evenki nām-nà ‘dust’\(^{18}\).
Tu H-B *țās ‘mourning; damage’ (Tu yās ‘mourning’; H-B *țās ‘id’)>Hung. gyáss [țās]>Cheremis sōs (<Old Chuvash *sūs (<*țās)\(^{19}\)>Tung. *nas-, e.g., Manchu nas-a- ‘to mourn’\(^{20}\).

Those correspondences make it very probable that the Tunguz numeral root *na-d- ‘7’ was a borrowing from the Common Turkic-Hunno-Bulgarian root *Ja-d-\(^{21}\).

4. In the Old Turkic texts written in both the runic and the Sogdian/Uighur scripts the word for “seven” is usually styled as either ýtý or ýty, which in turn stand for ýtti or ytti\(^{22}\).

The conservative southwestern group of Turkic languages, however, has -d-, or -dd- instead: Ottoman (texts since the 14th century) بيدى yidi; Turkmen yedi (~yeddi, yetdi); Gagauz yedi (cf. Kazan Tatar ężidi.

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16 For details see Clauson, EDT, p. 930; Rasânen, EWT, p. 196; Egorov, Ė Et Čuv, p. 213; cf. also fn. 14.
17 For details see Clauson, EDT, p. 933; Rasânen, EWT, p. 193; Egorov, Ė Et Čuv, p. 218; Z. Gombocz, BTL, 80.
18 For details see Cincus, SST, vol. 1, p. 582.
19 For details see Clauson, EDT, p. 973; Rasânen, EWT, p. 191; Gombocz, BTL, p. 76.
23 XIII. Yuzylanđan beri Türkiye Türkçesine yazılması kitaplardan toplanan tıanlılaryile Tarama sosluğu, vol. 6 (Ankara, 1972), pp. 4587-4588. Hieronymus Megiser, in his Institutionum Linguarum Turcicae (Leipzig, 1612), has jeti in both Latin-Turkish and Turkish-Latin vocabularies. Franciscus a Mesgnien Meninski, Grammatica Turcica (Vienna, 1680) writes ędi iedy, p. 42.
<yedî̠>; Azeri yeddi²⁴). The Codex Cumanicus (14th century) has doublets: yetti~yeti²⁵. The "Kitâb at-tuḫfa az-zakîya fi luğat at-turkıya," a reliable Mamlûk-Kipchak grammar from Syria written in the 14th century, writes the word 'seven' تمامًا (26)

The majority of living Turkic languages have the geminata -tt-: Khalaj yätti, but also yiît; Uzbek yetti, New Uighur yütî, Altai, Teleut, Tula, Kürük, Kyzył yätti, Shor çetti, Yakut sättä. But cf. Bashkir yiîtii, Kazakh zeti, Kirgiz zêtii, Khakas zettii²⁶.

4.1. Scholars agree that the consonant at the end of the stem (first syllable) was originally *d-²⁷. There is a phonemic law in Old Turkic replacing the geminata by the voiceless stop, i.e., -dd- (or -dt-) becomes simply -t-²⁸.

Based on this, one arrives at the following Common Turkic consonantism in the word for "seven" *JV-d-ti (V=vowel); the root is *JV-, the infix -d-, and the suffix -ti. By the way, the suffix -ti also occurs in the Turkic numeral "six" al-ti.

The infix -d- of the Turkic word for 'seven' is also to be found—as was shown above—both in the Tunguz na-d-(an) '7' (cf. Santan 'na-t-a and in one Proto-Mongolian form *do-t-(arun) '7'.

4.2. The Turkic infix -d- had morpholetic status. It was used oppositionally with -t-. While -d- designated the singular, -t- stood for plural, as is clearly seen in Ottoman Modern Turkish:

27) See the lists of Turkic numerals in Aleksandr N. Samoiloviĉ, "Tureckie čislitel'nye kolisestvennye i obzor popytok iko tolo-
28) See, e.g., Clauson, EDT, p. 886.
On the Tunguz Numeral *Nadan 'Seven'*

4.3. In 4.1 I used the symbol V for the vowel, because the situation required discussion. In the quoted examples there appear: -ā-; -i-; -e-; -i̯-, -i̯e- and -ā-. The reason for this was that the change *da-* into *Ja-* eventually developed also the palatalized allophones: *J'a-*→*Ja-*.

A comparable situation can be observed in Hunno-Bulgarian, although the number of attested forms is limited: Danube-Bulgarian (8th century) ЧИТЕМЬ \( \breve{z}i-t-sm \) 'the seventh', Volga-Bulgarian (13th century) \( \breve{z}iy\acute{a}ti \), 'seven' \( \sim \) \( \breve{z}iy\acute{a}\breve{z}i \) id.\(^{31}\); Chuvash \( \breve{s}\breve{i}\tilde{e}\breve{\breve{e}}\breve{t}a\breve{i} \). Apparently -i- goes back to *-iyā-, which represents the palatalization: *da-*→*zi-*→*zi-*.

The Common Turkic-Hunno-Bulgarian form of the numeral '7' was probably *J'a-d-, which developed in Common Turkic to *J'a-d- and in Hunno-Bulgarian into *zi-d-.

5. The etymology proposed for the Tunguz numeral *Nadan 'seven'* helps to penetrate the structure of the Altaic numerals; also, it frees from isolation the said Common Tunguz numeral.

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30) In Old Turkic the voiced stop \( d \) belonged to the phonemes allowed to occur in the final position of the stem, e.g., \( id\)- 'to send'; \( qod\)- 'to leave'; \( dd \) 'time'; \( tid\)- 'to hold back'; \( tod\)- 'to become full.' Several important suffixes had \( m \) in their anlaut, e.g., verbal negations /mA/ and /mAz/; past indefinite tense /m\( i\)/ etc. Therefore, the sequence \( dm \) (-d+m-) was normal in that language, e.g., (IET) id\'\( m\)as 'he/they sent', (II E 25) id\'\( m\)as 'he/they do not send'. However, instead of *yu\( d\)m\( a\)s '70' there appears in Old Turkic (IE 12) y\( u\)\( d\)\( m\)\( a\)s, i.e., a form with the infix \(-t-\): y\( u\)-t\( m\)\( a\)s.

31) Rasänin (Materialien zur Laufschiichte der Türkischen Sprachen [Helsinki, 1949], p. 81) stresses the palatalizing role of the initial glide \( j \)- and the initial voiced palatal stop \( \breve{z} \)- on the following back vowel: e.g., Tatar \( \breve{z}d\) 'summer' (<<\( \breve{z}\)d\( a\)), \( \breve{z}\breve{d} \) 'young' (<<\( \breve{z}\)\( a\)), Bashkir \( y\)\( a\)s id. (<<\( y\)\( a\)). This must have been an old phenomenon, since—as Rasänin states (ibid.)—it appears in a notation by Constantine Forphyrogenitus (ca. 948) for the name of the Ural River: \( \Gamma\epsilon\chi\) (De administrando imperio, ed. Gyula Moravcsik [Budapest, 1949], p. 166), i.e., ye\( y\)\( i\)\( y\) < *y\( y\)i\( a\)*. I add the notation in fragment 21 of Menander Protector, where the information on Zemarch's legation to the Turks in 568 is given: the name of the Ural River is written there as \( a\)\( i\)\( x\) Dayi\( x\); Ludwig Dindorf, ed. in Historia graeci minores, vol. 2 (Leipzig, 1881), p. 54.


33) Farid S. Xakimzjanov, Jazyk èpitafij vol-\( z\)skih bulgar (Moscow, 1975), p. 65.

Graphically our results can be represented as follows:

Proto-Mongolian (~Altaic) \[^{da-I-}\,^{da-r-}\,^{da-d-}\,^{da-t-}\]

![Diagram showing relationships between Proto-Mongolian and Common Turkic-Hunno-Bulgarian](image)

Common Turkic-Hunno-Bulgarian \[^{Ja-a-d-}\,^{na-d-}\,\text{Common Tunguz}\]

Common Turkic \[^{f'a-d-}\,^{2\text{a}-d-}\,\text{Hunno-Bulgarian}\]

**Abbreviations**


H-B = Hunno-Bulgarian.


Mo = Mongolian.

OT = Old Turkic.


SH = "The Secret History of the Mongols"/"Yuan-ch'ao pi-shi"/"Mangqolun ninca tobča'-an."

Tu = Turkic.

WMo = Written Mongolian.