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Professor Jiro IKEGAMI from Hokkaido University

Contents

(*=In Japanese with English Summary.)

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目　　次

On the Tunguz Numeral

Nadan 'Seven'

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1. All Tunguz languages have for the numeral "seven" the same designation, which is *ᵗnadan*: Evenki, Even, Negidal *nadan*; Solon, Oroch, Ulcha, Nanai *nadã* (<*nadan*); Udihe, Orok *nada* (<*nadan*); Jurchen 納丹 *nah-tān* (=*nadan*); Manchu *nadan*[1]; however, see the Santan form (EZ, from 1786) *nata* '7', with *-t-*[2].

1.1. But for the number "seventeen," the oldest preserved Tunguz language, Jurchen, has another etymon: 苔兒歡 *ta -êrh- kuan*, i.e., *darxon*[3]. It consists of two elments; the second, *-xon~-xoan*, stands for "twenty", as was correctly recognized by Johannes Benzing[4], since the syntax immediately

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1) Vera I. Cincius, *SST*, vol. 1, pp. 576–577. G. J. Ramstedt put the Tunguz *nadan* '7' into the category of numerals "die einer 'Erklärung' harren" ("Zahlwörter," p. 27).

2) See Jirô Ikegami, "A Collection of Santan Words," *Bulletin of the Institute for the Study of North Eurasian Cultures, Hokkaido University* 2 (Sapporo, 1967), p. 72 (Jap.). The notation of this Santan word is from 1786.

　　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.

　　Professor Jirô Ikegami devoted a series of studies to Santan words. Apart from the article mentioned above, one should note: "On the Santan vocabularies of the XVIIIth and XIXth centuries", *Trudy Dvadcat' pjatogo Meždunarodnogo Kongressa Vostokovedov*, Moskva, 9–16 avgusta 1960, vol. 3 (Moscow, 1963), pp. 439–442; "On the Santan vocabularies of the eighteenth and nineteenth centuries", *Ural-Altaische Jahrbücher* 33: 1–2 (Wiesbaden, 1961), pp.

73–77.

3) I am quoting the Jurchen numerals after Wilhelm Grube, *Die Sprache und Schrift der Jučen* (Leipzig, 1896), pp. 34–35. See also Laufer, "Numerals", p. 112.

4) Benzing, *TuSpr*, pp. 101–102. But, to identify the Jurchen *-xon -xun* with the Mongolian *xorin* '20', as does Benzing, I propose, instead, **qoɣan > *χŏn > χon* '20', on the basis of the following hypothesis: The Mongolian numeral "two" *qoyar* had a parallel form **qoɣar*, "found in Mo. *qoɣor* 'between, in the middle'" (W. Kotwicz, "Ndn," pp. 160, 166; N. Poppe, *Mo Comp St*, p. 242); the structure of both has the singulative infix *-r*: **qoɣa-r, qoya-r*; the corresponding plurative infix was **-n*, since **qoɣa-n* '20'. On the infixes and their function see below.

　　Scholars have previously interpreted *-xon ~ -xun* as a numeral '10'; see B. Laufer, "Numerals", p. 113, and, especially, N. Poppe, "O čislitel'nom 'desjat' v tungusskix jazykax," *Comptes Rendus de l'Académie des Sciences de l'URSS 1929* (Leningrad, 1929), pp. 318–319: *-xon* < Turkic *on* < *ᵗhon* '10'.

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 "Oberstufenzählung" system for all numbers of the second row (11-19), while Manchu has kept only four cases of it[5]:

	Jurchen	Manchu
11	*anšo*	*omšon*
12	*jir-xon*	*jor-xon*
13	*gor-xon*	
14	*dur-xon*	
15	*tobu-xon*	*tofo-xon*
16	*n'ul-xon* (~*n'iru-*)	*n'ul-xun*
17	*dar-xon*	
18	*n'u-xun*	
19	*o-nu-xon*	

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 *-r-*, and the suffix *-ban*, and the numeral *qoyar* '2' is to be analyzed as the root *qo-*, the infix *-y-*, and the suffix *-ar*. 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-r- (ban)* '3'; Plural *γu-t-(in)>γu-č-(ın)* '30', Singular *qo-y-(ar)* '2': Plural *qo-r-(in)* '20'.

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

5) Laufer, "Numerals", pp. 112-113, and Kotwicz, "Ndn", pp 182-190. For practical reasons I do not include in this discussion Japanese works on the Jurchen language and script, for which see Minobu Honda and E B Ceadel, "A Survey of Japanese contributions to Manchurian studies', *Asia Major*, n. s 5.1 (London, 1955), pp. 91-92, and "Books and Articles on Altaistic Subjects published in Japan during 1954-1971", *Acta Asiatica* 24 (The Tōhō Gakkai [Tokyo, 1973]), pp 85-117

qo-y-ar, also appears with the ınfix *-l-* (=Turkic *-š-*) : *qo-l-ba-ɣa* 'pair': Turkic *qo-š* 'id' (/bA/ is a denominal verbal suffix; /GA/ is a deverbal nominal suffix; cf. *qolba-~qolbu-* 'to unıte')[6].

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

Root	Infix	suffix
na-	-d- (possible also	-an
	-t- as in the Santan	
	notations)	
da-	-r-	

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

2.3. The Jurchen words for the numerals 12 to 19 (ı. e , those of the second row) seem to have been borrowed from the designatıons 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 Mongolian[7]:

	Jurchen		Written Mongolıan
	Numbers 2-9	Numbers 2-9 ın the second row	numbers 2-9
2	*jo*	*jır*	*jir-ın* ("Secret Hıstory")
3	*ılan*	*gor-*	*ɣur-ban*
4	*duyin*	*dur-*	*dör-ben*
5	*šunja*	*tobu-*	*tabu-n*
6	*nıŋju*	*n'iru-*(<*nirɣu*<*jirɣu-*)	*jirɣu-ɣan*
7	*nadan*	*dar-*	*dol-u-ɣan*
8	*jakun*	*n'u-*	*naı-man*
9	*uyun*	*o-nu-*	*yı-sun*

2.4. The Common-Mongolıan numeral *doluɣan* '7' goes back to the form **daluɣan*, the change *a>o* ın Mongolıan resulted from the assimilatory ınfluence of the vocalism of the suffix in the aggregate *-uɣa-*. The plural root, having another vocalism ın the suffix (/An/), was not affected by the assımilation: *dal-an* '70'[8].

⸗Sınce the alternatıon *-l-~-r-* in the final positıon of the stem ıs attested ın both Mongolian and Tunguz—e. g., WMo *čaɣal-sun~čaɣar-sun* 'paper'[9]; Tunguz Nanai *pal-an* 'floor'~Even *har-an* 'id'[10] —the forms *da-l-* and *da-r-*

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6) Data on the roots, ınfixes, and suffixes of the Mongolıan numerals *ɣurban* '3' and *qoyar* '2' are to be found ın Ramstedt, "Zahlworter", pp. 5-8, Kotwıcz, "Ndn", pp. 152-182, Poppe, "Mongol'skıe čıslıtel'nye", *Jazykovednye problemy po čıslıtel'nym I* (Lenıngrad, 1927), pp. 104-110, and Poppe, *Mo Comp St*, pp 242-248

7) See Laufer, "Numeıals", pp. 112-115, Poppe, "O čıslıtel'nom, etc" (see fn. 4), pp 318-319, Kotwıcz, "Ndn", pp. 182-190, Benzıng, *TuSpr*, pp 101-102, Poppe, *Mo Comp St*, pp 242-246

8) Poppe, *Mo Comp St*, p 246

9) Poppe, *Mo Comp St*, p. 158

10) Benzıng, *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 Rašīd ad-Dīn (d. 1318) دوتا فور (*dwt'qwn*) *do-t-aɣun*[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. *doluɣan*< *daluɣan*, i. e., *dotaɣun* goes back over **dotuɣan* to **datuɣan*, where **da*- is the root, -*t*- is the infix, and **-uɣan* is the suffix.

Thus the Mongolian (Proto-Mongolian and Written Mongolian) root *da*- for numeral '7' occurs with three infixes:

-*l*- = *dal* (*do-l-uɣan*<*daluɣan*; *dal-an*) ;

-*r*- = *da-r*- (*dar-xuan*) ;

-*t*- = **da-t*- (*dot-aɣun*<**datuɣan*)[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*; *noyan* '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, Buriat and Mogol) usually has the variant -*t*, e. g., SH *modun* 'tree', pl. *modu-t*; *qatun* 'woman', pl. *qatu-t*; *no'un* 'boy', pl. *no'u-t*; *noyan* '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 *ǯ-/y*- (=*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 **ǯiäl*- (>Čuw *śil-xe*<*ǯiäl-käi*)[15];

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11) *Sbornik letopisej. Istorija Mongolov, sočinenie Rašid-Èddina. Istorija Čingizxana do vossestvija ego na prestol*, ed. Ilja N. Berezin (Trudy Vostočnogo Otdelenija Imp. Arxeologičeskogo Obščestva, vol. 13; S.-Peterburg, 1868), p. 20. The Persian و is used to render the Turkic and Mongolian ɣ.

Gerhard Doerfer included this word, with a question mark, thus " (? mo ?) ", in his *Turkische und mongolische Elemente in Neupersischen*, vol. 1 (Wiesbaden, 1963), p. 329, 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 *dotaqun*. Doerfer was unaware of Kotwicz's contribution.

12) See also the Santan form *na-t-a* '7' (fn. 2), and Mo **ɣu-t-* (*in*) '20' (cf. § 2).

13) Poppe, *Mo Comp St*, pp. 178–180. The examples from the "Secret History of the Mongols" are taken from Erich Haenisch, *Wörterbuch zu Monghol un niuča tobca'an* (Leipzig, 1939), pp. 110 (*modu-n: modu-t*): pp. 111–112 (*mu-n*, -*t*).

14) Poppe. *Alt Sprs*, p. 22. See also N. Poppe, " Altaisch und Urturkisch ", *Ungarische Jahrbucher* 6 (Berlin, 1926), pp. 104–107.

15) The details are given in Clauson, *EDT*, p. 916; M. Rasanen, *EWT*, p. 181; Egorov, *EtČuv*, p. 213; See also fn. 14.

Mo *del-eŋ* 'udder (of animals)' = Tu *Jel-in* (e. g., OT *yel-in*) 'id'

= H-B **ǯàl-* (>Čuv. *śil-ĕ*)[16].

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 **Jām* 'a piece of dust; weeds' (e. g., OT *yām* 'dust'; H-B **ǯām* 'weeds'>Hung. *gyom* [ǯām];>Chuv. *śum*<**ǯām*)[17] >Tunguz **nām-*, e. g., Evenki *nām-nà* 'dust'[18].

Tu H-B **Jās* 'mourning; damage' (Tu *yās* 'mourning'; H-B **ǯās* 'id'>Hung. *gyász* [ǯās];>Cheremis *sös*<Old Chuvash **śüs*<**ǯās*)[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 *yty* or *yyty*, which in turn stand for *yàti* or *yiti*[22].

The conservative southwestern group of Turkic languages, however, has *-d-*, or *-dd-* instead: Ottoman (texts since the 14th century) يدى *yidi*~ يدى *yedi*[23]; Turkmen *yedi* (~*yeddi*, *yetdi*); Gagauz *yedi* (cf. Kazan Tatar *ǯidi*

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16) For details see Clauson, *EDT*, p. 930, Räsänen, *EWT*, p. 196; Egorov, *Et Čuv*, p 213; cf. also fn. 14.

17) For details see Clauson, *EDT*, p. 933; Räsänen, *EWT*, p. 183; Egorov, *Et Čuv*, p. 218; Z. Gombocz, *BTL*, 80.

18) For details see Cincius, *SST*, vol. 1, p 582.

19) For details see Clauson, *EDT*, p. 973; Räsänen, *EWT*, p. 191; Gombocz, *BTL*, p. 76.

20) Cincius, *SST*, vol. 1, p. 586.

21) See the pilot studies by Willy Bang, "Turkisches Lehngut im Mandschurischen", *Ungarische Jahrbücher* 4 (Berlin, 1924), pp. 15–19, and W. Kotwicz, "Les éléments turcs dans la langue mandchoue", *Rocznik Orientalistyczny* 14 (L'viv, 1939), pp. 91–102.

22) Runic script: see the corpus by Hüseyin Namık Orkun, *Eski Türk yazıtları*, vol. 1

(Istanbul, 1936): *yati* (IE13, p. 35, IE15, p. 37; IIE 24, p. 61; To 4, p. 101; To 49, 51, p. 117); *yiti* (II El3, p. 37; I E31, p. 45). In Uighur script see, e. g., Şinasi Tekin, *Maitrisimit nom bitig. Die uigurische Übersetzung eines Werkes der buddhistischen Vaibhāsika-Schule*, 2, Text: Analytischer und rucklaufiger Index (Berlin, 1980), p. 148b (s. v. *yyty* 'sieben'). Cf. also V. M. Nadeljaev (ed.), *Drevnetjurkskij slovar'* (Leningrad, 1969), p. 259 (*jeti, jetti*), p. 263b (*jiti* II), and Clauson, *EDT*, p. 886.

23) *XIII. Yüzyıldan beri Türkiye Türkçesiyle yazılmış kitaplardan toplanan tanıklarıyle Tarama sözlüğü*, vol. 6 (Ankara, 1972), pp. 4587–4588. Hieronymus Megiser, in his *Institutionum Linguae Turcicae* (Leipzig, 1612), has *jedi* in both Latin–Turkish and Turkish–Latin vocabularies. Franciscus a Mesgnien Meninski, *Grammatica Turcica* (Vienna, 1680) writes يدى *iedy*, p. 42.

<$yedi$); Azeri $yeddi$[24].

The *Codex Cumanicus* (14th century) has doublets: $yetti \sim yeti$[25]. The "Kitāb at-tuḥfa az-zakīya fī luġat at-turkiya," a reliable Mamlūk-Kipchak grammar from Syria written in the 14th century, writes the word 'seven' یادی $yādī$[26].

The majority of living Turkic languages have the geminata *-tt-*: Khalaj *yätti*, but also *yiẹti*; Uzbek *yetti*, New Uighur *yättä*, Altai, Teleut, Tula, Küärik, Kyzyl *yätti*, Shor *četti*, Yakut *sättä*. But cf. Bashkir *yïtï*, Kazakh *žetī*, Kirgiz *žetī*, Khakas *čitī*[27].

4.1. Scholars agree that the consonant at the end of the stem (first syllable) was originally *-d-*[28]. There is a phonemic law in Old Turkic replacing the geminata by the voiceless stop, i.e., *-dd-* (or *-dt-*) becomes simply *-t-*[29].

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-(aγun)* '7'.

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

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24) Nikolaj A. Baskakov (ed.), *Turkmensko-russkij slovar'* (Moscow, 1968), p. 301; See also Džumamurad Amansaryev, *Türkmen dialektologiyasï* (Ašgabat, 1970), p. 313: *yedi ~ yeddi ~ yetdi*; Ljudmila A. Pokrovskaja, *Grammatika gagauzskogo jazyka* (Moscow, 1964), p. 122; Zarifa Budagova, *Azerbajdžanskij jazyk (Kratkij očerk)* (Baku, 1982), p. 66; Èdgem R. Tenišev (ed.), *Sovremennyj tatarskij literaturnyj jazyk. Leksikologija, fonetika, morfologija* (Moscow, 1969), p. 175.

25) Kaare Grønbech, *Komanisches Worterbuch. Türkischer Wortindex zu Codex Cumanicus* (Copenhagen, 1942), p. 123. A Central Asian "Tafsīr" from the 13th–15th century writes بتدو *yetdü* (< **yedtü*); see Aleksandr K. Borovkov, *Leksika sredneaziatskogo tefsira XIII-XV vv.* (Moscow, 1963), p. 152.

26) *La langue des Kiptchaks d'apres un manuscrit arabe d'Itanboul*, ed. Tibor Halası-Kun, pt. 2: Reproduction phototypique (Budapest, 1942), p. 60a.

27) See the lists of Turkic numerals in Aleksandr N. Samojlovič, "Tureckie čislitel'nye količestvennye i obzor popytok ix tolkovanija," *Jazykovednye problemy po čislitel'nym I* (Leningrad, 1927), pp. 136, 140, 149-150; F. G. Ishakov, "Čislitel'nye," *Issledovanija po sravnitel'noj grammatike tjurkskix jazykov*, vol. 2: *Morfologija* (Moscow, 1956) p. 177; Martti Räsänen, *Materialen zur Morphologie der türkischen Sprachen* (Helsinki, 1957), pp. 77-78. Aleksandr M. Ščerbak reconstructs the Proto-Turkic numeral 'seven' as **θäti*; see his *Očerki po sravnitel'noj morfologii tjurkskix jazykov (imja)* (Leningrad, 1977), p. 139. On Khalaj see Gerhard Doerfer and Semih Tezcan, *Worterbuch des Chaladsch (Dialekt von Charrab)* (Budapest, 1980), pp. 223, 224.

28) See, e.g., Clauson, *EDT*, p. 886.

29) O. Pritsak, "Das Alttürkische," *Handbuch der Orientalistik*, Erste Abteilung, Fünfter Band, Erster Abschnitt: *Turkologie*, 2nd ed. (Leiden, 1982), p. 33.

ye-d-(i) '7'   *ye-t-(miš)* '70'[30].

4.3. In 4.1 I used the symbol V for the vowel, because the situation required discussion. In the quoted examples there appear: *-ä-*; *-i-*; *-e-*; *-ĭ-*, *-iē-* and *-ā-*.

The reason for this was that the change **da-* into **Ja-* eventually developed also the palatalized allophones: **J'a-~J'á-*[31].

A comparable situation can be observed in Hunno-Bulgarian, although the number of attested forms is limited: Danube-Bulgarian (8th century) читемь *ži-t-əm* 'the seventh'[32], Volga-Bulgarian (13th century) جِيَاتٍ *žiyāti*, 'seven' ~ جِيَاجِ *žiyāži* id.[33]; Chuvash *šiččĕ*[34]. Apparently *-i-* goes back to **-iyā-*, which represents the palatalization: **dā-* > **ž'á-* > **žiá-*.

The Common Turkic-Hunno-Bulgarian form of the numeral '7' was probably **J'a-d-*, which developed in Common Turkic to **J'á-d-* and in Hunno-Bulgarian into **ž'á-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., *id¹-* 'to send'; *qod-* 'to leave'; *ŏd* 'time'; *tid¹-* '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 /miš/ etc. Therefore, the sequence *dm* (*-d+m-*) was normal in that language, e. g., (IE7) *id'məs* 'he/they sent', (II E 25) *id'maz* 'he/they do not send'. However, instead of **yädməš* '70' there appears in Old Turkic (IE 12) *yätməs*, i. e., a form with the infix *-t-*: *yd-t-məs*.

31) Rasanen (*Materialien zur Lautgeschichte der Türkischen Sprachen* [Helsinki, 1949], p. 81) stresses the palatalizing role of the initial glide *y-* and the initial voiced palatal stop *ž-* on the following back vowel: e. g., Tatar *žäy* 'summer' (<*žay*), *žäš* 'young' (<*žaš*), Bashkir *yaš* id. (<*yaš*). This must have been an old phenomenon, since—

as Räsänen states (ibid.)—it appears in a notation by Constantine Porphyrogenitus (ca. 948) for the name of the Ural River: Γεήχ (*De administrando imperio*, ed. Gyula Moravcsik [Budapest, 1949], p. 166), i. e., *yeyiχ* < **yayiq*. 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 Δαιχ *Dayix*; Ludwig Dindorf, ed. in *Historici graeci minores*, vol. 2 (Leipzig, 1881), p. 54.
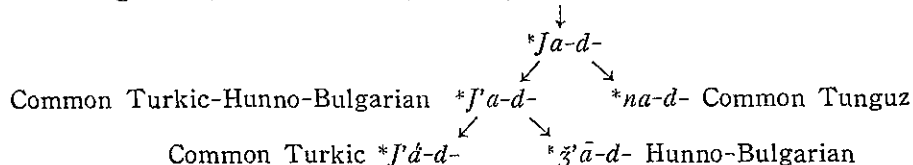
32) See O. Pritsak, *Die Bulgarische Fürstenliste und die Sprache der Protobulgaren* (Wiesbaden, 1955), p. 55.

33) Farid S. Xakimzjanov, *Jazyk èpitafij volžskix bulgar* (Moscow, 1978), p. 65.

34) Nikolaj I. Ašmarin, *Thesaurus linguae Tschuvaschorum*, vol. 12 (Čeboksary, 1957), pp. 191-192; M. I. Skvorcov (ed.), *Čăvašla-vyrăsla slovar'* (Moscow, 1982), pp. 420-421; cf. Egorov, *EtČuv* p. 215.

Graphically our results can be represented as follows:

Proto-Mongolian (~Altaic) *da-l-, *da-r-; *da-d-, *da-t-

$$\downarrow$$

*Ja-d-

Common Turkic-Hunno-Bulgarian *J'a-d-   *na-d- Common Tunguz

Common Turkic *J'á-d-   *ʒ'ā-d- Hunno-Bulgarian

Abbreviations

Benzing, *Tu Spr* = Johannes Benzing, *Die tungusischen Sprachen. Versuch einer vergleichenden Grammatik* (Akademie der Wissenschaften und Literatur, Mainz. Abhandlungen der geistes- und sozialwissenschaftlichen Klasse, Jahrgang 1955, no. 11) (Wiesbaden, 1956).

Cincius, *SST* = Vera I. Cincius, *Sravnitel'nyj slovar' tunguso-man'čžurskix jazykov. Materialy k ètimologičeskomu slovarju*, 2 vols. (Leningrad, 1975-1977).

Clauson, *EDT* = Sir Gerard Clauson, *An Etymological Dictionary of Pre-Thirteenth-Century Turkish* (Oxford, 1972).

Egorov, *Et Čuv* = Vasilij G. Egorov, *Ètimologičeskij slovar' čuvasskogo jazyka* (Čeboksary, 1964).

Gombocz, *BTL* = Zoltán Gombocz, *Die Bulgarisch-Turkischen Lehnwörter in der Ungarischen Sprache* (Helsinki, 1912).

H-B = Hunno-Bulgarian.

Kotwicz, "Ndn" = Wladyslaw Kotwicz, "Contributions aux études altaïques. II. Les noms de nombres," *Rocznik Orjentalistyczny* 7 (L'viv, 1931), pp. 152-221.

Laufer, "Numerals" = Berthold Laufer, "Jurči and Mongol Numerals," *Kőrosi Csoma-Archivum* 1: 2 (Budapest, 1921), pp. 112-115.

Mo = Mongolian.

OT = Old Turkic.

Poppe, *Alt Spr* = Nicholas Poppe, *Vergleichende Grammatik der altaischen Sprachen*, Teil I. *Vergleichende Lautlehre* (Wiesbaden, 1960).

Poppe, *Mo Comp St* = Nicholas Poppe, *Introduction to Mongolian Comparative Studies* (Helsinki, 1955).

Ramstedt, "Zahlworter" = Gustaf John Ramstedt, "Über die Zahlworter der altaischen Sprachen," *Journal de la Société Finno-Ougrienne* 24: 1 (Helsinki, 1907), pp. 1-24.

Räsanen, *EWT* = Martti Räsanen, *Versuch eines etymologischen Worterbuchs der Turksprachen* (Helsinki, 1969).

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

Tu = Turkic.

WMo = Written Mongolian.