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What Can We Learn From the Mongolic Material in Kazakh and Kyrgyz?

1 Introduction

This study examines material of Mongolic origin in the Central Asian Turkic languages Kazakh and Kyrgyz.¹ As many words of Mongolic origin from across the respective lexicons of Kazakh and Kyrgyz as possible are examined, without limitation on semantic domain. Section 2 overviews relevant previous work.

Effort is devoted to limiting the study to just words that are in fact borrowings from a Mongolic variety and are not words common to both the Turkic and Mongolic families or borrowings from Turkic to Mongolic. Section 3 overviews this methodology.

The forms, meanings and domains of these loanwords are examined for what they reveal about the Mongolic variety(ies) they originated from; when the words were borrowed; the social context for the borrowing; the relative timing of various sound changes in the histories of Kazakh, Kyrgyz and Mongolic; and the effect the contact situation with Mongolic had on not just the lexicons but also the phonologies and morphologies of Kazakh and Kyrgyz.

These findings are presented in Section 4. The majority of the loanwords appear to be borrowings from a variety of Middle Mongol, with a few potential later borrowings. The loanwords cover a wide range of semantic domains (Section 4.1)—wider than Mongolic loanwords in Volga-area Turkic languages, like Tatar, although not as wide a

¹ This study is dedicated to the memories of Ilse Laude-Cirautas and György Kara, two great teachers who had a contagious passion for their work, who we've sadly recently lost. It was with Ilse opa that I first started learning in earnest about the history of Turkic languages and the study of historical Turkic varieties (2005–2007). It was also during study with her that I first became interested in Mongolic languages and the impacts of their contact with Turkic languages. Later (2008–2016) I began study of the Mongolic languages and their history with Kara bagsh and continued study of early Turkic languages with him as well. This paper was initially started as a project for a course I took with him, and is the current stop along the path that Ilse opa helped set me down.

Acknowledgements: I would like to thank the audience at the CESS/Mongolia Society 2022 joint conference for their feedback on an earlier version of this work. I'm grateful to the wonderful ILL staff at Swarthmore College for helping me obtain sources, and to Alva, the other editors and the publication team for their patience. I also want to thank Tolgonay Kubatova for assistance with the Kyrgyz material in this paper, Kağan Arik for his feedback on a draft, Timofey Mets and Daniel Swanson for helping me obtain hard-to-find sources and Joshua Sims, Paul Washington and Mark Zimin for thoughtful discussion. All errors in interpretation and analysis are my own.

range as Mongolic loanwords in South Siberian Turkic languages, such as Tuvan. Findings related to number of borrowings are similar (Section 4.5). Loanwords were not entirely phonologically adapted and, in turn, affected the phonologies of Kazakh and Kyrgyz by contributing to the range of phonological shapes words may take in the languages (Section 4.2). Additionally, Mongolic-origin function words, bound morphemes and verbal semantic categories are present in these languages (Section 4.3), and a wide range of other parts of speech were borrowed (Section 4.4).

As discussed in Section 5, all this evidence suggests more intense contact between Mongolic languages and the linguistic ancestor(s) of Kazakh and Kyrgyz than between Mongolic and Volga-area Turkic languages, but less sustained contact than between Mongolic and South Siberian Turkic languages. However, only a single relatively early period of strong contact is indicated, followed by little further linguistic exchange, despite continued interactions between speakers of Mongolic and Central Asian Turkic languages. The scenario that best matches the linguistic evidence is a period of Mongolic dominance, followed by a period of Turkic dominance during which Mongolic speakers were integrated into Turkic-speaking society, abandoning Mongolic in favor of Turkic as they intermarried into Turkic-speaking families.

2 Background

This section overviews this historical context related to Mongolic loanwords in Kazakh and Kyrgyz (Section 2.1), the position of this study within other literature on Mongolic loanwords in Turkic languages (Section 2.2) and a few hypotheses about Mongolic loanwords in Turkic languages that this study is poised to address and should take into consideration (Section 2.3).

2.1 Historical Context

It is widely agreed that Turkic and Mongolic languages have been in contact for a long time. It is also posited based on investigations into loanwords (e.g., many of the sources on the earliest attested loans, as discussed in Section 2.2) that the two families share a history about which very little is known for sure (where exactly, when exactly, etc.). There is debate about the oldest shared vocabulary in Turkic and Mongolic languages—while some see a set of very early loanwords in one direction or both, others see a common genetic affiliation (while often allowing for loanwords as well).

More recent contact between speakers of Mongolic languages and speakers of precursors to modern Kazakh and Kyrgyz is also documented: the expansion of Oirat-speaking Jungars into Central Asia beginning in the seventeenth century led to geographical overlap and conflict between the Jungars and Turkic speaking groups in

the area, including predecessors of modern Kazakh and Kyrgyz speakers. One hypothesis must be, then, that some or all Mongolic loanwords in Kazakh and Kyrgyz come from this period.

One of the goals of the present study is to determine when in the history of Turkic-Mongolic contact the loanwords attested in Kazakh and Kyrgyz originated. The earliest layers of vocabulary common to Turkic and Mongolic are excluded from this study. This still leaves the following main hypotheses to explore (in chronological order):

1. Some time after the earliest contacts and before the Mongol expansion (between the sixth and twelfth centuries CE),
2. During the Mongol expansion (thirteenth century CE),
3. After the Mongol expansion but before the Jungar expansion (fourteenth through sixteenth century),
4. During the Jungar expansion (seventeenth century),
5. After the Jungar expansion (since the seventeenth century).

These five periods all involve contact between Mongolic and Turkic (including Kazakh and Kyrgyz) languages, but of different nature. Up to the Mongol expansion, Turkic and Mongolic speakers enjoyed dominance at different times in different places. During the Mongol expansion, the dominance of Mongolic speakers was at its height and largest geographic extent, while Turkic speakers were less privileged. Some time after the Mongol expansion Turkic speakers gained social prominence in many areas where Mongolic speakers had been dominant. During the Jungar expansion, Mongolic and Turkic speakers had social prominence in their own communities, but the communities were in conflict with one another. After this conflict ended, some Oirat speakers remained in close proximity with Kazakh and Kyrgyz speakers through the present day.² The linguistic evidence is examined with the context of this periodization in mind.

2.2 Mongolic Loanwords in Turkic Languages

This work is positioned within an extensive literature on Mongolic loanwords in Turkic languages.

Many dictionaries of modern Turkic languages—especially etymological dictionaries—mention some words as being of Mongolic origin,³ although comparisons with Mongolic languages are conspicuously sparse in some of these works, such as Judáx-

² Cf. Tiénišev, “O jazyké kalmýkov Issyk-Kúl’a.”

³ E.g., Seydaqmátov, *Qırğız tilinin qısqaça etimologiyalıq sözdüğü*.

in,⁴ and Isqáqov, Sızdıqova and Sarıbáyev,⁵ when, e.g., Arabic comparisons abound. A recent etymological dictionary of Mongolic languages attributes many words in modern Turkic languages (especially Kyrgyz) to Mongolic origins.⁶ Etymological attributions in all of these sources mostly seem to be based on similarities of words, and sometimes absence of a word in other Turkic languages the author may have been aware of—as opposed to thorough philology or even deference to another source.

Some studies also discuss a limited number of Mongolic loanwords in Turkic languages, such as Taşbaş on Turkic kinship terms,⁷ Shamaeva and Prokopieva on body part terms in Sakha (focus on Mongolic loans),⁸ Jankowski on Crimean toponyms and Níest'erova on fishing terms in Sakha (focus on Mongolic loans).⁹ However, none of these sources constitute systematic studies, and often just guess about Mongolic origin based on similarities of forms and potential absence of similar forms in some subset of other Turkic languages. Bazıl'xan attempts to quantify the overlap in the lexicons of Mongolian and Kazakh,¹⁰ but seems to also rely on similarity and does not distinguish between origin (Turkic, Mongolic, nondistinct, neither). With similar shortcomings, Sıdıqov lists around 500 words that appear to be similar in modern Mongolic languages and South Siberian and Central Asian Turkic languages, grouped by semantic domain.¹¹

The literature also includes various papers and monographs on the earliest attested Turkic and Mongolic varieties, with arguments that some of the common vocabulary constitutes Turkic-to-Mongolic loans,¹² Mongolic-to-Turkic loans,¹³ neither and both.¹⁴ These sources are part of the larger debate about whether the earliest set of common vocabulary represents borrowing (in support of anti-Altaic sentiments) or cognates (in support of pro-Altaic sentiments), with many of those in support of a genetic connection

4 Judáxin, *Qırğızça-orusça sözdük*.

5 Isqáqov, Sızdıqova and Sarıbáyev, *Qazaq tiliniñ qısqaşa etimologiyalıq sözdigi*.

6 Sanžéjev, Orlóvskaja and Šev'érnina, *Etimologičeskij slovar' mongólskix jazykóv, I: A–E*; idem, *Etimologičeskij slovar' mongólskix jazykóv, II: G–P*; idem, *Etimologičeskij slovar' mongólskix jazykóv, III: Q–Z*.

7 Taşbaş, “The Turkic Kinship System”; idem, “Kinship Loanwords in the Turkic Languages.”

8 Shamaeva and Prokopieva, “Mongolian Loanwords in the Figurative Words of the Yakut Language.”

9 Jankowski, “Mongolian Loanwords in the Crimean Toponymy”; Níest'erova, “Mongólskije zaímstvo-vanija v l'éksike rybolóbstva jakútskogo jazyká.”

10 Bazıl'xan, “Krátkaja sravnít'el'no-istoričeskaja grammátika mongólskogo i kazáxsckogo jazykóv.”

11 Sıdıqov, “Túrko-Mongólskije paralléli.”

12 Poppe, “The Turkic Loan Words in Middle Mongolian”; Clauson, “The Earliest Turkish Loan Words in Mongolian”; idem, “The Turkish Elements in 14th Century Mongolian”; Šerbák, *T'úrskomongólskije jazykovýje kontakty v istorii mongólskix jazykóv*; Rybatzki, “Classification of Old Turkic Loanwords in Mongolic.”

13 Gülensoy, “Eski ve orta Türkçede Moğolca kelimeler ve Moğolca-Türkçe müşterek kelimeler üzerine notlar”; Kuhl and Sasse, “Mongolica im Alttürkischen”; Doerfer, “The Older Mongolian Layer in Ancient Turkic.”

14 Clark, “Mongol Elements in Old Turkic?”; Šerbák, “T'úrksko-mongólskije jazykovýje sv'ázi”; idem, *Ránnije t'úrksko-mongólskije jazykovýje sv'ázi*; Schönig, “Turko-Mongolic relations.”

still at times investigating and acknowledging borrowing, although not as fervently as those pushing against the perspective of genetic relatedness.¹⁵ The present study is not concerned with these early loanwords, regardless of trajectory, and when it is apparent that matching words in Kazakh or Kyrgyz and Mongolic are from this set of “nondistinct” words, they are excluded from analysis as part of this study.

There is also more general work on Turkic and Mongolic languages that presents (proposed) Mongolic etymologies or comparisons of many words found in Turkic languages. This body of literature includes Clauson, Räsänen, Doerfer, Tiénišev et al., Sievortján, Ljevítskaja, Dybó and Rassádin, and Dybó.¹⁶ These are systematic studies that build on, interact with and critique one another, but none of them focus on any one modern language, and some of them examine only the oldest attested varieties of each family.

There are, however, a number of in-depth studies of Mongolic loans into modern Turkic languages. Modern Turkic languages can roughly be divided based on the extent of historical contact they have had with Mongolic languages: languages *proximal* to Mongolic languages, with a long history of constant interactions; *near-medial* languages, with strong early interactions and periodic interactions since; *far-medial* languages, which are proximal to the near-medial languages, but have not had much direct contact with Mongolic for some time; and *distant* languages, which may have only had a short period of contact at a very early date.

¹⁵ Ilse opa worked closely with and held in high regard Nicholas Poppe, an avid Altaicist, and her views were aligned with his in this regard. Kara bagsh, in my experience with him, did not take a strong stance either way but did concede that he believed the nondistinct Turkic-Mongolic vocabulary likely to be loanwords, at the same time considering it important to study “Altaic” languages together as if they constitute related languages, whether by a common origin or convergence. For a third approach to the Altaic debate more in line with my current views on the matter—an approach which assumes nondistinct Turko-Mongolic forms to be loans between unrelated language families but also problematizes the term “Altaic” even as used for a group of convergent languages—see Beckwith (“The Altaic Convergence Theory”).

¹⁶ Clauson, *An Etymological Dictionary of Pre-Thirteenth-Century Turkish*; Räsänen, *Versuch eines etymologischen Wörterbuchs der Türksprachen*; Doerfer, *Türkische und mongolische Elemente im Neupersischen: I: Mongolische Elemente im Neupersischen*; idem, *Türkische und mongolische Elemente im Neupersischen: II: Türkische Elemente im Neupersischen, alif bis ta*; idem, *Türkische und mongolische Elemente im Neupersischen: III: Türkische Elemente im Neupersischen, gim bis kaf*; idem, *Türkische und mongolische Elemente im Neupersischen: IV: Türkische Elemente im Neupersischen (Schluß) und Register zur Gesamtarbeit*; Tiénišev et al., *Sravnitel'naja grammatika t'ürkskix jazyk'ov: l'éksika*; Sievortján, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 1*; idem, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 2*; idem, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 3*; idem, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 4*; Ljevítskaja, Dybó and Rassádin, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 5*; idem, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 6*; Dybó, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 7*; idem, *Etimologičeskij solvár' t'ürkskix jazyk'ov: 9*.

Studies of Mongolic material in proximal Turkic languages include those on Sakha,¹⁷ Tuvan and South Siberian Turkic languages generally.¹⁸ Studies on far-medial Turkic languages include those on Bashqort,¹⁹ Volga Qıpçaq (i.e., Tatar and Bashqort),²⁰ Chuvash,²¹ Karaim,²² Noğay,²³ Qaraçay-Balqar,²⁴ and the earlier varieties Cuman and Chağatay.²⁵ Studies on distant Turkic languages include those on Turkish and its predecessor Ottoman.²⁶ Besides a study of Mongolian loanwords in Salar,²⁷ the only systematic study of Mongolic loans into near-medial languages is limited to Mongolic loans into Kyrgyz beginning with the sound *a*.²⁸ The present study, then, represents a major expansion of work on Mongolic borrowings both in near-medial Turkic languages generally, and in Kazakh and Kyrgyz specifically.

A number of sources in this last group are not careful to exclude words which are nondistinct or could be earlier loans from Turkic into Mongolic, or are generally careful but miss a few. Commonly there are controversial entries, e.g., Csáki discusses the controversy behind whether *töle*-(krč) “pay” is borrowed from *töli*-(MMo) “pay off” or whether the Mongolic word is borrowed from Turkic, but concludes that it may be included as a borrowing from Mongolic found in Qarachay-Balqar.²⁹

2.3 Hypotheses About Mongolic Loanwords in Turkic

There are several hypotheses about Mongolic loanwords in Turkic that the present study is in a position to explore.

17 Kažuzyński, “Mongolische Elemente in der Jakutischen Sprache.”

18 Rassádin, “O mongól'skix zaimstvovanijax v t'úrkskix jazykax v Júžnoj Sibíri”; idem, *Mongolobur'át-skije zaimstvovanija v sibírskix t'úrkskix jazykax*; Tatárintsev, *Mongól'skoje jazykovóje vlijánije na tuvinskiju l'ěksiku*; Khabtagaeva, *Mongolic Elements in Tuvan*; Xabtagájeva, “O mongól'skix el'em'ěntax v tuvínskom jazyké.”

19 Išbiröin, “Mongól'skije zaimstvovanija v baškírskom jazyké.”

20 Csáki, *Middle Mongolian Loan Words in Volga Kipchak Languages*.

21 Róna-Tas, “Loan-Words of Ultimate Middle Mongolian Origin in Chuvash.”

22 Zajączkowski, “Die Mongolischen Elemente in der Karaimischen Sprache.”

23 Birtalan, “On Some Mongolian Loanwords in Nogai”; idem, “Further Remarks on the Mongolian Loanwords in Nogai.”

24 Csáki, “Middle Mongolian Loan Verbs as They Appear in Karachay-Balkar.”

25 Poppe, *Die mongolische Lehnwörter im Kommanischen*; Knüppel, “Noch einmal zu den mongolischen Lehnwörtern im Kommanischen”; Kincses Nagy, “Mongolian Loanwords in Chagatay”; Kincses- Nagy, *Mongolic Copies in Chaghatay*.

26 Tuna, “Osmanlıca Moğolca ödünç kelimeler”; idem, “Osmanlıcada Moğolca kelimeler”; Schöning, *Mongolische Lehnwörter im Westoghusischen*.

27 Drimba, “Remarks Mongolian Loanwords in the Salar Language.”

28 Kalieva, “Kırgız Türçesindeki Moğolca alıntı kelimeler.”

29 Csáki, “Middle Mongolian Loan Verbs as They Appear in Karachay-Balkar,” 57–58.

The *hypothesis of post-expansion borrowing* states that Mongolic borrowings in Turkic are essentially unattested until the Mongol expansion in the thirteenth century CE.³⁰ This may be tested by the dating of both Mongolic and Turkic sound changes attested in the borrowed forms.

The *hypothesis of proximity* states that Turkic languages west and north from the “central territory of the Mongols” have fewer direct Mongolic borrowings.³¹ This may be quantified by comparing the number of loans identified by sources that are complete studies of Mongolic loanwords in various Turkic languages—and hence are fairly exhaustive—to the results of this study.

The *hypothesis of secondary borrowing* states that Mongolic words in Bashqort, Balqar, Qumuq, Tatar, Ottoman, Crimean Tatar and Chuvash (far-medial and distant languages) are borrowed via another Turkic language.³² This hypothesis in theory may be quantified by identifying unexpected sound changes—e.g., changes picked up in the intermediary language that are not expected if the loans had entered the language directly. The present study does examine unexpected sound changes in Mongolic loanwords into Kazakh and Kyrgyz, and it is considered whether the words that underwent them may have been borrowed through an intermediary language. Similarly, it may be possible to examine whether Mongolic borrowings in the languages discussed by Ligeti went through an intermediary language represented in modern times by Kazakh and Kyrgyz.

This last hypothesis is mostly outside of the scope of this study, but it is important to take into consideration when an unexpected sound change is encountered.

3 Methodology

This section overviews why identifying loanwords can be a difficult task, especially between Turkic and Mongolic languages (Section 3.1), how not to identify loanwords (Section 3.2), ways that loanwords can be identified (Section 3.3) and further details of the methodology of this study (Section 3.4).

3.1 The Difficulty of Identifying Loanwords

Identification of loanwords between Turkic and Mongolic is difficult, due to various complicating factors.

³⁰ Clark, “Mongol Elements in Old Turkic?”

³¹ Ligeti, “Mongolos jövevényiszavaink kérdése.”

³² Ibid.

First of all, a good handful of words reconstructable to the two respective proto-languages are not distinctive, or are minimally distinctive. For example, **qara* “black” may be reconstructed for both Proto-Turkic and Proto-Mongolic. Even in modern varieties, reflexes of these forms are not very distinct, e.g., Turkic *qara*^(kaz,kir) “black” corresponds to Mongolic *xar*^(khk) and *qara*^(sce) “id”.³³ Hence borrowed words can be very difficult to tell apart from nondistinct words, cf. *quda*^(kaz,kir) “(male) relatives of child’s spouse” is borrowed from Mongolic, with forms like *quda*^(WMo) and *xud*^(khk) “id”.

Additionally, as mentioned previously, borrowing has happened in both directions. The result includes borrowings into Turkic languages of Mongolic forms of nondistinct Turko-Mongolic words as well as borrowings into Turkic languages of Mongolic words borrowed originally from Turkic. Both of these types of borrowings might be termed “reborrowings”, since in both cases these words presumably existed in different forms before the borrowing replaced those forms. Examples include the following:

ayıl^(kir) “village” ← *ayıl*^(MMo) “settlement” ≈ *ağıl*^(OTk) “settlement” → *awıl*^(kaz) “village”;
qudıq^(kaz), *quduq*^(kir) “well” ← *quduy*^(WMo) “id” ← **quduy*^(PTk) “id” (← **qud*^(PTk) “pour”
 → *quy*^(kaz,kir) “pour”) → *kuyu*^(tur) “well”.

In this case, the Mongolic phonological form of *ayıl*^(kir) demonstrates that it must be of Mongolic origin and not Turkic, like *awıl*^(kaz) is. Likewise, the fact that *qudıq*^(kaz), *quduq*^(kir) did not undergo the **d* → *y* / *V* sound change like *kuyu*^(tur) did makes it clear that it must have been reborrowed,³⁴ very likely from a Mongolic source.

The fact that borrowing of this sort has been going on for at least one millennium (and likely as many as two millennia) can make it difficult to sort out the ultimate origin of words and the direction of borrowing. For example, if *ayıl*^(MMo) “settlement” ≈ *ağıl*^(OTk) “id” is not common to both language families due to a shared origin (“Altaic”), then it is not clear which family borrowed it from the other. With *quduy*^(MMo,OTk) “well”, it is clearer that this is a borrowing from Turkic, because of the existence of the stem **qud*^(PTk) “pour”, which it is derived from. If indeed *ayıl*^(MMo) turned out to be a borrowing from Turkic, then the situation of these two words may indeed be similar.

Another problem is that the phonologies of early Turkic and early Mongolic languages are not extremely different. There are many commonalities, such as similar

33 Khalkha forms in this paper are provided in something resembling their underlying representations, which often differ from orthographic or pronounced forms. For example, the word that would be transcribed here as *xaaly*^(khk) “door” is orthographically *xaalga*^(khk), and is pronounced *xaaləq*^(khk). See Svantesson et al. (*The Phonology of Mongolian*) for details on the mapping between Khalkha underlying forms, orthographic forms and pronunciations. In a few examples in this paper, pronounced forms are given to highlight a phonological process. Otherwise, common philological conventions are used in transcriptions, with some minor differences between Turkic and Mongolic transcriptions; e.g., where Turkic transcriptions use *ğ* for a voiced dorsal obstruent that is not a velar stop, Mongolic transcriptions use *y*.

34 I.e., it did not undergo the change of proto-Turkic *d* to *y* after a vowel.

vowel inventories that include front rounded vowels, similar consonant inventories and even similar environmental distribution of consonants (e.g., complementary distribution of uvulars and velars depending on adjacent vowel backness),³⁵ and similar syllable structure. There are a number of specific phonotactic differences (such as the lack of many high-sonority consonants word-initially in Turkic),³⁶ but even many of those can be attributed to later changes and may not be present in reconstructions.

The similarity of the phonologies of the languages, besides making it harder to tell the ultimate origin of loans, also results in disguised borrowings. For example, Turkic **yöl*^(PTk) “road, path” can be understood to have been borrowed into Mongolic as *jol*^(MMo) “luck”, likely from a Turkic variety that underwent a word-initial change **y* → *j*. In Kyrgyz and Kazakh, then, which both underwent this same change, the form of *jol*^(kir,kaz) “road, path; luck” could come from either source; however, the semantics suggest that it may indeed come from *both* sources. Sakha provides clear evidence of this in the phonology: *suol*^(sah) “road, path” is of Turkic origin, undergoing the expected sound changes from Proto-Turkic, while *jol*^(sah) “luck” was borrowed from a Mongolic source after those sound changes had taken place, so the word was not affected by them. Another example based solely on semantic evidence and lacking phonological evidence, is *toqu*^(kir) “weave; saddle (v.)”, with one meaning inherited from Turkic (*toqu*^(OTk) “weave”) and the other meaning from Mongolic (*toqu*^(MMo) “saddle (v.)”).

More generally, words come and go in all languages, and words change meanings in all languages, obscuring origins or making it difficult to say for sure the origin of a given similar word or even that the word is the same.

3.2 How *Not* to Identify a Loanword

There are a number of ways *not* to identify a loanword. Here I will overview the following “anticriteria”: early absence of a word, early presence of a word, prevalence of a word in one or the other family, semantic narrowing or broadening, and cultural history. It is important to explain why these were not used as criteria in the identification of loanwords.

Early absence of a word. When a word is absent in corpora of early varieties, this does not mean that the word was borrowed into later varieties from another source, and it does not mean that its source in later varieties is another language family. It could very easily be a simple case of a word not attested in an early variety. For example, if a word is not attested in any pre-thirteenth-century CE Turkic variety, but is attested in

35 Washington, “Vowel harmony in Turkic languages,” Chap. 59 in *The Oxford Handbook of Vowel Harmony*, edited by Nancy Ritter and Harry van der Hulst. Oxford: Oxford University Press (forthcoming).

36 Washington, “Sonority-Based Affix Unfaithfulness in Turkic Languages.”

later Mongolic sources and later Turkic languages, it does not necessarily mean that the word is of Mongolic origin. It is possible that the word was used in Old Turkic and is simply not present in the Old Turkic corpus.

Early presence of a word. Similarly, the presence of a word in an early variety of language family A and later varieties of language family B does not mean that the word was borrowed from language family A into language family B. For example, when a word is attested in an early Mongolic corpus and is also present in modern Turkic varieties, this does not mean the word was borrowed from a Mongolic variety into the Turkic varieties. It is possible that the word was borrowed from a Turkic source into the early Mongolic variety, that the word is borrowed from a third language family or that the word is otherwise nondistinct in Turkic and Mongolic.

It should be noted, however, that the absence of a word in pre-thirteenth-century CE Turkic varieties and its presence in an early Mongolic variety may suggest that evidence of a Mongolic origin should be investigated, especially given the scarcity of Mongolic material from this time frame relative to Turkic material. The apparent presence of a word in pre-thirteenth-century CE Turkic varieties, though, may sometimes warrant additional evaluation.³⁷

Prevalence of word in family. The greater prevalence of a word in one language family does not mean it did not originate in the other. For example, the wide distribution of *čöl*^(MMo) “desert, desolate” in Mongolic (along with derivatives and various meanings) does not necessarily mean that *čöl*^(kir), *šöl*^(kaz) “desert” is of Mongolic origin. While not attested in most Turkic languages, this word appears to have been attested in Turkic relatively early. It is possible that a word like this was in fact a borrowing in the other direction (from Turkic to Mongolic),³⁸ and simply became more prevalent in Mongolic while losing prevalence in Turkic.

Semantic narrowing or broadening. Csáki proposes that the language with the narrower meaning is the language into which a word was borrowed.³⁹ Relying on semantic narrowing or broadening to determine direction of a loan word, however, is impossible, since narrowing and broadening occur frequently within any given language. So while narrowing may occur in the context of loanwords, as in *čečen*^(MMo) “wise, skillful” → *šešen*^(kaz) “orator”, *čečen*^(kir) “well-spoken, orator”, so does broadening, as in *möče*^(MMo) “limb” → *müčö*^(kir), *müše*^(kaz) “body part, member”.

³⁷ As discussed by Clark, “Mongol Elements in Old Turkic?”

³⁸ As suggested by Räsänen, *Versuch eines etymologischen Wörterbuchs der Türksprachen*, 117.

³⁹ Csáki, *Middle Mongolian Loan Words in Volga Kipchak Languages*.

Cultural history. Csáki proposes that if a word is of a domain associated with one culture then it must be a borrowing from the language family associated with that culture.⁴⁰ She goes so far as to suggest that words associated with horse breeding in Turkic languages are more likely to have a Mongolic origin. While some words in Turkic languages in that semantic domain are from Mongolic, like *dönen*^(kaz), *dönön*^(kir) ← *dönen*^(MMo) “four-year-old male livestock”, plenty also have Turkic origins, like *ayğır*^(kaz,kir) ← *aðğır*^(OTk) “stallion”, *jılqı*^(kaz,kir) “herd horse” ← *yılqı*^(OTk) “herd horse, large livestock”. For the most part, then, semantic domain must be ignored as a tool for identifying borrowings.

Previous studies or dictionaries. It must also be said that a word should not be considered a loanword just because a previous source or etymological dictionary identifies it as such. Not all sources are equally careful or use the same principles to identify loanwords. Words identified by previous sources of this type are, however, worth considering, and when excluded from the current study, must be excluded for principled reasons.

3.3 Potential Ways to Identify a Loanword

Fortunately, there exist a number of ways that a loanword can be identified.

Phonological criteria. If a word contains a sound in a position where it should not occur in nonborrowed words (based on known phonological gaps or sound changes), then there’s a good chance it is a loanword. For example, Mongolic loanwords in Kazakh and Kyrgyz appear to comprise the earliest layer of the lexicon with initial *d*, *n* and *s*:

düley^(kaz), *dülöy*^(kir) “deaf” ← *dülei*^(MMo) “id”,

şırt^(kir) “stitch, quilt” ← *siri*^(MMo) “id”,⁴¹

nağası^(kaz) “male relative on mother’s side” ← *nayaçu*^(MMo) “id”.

Aside from a very small handful of exceptions, such as *ne*^(kaz,kir) “what” and *de*^(kaz,kir) “say”, there are no Turkic stems that fit these phonological patterns in Kazakh and/or Kyrgyz. It is also worth mentioning that the reasoning may be slightly circular, since we can examine the ways in which Mongolic words were and were not adapted to Turkic phonology (Section 4 2); the ways they were not adapted, then, may be used as evidence of their identity as loanwords.

⁴⁰ Ibid.

⁴¹ But see Clark (“Mongol Elements in Old Turkic?,” 151–152), who suggests that this root may not be a Mongolic loanword in Turkic.

Morphological criteria. If a word contains a morpheme that is used widely in one language family and is only attested in a few words in another family, then a word that contains that morpheme attested in both language families is likely to be a loan from the family where the morpheme is widely used. For example, *-yul*^(MMo) is attested in a few loanwords from Mongolic in Kazakh and Kyrgyz,⁴² but not elsewhere:

jasawıl^(kaz), *jasool*^(kir) “yesaul, lackey” ← *jasayul*^(MMo) “yesaul (marshal)” and
qarawıl^(kaz), *qarool*^(kir) “guard” ← *qarayul*^(MMo) “id”.⁴³

Etymological criteria. If a word is attested in two language families but the root from which it is derived is attested widely in one family but not attested in the other, then the word is likely borrowed from the language family where the root is attested into the other family. For example, the positing of *unaa*^(kir) “transport” as borrowed from *unuγa*^(MMo) “transport” is supported by the existence of *unu-*^(MMo) “ride” throughout Mongolic and its absence throughout Turkic.

Synonyms. If a language of one family has two words, roughly synonyms, for a concept, and one of the words corresponds to the sole word for that concept in another language family, then that word is likely a borrowing from that language family. For example, in Kyrgyz *qolqap*^(kir) “glove, mitten” is of transparently Turkic etymology, while the synonym *meeley*^(kir) “glove, mitten” corresponds to Mongolic *begelei*^(MMo) “glove, mitten”, where no other word is commonly attested for this concept. Hence the latter Kyrgyz word is likely to be a borrowing from Mongolic.

No single criterion listed here can be used on its own to determine whether or not a word is a loanword from a particular source language. These strategies must be used together, along with careful application of the comparative method, to determine the origin of a word. Even then it can be unclear.

3.4 Identifying Material for this Study

This study was guided by the above-mentioned ideas about how not to identify loanwords and how to identify loanwords. Several hundred vocabulary items were identified that were similar between Mongolian on the one hand and Kazakh and/or Kyrgyz on the other. Then they were filtered based on origin; only words that were plausibly

⁴² See Poppe (*Grammar of Written Mongolian*, 46) for some discussion of *-yul*.

⁴³ The verb *qara-*^(WMo,kaz,kir) “look at, watch” is widely considered a word of Mongolic origin, likely due to its more limited distribution in Turkic, the existence of the Turkic synonym **baq-*^(PTK) and the lack of synonyms in Mongolic. These criteria are sufficient for the present study to come to the same conclusion; however, there is a chance this word could be a nondistinct Turko-Mongolic word.

of Mongolic origin and not common to Mongolic and Turkic languages were included in the study. Additionally, all the words from Csáki were compared against Kyrgyz,⁴⁴ from which about 115 matched words in Kyrgyz. From this list as well, several items were removed that were not uncontroversially borrowings from Mongolic. In the end, approximately 200 borrowings from Mongolic into Kazakh and/or Kyrgyz were identified.⁴⁵ Toponyms were not considered, although there do appear to be quite a few of Mongolic origin in current Kazakh- and Kyrgyz-speaking areas.

Sources consulted for early Turkic forms include Nadiel'ájev et al.,⁴⁶ Räsänen and Clauson.⁴⁷ Sievort'án; L'evítskaja, Dybó and Rassádin; and Dybó were consulted for their perspectives on Turkic etymology, including reconstructions.⁴⁸ Zhu and Junast were consulted for modern Mongolic forms,⁴⁹ Lessing was consulted for Written Mongolic forms and Sanžéjev, Orlóvskaja and Ševiernina and Nugteren were consulted for their perspectives on Mongolic reconstruction.⁵⁰ Some Turkic and Mongolic dictionaries were also consulted for modern forms, such as Judáxin and Munin.⁵¹

It should be noted that there are two main reasons this study examines both Kazakh and Kyrgyz material. First of all, it is convenient to study the two languages together. While the languages are different along all dimensions of grammar (phonetics, phonology, morphology, syntax, semantics, lexicon, etc.), they are also very similar, and enjoy some tangible (albeit sometimes limited) level of mutual intelligibility. For the purposes of this study, a huge amount of lexical overlap was expected. Secondly, the differences between Kazakh and Kyrgyz present alternate advantages for determining which changes might have happened after Mongolic words entered Turkic and which happened before: e.g., Kazakh has merged *š with s, while Kyrgyz has not (Section 4.2.2), and Kyrgyz (like many Mongolic languages as well as other Turkic languages in contact with Mongolic) has acquired long vowels from lenition of intervocalic dorsals (Sections 4.2.4 and 4.2.5), while Kazakh has not.

44 Csáki, *Middle Mongolian Loan Words in Volga Kipchak Languages*.

45 The complete list of forms considered in this study, which continues to be a work in progress, is available at <https://doi.org/10.5281/zenodo.7753379>.

46 Nadiel'ájev et al., *Dr'evn'e'túr'skij Slovár'*.

47 Räsänen, *Versuch eines etymologischen Wörterbuchs der Türksprachen*; Clauson, *An Etymological Dictionary of Pre-Thirteenth-Century Turkish*.

48 Sievort'án, *Etimologičeskij solvár' t'úr'skix jazykóv*: 1; idem, *Etimologičeskij solvár' t'úr'skix jazykóv*: 2; idem, *Etimologičeskij solvár' t'úr'skix jazykóv*: 3; idem, *Etimologičeskij solvár' t'úr'skix jazykóv*: 4; L'evítskaja, Dybó and Rassádin, *Etimologičeskij solvár' t'úr'skix jazykóv*: 5; idem, *Etimologičeskij solvár' t'úr'skix jazykóv*: 6; Dybó, *Etimologičeskij solvár' t'úr'skix jazykóv*: 7; idem, *Etimologičeskij solvár' t'úr'skix jazykóv*: 9.

49 Zhu and Junast, *Ménggǔ yǔzú yǔyán cídiǎn*.

50 Lessing, *Mongolian-English Dictionary*; Sanžéjev, Orlóvskaja and Ševiernina, *Etimologičeskij slovár' mongólskix jazykóv, I: A–E*; idem, *Etimologičeskij slovár' mongólskix jazykóv, II: G–P*; idem, *Etimologičeskij slovár' mongólskix jazykóv, III: Q–Z*; Nugteren, *Mongolic Phonology and the Qinghai- Gansu Languages*.

51 Judáxin, *Qırğızça-orusça sözdük*; Munin, *Xal'mg-ors tol'*.

4 Findings

This section overviews the findings of this study along the lines of semantic domains attested in borrowed material (Section 4.1), the phonological properties of borrowings (Section 4.2), borrowings of bound morphemes (Section 4.3), the range of parts of speech borrowed (Section 4.4) and the number of borrowings (Section 4.5).

4.1 Semantic Domains

Many previous studies of Mongolic loanwords in Turkic are focused on single semantic domains or concern themselves with delineating the borrowings along the lines of semantic domains.⁵²

Indeed, the borrowing of words of certain semantic domains can allow for inference of a lot of detail about the nature of the language contact situation. For example, if many kinship terms were borrowed, that suggests that both languages were spoken in home situations and may even suggest that first-language speakers of the two languages were intermarrying. If borrowing is limited to certain types of technology, it does not imply an intense language contact situation, simply the exchange of technology. Likewise, if borrowings are limited to just legal and administrative terminology, it suggests that the language that originated those borrowings had legal and administrative dominance—i.e., that the speakers of the other were subordinated in that regard.

Table 1 shows some semantic domains represented by the borrowings identified in Kazakh and Kyrgyz in comparison to previous sources on Tuvan and Volga-area Turkic.⁵³

Table 1: Some of the semantic domains of Mongolic borrowings in Kazakh and Kyrgyz, as compared with Tuvan and Volga-area Turkic languages.

Domain	Tuvan	Kazakh/Kyrgyz	Tatar/Bashqort
horse breeding	✓	✓	✓
hunting & falconry	✓	✓	✓
kinship	✓	✓	✓
flora/fauna	✓	✓	✓
tools	✓	✓	✓

⁵² Sources of the first type include Taşbaş (“The Turkic Kinship System”; “Kinship Loanwords in the Turkic Languages”), Shamaeva and Prokopieva (“Mongolian Loanwords in the Figurative Words of the Yakut Language”) and Niéstiérova (“Mongólskije zaímstvovaniia v l’éksike rybolóbstva jakútskogo jazyká”), while sources of the second type include Khabtagaeva (*Mongolic Elements in Tuvan*) and Csáki (*Middle Mongolian Loan Words in Volga Kipchak Languages*).

⁵³ Tuvan per Khabtagaeva (*Mongolic Elements in Tuvan*), Volga-area Turkic per Csáki (*Middle Mongolian Loan Words in Volga Kipchak Languages*).

Table 1 (continued)

Domain	Tuvan	Kazakh/Kyrgyz	Tatar/Bashqort
food & food prep	✓	✓	✓
body parts	✓	✓	✓
textile & fiber work	✓	✓	✗
law & politics	✓	✗	✗
military	✓	✗	✗
religion & folklore	✓	✗	✗

As an example of one of the categories, a number of Kazakh and Kyrgyz kinship terms and terms related to marriage are of Mongolic origin:⁵⁴

- abisın*^(kaz,kir) “wife of husband’s brother” ← *abisun*^(MMo) “id”,
baǵa^(kir), *baǵa*^(kar) “wife’s sister’s husband” ← *böle*^(WMo) “id”,
bölö^(kir), *böle*^(kaz) “child of mother’s sister”⁵⁵ ← *böle*^(WMo) “sister’s child”,
quda^(kaz,kir) “(usually male) relative of child’s spouse” ← *quda*^(WMo) “id”,
qudaǵy^(kaz,kir) “(grand)mother of child’s spouse” ← *qudayai~qudayui*^(WMo) “id”,
zawşı^(kaz), *juuču*^(kir) “young man’s parents or representative in match-making visit”
← *ǵayuči*^(WMo) “id”.

The fact that so many borrowings are related to marriage suggests intermarriage between Turkic speakers and Mongolic speakers. There are many forms this could take, discussed in Section 5.

Also lending strength to a model involving the integration of Mongolic speakers into Turkic-speaking families, the Turkic word for “give birth”, *tuu*^(kir) in Kyrgyz, was replaced with the Mongolic word *törö*^(kir) for humans, with the Turkic word relegated to animal births and in expressions such as *tuulǵan kün*^(kir) “birthday”. Even the word for “family” in Kyrgyz, *üy bülö*^(kir), appears to be a partial borrowing from Mongolic, cf. *ger бүл*^(khk) “id”.

In relation to falconry, there are no fewer than three words for falcons and hawks borrowed from Mongolic (the specific referents of these words and the distinctions between them likely require further attention),⁵⁶ and there is also a borrowed word for headgear used in falconry:

⁵⁴ The terms *aǵa*^(kaz,kir), *ake*^(kir) “older brother, uncle” are likely also of Mongolic origin (cf. *aqa*^(MMo) “older brother”, *aya*^(MMo) “respected older male (relative)”), and the words *ǵze*^(kaz) “grandmother” and *eje*^(kir) “older sister” may also be (cf. *eji*^(MMo) “mother”, but also *eje*^(OTK) “older sister”).

⁵⁵ There may be regional variation in the meaning of this term in Kyrgyz.

⁵⁶ The word *sar*, *sar*^(kir) “kite, buzzard” may also be borrowed from Mongolic, cf. *sar*^(MMo) “harrier, buzzard”, but the borrowing in this case is at least as likely to have been from Turkic to Mongolic.

itelgi^(kir) “species of falcon” ← *itelgi*^(MMo) “id”,
qarşığa^(kaz), *qarçığa*^(kir) “goshawk” ← **qarçıya*^(MMo) “id”,
suñqar^(kaz), *šumqar/suñqar*^(kir) “hawk, falcon” ← **siñqor*^(MMo) “id”,⁵⁷
tomağa^(kaz), *tomoğo*^(kir) “falconry headgear” ← *tomuya*^(WMo) “id”.

The borrowing of this set of words from Mongolic into Kazakh and Kyrgyz suggests that Central Asian falconry culture may have originated in Mongolic-speaking communities, with vocabulary being borrowed along with the technology. It is possible, however, that Mongolic words simply displaced existing Turkic words. Other words from Mongolic related to hunting include *bötögö*^(kir) “bird innards”.

Regarding horse breeding and equestrian culture, words for different ages of livestock, including horses (e.g., *dönen*^(kaz), *dönezin*^(kaz), *qunan*^(kaz,kir), *qunañin ~ qunayın*^(kir)); words for equine coat colors (e.g., *jeerde*^(kir), *čabdar*^(kir), *küröñ*^(kir), *börtö*^(kir)),⁵⁸ the words *noqta*^(kaz)/*noqto*^(kir) “halter”, *toqum*^(kir) “saddle cloth” and *qanjiğa*^(kir) “game strap”; the word *kökül*^(kir) “forelock”; and the general word for “mounted livestock” (*unaa*^(kir), later coming to mean “transport” more generally) were all borrowed from Mongolic into Kazakh and Kyrgyz.⁵⁹ Other words of Mongolic origin related to livestock include *bodo mal*^(kir) “heavy livestock” and *iñgen*^(kir) “mature female camel”.

Regarding textile and fiber work, the words *šibege*^(kir) “awl” (also used in the compound *ilme šibege*^(kir) “crochet hook”), *širi*^(kir) “quilt (v.)”, *širdaq*^(kir) “felt rug”, *oymo*^(kir) “stitched pattern”, *temene*^(kir) “sackcloth (or any large) needle” and *širi*^(kir) “a type of leather” all made their way to Kazakh and/or Kyrgyz from Mongolic. It should be noted that these technologies are relatively relegated to home and family settings, and traditionally belong to the domain of women, which again suggests a situation where Mongolic words entered Turkic via the incorporation of Mongolic speakers into Turkic-speaking society.

4.2 Phonological Properties

The phonological properties of Mongolic loanwords into Kazakh and Kyrgyz are examined in this section. Discussed specifically are Mongolic sound changes not attested (Section 4.2.1) and attested (Section 4.2.2) in the borrowed material, as well as the NW Turkic sound changes missed (Section 4.2.3) and attested (Section 4.2.4) in this material. The specific issue of intervocalic dorsals is explored (Section 4.2.5), as well as the effect

⁵⁷ There is an early Turkic form of this word which may indicate a borrowing in either direction or a nondistinct word, but the initial *š* in Kyrgyz strongly suggests a Mongolic borrowing in this case.

⁵⁸ The coat color *qoñır*^(kaz), *qoñır*^(kir) appears to be a nondistinct Turkic-Mongolic word.

⁵⁹ The word *uquruq*^(kir) “lasso pole” = *uyurya*^(MMo), *uqruq*^(OTk) appears at first to be an nondistinct Turkic-Mongolic word, but further work on its history is needed.

the loanwords had and could have had but did not on the phonologies of Kazakh and Kyrgyz (Section 4.2.6). A few open questions are also examined (Section 4.2.7).

4.2.1 Mongolic Sound Changes Not Attested

A number of common Mongolic sound changes appear not to have been undergone by the examined Mongolic loans in Kazakh and Kyrgyz. As such, these words could not have been borrowed from a Mongolic variety that had undergone any one of these changes after they had taken place. Hence, when datable, these sound changes may be used to establish something of a *terminus ante quem* for the loans—but only if the words were borrowed from a variety where the changes later applied. However, not all Mongolic languages underwent all of these changes, and some “peripheral” Mongolic languages, like Monguor and Dongxiang (Santa) underwent few or none of them.

The following Mongolic sound changes, listed in rough chronological order, were missed in all of the loans examined in Kazakh and Kyrgyz:

apocope (final vowel deletion). Example:

qolomto^(kir) “hearth” ← *ʧolomta*^(MMo) “id” → *ʧolomt*^(khk) “id”;

vowel assimilation (“palatal breaking”). Examples:

čida^(kir) “put up with” ← *čida*^(MMo) “be able to” → *čad*^(khk) “be able to”;

ʃrǵa^(kir) “revel” ← *ʃrǵa*^(MMo) “id” → *ʃarɣ*^(khk) “id”;

frication of K (*q* and *k*). Examples:

šilekey^(kir) “saliva” ← **silükei*^(MMo) “saliva, slobbering” → *šülx̥i*^(khk) “slobbery”;

čuqul^(kir) “urgent” ← *čuqul*^(MMo) “important” → *čuxl*^(khk) “important”;

depalatalization. Examples:

ʃolbun^(kir) “stray” ← *ʃolbin*^(MMo) “id” → *dzolbiŋ*^(khk) “id”, *zolbiŋ*^(bxr) “id”;

čoqu^(kir) “temple, summit” ← *čoqu*^(MMo) “temple” → *tsox*^(khk) “top of forehead”;

final n velarization. Examples:

ʃolbun^(kir) “stray” ← *ʃolbin*^(MMo) “id” → *dzolbiŋ*^(khk) “id”, *zolbiŋ*^(bxr) “id”;

deaffrication. Example:

čičirqanaq^(kir) “sea buckthorn” ← **čičäryana*^(MMo) “id” → *šasäryana*^(bxr) “id”;

ʃolbun^(kir) “stray” ← *ʃolbin*^(MMo) “id” → *zolbiŋ*^(bxr) “id”;

debuccalization. Example:

sööm^(kir) “span” ← **sögüm/sögem*^(MMo) “id” → *hööm*^(bua) “id”;

shift of *Vi* diphthongs. Examples:

maṇday^(kaz,kir) “forehead” ← *maṇlai*^(MMo) “id” → *maṇlæ*^(khk),

ayıl^(kir) “village” ← *ayıl*^(MMo) “settlement” → *ææl~æel*^(khk) “id”, *ææl*^(xal) “id”;

palatal fronting of back vowels. Examples:

tāqum^(kaz,kir) “kneepit” ← *takim*^(WMo) “id” → *tæxⁱm*^(khk) “id”, *tækm*^(xal).

Some of these sound changes attested in Mongolic have been dated.

Depalatalization is discussed by Ramstedt and Kałużyński as occurring or beginning no earlier than the fourteenth century CE in Khalkha, Buryat and Kalmyk.⁶⁰ More precise measures include Kara,⁶¹ who places depalatalization in Kalmyk and Khalkha around the late seventeenth century, and Clark who claims that depalatalization occurred in Buryat after the 1620s but before the 1680s to the 1720s.⁶² Depalatalization is widely attested in Mongolic languages (outside of Southern Mongolic) as well as in some Turkic languages.

Deaffrication is claimed by Kara to have affected Buryat by the seventeenth century,⁶³ and Clark suggests that it occurred in two stages during the period of the 1680s to the 1720s.⁶⁴ Deaffrication is attested in many Mongolic and Turkic languages.

Kazakh is among the Turkic languages where deaffrication (cf. *zalğa*^(kaz) “connect, join; extend; continue” ← *ǰalya*^(MMo) “id”) and depalatalization (*şunqar*^(kaz) “falcon” ← *şınqor*^(late MMo) “id”) are attested. However, the details of these changes are different in Kazakh than in most Mongolic languages that underwent them (cf. *ǰaly*^(khk) “connect; etc.”, which underwent depalatalization but not deaffrication, and *şonx*^(khk) “falcon”, which did not undergo depalatalization, all contrary to the fate of these stems in Kazakh),⁶⁵ and the two sound changes affected the entire lexicon of Kazakh, not just Mongolic loans. These facts taken together suggest that Mongolic depalatalization and deaffrication had not occurred in Mongolic loanwords when they were borrowed into the ancestor of Kazakh. Deaffrication and depalatalization did not occur in Kyrgyz, and the Mongolic loanwords in Kyrgyz do not exhibit them either, making it clear that these changes had not occurred yet before the words were borrowed into the ancestor of Kyrgyz.

⁶⁰ Ramstedt, *Einführung in die Altaische Sprachwissenschaft*; Kałużyński, “Mongolische Elemente in der Jakutischen Sprache.”

⁶¹ György Kara, personal communication, 2009-10-12.

⁶² Clark, “A Problem in Buryat Historical Linguistics.”

⁶³ György Kara, personal communication, 2009-10-12.

⁶⁴ Clark, “A Problem in Buryat Historical Linguistics.”

⁶⁵ Although the details are different, the occurrence of deaffrication and depalatalization, along with debuccalization, throughout a contiguous region of Turkic, Mongolic and Tungusic languages suggests that the changes spread by way of contact between these languages.

4.2.2 Mongolic Sound Changes Attested

While many Mongolic sound changes are not attested in loanwords into Kazakh and Kyrgyz, a couple Mongolic sound changes are attested in these loanwords, although not with complete consistency.

The first of these sound changes is palatalization, whereby an *s became *š* before *i*. This sound change cannot be detected in Kazakh because in Kazakh all *š* sounds were historically depalatalized to *s*, resulting in neutralization (see Section 4.2.4 for more on this).

palatalization (variable). Examples:

- šibege*^(kir) “awl” ← **sibüge*^(MMo) “id” → *šöwg*^(khk) “id”,
šilekey^(kir) “saliva” ← *silükei*^(MMo) “saliva, slobbering” → *šülxi*^(khk) “slobbery”,
šır-^(kir) “stitch, quilt” ← **siri-*^(MMo) “id” → *šir-*^(khk) “id”,
štyraq^(kir) “shank” ← *sigira*^(MMo) “hoof” → *šir*^(khk) “shank”,
šüüdürüm^(kir) “dew” ← *sigüderi*^(MMo) “id” → *šüüdr*^(khk) “id”.

This palatalization is one of the earliest sound changes attested in these loanwords, with reference to the reconstruction of Proto-Mongolic. Clark claims only that it occurred at some point before the period of the 1660s to the 1720s,⁶⁶ while Kara locates the change more specifically in the thirteenth into the fourteenth century CE.⁶⁷ This change is attested throughout Mongolic languages.

However, a handful of Mongolic loanwords in Kyrgyz seem to have avoided palatalization.

unexpected lack of palatalization. Examples:

- šırqoo*^(kir) “illness” ← *sırqa*^(MMo) “wound” → *šarx*^(khk) “injury, wound”,
sülöösün^(kir) “lynx” ← *silegüsün*^(MMo) “lynx” → *šilüs*^(khk) “id”.

In *sülöösün*^(kir), it is possible that the rounding of the first vowel (discussed in Section 4.2.4) blocked palatalization (i.e., the *s* was no longer in an environment, such as before *i*, where palatalization would have been triggered), but this would mean that a Turkic-specific change preceded a Mongolic change. Given that this Mongolic change is early, it might be possible that the community where this borrowing occurred was bilingual when both of these changes occurred, allowing for both of the changes to affect a single word. However, this rule ordering does not seem to have applied to *šüüdürüm*^(kir), where palatalization did take place despite the anticipatory rounding, and the explanation does not work for

⁶⁶ Clark, “A Problem in Buryat Historical Linguistics.”

⁶⁷ György Kara, personal communication, 2009-10-14.

sırqoo^(kir). Another explanation might be that the words where palatalization did not occur were borrowed earlier, before palatalization took place in Mongolic. Alternatively, palatalization may have been spreading by way of lexical diffusion when the words were being borrowed, in which case some words had not been targeted by the change yet. Further work is needed on this question.

vowel reduction (sporadic). Examples:

belterge^(MMo) “wolf cub” → *böltürük*^(kir) “id”,
qural^(MMo) “get-together” → *qurultay*^(kir) “convention”,
sigüderi^(MMo) “dew” → *šüüdürüm*^(kir) “id”,
soqar^(MMo) “blind” → *soqur*^(kir) “id”.

The identified vowel reduction may be due to inadequate reconstructions of the Mongolic material. For example, the reconstruction **soqar*^(MMo) is based on comparative evidence,⁶⁸ but some sources reconstruct **soqur*,⁶⁹ which corresponds to the Kyrgyz form.

There are also words that have the “reverse” pattern, where the borrowed form has a nonhigh vowel instead of a Mongolic high vowel, such as *sibege*^(kir) “awl” ← **sibüge*^(PMo) “id”, *šilekey*^(kir) “saliva” ← **silükei*^(PMo) “saliva, slobbering” and *tomaya*^(kaz), *tomoyo*^(kir) “hawk headgear” ← *tomuya*^(MMo).⁷⁰ As discussed by Nugteren,⁷¹ however, there is evidence for reconstructing **siböge*^(MMo) and **silökei*^(MMo) with a nonhigh vowel, which in the former case may even have secondary rounding, from earlier ***sibege*. The form of the Kyrgyz borrowing may be additional evidence of this and would hence suggest a particularly early borrowing.

4.2.3 NW Turkic Sound Changes Missed

One sound change specific to NW Turkic that appears not to have affected Mongolic loanwords is post-vocalic **d* lenition, which involved the change of Proto-Turkic **d* to the glide *y* after vowels.

post-vocalic **d* lenition. Examples of occurrence by position, with analogous Mongolic loanwords where it did not occur:

⁶⁸ See e.g. Nugteren, *Mongolic Phonology and the Qinghai-Gansu Languages*, 500.

⁶⁹ Sanžéjev, Orlóvsckaja and Ševíérnina, *Etimologičeskij slovár' mongól'skix jazykóv*, III: Q–Z.

⁷⁰ Reconstructions per *ibid.*, 108, 114.

⁷¹ Nugteren, *Mongolic Phonology and the Qinghai-Gansu Languages*, 66, 118, 132, 494, 496.

intervocalic: *ayaq*^(kaz,kir) “foot, leg” ← **hadaq*^(PTk) “id”,

cf. *saadaq*^(kir), *sadaq*^(kaz) “quiver” ← *sayaday*^(WMo) “id”;

syllable-final: *quyruq*^(kaz), *quyruq*^(kir) “tail” ← **qudruq*^(PTk) “id”

(no comparable pattern identified in material from Mongolic);

word-final: *boy*^(kaz,kir) “stature” ← **bod*^(PTk) “id”,

cf. *qıtar*^(kir) “black paint” ← *kitad*^(WMo) “Chinese”.

This sound change affected NW, SW and SE Turkic languages, as well as Southern Altay (sometimes, but not always, considered a NW language), but did not affect Yeniseian, Sayan or Lena Turkic, nor Chuvash or Halaj. In Yeniseian Turkic the reflex of post-vocalic **d* is *z*, in Lena Turkic the reflex is *t*, both assumed to have gone through a stage of *ð*, with an additional *θ* stage in Lena Turkic.⁷² The existence of *ð* as the primary realization of this phoneme is discussed (and argued) by Clauson, Erdal and Johanson to have already been present in the earliest attested inscriptions of the eighth century CE,⁷³ with clear orthographic differentiation from *d* in scripts attested not much later. The change to *y*, almost certainly via *ð*, starts to be attested in materials from the eleventh century CE, and becomes more widely attested into the thirteenth century CE and beyond.

The fact that this change did not apply to the Mongolic material borrowed into Kazakh and Kyrgyz means that the change must have occurred before the loanwords were borrowed. This is not surprising given the increasing prevalence of the change in Turkic languages by the thirteenth century CE. As discussed throughout, it is likely that the majority of Mongolic material was borrowed into the predecessor(s) of Kazakh and Kyrgyz around or not long after the thirteenth century CE. The finding regarding these loans missing the **d* → *y* change supports this conclusion.⁷⁴

Another NW-Turkic sound change missed is the lenition of syllable-final **ğ*. In most NW Turkic languages, including Kazakh, the reflex is *w*, and in Kyrgyz and Southern Altay it coalesced with a preceding vowel. In loanwords of Mongolic origin, syllable-final *y* instead ended up as a voiceless stop.

syllable-final **G* lenition. Examples:

after *u*: *buw*^(kaz), *buu*^(kir) “steam” ← **buug*^(PTk) “id”,

cf. *quduq*^(kaz), *quduq*^(kir) “well” ← *quduy*^(MMo) “id”;

⁷² Anderson, “Historical Aspects of Yakut (Saxa) Phonology.”

⁷³ Clauson (“The Turkish Y and Related Sounds”), Erdal (*A Grammar of Old Turkic*, §2.23) and Johanson (*Turkic*, §18.5.2).

⁷⁴ It might also be possible that the Turkic language into which loans with *d* entered borrowed them with *d*, while native Turkic words still had *ð*, not yet having changed to *y*.

after *a*: *taw*^(kaz), *too*^(kir) “mountain” ← **taa*_g^(PTk) “id”,

cf. *maqta*^(kaz,kir) “praise” ← *mayta*^(MMo) “id”.

Again, the fact that this change did not affect loanwords from Mongolic suggests that the change had taken place already in the predecessor(s) of Kazakh and Kyrgyz by the time the words were borrowed.

4.2.4 NW Turkic Sound Changes Attested

Quite a few NW-Turkic-specific sound changes are attested in the Mongolic loanwords in Kazakh and Kyrgyz.

Second-syllable reduction (variable). Examples:

asara^(MMo) “look after” → *asira*^(kir) “bring up”,

čabidar^(MMo) “skewbald” → *čabdar*^(kir) “id”,

sirideg^(MMo) “quilted mattress” → *širdaq*^(kir) “quilted felt rug”.⁷⁵

This process affects vowels of the second syllable of three-syllable words, and is attested sporadically in Central Asian Turkic languages. Something similar appears to still be somewhat active in at least some varieties of Uyghur,⁷⁶ and is thought to be responsible for the irregular plural *baldar*^(kaz,kir) “children” of *bala*^(kaz,kir) “child”. However, as in Kazakh and Kyrgyz more generally, this process does not consistently appear in the history of these Mongolic loanwords. In the forms in this study that exhibit something like second-syllable reduction, the process appears in inconsistent ways (either vowel reduction or full deletion of vowels).

Glide fortition. Example:

yada^(MMo) “be unable to” → *žada*^(kaz) “be exhausted”, *žada*^(kir) “be fed up with”.

In glide fortition, **y* changed to an obstruent word-initially, *ž* in Kazakh and *ʃ* in Kyrgyz. This occurred in many NW Turkic languages, Bolgaric Turkic and nearly all Siberian Turkic languages. In most modern Bolgaric and Siberian Turkic languages this has further devoiced, e.g., to *č*, *ɕ* or *s*. In Mongolic loanwords in Kazakh and Kyrgyz, this change resulted in the merger of word-initial Mongolic *y* and *ʃ*.

⁷⁵ This form additionally appears at first glance to exhibit sporadic backing, although there is evidence that the verb this form is derived from is an originally back-vowel stem that instead fronted in Mongolic (Nugteren, *Mongolic Phonology and the Qinghai-Gansu Languages*, 493).

⁷⁶ Yakup, *The Turfan Dialect of Uyghur*, §2.3.1.2.

Desonorization. Examples:

maŋlai^(MMo) “forehead” → *maŋday*^(kaz,kir) “id”,

taŋlai^(MMo) “soft palate” → *taŋday*^(kaz,kir) “id”.

Desonorization is a process attested throughout Siberian and NW Turkic languages, whereby a syllable-initial sonorant decreases in sonority, usually to avoid rising sonority across a syllable boundary.⁷⁷ In Turkic languages where it is productive in the morphology it does not always affect roots. Interestingly, only two forms in the entire set of words examined appear to have this process attested—and only these forms even have an environment where it would be expected. It is possible that rising sonority across syllable boundaries is rare in Mongolic words generally; if this is the case, then perhaps Turkic desonorization patterns are the result of Turkic languages trying to fit more Mongol-like phonotactics. Alternatively, due to Turkic phonotactics, words with sonority rises at syllable boundaries may have been avoided as possible loanwords. More research is needed in this area.

Deaffrication (Kazakh). Examples:

čida^(MMo) “be able to” → *šida*^(kaz) “put up with”,

baĵa^(MMo) “wife’s sister’s husband” → *baža*^(kaz) “id”.

Deaffrication resulted in all affricates in Kazakh becoming fricatives. More specifically, *č → š and *ĵ → ž. In some varieties of Kazakh, these fricatives reaffricated word-initially. It is possible to say that this is a separate affrication process and not word-initial affricates being excluded from the deaffrication process, because of forms like *šaytan* “shaitan” (borrowed from Arabic, pronounced [čaytan] in these varieties). Similar deaffrication processes have occurred in various Turkic and Mongolic languages, and appear to be areally clustered. This change is likely to be relatively recent in Kazakh, so it is not surprising that all the Mongolic loanwords are affected.

Depalatalization (Kazakh). Examples:

šinqor^(late MMo) “hawk, falcon” → *sunqar*^(kaz) “id”,

šir^(late MMo) “leather” → *sir*^(kaz) “id”.

Depalatalization affected the entire Kazakh lexicon by changing all *š to s. It did not affect other palatals. Like deaffrication, it appears to be an areal change, and also a fairly recent one in Kazakh, so it is not unexpected that it affects all the Mongolic loanwords. Depalatalization appears to have preceded deaffrication, given that the input of the former is also an output of the latter.

77 Washington, “Sonority-Based Affix Unfaithfulness in Turkic Languages.”

Various other diachronic and synchronic sound patterns of Kazakh and Kyrgyz (and their predecessor(s)) have affected Mongolic loanwords. When synchronic sound patterns affect loanwords at the time they are borrowed, this can be thought of as the loanwords being adapted to fit a language's phonology, as opposed to simply undergoing a sound change.

For example, loanwords were adapted to Kazakh and Kyrgyz phonologies by fitting words into the rounding harmony patterns of Kazakh and Kyrgyz; e.g., *šinqor*^(MMo) “hawk, falcon” was adapted to Turkic patterns by rounding the first vowel and unrounding the second vowel (perhaps through underspecification) as *sunqar*^(kaz), *šunqar*^(kir) “id”; *sibüge*^(MMo) “awl” was adapted with entirely unrounded vowels as *šibegē*^(kir) “id” (although see discussion in Section 4.2.2); and *silegüsün*^(MMo) “lynx” was adapted to Kyrgyz as *sülöösün*^(kir) “id” with all rounded vowels, and to Kazakh as *silewsin*^(kaz) with all unrounded vowels, the difference here probably being due to how the VGV sequence was handled (for which see below and Section 4.2.5). Here, the VGV sequence resulted in a long rounded vowel in Kyrgyz, which led to all the vowels in the word rounding; in Kazakh, the VGV sequence resulted in an unrounded vowel and a glide *w*, and in Kazakh usually only the first vowel of a word or a high vowel before a *w* may be round.

Another NW Turkic sound change found in these borrowings is intervocalic *G* (*g* and *ğ*) elision, which is born out differently in Kazakh and Kyrgyz. In Kazakh, the result often involves the creation of the glide *w*, as in *žalqaw*^(kaz) “lazy” ← *jalqayu*^(MMo) “id”. In Kyrgyz, the result is usually a long vowel, as in *jalqoo*^(kir) “id”. Note that Central Mongolic languages have similar outcomes to Kyrgyz, although not all the time; cf. *dzalxu*^(khk) “id” versus *una*^(khk) “transport”, compared to Kyrgyz *unaa*^(kir) “id” (where the *u* and *a* in Khalkha are historically long vowels). Other words with similar outcomes in Kyrgyz and Khalkha include *beeli*^(khk) “glove, mitten” and *meeley*^(kir) “id”, as well as *šüüdr*^(khk) “dew” and *šüüdürüm*^(kir) “id”. An additional example where they are not the same is *bülen*^(khk) “warm (of liquids)” and *melüün*^(kir) “warm (of air)”.

4.2.5 Intervocalic Dorsals

The reflexes of intervocalic dorsals in Kyrgyz are apparently inconsistent. For reconstructed Mongolic *VGV (front *VgV and back *VyV) and *VKV (front *VkV and back *VqV) sequences, there are a variety of outcomes, which are in many cases unexpected. The expected reflexes of *VKV are either VKV (preserved) or VGV (lenited), depending on whether Kyrgyz lenition occurred before or after the borrowing took place. The expected reflexes of *VGV are either VGV (preserved), V: (deleted / fully lenited), or Vy (partially lenited), also depending on whether Kyrgyz lenition occurred before or after the borrowing took place.

However, as seen in Table 2, several unexpected patterns are witnessed: some *VGV sequences are realized in Kyrgyz as VKV (all of which are *aqā*), and other *VGV sequences are realized as short vowels. There is also a fairly wide distribution of most potentially expected options.

Table 2: The outcome of Mongolic intervocalic dorsals *VKV and *VGV in Kyrgyz words of Mongolic origin.

Kyrgyz Outcome	Mongolic *VKV	Mongolic *VGV
→ VKV	<i>bükülü</i> “all” <i>čoqu</i> “top (of mountain, head)” <i>čuqu</i> “urgent” <i>kömököy</i> “uvula” <i>kökül</i> “forelock” <i>moqo-</i> “become blunt” <i>nökör</i> “khan’s servant” <i>soqur</i> “blind” <i>šilekey</i> “saliva” <i>toqu-</i> “saddle (v.)” <i>toqum</i> “saddle cloth”	<i>alaqan</i> “palm” <i>baqan</i> “support pole” <i>malaqay</i> “fur hat”
→ VGV		<i>bosoğo</i> “threshold” <i>bötögö</i> “bird innards” <i>čağan</i> “month name” <i>qanǵa</i> “game strap” <i>qarağa</i> “larch” <i>qarčığa</i> “falcon” <i>qudaǵıy</i> “co-mother-in-law” <i>soloğo</i> “left-handed” <i>šibege</i> “awl” <i>šibağa</i> “lot” <i>tegerek/tögörök</i> “circle” <i>tomoğo</i> “hawk headgear”
→ Vy		<i>čöyčök</i> “bowl” <i>öydö</i> “upwards”
→ V		<i>añqoo</i> “simple-minded” <i>buuday</i> “wheat” <i>buurul</i> “grey” <i>jalqoo</i> “lazy” <i>jasool</i> “executive” <i>jeerde</i> “chestnut (coat color)” <i>juuču</i> “young man’s representative at match-making visit” <i>örgöö</i> “khan’s yurt” <i>meeley</i> “glove, mitten” <i>melüün</i> “warm (of air)” <i>oboo</i> “cairn” <i>qaalga</i> “yurt door” <i>qarool</i> “guard” <i>saadaq</i> “quiver” <i>saqoo</i> “stutterer” <i>sööm</i> “span” <i>sülöösün</i> “lynx”

Table 2 (continued)

Kyrgyz Outcome	Mongolic *VKV	Mongolic *VGV
		<i>šüüdürüm</i> “dew” <i>unaa</i> “transport”
→ V		<i>eǰigey</i> “dried cheese” <i>čilbir</i> “rein” <i>dolono</i> “hawthorn”

The reason for this distribution is not immediately clear. One possibility is that the reconstructions assumed in this study (based on the sources described in Section 3.4) are not accurate reconstructions or are not consistently reconstructed for a single period. Other possibilities include that there is periodized borrowing, before and after lenition processes took place, or that some borrowing was mediated through other languages (such as other Turkic languages). It is also possible that the state of Mongolian reconstruction is not sufficiently well understood to account for these forms. A number of sources have examined Mongolic *VGV and *VKV in some depth,⁷⁸ the issues discussed in these sources have not been fully considered in this study. Whatever the cause for the unexpected reflexes, further investigation is called for.

It is interesting to note that even when the outcome is a long vowel in Kyrgyz, the result seems to vary; e.g., *ǰuuču*^(kir) “representative of young man at match-making visit” and *ǰalqoo*^(kir) “lazy” are both reconstructed in Mongolic with *ayu (and both are realized in Kazakh with aw). It could be that the different outcomes represent borrowings at different periods, or that reconstructions need additional work.

4.2.6 Effect on Phonologies

Despite early Mongolic and Turkic phonologies not being drastically different, there were some differences. With the influx of Mongolic loanwords into Turkic, some of these differences ended up influencing the phonologies of these Turkic languages, and others could have but did not.

Some of the phonological differences found in these loanwords that did affect Turkic languages are the following:

initial d. No nonborrowed words (with one or two exceptions) in Kazakh and Kyrgyz start with *d*, but some words of Mongolic origin do. Examples:

⁷⁸ Poppe, “On the Velar Stops in Intervocalic Position in Mongolian”; Janhunen, “Laryngeals and Pseudolaryngeals in Mongolic: Problems of Phonological Interpretation”; Rykin, “Reflexes of the *VgV and *VxV Groups in the Mongol Vocabulary of the Sino-Mongol Glossary *Dada yu/Beilu yiyu* (Late 16th–Early 17th Cent.)”; Janhunen, “Medial Intervocalic *k and *g in Mongolic.”

düley^(kaz), *dülöy*^(kir) “deaf” ← *dülel*^(MMo) “id”,

dönen^(kaz), *dönön*^(kir) “three- or four-year-old male livestock” ← *dönen*^(MMo) “four-year-old male livestock”.

initial š. No nonborrowed words in Kyrgyz start with *š*, but words of Mongolic origin which have undergone the palatalization process discussed in Section 4.2.2 do. Examples:

šırı^(kir) “stitch, quilt” ← *siri*^(MMo) “id”,

šilekey^(kir) “saliva” ← *silükei*^(MMo) “saliva, slobbering”.

initial n. No nonborrowed words (with one or two exceptions) in Kazakh and Kyrgyz start with *n*, but some words of Mongolic origin do. Examples:

nağası^(kaz) “male relative on mother’s side” ← *nayaču*^(MMo) “id”,

noqta^(kaz), *noqto*^(kir) “halter” ← *noyta*^(MMo) “id”.

The following phonological differences could have affected Turkic languages but did not:

initial g/g̃. No nonborrowed words in Kazakh or Kyrgyz begin with a voiced dorsal sound, but many Mongolic words do (although potentially voiceless unaspirated in Khalkha); borrowed words begin with a voiceless stop instead. Example:

qolomto^(kir) “hearth”, *qolamta*^(kaz) “hot cinders” ← *γolomto*^(MMo) “hearth” → *γolomt*^(khk) “hearth”.

syllable-final g/g̃. No nonborrowed words in Kazakh or Kyrgyz have a syllable-final voiced dorsal sound, but many Mongolic words do; borrowed words contain a voiceless stop instead. Examples:

quduγ^(MMo) “well” → *qudıq*^(kaz), *quduq*^(kir) “id”,

mayta^(MMo) “praise” → *maqta*^(kaz,kir) “id”.

vowel-harmony disharmonic stems. Nonborrowed stems in Turkic languages are internally “harmonic”, meaning they follow vowel-sequencing restrictions similar to the productive vowel harmony patterns of the language.⁷⁹ Early Mongolic, Kazakh and Kyrgyz all have different patterns in this regard. Mongolic words in Kazakh and Kyrgyz have been adapted to follow Kazakh and Kyrgyz patterns. Examples:

inay^(MMo) “favorite” → *inaq*^(kir) “close friend”,

kekül^(MMo) “forelock” → *kekil*^(kaz), *kökül*^(kir) “id”,

abisun^(MMo) “wife of husband’s brother” → *abısın*^(kaz,kir) “id”.

⁷⁹ Washington, “Vowel Harmony in Turkic languages.”

4.2.7 Open Questions

There are a number of open questions of phonological history related to Mongolic loanwords in Kazakh and Kyrgyz that require further investigation.

There are a few mysterious correspondences involving unexpected consonantal differences. Two examples are *ulut*^(kir)/*ult*^(kaz) “nation” ← *ulus*^(MMo) “id” (originally from Old Turkic *uluš* “id”) and *čimčl*^(kir)/*šimšl*^(kaz) “pinch” ← *čimki*^(MMo) “id”. It is possible that these are borrowings from specific later varieties, cf. *ulad*^(bua) “nation”. However, as discussed by Clark,⁸⁰ the alternation of *s~d* is already attested in the Middle Mongol period, so the apparent presence of this sound change does not mean that this is a late borrowing. It is also possible that the *k~č* alternation represents an internal change in NW Turkic. These questions require further investigation.

There are also some borrowings with what appear to be “extra” material, e.g. *čoǵuu*^(kir) “together” ← *čuy*^(MMo) “together”; *söömöy*^(kir) “index finger” ← *sögüm~sögem*^(MMo) “span”; *šyraq*^(kir) “shank” ← *sigira*^(MMo) “hoof”; *sırqoo*^(kir) “illness” ← *sırqa*^(MMo) “wound”; *talaq*^(kir) “steppe” ← *tala*^(MMo) “id”. These forms may represent sporadic morphological additions, but require additional investigation. A form that appears to have extra material is *šüüdürüm*^(kir) “dew” ← *sigüderi*^(MMo) “id”, but a final /m/ is attested in some Mongolic varieties, such as Yugur,⁸¹ so may be a retained archaism in these varieties and Kyrgyz.

One form examined in this study appears to be missing material in an unexpected way: *teben*^(kaz) “large, thick needle”, cf. *tebene*^(WMo) “id”. This looks like apocope of the type found throughout modern Central Mongolic varieties (cf. *tewn*^(khk) and *temn*^(xal)), but it may instead be indicative of the Kazakh form being of Turkic origin. Clauson attributes the word to a Turkic origin,⁸² Räsänen and Nugteren notice the presence of the word in both Turkic and Mongolic and treat it as a nondistinct word.⁸³ Regardless of the origin of the Kazakh word, it is likely that Kyrgyz *temene*^(kir) “id” is of Mongolic origin, as it would not have the final vowel if it were of Turkic origin. Another word that needs additional attention due to a similar issue is *böltirik*^(kaz), *böltürük*^(kir) “wolf cub”, cf. *belterge*^(MMo) “id”.

4.3 Morphological Borrowings

Morphological borrowings include the borrowing of individual morphemes, as well as calques (structural borrowing). This section considers both, beginning with structural borrowing.

⁸⁰ Clark, “Turkic Loanwords in Mongol, I: The Treatment of Non-initial S, Z, Š, Č,” 47–48.

⁸¹ Nugteren, *Mongolic Phonology and the Qinghai-Gansu Languages*, 498.

⁸² Clauson, *An Etymological Dictionary of Pre-Thirteenth-Century Turkish*, 507.

⁸³ Räsänen (*Versuch eines etymologischen Wörterbuchs der Türksprachen*, 472), Nugteren (*Mongolic Phonology and the Qinghai-Gansu Languages*, 515).

The past tense system of Kazakh and Kyrgyz (Table 3) is organized roughly like that of Khalkha (Table 4). When compared with the past tense systems of other Turkic languages (Table 5), it might be concluded that the organization of the past tense system of Kazakh and Kyrgyz (but not the actual morphemes) was borrowed from Mongolic.⁸⁴

Table 3: The past-tense system of Kazakh and Kyrgyz. First person singular forms for each category for the verb *ket*^(kaz,kir) “leave” are *kettim*^(kaz,kir), *ketippin*^(kaz)/*ketiptirmin*–*ketipmin*^(kir), *ketkenmin*^(kaz,kir) and *ketken ekenmin*^(kaz,kir). Third person forms for each are *ketti*^(kaz,kir), *ketipti*^(kaz)/*ketiptir*^(kir), *ketken*^(kaz,kir) and *ketken eken*^(kaz,kir).

	recent past	non-recent past
eyewitness	-DI	-GAn
evidential/mirative	-(I)p ^(kaz) / -(I)p(tIr) ^(kir)	-GAn eken

Table 4: The past-tense system of Khalkha. Example forms for the verb *yaw*- “go” are *yawla*/*yaww*, *yawje*, *yawsŋ* and *yawsŋ yum bain*.

	recent past	non-recent past
eyewitness	-/A/-w	-sŋ
evidential/mirative	-je	-sŋ yum bain

Table 5: The past-tense system of Tatar, Turkish and Old Turkic. Example forms in Turkish of the verb *git*- “go” are *gitti* and *gitmiş*, and in Tatar of the verb *kit*- “leave” are *kitte* and *kitkän*.

	past
recent/eyewitness	-DI
non-recent/hearsay	-mİS ^(turOTk) / -GAn ^(tat)

While other Turkic languages have forms which are ambiguous between recentness and evidentiality (with recent and eyewitness linked), Kazakh and Kyrgyz appear to have separated these features. The use of -GAn in Kazakh and Kyrgyz parallels Khalkha’s use of -sŋ, just as *eken* in Kazakh and Kyrgyz is parallel to Khalkha’s *yum bain*. It should

⁸⁴ These tables are simplifications and there is much nuance not shown. For example, some forms labeled “recent past” have imitative uses (referring to change of state) and some forms labeled “non-recent past” have experiential uses (where the subject has experienced the event). Additionally, some “eyewitness” forms (-DI) are probably better labeled “confirmative”, per Straughn (“Evidentiality in Uzbek and Kazakh”), because events reported using these forms do not need to be directly witnessed, while others (-GAn) are better thought of as neutral with regard to confirmativity. Tatar also allows -GAn *ikän*, albeit with different morphotactics than Kazakh and Kyrgyz.

be noted that *eken* and *yum bain* are also used with nonovert copula constructions in these languages as well to express evidentiality and mirativity (as are *ikān* in Tatar and *imiš~(y)mİš* in Turkish). Also, Kazakh and Kyrgyz, just like Khalkha, have entirely unrelated morphemes for eyewitness and evidential recent past. The evidential recent past in both Khalkha and Kazakh and Kyrgyz is formed around a converb suffix; in the case of Turkic, the construction historically derives from an *-(l)p* converb and the auxiliary *tur-*, which was attested in full in Chaghatay but is significantly reduced in Kyrgyz (where *tur-* has cliticized and its remnants are not always used in this construction) and especially Kazakh (where the remnants of *tur-* in this construction are only seen in the third-person agreement suffix). Negative forms are also parallel, with Khalkha *-güi* occurring after the past tense morphemes just like Kazakh and Kyrgyz *emes* and *joq*, contrasting with *-mA* in Old Turkic, Tatar and Turkish, used before past tense morphemes.

There appears to be one inflectional morpheme in Kyrgyz borrowed from Mongolic. The Kyrgyz past imperfect *-čU* (e.g., *maqtañčumun*^(kir) “I used to brag; I was bragging”) may be from the Middle Mongol past perfective(?) mirative *-JUĞU(i)/-čUGU(i)*, which was reduced to *-ji/-či* in Written Mongolian.⁸⁵

A diminutive suffix in *-Kay/- (n)AKAy* appears to have been borrowed into Kyrgyz and to some extent Kazakh. The suffix seems to have been borrowed independently of any words it occurs with, as it seems to only be attested with Turkic stems. Examples include *jaqšinaqay*^(kir) “nice”, cf. *jaqşı*^(kir) “good”; *kičinekey*^(kir) “small”, cf. *kičüü*^(kir) “small”; *tatnaqay*^(kir) “cute”, cf. *ta(t)tuu*^(kir) “sweet”; *jönököy*^(kir) “simple”, cf. *jön*^(kir) “simple”; *balaqay*^(kaz, kir) “child (dim.)”, cf. *bala*^(kaz, kir) “child”.

Kyrgyz appears to have borrowed a modal particle, *da*^(kir), from Mongolian. The use of this particle in Kyrgyz at the end of a sentence expresses that the information provided explains another matter that is present in the discourse but is assumed to already be known to the interlocutor. This is not identical in usage to Khalkha *dAA*^(khk) or Classical Mongolic *da*^(WMo) but is reminiscent of it.⁸⁶

In Kyrgyz the limiting word *ele*^(kir) “only, just” appears to have been borrowed from Mongolic *ele*^(MMo) “only”. This word is somewhat difficult to classify grammatically; it may be dependent on (and follow) a range of other word and phrase types: nouns (*bala ele*^(kir) “just a child”), adjectives (*kičinekey ele*^(kir) “not that big”), numbers (*eki ele*^(kir) “just two”), adverbs (*kečee ele*^(kir) “just yesterday”), and even adverbial and postpositional phrases (*üč kün ötköndön kiyin ele*^(kir) “after just three days passing”). It also appears to have interfered with past-tense forms of the defective copula: *ele*^(kir) “it was”, *elem*^(kir) “I was”, etc., cf. forms in other Turkic languages like *edi*, *edim*^(kaz).⁸⁷ The difficulty of categorizing this word results in it being described as a “particle”, making its presence in Kyrgyz less of a lexical borrowing and more of a grammatical borrowing.

⁸⁵ Poppe, *Grammar of Written Mongolian*, 93.

⁸⁶ *Ibid.*, 187.

⁸⁷ Note Kyrgyz dialectal forms *ede*, *edem*. Another explanation of the standard Kyrgyz forms is borrowing of Mongolic past tense *-la*^(khk), equivalent to Kyrgyz *-DI*^(kir) as discussed above.

It is also possible that the verbal noun ending $-(I)w^{(kaz)}$, $-(U)U^{(kir)}$, attested throughout NW Turkic and beyond, may originate in Mongolic $-GU^{(WMo)}$,⁸⁸ although further work would be needed to make this determination.

4.4 Parts of Speech Borrowed

According to many sources,⁸⁹ while nearly any content may be borrowed from one language to another, some types of linguistic material are easier to borrow. Generally nouns and adjectives are considered the easiest to borrow, followed by verbs, then adverbs and then function words (like conjunctions, adpositions, interjections, numerals and pronouns). Finally, bound morphemes are considered the most difficult semantically specified material to borrow, with derivational morphology considered a little bit easier than inflectional morphology. Phonemes are supposed to be even more difficult to borrow from one language to another.

How difficult to borrow attested borrowed material is can yield information about the intensity of contact between the lending language and the borrowing language. This intensity is likely some combination of level of social interaction and how long it is sustained for.

In Tuvan, Mongolic material of every level of difficulty of borrowing examined is attested, save for inflectional morphology.⁹⁰ In Tatar and Bashqort, Mongolic-origin material is only attested among the easiest-to-borrow categories: nouns, adjectives and verbs, with some adverbial uses of borrowed adjectives (e.g., *alis*^(tat,bak) “far”).⁹¹ Table 6 summarizes the grammatical categories attested among Mongolic borrowings in these languages, as well as Kazakh and Kyrgyz.

Table 6: Parts of speech borrowed from Mongolic.

borrowing “ease”	Part of Speech	Tuvan	Kyrgyz	Kazakh	Tatar & Bashqort
1	nouns	✓	✓	✓	✓
1	adjectives	✓	✓	✓	✓
2	verbs	✓	✓	✓	✓
3	adverbs	✓	✓	✓	~
4	conjunctions	✓	x	x	x
4	postpositions	✓	x	x	x
4	particles	✓	✓	x	x
4	interjections	✓	✓	✓	x

⁸⁸ Poppe, *Grammar of Written Mongolian*, 46.

⁸⁹ Cf. Hock, “Principles of Historical Linguistics.”

⁹⁰ Khabtagaeva, *Mongolic Elements in Tuvan*.

⁹¹ Csáki, *Middle Mongolian Loan Words in Volga Kipchak Languages*.

Table 6 (continued)

borrowing “ease”	Part of Speech	Tuvan	Kyrgyz	Kazakh	Tatar & Bashqort
4	numerals	✓	×	×	×
4	pronouns	✓	×	×	×
5	derivational morphology	✓	✓	✓	×
6	inflectional morphology	×	✓	×	×

As reflected in the table, Kazakh and Kyrgyz land in between Tuvan, and Tatar and Bashqort, with Kyrgyz borrowing both derivational and inflectional morphology, and many types of function words, and Kazakh having borrowed a limited number of function words and some derivational morphology. The fact that Kyrgyz appears to have borrowed inflectional morphology may suggest a situation more conducive to borrowing than Tuvan has historically had, although Tuvan has borrowed all types of function words examined here, while Kyrgyz has borrowed only a few, potentially due to a shorter period of contact with Mongolic.

4.5 Number of Borrowings

The number of borrowed items can be an important indicator of the level of contact between languages. Table 7 surveys the number of forms reported in previous studies of Mongolic loanwords in Turkic languages.

Table 7: The number of borrowings of Mongolic loanwords reported for various Turkic languages.

language	source	words
Karaim	Zajāczkowski ⁹²	34
Karachay-Balkar	Csáki ⁹³	42 ⁹⁴
Tatar/Bashqort	Csáki ⁹⁵	136
Kazakh/Kyrgyz	present study	≥200
Sakha	Kałużyński ⁹⁶	several hundred
Tuvan	Khabtagaeva ⁹⁷	~1300

⁹² Zajāczkowski, “Die Mongolischen Elemente in der Karaimischen Sprache.”

⁹³ Csáki, “Middle Mongolian Loan Verbs as They Appear in Karachay-Balkar.”

⁹⁴ This number includes only verbs, so the total is likely higher, probably around the same as Tatar and Bashqort.

⁹⁵ Csáki, *Middle Mongolian Loan Words in Volga Kipchak Languages*.

⁹⁶ Kałużyński, “Mongolische Elemente in der Jakutischen Sprache.”

⁹⁷ Khabtagaeva, *Mongolic Elements in Tuvan*.

Karaim has among the fewest, at thirty-four borrowings, while Tuvan has the most, at around 1300. Kazakh and Kyrgyz come in at a medium level of borrowings, at 200 or more identified in this study. It should be noted that this number excludes some words reported in previous studies because of some level of doubt in the literature that the words are of Mongolic origin (viz. *töle*-(kaz)/*tölö*-(kir) “pay”, cf. *töli*-(MMo) “id”; *qaraŋǵı*-(kaz,kir) “dark, darkness”, cf. *qaraŋyui*-(MMo) “id”).⁹⁸

5 Discussion

Discussion addresses the source variety of borrowed Mongolic material and timing of the borrowings (Section 5.1), the nature of the contact situation that resulted in borrowing (Section 5.2) and some differences between Kazakh and Kyrgyz in terms of borrowed material (Section 5.3).

5.1 Source Variety and Timing

The phonological forms of the Mongolic material identified in this study appear to mostly have only very early Mongolic sound changes attested, along with many preserved archaisms. Most forms are consistent with Middle Mongolic. A number of Turkic sound changes are attested in this material but, for the most part, only ones that are understood to have occurred before the thirteenth century CE.

A handful of loanwords do not fit these generalizations and may represent later borrowings, borrowings from different Mongolic varieties, or secondary borrowings (i.e., borrowed through another Turkic language).

Some sound changes, like intervocalic dorsal obstruent lenition, appear to have occurred shortly after the Mongol expansion in both Mongolic and Turkic languages and may have occurred in both families as a result of ongoing contact. Much later sound changes attested in both families (although with more different implementations across varieties), like deaffrication and depalatalization, may be evidence of ongoing contact several centuries after the Mongol expansion.

Taken together, all of this suggests that the majority of the loanwords examined in this study entered the linguistic predecessor(s) of Kazakh and Kyrgyz during and/or shortly after the Mongol expansion. Given the lack of more recent Mongolic sound changes in the Kazakh and Kyrgyz material, it appears that very little borrowing, if any,

⁹⁸ Both examples discussed by Csáki (“Middle Mongolian Loan Verbs as They Appear in Karachay-Balkar,” 203–204, 118).

occurred during or after the Jungar expansion (seventeenth century),⁹⁹ or even after the fifteenth century or so—and most of it likely occurred well before then.

5.2 Contact Situation

The moderate impact of Mongolic languages on the lexicon and phonology of Kazakh and Kyrgyz suggests a period of sustained multilingualism. The fact that bound morphology was borrowed suggests language shift (in this case, Mongolic speakers acquiring Turkic and eventually abandoning Mongolic), either widespread or among influential individuals.

One might hypothesize that bilingualism in Mongolic among Turkic speakers, without many native Mongolic speakers also speaking Turkic, may have been prevalent in Turkic-speaking society for an extended period, during which borrowings occurred, and after which the impetus for bilingualism was lost. However, the wide range of semantic categories borrowed, and especially the presence of family- and home-relegated vocabulary, such as words for kinship by marriage and fiber-working technology, suggest a contact situation where Mongolic speakers were absorbed into otherwise Turkic-speaking families and/or where Mongolic-speaking families switched to speaking a Turkic language. If there had been bilingualism solely among Turkic speakers, then borrowings would have likely been limited to certain domains of life, such as public administration and military affairs. In fact, we find little evidence of Mongolic loanwords in these semantic domains in Kazakh and Kyrgyz, unlike in Tuvan.¹⁰⁰

Given all of this, and the timing, there are several possibilities that are worth considering regarding how this language contact occurred. One possibility is that Mongolic-speaking men (who had more mobility than women, and more power than their Turkic-speaking counterparts at the time, and may have had reason to be living in Turkic-speaking areas) took Turkic-speaking wives and settled in Turkic-speaking areas. Another possibility is that Turkic-speaking men, perhaps related to a deficit of men among the Mongolic-speaking population, took Mongolic-speaking wives and settled in Turkic-speaking areas. Either scenario requires the incorporation of Mongolic speakers into Turkic-speaking society. However, it seems likely that neither scenario is sufficient to explain either the extent of influence that Mongolic languages had on Kazakh and Kyrgyz nor the range of semantic domains borrowed from. Specifically, borrowings in domains under the traditional primary purview of both men and women are attested, and the tense system was affected. This suggests more extensive incorporation of Mongolic speakers into Turkic society than either scenario offers on its own. Instead, the

⁹⁹ Although see Saribáyev (“Mongól'sko-kazáxskije l'eksičeskije parall'éli”) for apparent exceptions to this generalization, especially in eastern dialects of Kazakh. Further investigation of such forms would be needed to understand when they were borrowed and from what variety.

¹⁰⁰ Cf. Khabtagaeva, *Mongolic Elements in Tuvan*.

contact situation most likely involved large-scale incorporation of Mongolic-speaking families into Turkic communities, with extensive geographic overlap resulting in frequent (perhaps daily) contact, widespread intermarriage in both directions and the eventual total shift of Mongolic speakers to Turkic with a period of sustained bilingualism. Even in this setting, a certain amount of the borrowing must have taken place through the incorporation of Mongolic speakers (both men and women) into Turkic-speaking families and not simply through [social and linguistic] contact outside a home setting.

To my knowledge, the hypothesis that Mongolic loanwords entered Turkic languages through home settings as opposed to administrative or military settings is not commonly posited. This may be due to patriarchal views of Turkic and Mongolic society and history.

5.3 Differences Between Kazakh and Kyrgyz

Both Kazakh and Kyrgyz exhibit a significant Mongolic adstrate. However, the absence in Kazakh of a number of Mongolic borrowings that were identified in Kyrgyz is striking.

For example, there appear to be no Kazakh correspondents to *belen*^(kir) “ready”, *bürkök*^(kir) “overcast”, *čoġuu*^(kir) “together”, *jolbun*^(kir) “stray”, *öydö*^(kir) “upwards”, *qaalğa*^(kir) “yurt door”, *şuru*^(kir) “bead”, *şüüdürüm*^(kir) “dew”, *törö*^(kir) “be born”,¹⁰¹ *üy bülö*^(kir) “family”, the past imperfect *-čü*^(kir), etc. Kyrgyz has also acquired the Mongolic *ayıl*^(kir) “village, settlement” ← *ayıl*^(MMo) “id”, while Kazakh has retained the Turkic form *awıl*^(kaz), cf. *ağıl*^(OTk) “id”

However, Kazakh has borrowed words like *nağası*^(kaz) “male relative on mother’s side”, *dönezin*^(kaz) “three-year-old filly or heifer” and *qalaqay*^(kaz) “nettle” which are not attested in Kyrgyz.

It is possible that the smaller number of Mongolic borrowings identified in Kazakh is an effect of the author’s somewhat better knowledge of Kyrgyz and because the methodology of this study initially focused primarily on investigation of Kyrgyz words.

It should also be noted that there is extensive overlap between the Mongolic words present in Kazakh and Kyrgyz, and those identified by other sources in Chaghatay, Tatar and Bashqort and even Karachay-Balkar, despite the different scales of apparent borrowing. This suggests that these words entered Turkic together, and that the nature of the contact was large-scale and potentially even geographically expansive. It is difficult to tell whether languages like Sakha and Tuvan, with so many more borrowings and more prolonged contact with Mongolic, were affected by this same event, but with more

¹⁰¹ A similar form is attested in early Old Turkic, so there is a chance that this word is not borrowed from Mongolic; however, the vowels of the Kyrgyz form are more consistent with borrowing from a Mongolic form than descent from something like the Old Turkic form.

work it should be possible to sort out the extent of overlap and relative timing of overlapping borrowings.

6 Conclusion

Studies of loanwords always have the potential to add insight to the specifics and relative timing of various linguistic changes (especially sound changes which affect a lot of material) in both source and target language. Since the loanwords examined in this study are the result of borrowing events that occurred fairly early, study of this material has the potential to support arguments related to problems of Mongolic reconstruction, just as study of Chinese borrowings into Japanese, Korean, Vietnamese and other languages provides insight into the linguistic (especially phonological) history of both Chinese and the borrowing languages. As a specific example, the borrowed word *šibege*^(kir) provides evidence that the second vowel in Mongolic may have originally not been high and possibly also that it was unrounded.

Since the relative timing of many linguistic changes (especially sound changes) in Turkic and Mongolic languages during and since the period in question are already somewhat well understood, in part through attestation, nothing of much novelty along these lines was revealed through study of these loanwords—but open questions remain, for example, about intervocalic dorsals.

However, because of the relative lack of controversy surrounding the Turkic sound changes attested in Kazakh and Kyrgyz forms, we are able to say something more accurate about the approximate timing of the language contact situation(s). More specifically, we are able to determine from Mongolic loanwords into Kazakh and Kyrgyz that there was a contact situation that began around the thirteenth century at the earliest and ended no later than the fifteenth century.

And from examining semantic domains and considering the extent of influence from the lending language on the borrowing language(s), for example in areas like tense morphology, we also get a sense of the nature of the borrowing situation, including something of the cultural and social context that led to borrowing. The situation examined in this study appears to have involved the incorporation of many Mongolic speakers into Turkic-speaking society—and, importantly, households—with a period of widespread bilingualism.

It is my hope that this study is just the beginning of careful examination of Kazakh and Kyrgyz material of Mongolic origin, especially given that this study was not exhaustive in identifying material, nor did it answer all the questions raised. I expect that much more can be learned from the material presented here and other material that was not included in this study and/or has yet to be identified.

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