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ARTICLE

The Middle Mongol zodiac in Georgian transcription[1]

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Abstract

This paper presents linguistic and philological analyses of glossed medieval Georgian transcriptions of the Middle Mongol zodiac terms in the fourteenth-century anonymous ასწლოვანი მატიანე *Asc'lovani Mat'iane* (*Chronicle of One Hundred Years*), revealing unique details on Middle Mongol as attested in medieval Georgia. This is the first instalment of the authors' joint research on this vastly important, largely untapped contemporaneous Georgian source on medieval Mongol language, culture and history.

Keywords: Middle Mongol language; Mongol Empire; Mongol invasion of Georgia; Medieval Georgian transcriptions of foreign languages; Historical-comparative linguistics; Žamtaaγmc'ereli; *Chronicle of One Hundred Years*

Introduction

As a result of the Mongol conquests, the kingdom of Georgia was under heavy Mongol influence from the 1230s until the reign of George V the Magnificent (r. 1314–46) (*Nark'vevebi* 1979: 623–9), who liberated Georgia from Mongol rule and created a very strong state. The most important source on this period of Georgian history is the anonymous fourteenth-century ასწლოვანი მატიანე *Asc'lovani Mat'iane* (*Chronicle of One Hundred Years*),[2] which, as a legacy of the Mongol domination, attests numerous Old Georgian transcriptions of Middle Mongol in its extant manuscripts. Some of these transcriptions were studied in 1917 by Boris Jakovlevič Vladimircov (1884–1931), but these transcriptions, and Vladimircov's pioneering work on them, have been nearly completely forgotten by Mongolistic scholarship. A new, modern study of this important data needs to be undertaken on the

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[1] A preliminary version of this paper, based only on Vladimircov's 1917 Cyrillic transcriptions, was presented by Andrew Shimunek at the symposium *La Kartvelologia presso "L'Orientale": Giornata di studi dedicata a Shalva Beridze (1892–1970)*, organized by Gaga Shurgaia, on 4 December 2019, at the University of Naples L'Orientale. That paper has been fundamentally revised and improved based on Gaga Shurgaia's examination of the most recent critical edition of the *Chronicle* and its earliest manuscripts. We wish to thank 斎藤純男 Yoshio Saitô, András Róna-Tas and Éva Csáki for kindly providing copies of their publications and Michele Bernardini for advice on Arabic transliteration. Any errors in our paper are solely our responsibility. For the transliteration of Georgian, we follow the Trubeckoj-Vogt system (Vogt 1971), adopted by the *Revue des études géorgiennes et caucasiennes* (see *RÉGC* 1, 1985, 3–4). The same system is applied to the surnames of Georgian scholars in bibliographic references, while in the main text they are transcribed according to the system codified in 2002 by the State Department of Geodesy and Cartography of Georgia. For the transliteration of Russian, we employ the scientific transliteration of Cyrillic. Kitan text is given in Andrew West's freeware Babelstone fonts.

[2] On the historical and philological issues of this work, see Žavaxišvili 1977: 246–66; *AM.Ž*, 10–34.

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surviving manuscripts as Vladimircov dealt with only a small fraction of the Mongol data contained therein.

It is with this goal in mind that we began collaborating on a joint study examining the Georgian transcriptions of Middle Mongol contained in this important text and on the historical and cultural value of this source.[3] In this paper we present a small selection of our joint work – a preliminary analysis of the Georgian transcriptions of the Middle Mongol zodiac animal names from the point of view of Mongolian and Georgian philology and historical linguistics.

1. The data

The glossed Georgian transcriptions of the 12 animals of the Middle Mongol zodiac occur in a complete list in the following passage:

Georgian original	Our English translation
და ეგრეთვე ესე თორმეტ წლად გააწევს,	So too do these twelve years finish.
რომელსა უწოდენ სახელად ესრეთ:	They call them in the following way:
ყალღუნჯილ, უქურჯილ, ფარსინჯილ,	*q'alɣunǯil*, *ukurǯil*, *parsinǯil*,
თავლაინჯილ, ლუილჯილ, მოღილჯილ,	*tavlainǯil*, *luilǯil*, *moɣilǯil*,
მორინჯილ, ყონიჯილ, მეჩინჯილ, თაღანჯილ,	*morinǯil*, *q'oniǯil*, *mečinǯil*, *taɣanǯil*,
ნოხინჯილ, ყაყაინჯილ.	*noxinǯil* [and] *q'aq'ainǯil.*
ესე არს სახელი ათორმეტთა ცხოველთა,	These are the names of the twelve animals,
რომელთა მისცეს მთავრობა თჳთოსა წლისა თჳთოსა პირუტყუსა,	to each of which the government of each year have been given.
რომლისა პირველად თავ	As the first at the beginning of these,
ყვეს ყალღუნ,	they established *q'alɣun*,
რომელ არს თაგუ, მერმე ზროხა,	which is a mouse, then a bovine,
ავაზა, კურდღელი, ვეშაპი, გუელი,	a cheetah, a rabbit, a dragon, a snake,
ცხენი, ცხოვარი, ყაპუზუნა, ქათამი,	a horse, a sheep, a monkey, a chicken,
ძაღლი, ღორი.	a dog [and] a pig.
ესენი აქუნდეს წელიწადის სათუალავად, ვითა	They have them to count the years, as
ჩუენ ქართველთა ქორონიკონი. *AM.Ž* 45	we Georgians [have] the *koronik'oni.*[4]

1.1. *The Middle Mongol names of the zodiac animals in Georgian transcription*

In this section we shall deal with phonological, phonetic and morphological issues of how the author of the fourteenth-century anonymous *Chronicle* rendered Middle Mongol words and expressions into Georgian, and how to reconstruct the original Mongol forms.

1.1.1. *Morphological structure of the animal years*

The Georgian transcriptions of the Middle Mongol animal years of the zodiac are attested in the following two morphosyntactic constructions:

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[3] Our joint study of the historical background of this fundamental Georgian source on the Mongols, its glossed Georgian transcriptions of Middle Mongol and their value for the study of Mongolian philology, linguistics, and history is currently in progress. Moreover, Gaga Shurgaia is preparing a new edition of the *Asc'lovani Mat'iane*, with translation into English, philological and historical commentary for *Patrologia Orientalis* (Brepols).

[4] Georgian ქორონიკონი *koronik'oni*, derived from the Greek word χρονικόν, is a cycle in the traditional Georgian calendar consisting of 532 years. See K'ek'eliʒe 1945: 327–35; Grumel 1958: 151–3.

Morphological structure	Animal years
1. {[ANIMAL]-NOMINATIVE + [YEAR]}	mouse, ox, horse, sheep, monkey
2. {[ANIMAL]-GENITIVE + [YEAR]}	cheetah, rabbit, dragon, snake, chicken, dog, pig

The {[ANIMAL]-NOMINATIVE + [YEAR]} construction is attested throughout Middle Mongol records and in modern Mongolian. As we shall demonstrate below, the {[ANIMAL]-GENITIVE + [YEAR]} construction reflects non-native morphosyntactic order, undoubtedly influenced by Georgian syntax.

The Mongol word for "year" is consistently phonetically transcribed in Georgian script in these zodiac constructions as ჯილ *žil* "year".[5] It is cognate to eastern MMgl 真勒 ~ 只勒 *ǰil* [ʧil] "year (年)" (*SHM* §141, §153, etc.), which is a loan from Turkic.[6] Mongol *ǰ* represents voiceless unaspirated [ʧ] or voiced [ʤ] depending on the dialect. In Georgian, the grapheme ჯ *ž* indicates a voiced post-alveolar affricate phoneme /ʤ/. The voicing of this initial consonant is interesting to note, since in most eastern varieties of Middle Mongol the corresponding consonant is transcribed in Chinese with a voiceless unaspirated consonant. In Persian and Arabic transcriptions of this segment, it is written with the Arabic letter ج *ǰ*, e.g. western MMgl جِيْل *ǰil* "year" (*Leid.* 71a-03-6), a consonant which in Arabic transcriptions of Mongol can render both Mongol *ǰ* and *č*.[7] Because of the rich consonant inventory of the Georgian language, which distinguishes three obstruent series, i.e. voiced, voiceless aspirated and voiceless unaspirated ejective,[8] the Georgian evidence confirms that western Middle Mongol was characterized by voiced consonants.[9]

1.1.2. Transcriptions of the animal names

The Middle Mongol animal zodiac as attested in Georgian transcription follows the traditional order still employed in Mongolia today, i.e. MOUSE, OX, TIGER or CHEETAH, HARE or RABBIT, DRAGON, SNAKE, HORSE, SHEEP, MONKEY, CHICKEN, DOG and PIG (quoted here not in their Chinese, but Mongolian values).[10] We follow this order in presenting the transcriptions of zodiac animals below. Headwords below are cited below first in romanization (in bold) of the Georgian transcription, followed by the Georgian script original, an English translation and original Old Georgian form of its accompanying semantic gloss, and attested page(s) in *AM.Ž*, followed by our discussion and reconstructions.

The Mouse. ***q'alγun*** ყალღუნ "mouse (თაგუ)", attested in the word ყალღუნჯილ *q'alγunžil* "Year of the Mouse" (*AM.Ž* 45).

Some manuscripts have ყურყუნ *q'urq'un* "mouse (თაგუ)" in the words ყურყუნიჯელ *q'urq'unižel* and ყურყუნიჯლ *q'urq'unižl*. Given these variants and the transcriptions of

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[5] Vladimircov treats this as "џiл" (BYV 1488, 1489, 1490, 1491, 1492).

[6] Cf. Middle Turkic *yïl* "year" (Kara 2009: 134) and fourteenth-century Volga Bulgar Turkic جال *ǰāl* "year" (Róna-Tas 1976).

[7] On the consonantal phonology of western Middle Mongol in Arabic and Persian sources, see Saitô 2011: 60–61 and Saitô 2003.

[8] The latter are known as "voiceless abruptive" or "voiceless glottalized" in Georgian philological terminology (see Axvlediani 1956: 74–5).

[9] For the post-alveolar place of articulation, of relevance to the transcription of the word for "year" (see discussion of *žil* "year" in section 1.1.1 above), Georgian has three affricates: voiced ჯ /ʤ/, voiceless aspirated ჩ /ʧʰ/ and voiceless unaspirated ejective ("voiceless abruptive" or "voiceless glottalized") ჭ /ʧ'/. The voiced ჯ /ʤ/ in MMgl ჯილ *žil* "year" thus clearly transcribes a voiced affricate in that western variety of Middle Mongol.

[10] The Mongolian values of the zodiac animals are notably different from the Chinese ones. For example, in this calendrical context, Chinese 虎 "tiger" corresponds to eastern Middle Mongol "tiger" but western Middle Mongol "cheetah" or "tiger", and Chinese 羊 "sheep, goat" and 鼠 "rat, mouse" correspond unambiguously to Mongol "sheep" and "mouse", respectively.

Middle Mongol attested in other sources, the original Georgian transcription was undoubtedly *ყულღუნ **q'ulγun* "mouse"[11] + ჯილ *ǯil* "year (წელი)", cognate to eastern MMgl $^{\text{中}}$忽𪖈$^{\text{中}}$合納 ~ $^{\text{中}}$忽魯$^{\text{中}}$合納 *quluqana* [qʊlʊqana], glossed as "mouse, rat (鼠)" (*SHM* §111 etc.; *HYYY* §1.06a7). In other sources on western Middle Mongol, the word appears as قُلْقُنَا *qulquna* [qʊlqʊna] "mouse" (*Leid.* §66b-09-5) and in the *Muqaddimat al-Adab* by Abū 'l-Qāsim Maḥmūd ibn ʿUmar al-Zamaḫšarī (1074-1144) as قولغونه *qulγuna* "mouse" (*MAA*: Poppe 1938: 309). The Middle Mongol word is also attested as a loanword in New Persian in the form قولقنه *qūlquna* "Maus" and as a loanword in certain Ewenki and Turkic dialects (*TMEN* I: 440 §308).

Unlike the ambiguous Chinese gloss "mouse, rat (鼠)" in the Chinese sources on Middle Mongol, the unambiguous translation of Mongol *qulquna* into Georgian as თაგუ *tagu*, which only means "mouse" and not "rat", makes it very clear that this Middle Mongol word – like its modern Khalkha Mongolian reflex **хулгана** [ˈχʊɮɢ̆ʁə̆n ~ ˈhʊɮɢ̆ʁə̆n] – denotes a "mouse" and not a "rat". Thus, in the Mongolian zodiac, in both medieval and modern times, this is the "Year of the Mouse".

The Ox. ***ukur*** უქურ "bovine (ზროხა)", attested in the word უქურჯილ *ukurǯil* "Year of the Bovine" (*AM.Ž* 45),[12] parsable as უქურ *ukur* "bovine (ზროხა)" + ჯილ *ǯil* "year (წელი)".[13]

This word is cognate to eastern MMgl 忽客$^{\text{舌}}$児 *hüker* [hukʰər] ~ 忽格児 *hüger* [hugər] "ox (牛)" (*SHM* §121 etc.; *HYYY* §1.05b1).[14] In the *Muqaddimat al-Adab*, a western Middle Mongol form اوكر *üker* is given (*MAA* 377). Other attested western varieties of Middle Mongol exhibit a phonological form similar to the eastern dialects, e.g. هُوْكَرْ *hüker* [hukər] "cow (گاو)" (*Leid.* §66b-03-1). The Georgian transcription is remarkable in its deletion of the initial laryngeal fricative /h/ in this word. As Georgian always maintains initial /h/ in native and loaned words, this transcription may indicate a dialectal Mongol form.[15] Examination of the other Mongol words in *AM.Ž* will help to determine whether this western Mongol dialect lost /h/. Another possibility is that the author was influenced by Literary Mongol orthography, as he was clearly both fluent and literate in Mongol (q.v. *AM.Ž* 44–5). In spoken Middle Mongol, this word has an initial /h/, but in Literary Mongol it is written *üker* as Literary Mongol is a borrowed script which offers no grapheme for the Mongol phoneme /h/.[16]

The Middle Mongol word is also attested as a loanword in New Persian هوكر *hǖkär* ~ هوكار *hǖkār* ~ هوكير *hǖker* "Rind, Stier" (*TMEN* II: 538 §397) and as a loanword in Turkic and other languages (*TMEN* II: 539–40).

This word is widely attested in Mongolic daughter languages. In modern Literary Oirat, there are two reflexes of this word, *üker* and, with progressive rounding assimilation, *ükür* "ox" (*IDWO* 483). Note also Daur *xukur*, Shira Yoghor *hogor*, Mongghul *fuguor* and Hungarian

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[11] Vladimircov (1917: 1488) is essentially correct in reconstructing the word as "*кулђун".

[12] The name of the year in some manuscripts is corrupted to უქრჯალ *ukrǯal* and უქრიჯალ *ukriǯal*.

[13] Vladimircov (1917: 1488) transcribes the word as "yќyp".

[14] In philological transcriptions of Middle Mongol, *ö* denotes IPA /o ~ ɵ/, *ü* denotes IPA /u/, *o* is IPA /ɔ/, and *u* is IPA /ʊ/ (*LASM* xliv).

[15] We are grateful to an anonymous peer reviewer, who suggests that "the Mongolian dialect underlying this document in Georgian script was in the process of losing the initial *h*- and had lost it only in special phonological positions. This is the case for the language of the *Muqaddimat al-Adab*, where initial *h*- is lost mainly (although not exclusively) before velars -*k*-, -*γ*- and spirant -*s*- (see Gruntov 2005)".

[16] On the Literary Mongol script and its divergence from spoken Middle Mongol, see Kara 2005: 25-32 et passim.

ökör "id." (Kara 2009: 315), the latter of which is widely believed to be a loanword from an early variety of western Old Turkic, perhaps ultimately from Indo-European.[17]

The Tiger/Cheetah. **pars** ფარს "cheetah, Acinonyx jubatus (ავაზა)", attested in the word ფარსინჯილ *parsinǯil* "Year of the Cheetah" (*AM.Ž* 45).

The Georgian rendering of this Mongol phrase[18] is a non-native attempt to transcribe a phonologically progressive spoken western Middle Mongol dialectal **pars-in ǰil* (cheetah-GEN year), which is a logically possible but unattested phrase.[19] Judging from the animal years attested in other Middle Mongol sources, this form is also stylistically non-native. In other Middle Mongol texts and in modern Mongolian, as mentioned above, the animal years are expressed as [ANIMAL]-NOMINATIVE + *ǰil* "year". As for this concrete case, in the *Secret History of the Mongols*, the Year of the Tiger is attested in the form 巴舌兒思 只勤 *bars ǰil* (*SHM* §202) and in modern Khalkha Mongolian as **бар жил** "Year of the Tiger", both literally "tiger year". The non-native Mongol grammar of the Georgian rendering ფარსინჯილ *parsinǯil* indicates that the author of the *Chronicle* was a fluent, albeit non-native, speaker of Mongolian, and that most of the Mongolian words and expressions in this book were personally written down by him from memory. This particular error indicates that the author of the *Chronicle* had good grammatical knowledge of Mongolian (i.e. morphosyntactically correct grammar), but he seems to have been influenced by his native language here, which would use the genitive.[20]

The transcription of ფ *p* /pʰ/ instead of the expected *b* (which would be easily represented in Georgian with the letter ბ *b*) is worth discussion. Comparison with Ottoman Turkish *pars* "leopard, panther",[21] which is historically related to, although semantically and phonologically distinct from, the eastern Middle Mongol word *bars* "tiger", suggests that the Georgian transcription of the western Middle Mongol dialect word *pars* "cheetah" is phonetically influenced by western Turkic *pars* or New Persian پارس *pārs* "leopard, panther". Western Middle Mongol ფარს *pars* "cheetah (ავაზა)" can thus be seen as a then-recent Turkism (or less likely, a Persianism) in the Georgian transcriptions of Middle Mongol.[22]

It is well known that the Mongol Empire and its successor states were characterized by widespread bilingualism in Mongol and Turkic. In the western regions of the empire Turkic was even more actively used. This can be observed in the numerous Turkisms among the Mongol lexical data in the *Jāmiᶜ al-tawārīḫ* (*Compendium of Chronicles*) by Rašīd al-Dīn Faḍl Allāh (1247–*c.* 1318) and in languages resulting from intense Mongol–Turkic language contact, such as Chaghatai Turkic and the Kipchak (Qïpčaq) languages.[23]

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[17] On the Turkic etymology of Hungarian *ökör*, see Róna-Tas and Berta 2011. Róna-Tas (1974) compares the Turkic and Mongol words to Tokharian B (Kuchean) *okso* "ox", from Proto-Indo-European.

[18] This is a Mongol phrase transcribed in Georgian as if it were a single word, i.e. as a single orthographic sequence in Georgian.

[19] Vladimircov (1917: 1488–9) proposes the same morphological analysis but makes no comment on the non-nativeness of the expression. Vladimircov does not recognize this as a Turkism.

[20] Compare modern Georgian ვეფხვის წელი *vepxvis c'eli* "Year of the Tiger", derived from *vepxv-* "tiger" (root form) + *-is* "genitive case suffix" + *c'eli* "year" (nominative case form).

[21] Cited here from Clauson (1972: 368), who considers Ottoman Turkish *pars* "leopard" to be a "recent borrowing" from Persian. The earliest Turkic variant is *bars*, occurring in personal names in the Old Turkic inscriptions of Mongolia, where it undoubtedly is the zoonym "tiger" and *bars* with the meaning "tiger" occurs in other early Turkic texts (q.v. *DTS* 84). Clauson (1972: 368) considers Mongol *bars* "tiger" to be a borrowing from early Turkic *bars* "tiger", itself a borrowing from an early Iranic language.

[22] Other Turkisms exist in this text, as we shall demonstrate in a separate paper as mentioned in footnote 3.

[23] For a bibliographic listing of Middle Mongol loanwords in Turkic languages, see Csáki 2006.

Such Turkisms are also commonly found in the medieval Latin accounts of William of Rubruck, John of Plano Carpini, and Marco Polo.[24]

The semantic value is also significant: in most Middle Mongol sources the word *bars* is glossed as "tiger", but the Georgian transcription is glossed in Georgian as ავაზა *avaza* "cheetah". Although the cheetah is now restricted to a small and dwindling population in Africa, in earlier times it had a vastly wider geographic distribution, including Georgia.[25]

The geographic distribution of the "cheetah"/"tiger" vs. "tiger" glosses suggests a partial semantic isogloss: in the eastern Middle Mongol dialects, *bars* denoted only "tiger", whereas in the western dialects, *bars* ~ *pars* indicated "cheetah" as well as "tiger" (in the variety documented by *IM*) as summarized in Table 1.

Table 1. Partial isogloss of "cheetah"/"tiger" and "tiger" in Middle Mongol dialects

Western Middle Mongol "cheetah"/"tiger"	Eastern Middle Mongol "tiger"
pars ფარს "cheetah (ავაზა)" (*AM.Ž*)	
bars بَرْس "cheetah (يُوْز)" (*Leid.* 66b-07-3)[27]	
bars بَرس "tiger" (*IM*)	*bars* 巴兒思 "tiger (虎)" (*SHM* §78)[26]

The Georgian gloss of this Middle Mongol word as ავაზა "cheetah", together with the phonological arguments discussed above, demonstrates that the anonymous Georgian author of the *Chronicle* had access specifically to a western dialect of Middle Mongol.

Doerfer identifies New Persian بارس *bārs* "Gepard, Cynailurus jubatus L." as a borrowing from Turkic *bars* "Panther, Felis panthera, später auch 'Gepard'" (*TMEN* II: 235). Note also Russian **барс** (*bars*) "leopard", borrowed from a Turkic language.[28]

The Hare/Rabbit. ***tavlai*** თავლაი "rabbit (კურდღელი)", attested in the word თავლაინჯილ *tavlainǯil* "Year of the Rabbit" (*AM.Ž* 45).

The name of this year in some manuscripts is altered to თავლაინჯალ *tavlainǯal*, თვლა ინჯლ *tvla inǯl*, or თვალინჯალ *tvalinǯal*,[29] but the corruption of the Mongol word *taulai* could be considered as a kind of *lectio facilior*: it seems that the copyists did not understand the word თავლაი *tavlai* and replaced it in the second case with the Georgian verbal noun[30] თვლა *tvla* "to count" and in the third with the Georgian noun თვალი *tvali* "eye". Moreover, in the expression თავლაინჯილ *tavlainǯil* we can observe the same type of error as in the case of *pars* ფარს "leopard" (see the entry for "The Tiger/Cheetah" above), in which the first noun of the compound word is declined in genitive case. The sequence *av* ავ in the Georgian transcription renders Middle Mongol *au*. Thus, the transcription indicates Middle Mongol *taulai* in Georgian phonetic transcription as თავლაი *tavlai* "rabbit (კურდღელი)".

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[24] See Sinor 1970, Clark 1973 and Pelliot 1959 for Turkic elements in the accounts of Carpini, Rubruck and Marco Polo. For notes on the rich admixture of Turkic and Mongol elements in the New Persian text of the *Jāmiʿ al-tawārīkh*, see Thackston 2012, *passim*. The lexicon of Chaghatai Turkic is another product of the convergence of Mongol, Turkic and New Persian in the successor states of the Mongol Empire; see Clauson 1972 *passim* and *MAA*.

[25] Due to its docile character and speed, it was the favourite hunting animal at the royal court and that of the great feudal lords in medieval Georgia (Gegechkori 2010: 70–75). The Old Georgian translation of the anonymous *Physiologus* (CPG 3766), attributed to Epiphanius of Cyprus (*c.* 310–403), handed down from a manuscript from the end of the tenth century, contains a detailed description of the cheetah (*Šat'berdis k'rebuli* 1979: 183–4).

[26] On the medieval Turkic origin of this Middle Mongol word, see Kara 2001: 83 and *TMEN* II: 236–7.

[27] The *kasrah*, i.e. short *i*, in the Leiden Manuscript transcription بَرْسِ *barsi* is probably superfluous, perhaps as a result of a non-native scribe analysing the genitive form بَرسِين *barsin* (*Leid.* 74b-13-2-1) as ✗*barsi* + ✗*-n* when compiling the text. The correct analysis should be *bars* "tiger" + *-un* "genitive suffix" or **-in* "spoken genitive suffix".

[28] The variation in New Persian between the forms پارس *pārs* and بارس *bārs* "leopard, panther" at first seems of relevance here, but the fact that Middle Mongol does not have the phoneme */p/* except in contemporaneous loanwords indicates that the Middle Mongol dialect form *pars* "cheetah" transcribed in Georgian is a contemporaneous borrowing from Turkish. Note that Common Serbi-Mongolic and Proto-Mongolic */p/ (i.e., *[p^h]) regularly lenited to Middle Mongol *h* (q.v. *LASM* 290, 361–3).

[29] Vladimircov (1917: 1489) gives the variant "т́авлін џіл", which we have been unable to confirm in the manuscripts used in the critical editions of the *Chronicle* and in the manuscripts available to us at the time of writing. Moreover, it is not plausible to hypothesize that Vladimircov, who did not know Georgian, had access to

This word is cognate to eastern MMgl 討來 *taulai* [tʰau̯lai̯] ~ 塔兀來 *ta'ulai* [tʰaɦʊlai̯] "rabbit, hare (兔, 兔児)" (*SHM* §257, §272, §239; *HYYY* §1.06a2). Note also western MMgl تاولاي *taulai* [tau̯lai̯] ~ تُولاىْ *tūlai* [tʊːlai̯] (Ligeti 1962: 68, 70) and in Armenian transcription as թուլայ *t'ulay* (phonetically [tʰulay]) "id." (Ligeti 1965: 283.28).

Middle Mongol *taulai* was borrowed in New Persian, attested as *taulai* "Hase", and as a loanword in Tibetan, Russian dialects and in certain Tungusic languages.[31]

The ვ *v* in the Georgian transcription deserves discussion. In late Middle Mongol, including other western sources contemporaneous to the Georgian transcriptions, the first syllable in the Mongol word was a diphthong [au̯] or vowel + glide sequence [aw].[32] Accordingly, the Georgian transcription of Mongol *au* as ავ *av* assumes an intermediate step *აჳ *aw*. The now-obsolete Georgian letter ჳ was created to render Greek ῠ ψιλόν. Although Greek υ denotes the front rounded vowel [ü], Georgian ჳ renders its Georgian phonetic approximation [wi] (Gamkrelidze 1990: 146). As for Greek diphthongs such as αυ or ευ, the letter υ signifies a [w] glide. An analogous use of ჳ is observed in Old Georgian texts as early as the fifth to seventh centuries, where [w] is sometimes transcribed in Georgian with ჳ *w* and sometimes with ვ *v* (Sarǯvelaʒe 1984: 292; Gamkrelidze 1990: 147). Thus, by replacing the letter ჳ *w* with ვ *v*, on the one hand, the copyist attested the existence of the diphthong in the Mongolian archetype and on the other hand, he did justice to Georgian phonology by recording the letter corresponding to the phoneme that was actually pronounced in Georgian.

The earliest attested Serbi-Mongolic cognate of this word is Middle Kitan *tawlya "rabbit, hare".[33] Old Turkic *tabïšγan* "rabbit, hare" is widely believed to be related, although by convergence (*LASM* 5–6).

The Dragon. **lu** ლუ "dragon (ვეშაპი)", attested in the phrase ლუილჯილ *luilǯil* "Year of the Dragon" (*AM.Ž* 45).

The word has no variants in the manuscripts. This is clearly a copyist's error for *ლუინჯილ *luinǯil*,[34] undoubtedly another non-native attempt to write the year name

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manuscripts of the *Chronicle* other than those employed in the critical editions by Simon Q'auxčišvili (1959) and Revaz K'ik'naʒe (1987).

[30] In Georgian grammatical terminology it is called *sac'q'isi*, but sometimes also *maṣdar*, which denotes a verbal noun in the Arabic grammatical tradition.

[31] *TMEN* I: 276–7 §144.

[32] In earlier thirteenth-century eastern Middle Mongol there are two forms: one with a diphthong [au̯], *taulai*, and another with a VCV sequence [aɦʊ], conventionally written *ta'ulai* in Mongolistic philological tradition. The latter is probably the primary form, historically going back to Common Serbi-Mongolic *tʰaɣʊlya "hare, rabbit" (corr. *LASM* 373). In later Middle Mongol and modern Mongol this sequence is realized as a monophthong [ʊː].

[33] KAS 戋矢为 ‹tau.li.a›, KLS 五丩 ‹tau.lia› ~ 吞 ‹taulia› (KLS orthographic forms from Liu Fengzhu 1998 and Kane 2009; phonetic readings from *LASM* 373).

[34] Vladimircov (1917: 1490) proposes a similar analysis but does not make note of the non-native morphosyntax of this reconstructed form.

as [ANIMAL] + *-(y)in "spoken genitive case suffix" + *ǰil* "year", i.e. ლუ *lu* "dragon" + *-ინ *-(y)in* "spoken genitive case suffix" + ჯილ *ǯil* "year" (see entries for "The Tiger/Cheetah" and "The Hare/Rabbit" above for discussion of a similar error). This year name is attested in other Middle Mongol sources as 祿 ^{丁}真 *lu ǰil* "dragon year (龍年)" (e.g. *HYYY* 3.04b3) and in spoken modern Khalkha as **луу жил** [ɮʊː ʧiɮ] "dragon year", i.e. "dragon" + "year".

Western Middle Mongol ლუ *lu* "dragon" is cognate to eastern MMgl 祿 *lu* [lʊ] "dragon (龍)" (*HYYY* §1.05a3) and western MMgl لو *lu* "dragon" (Golden 2000: 199c.12). It is ultimately a loanword into Old Turkic *lu* ~ *ulu* ~ *lü* ~ *lüi* "dragon" and Mongolic from a Middle Chinese dialect form of 龍 "dragon" (Kara 2009: 170). The word is attested in Serbi-Mongolic as early as Middle Kitan *lu "dragon"[35] (*LASM* 86, 433).

The Snake. ***moγi*** მოღი "snake (გუელი)", attested in the word მოღილჯილ *moγilǯil* "Year of the Snake (*AM.Ž* 45).[36]

In some manuscripts, the phrase is given as მოღიჯილ *moγiǯil*, which has been interpreted by the editors of the *Chronicle*[37] as a corruption, but from the Mongolistic point of view, this is clearly the correct form, as the usual form of this year name in other Middle Mongol sources is 抹^{中}孩 ^{丁}真 *moqai ǰil* "Year of the Snake (蛇児年)" (literally: "snake year", e.g. *HYYY* 3.14a5). As Georgian phonotactics do not usually allow diphthongs, Middle Mongol *ai* is reduced to Georgian ი *i* in this Georgian transcription.

Alternatively, based on the pattern above, we may hypothesize that the *Chronicle* recorded the expression with the structure {[ANIMAL]-GENITIVE + [YEAR]}. In this case, as with *ლუინჯილ **luinǯil* "year of the dragon" (see entry for "The Dragon" above), the expression *მოღინჯილ **moγinǯil* (rendering spoken MMgl dial. **moγ(a)i-n ǯil* "snake-GEN year") would have been altered by the copyists to მოღილჯილ *moγilǯil*.

This Middle Mongol *moγ(a)i* "snake" is cognate to eastern MMgl 抹孩 *moqai* [mɔqai̯] "snake (蛇)" (*HYYY* §1.06b4, §3.14a5), western late Middle Mongol موغاي *moʁay* "snake" and to Middle Kitan *mɔʁɔ "snake",[38] all ultimately from Common Serbi-Mongolic *mɔga ~ *mɔgɔ "snake" (*LASM* 353 and n. 307).

The Mongol word was borrowed into New Persian as موغاى *mōγāi* ~ موغا *mōγā* "Schlange" and was also borrowed into certain Turkic languages and Russian dialects.[39]

The Horse. ***morin*** მორინ "horse (ცხენი)", attested in the word მორინჯილ *morinǯil* "Year of the Horse" (*AM.Ž* 45).[40]

This word is cognate to eastern MMgl 秣^{舌}驎 *morin* [mɔrin] "horse (馬)" (e.g. *SHM* §31) and western MMgl مُوري *mori* (*Leid.* 66a-13-1) ~ مُورِيْن *morin* "horse" (*Leid.* 75a-10-3-1, 75a-12-1-1), also attested in Armenian phonetic transcription as մօրի *mori* "horse"

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[35] KAS 攴 ‹lu›, KLS 安 ‹lu› (KLS orthographic forms from Liu Fengzhu 1998 and Kane 2009; phonetic readings from *LASM* 86, 433).

[36] Vladimircov (1917: 1490) recognizes the "л" in "могiл" (i.e. *moγil* მოღილ) as an error for "н". This indicates that he assumes that the transcription should be emended to *მოღინჯილ **moγinǯil*, implying *moγi* "snake" + *-n* "genitive" or "attributive" + *ǯil* "year". This analysis is undoubtedly correct in terms of reconstructing the *Chronicle*'s archetype, but this is non-native style (see discussion in the entries for "The Tiger/Cheetah", "The Hare/Rabbit" and "The Dragon" above).

[37] Both Q'auxčišvili (1959: 159) and K'ik'naʒe (*AM.Ž* 45) considered *moγilǯil* as a genuine variant and *moγiǯil* as a corruption.

[38] KAS 仕圠及 ‹m.oγ.o›, KLS 旱 ‹moγo› (KLS orthographic forms from Liu Fengzhu 1998 and Kane 2009; phonetic readings from *LASM* 353, 357n.343, 421).

[39] Doerfer (*TMEN* I: 508–9 §375).

[40] A similar analysis is offered by Vladimircov (1917: 1490), who gives "морiн џiл", noting that in some manuscripts, the corrupted variant "морiл" occurs (1917: 1490 n. 6), which would be მორილ *moril* in Georgian transcription. We have been unable to verify this latter form in the manuscripts used in the critical editions of the *Chronicle* and in the manuscripts available to us at the time of writing.

(Ligeti 1965: 281.21). The Mongol forms are cognate to Middle Kitan *mir “horse”,[41] from Common Serbi-Mongolic *mərɪ “horse” (*LASM* 352–3), itself a culture word with comparanda in Old Chinese, Koreanic, Tungusic, Japanese-Koguryoic, Old Tibetan, Nivkh, and other languages.[42]

The Sheep. ***q’oni*** ყონი “sheep (ცხოვარი)”, attested in the word ყონიჯილ *q’oniǯil* “Year of the Sheep” (*AM.Ž* 45).[43]

In the *Letter of Il-Khan Abaga* (1271), this calendrical formula is attested as *qonin ǰil* “Year of the Sheep”, with the expected attributive suffix *-n*. The lack of this suffix in the Georgian transcription is noteworthy.[44]

This word is cognate to western MMgl قُونِي *qoni* “sheep”[45] (*Leid.* 66b-03-3) and eastern MMgl 中豁紉 *qonin* [qənin] “sheep (羊)” (*SHM* §19 etc.; *HYYY* §1.05b1), i.e. *qoni-n* at the morphological level.[46] The Mongol forms are cognate to Late Kitan 昏 (probably rendering *qəñ) “sheep”, all ultimately from Common Serbi-Mongolic *kʰənɪ “sheep” (*LASM* 365), undoubtedly related to Old Turkic *qoñ* “sheep” via a loanword relationship (*LASM* 365 n. 425).[47]

The Monkey. ***mečin*** მეჩინ “monkey, ape (ყაპუზუნა)”, attested in the word მეჩინჯილ *mečinǯil* “Year of the Monkey” (*AM.Ž* 45).[48]

This word is cognate to MMgl **meči-n* “monkey, ape”, attested not on its own, but as a component morpheme of western MMgl سُرمچی *sormeči* “monkey, ape” in the glossary of Ibn Muhannā (Poppe 1938: 446), a blend of **sor*, from Late Old Chinese 猿 *zuar “monkey, ape” and **meči-n* “monkey, ape”, the latter ultimately a loanword from Old Turkic *bičin* “monkey, ape” (the alternation between *m* ~ *b* in early Turkic-Mongolic loanwords is well known).[49] The Old Turkic word in turn is likely to be a borrowing from Iranic, perhaps related to New Persian بوزینه *būzīna* “monkey, ape” (*EDT* 295b). The modern Khalkha reflex of this Middle Mongol word is **мич** [mitʃʰ] “monkey, ape” (almost exclusively in its calendrical usage), sometimes also **бич** [pitʃʰ] “id.”[50]

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[41] KAS 又化 ‹m.ir›, KLS 马 ~ 丙 ‹mir› (KLS orthographic forms from Liu Fengzhu 1998 and Kane 2009; phonetic readings from *LASM* 352–3).

[42] *LASM* 353 n. 305; see also Beckwith 2009: 402 n. 45. As shown by Doerfer, the Middle Mongol word was borrowed into New Persian, attested as مورین *mōrīn* and as مری *mori* “Pferd”, and it was also borrowed into certain Tungusic languages, Turkic languages and Russian dialects (*TMEN* I: 507–8). Doerfer treats Korean 말 *mal* “horse” as a loanword from Mongolian (*TMEN* I: 508), but this is unlikely. The Korean word is indeed ultimately related to similar words in Serbi-Mongolic, Japanese-Koguryoic, Old Tibetan, Chinese and other neighbouring languages, but as a widespread culture word and not as a direct loan from Middle Mongol (*LASM* 353 n. 305). This is easily demonstrated, as the Korean word is attested in Early Middle Korean as 末 *mʌr “horse (馬)” in the twelfth-century 鷄林類事 *Jilin Leishi (Kyerim Yusa)*, around a century before the Mongols entered the Korean Peninsula in the early thirteenth century.

[43] Vladimircov cites a variant “k̇oiн” (1917: 1491), which would hypothetically be *ყოინ *q’oin*. We have been unable to confirm this form in the critical edition nor in the manuscripts.

[44] We are grateful to an anonymous peer reviewer for pointing this out and for the reference to Tumurtogoo 2006.

[45] The word is glossed in New Persian as کوسفَند *kusfand* (*Leid.* 66b-03-3), which is clearly an error for گوسفَند *gusfand*. On instances of ک *k* for expected گ *g* in the New Persian glosses in the Leiden Manuscript, see also footnote 56 below in the entry for ნოხი *noxi* “dog”.

[46] The Middle Mongol word is also attested as a loanword in New Persian قونین *qōnīn* ~ قونن *qōnin* “Schaf” (*TMEN* I: 442 §312).

[47] In the Kitan zodiac, the corresponding year is literally the “Goat Year”, represented by the zoonym *ɛma “goat”, written KAS 光为 ‹êm.a› and KLS 寺 ‹êma›, cognate to MMgl *ima’a-n* “goat”, from Common Serbi-Mongolic *ɪma “goat” (*LASM* 339); for the KLS form, see Liu Fengzhu 1998 and Kane 2009.

[48] Vladimircov (1917: 1491): “мечiн џiл”.

[49] For the etymology of the Old Turkic *bičin* “monkey” see *LASM* (400–402). Late Old Chinese form cited from Kiyose and Beckwith 2008: 11–12. See Kara 2001: 83 for the Turkic etymology of Middle Mongol and Preclassical Literary Mongol *bečin* ~ *bičin* ~ *mečin* “ape, monkey”. Wilkens (2021: 161a) also compares the Old Uighur and Mongol forms.

The Middle Mongol phrase is also attested in Preclassical Literary Mongol in the form *bičin ǰil* “year of the monkey” in the *Fragments of a Letter of Abū Sa’īd* (1320).[51]

The Turkic form was borrowed into New Persian (see *TMEN* II: 382–3 §821).

The Chicken. ***taγa*** თაღა “chicken (ქათამი)”, attested in the word თაღანჯილ *taγanǯil* “Year of the Chicken” (*AM.Ž* 45).[52]

This word is cognate to eastern MMgl 塔乞牙 *takiya* [tʰakʰija] “chicken (雞兒)” (*SHM* §141, §264) ~ 塔乞牙 “chicken (雞)” (*HYYY* §1.07a7) and western MMgl طاقيه *taqi’a* [taqija] “chicken” (*MAA* 341). The Georgian transcription perfectly matches western MMgl *taγa* “chicken” in Persian and Arabic phonetic transcription, attested in the plural form تاغاوُتْ *taγa-wut* “hens” ~ “roosters” (*Leid.* 68b-12-5, 68b-13-2-2). Also note the Armenian phonetic transcription թախեա *t‘axea* (phonetically [tʰaxea]) “chicken” (Ligeti 1965: 285.29).

The Mongol forms are cognate to Middle Kitan *taqa “chicken, hen”[53] (*LASM* 372). These forms are related to Middle Turkic *takagu* “hen”, undoubtedly as a loanword, the directionality of which remains to be determined (*LASM* 372 n. 472). Certain neighbouring languages, such as Korean, Hungarian, and Jurchen-Manchu, exhibit phonetically similar words for “chicken” (see *LASM* 372 n. 472; Ligeti 1986: 43; Kara 2005: 13–14; Kane 2009: 88; Aisin Gioro 2004: 96 §50).

The Dog. ***noxi*** ნოხი “dog (ძაღლი)” attested in the word ნოხინჯილ *noxinǯil* “Year of the Dog” (*AM.Ž* 45),[54] rendering spoken MMgl dial. **nox(a)i-n ǯil* “dog-GEN year”.[55]

This word is cognate to eastern MMgl 那^{中}孩 *noqai* [nɔqai̯] “dog (狗)” (*SHM* §78 etc.) and western MMgl نوْقَايْ *noqai* “dog”[56] (*Leid.* 66b-09-3). In Armenian script, this Mongol word is phonetically transcribed նուխա *nuxa* “dog” (*HNA*), suggesting a Middle Mongol dialect form *[nɔχa] “dog”. Other Armenian sources give the transcription նօխայ *noxay* “dog” (Ligeti 1965: 282.24), i.e. MMgl [nɔχai̯] “dog”. The Middle Mongol word was borrowed into New Persian as نوقاي *nōqāi* ~ نوقا *nōqā* “Hund” (*TMEN* II: 520 §386) and was also borrowed into Turkic and possibly Samoyedic (*TMEN* II: 520–21 §386). The Mongol forms are cognate to Middle Kitan *ñaq “dog”[57] and to Taghbach *ñaqañ “dog”, ultimately going back to Common Serbi-Mongolic *ñɔkʰañ “dog” (*LASM* 356).

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[50] The generic word for “monkey, ape” in modern Khalkha is **сармагчин** [ˈsarmăxtʃʰĭŋ], a reflex of Middle Mongol *sormeči-n* “monkey, ape” resulting from analogical change whereby the final element was reanalysed as *-gčin* “zoonym suffix” (*LASM* 400–402).

[51] Tumurtogoo 2006. We are grateful to an anonymous peer reviewer for pointing out this attestation.

[52] Vladimircov (1917: 1491): “т̇аг̇ан џіл”.

[53] KAS 令为为 ‹t.aq.a›, KLS 䒑 ‹taqa› (KLS orthographic forms from Liu Fengzhu 1998 and Kane 2009; phonetic readings from *LASM* 372).

[54] Vladimircov (1917: 1491): “нохін џіл”.

[55] We are grateful to an anonymous peer reviewer, who points out: “perhaps it is worth underlining that [the Georgian transcription of MMgl “dog”] is an early example of the process of spirantization of intervocalic *-q-* which is normally absent in Middle Mongolian but attested in all Modern North Mongolic languages (see Rybatzki 2003: 373)”.

[56] The New Persian gloss is سکْ *sak* (*Leid.* 66b-09-3), which is a scribal error or dialectal variant for سگ *sag* “dog”. As demonstrated by Yoshio Saitô (2006: v–viii), the New Persian and Arabic data in the Leiden Manuscript are characterized by numerous scribal errors and dialectal forms. Note also ک *k* for expected گ *g* in the manuscript’s New Persian gloss for “sheep” (q.v. the entry for *q’oni* ყონი “sheep” above).

[57] KAS 伏为 ‹ñ.aq›, KLS 兂 ‹ñaq› (KLS orthographic forms from Liu Fengzhu 1998 and Kane 2009; phonetic readings from *LASM* 356).

The Pig. ***q'aq'ai*** ყაყაი "pig (ღორი)", attested in the word ყაყაინჯილ *q'aq'ainǯil* "Year of the Pig" (*AM.Ž* 45).[58]

This word is cognate to eastern MMgl 中合中孩 *qaqai* [qaqai̯] "pig (豬児)" (*SHM* §166, §268) and western MMgl غاقَايْ *γaqai* "pig (خُوک)" (*Leid.* 66b-07-5) and غاقاى *γaqai* "id." (*MAA*: Poppe 1938: 175).

The Middle Mongol form was also borrowed in New Persian, attested as قاقا *qāqā* "Schwein", and in certain Turkic languages (*TMEN* I: 382 §259).

1.2. Reconstructed Middle Mongol genitive case morphemes in Georgian transcription

The animal zodiac constructions above provide evidence of two allomorphs of the Middle Mongol genitive case suffix:

> *-in -ინ (Geo *-in*)[59] ~ *-n -ნ (Geo *-n*)[60] "genitive case suffix allomorph", cognate to eastern Middle Mongol *-yin* "id.".

2. Reconstructed western Middle Mongol words in Georgian transcription

The tentative reconstructions of western Middle Mongol forms discussed above are presented in alphabetical order below:

*ʤil ჯილ (Geo *ǯil*)[61] "year (წელი)".
*lʊ ლუ (Geo *lu*)[62] "dragon (ვეშაპი)".
*məʧin მეჩინ (Geo *mečin*)[63] "monkey (ყაპუზუნა)".
*mɔʁ(a)i მოღი (Geo *moγi*)[64] "snake (გუელი)".
*mɔrin მორინ (Geo *morin*)[65] "horse (ცხენი)".
*nɔχ(a)i ნოხი (Geo *noxi*)[66] "dog (ძაღლი)".
*pars ფარს (Geo *pars*)[67] "cheetah, Acinonyx jubatus (ავაზა)".
*qaqai ყაყაი (Geo *q'aq'ai*) "pig (ღორი)".[68]
*qɔni ყონი (Geo *q'oni*) "sheep (ცხოვარი)".[69]
*qʊlʁʊn *ყულღუნ (Geo **q'ulγun*)[70] "mouse (თაგუ)".
*taʁa თაღა (Geo *taγa*)[71] "chicken (ქათამი)".
*taulai თავლაი (Geo *tavlai*) "rabbit (კურდღელი)".[72]
*ukur უქურ (Geo *ukur*) "bovine (ზროხა)".[73]

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[58] Vladimircov (1917: 1492): "к̇ак̇аін" and "к̇ак̇ан џiл". In the text variants available to us at the time of writing, we have been unable to confirm Vladimircov's variant "к̇ак̇ан џiл", which would be *ყაყანჯილ **q'aq'anǯil*.

[59] Cf. "-ін" (BYV 1488, 1501).

[60] Cf. "-н" (BYV 1489, 1491, 1492).

[61] Cf. "џiл" (BYV 1488, 1489, 1490, 1491, 1492).

[62] Cf. "лу" (BYV 1490, 1500).

[63] Cf. "мечин" (BYV 1491, 1500).

[64] Cf. "мог̇і" (BYV 1490, 1500).

[65] Cf. "морін" (BYV 1490, 1500).

[66] Vladimircov gives "нохі" (BYV 1491) and "нохаі" (BYV 1500).

[67] Cf. "п̔арс" (BYV 1488).

[68] Vladimircov gives "к̇ак̇аі" (BYV 1492, 1500) and "к̇ак̇а" (BYV 1492, 1500).

[69] Vladimircov gives "к̇оні" (BYV 1491, 1500) and "к̇оін" (BYV 1491, 1500).

[70] Cf. "к̇ург̇ун" (BYV 1488, 1500).

[71] Cf. "т̔аг̇а" (BYV 1491, 1501).

[72] Vladimircov gives "т̔авлаі" (BYV 1489, 1501) and "т̔авлі" (BYV 1489).

[73] Cf. "ук̔ур" (BYV 1501).

Concluding remarks

As our analyses above indicate, the fourteenth-century anonymous Georgian author, conventionally known as Žamtaaɣmc'ereli, demonstrates surprising accuracy in the phonetic transcription of Mongol phonemes. This Georgian source proves very important for the history of the Mongolian language, because a careful examination of the Georgian transcriptions of medieval Mongol zodiac calendrical terms in it allows us to:

1) identify the specific Mongol dialect of the transcriptions as a western dialect of Middle Mongol exhibiting certain phonetic similarities to other varieties of Middle Mongol in Persian, Arabic and Armenian phonetic transcription;
2) reconstruct Middle Mongol dialect forms which are phonetically distinctive from other sources (e.g. western Middle Mongol *taʁa "chicken" and *qʊlʁʊn "mouse");
3) clarify the precise semantic values of certain Middle Mongol words which are ambiguously glossed in Chinese (e.g. *qʊlʁʊn, glossed as "mouse" in Georgian, but ambiguously glossed in Chinese as "rat, mouse");
4) uncover an informative semantic gloss providing insight on cheetahs in Georgia at the time of Mongol domination and thereby also identify a partial semantic isogloss between eastern and western Middle Mongol dialects (i.e. western Middle Mongol *pars* ~ *bars* "cheetah, tiger" vs. eastern Middle Mongol *bars* "tiger"); and
5) attest an early example of the spirantization of the intervocalic plosive $q > \chi$ (e.g. earlier eastern MMgl *noqai* "dog" corresponds to *noxi* "dog" in Georgian transcription).

The *Chronicle* offers a wealth of data on other aspects of medieval Mongol language, culture and history which we plan to address in future studies.

Abbreviations and sigla

AM.Ž	Žamtaaɣmc'ereli, *Asc'lovani mat'iane* (1987, edited by R. K'ik'naʒe)
BYV	Vladimircov (1917)
corr.	correction of
CPG	*Clavis Patrum Graecorum*, 1–5, cura et studio M. Geerard. (Corpus Christianorum). Turnhout: Brepols, 1974–87; *Supplementum*, cura et studio M. Geerard and J. Noret. (Corpus Christianorum). Turnhout: Brepols, 1998
EDT	Clauson, *Etymological Dictionary of Pre-Thirteenth Century Turkish* (1972)
Geo	Georgian
HNA	Blake et al., *History of the Nation of the Archers* (1954)
HYYY	*Hua-Yi Yiyu* (Kuribayashi 2003)
IDWO	*Integrated Dictionary of Written Oirat* (Kuribayashi 2017)
KAS	Kitan Assembled Script[74]
KLS	Kitan Linear Script[75]
IM	*Ibn Muhannā* (Poppe 1938, Gül 2016)
LASM	Shimunek (2017)
Leid.	*The Leiden Manuscript*, i.e. *Kitâb Majmû' Turjumân Turkî wa-'ajamî wa-Muğalî* (Saitô 2006, Poppe 1928)
MAA	*Muqaddimat al-Adab* [by Abū 'l-Qāsim Maḥmūd ibn ʿUmar al-Zamaḫšarī] (Poppe 1938)
MMgl	Middle Mongol
ms.	manuscript
mss.	manuscripts
RÉGC	*Revue des études géorgiennes et caucasiennes*

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[74] "Kitan Assembled Script" or "Composite Script" denotes the putative 小字 "Small Script" (Kara 1987, 2005; *LASM* 210 n. 58).

[75] "Kitan Linear Script" denotes the putative 大字 "Large Script" (Kara 1987, 2005). KLS orthographic forms are cited from Kane (2009). The phonetic values are cited from *LASM*.

SHM	*Mongqol-un Niuča To[b]ča'an* (*Secret History of the Mongols*, quoted from Kuribayashi 2009)
TMEN	Doerfer, G. 1963; 1965; 1967. *Türkische und mongolische Elemente im Neupersischen.*

Symbols

*	Scientific reconstruction based on mainstream historical–comparative linguistic methods
✗	Erroneous form or scribal error
/ /	Phonemes
[ ]	Phonetic transcription (in IPA or other writing systems)
-	Morpheme boundary
~	Linguistic variation between two or more forms (free or conditioned)

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