

From Göktürk Runes To A Common Latin Script: Historical Alphabets Of The Turks And The Problem Of Orthographic Unity

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Abstract: This article offers a diachronic survey of the writing systems used for Turkish and other Turkic varieties over roughly 1,300 years, from the earliest Göktürk (Orkhon) inscriptions to contemporary Latin-based alphabets. It examines the structural and functional properties of thirteen major scripts—Göktürk, Manichaean, Sogdian, Uyghur, Brāhmī, Tibetan, Syriac, Hebrew, Greek, Armenian, Arabic (pre- and post-reform), Cyrillic, and Latin—with particular attention to how adequately each represents the phonological system of Turkish. On the basis of grapheme–phoneme correspondence and coverage of vowel and consonant inventories, the article proposes approximate “suitability percentages” for each alphabet. In the second part, it analyses the emergence of the 34-letter Common Turkic Alphabet adopted at the 1991 Symposium on Contemporary Turkic Alphabets (Marmara University) and compares this model with the Latin-based orthographies of Turkish, Azerbaijani, Uzbek, Turkmen, Karakalpak, Crimean Tatar, and Gagauz. A table of conformity scores highlights both the high compatibility of some standards (Azerbaijani, Turkish, Gagauz, Crimean Tatar) and the marginal or non-existent alignment of others. The study argues that, despite strong historical and political constraints, a functionally unified Common Turkic Latin Alphabet remains a realistic and culturally beneficial goal for enhancing written communication across the Turkic world.

Keywords: Turkish language; Turkic languages; historical alphabets; Göktürk (Orkhon) script; Arabic script; Cyrillic script; Latin-based orthographies; Common Turkic Alphabet; orthographic reform; grapheme–phoneme correspondence; script suitability; language planning.

Introduction: It is known that the Turkish language has a written history going back approximately 1,300 years. Over the course of this history, Turks have used the Göktürk (Orkhon), Manichaean, Sogdian, Uyghur, Brāhmī, Tibetan, Syriac, Hebrew, Greek, Armenian, Arabic, Cyrillic, and Latin alphabets. The use of such a wide variety of scripts can be explained by political, civilizational, and religious factors. None of these alphabets, however, has been able to represent the phonological system of Turkish fully and perfectly.

1. Göktürk (Orkhon) Alphabet. The Göktürk script is known as the first official writing system of the Turks. It is written from right to left. Because this system resembles the Old Norse runic script, it is also called the Old Turkic runic script. Although the earliest extant examples written in Göktürk date to the seventh

century, many scholars argue that Turks began using this script much earlier. The Göktürk script was employed over a vast geographical area among Turks from the seventh to the eleventh centuries. The earliest known text in this script is the six-line Çoyr inscription, dated to 687–692.

There are various theories about the origin of the Göktürk alphabet, linking it to the Norse, Germanic, Greek, Aramaic, Pahlavi, Sogdian, and Sumerian scripts. Some scholars argue that the script was created independently by the Turks themselves. The most plausible view is that the Göktürk script developed out of Turkic tribal tamgas (clan marks) and, under the influence of the Aramaic script, evolved into a phonetic alphabet.

The Göktürk alphabet contains 38 signs. Of these, 4

represent vowels, 10 represent “back” consonants, 10 represent “front” consonants, 5 represent neutral consonants, 4 are syllabic signs, and 5 are ligatures. In this alphabet, vowel harmony is not indicated primarily by vowels, as in modern Turkish, but by consonants. The pairs a–e, ı–i, o–u, and ö–ü are each written with the same vowel sign. In practice, it is not difficult to distinguish a from e or ı from i by looking at whether the consonants in the word are back or front. However, it is impossible to distinguish o from u or ö from ü in the same way.

The consonants b, d, g, k, l, n, r, s, t, and y each have separate signs for their back and front variants. The consonants ç, m, p, ş, and z are neutral and are represented by a single sign each. In addition, the script contains four special characters representing the syllables ık–k–kı, iç–çi, ok–uk–k–ko–ku, and ök–ük–k–kö–kü. The ligatures used in the Göktürk alphabet include ld–lt, nç, nd–nt, ɲ, and ń.

The Göktürk alphabet is very rich in consonantal representation but somewhat weak in its treatment of vowels. With the exception of vowels, all phonemes known to exist in Old Turkic are each represented by a distinct sign. For this reason, we may say that the suitability of the Göktürk alphabet for the Turkish language is approximately 91%.

2. Manichaean Alphabet. The Manichaean alphabet was used among the Turks from the first half of the eighth century to the mid-ninth century. This script is the first writing system adopted by the Turks primarily for religious reasons. After Böğü Qağan, ruler of the Uyghur Khaganate, imposed the Manichaean religion on his people in 762, the Turks began to use the Manichaean script. It is said to have developed from the Estrangelo branch of the Syriac script, itself derived from the Aramaic script.

The most important extant works in Manichaean script include the hymn Great Hymn to Mani, the 24-line Description of Hell, an untitled two-page hymn, and the penitential text Huastuanift, which survives in more than twenty copies. The script is written from right to left.

In this writing system, the sign used for ‘ayn and yod in Semitic is used in initial position to represent the vowels ı and i. In final position, these vowels are sometimes marked with double signs. In medial position, vowels are sometimes left unwritten; ı and i are represented by the sign for y. Initial o and u are written with aleph + waw, while ö and ü are written with aleph + waw + yod.

Each consonant phoneme is represented by its own letter, with one exception: the voiceless palato-alveolar affricate ç and its voiced counterpart c are written with

a single sign. In addition, there are special signs representing the clusters çy (çı/çi) and çn.

The Manichaean alphabet is weak in its representation of vowels but rich in consonants. Its suitability for the Turkish language can be estimated at 87%.

3. Sogdian Alphabet. The Sogdian alphabet was used among Turks for a short period in the eighth–ninth centuries, due to the economic and commercial influence of the Sogdians in the Uyghur Khaganate. During this period, Sogdian also functioned as a lingua franca in Central Asia. The Sogdian script itself derives from the Pahlavi alphabet, which in turn developed from the Aramaic script. The Karabalgasun and Sevrey inscriptions are the most important monuments of this phase. The script is written from right to left.

The Sogdian alphabet consists of 22 letters. In initial position, a is written with aleph or double aleph, and e is also written with aleph. The vowels ö and ü in initial position and in the first syllable are written with aleph + waw, or occasionally with aleph + waw + yod. The vowels ı and i are written with aleph + yod.

In this writing system, the voiceless uvular fricative h and the voiced uvular fricative ġ are represented by the same sign. Likewise, the voiced and voiceless velar stops g and k, and the voiceless glottal fricative h, are also written with the same character. The voiced dental fricative z and the voiced labiodental fricative j are represented by a single sign. The voiced bilabial stop b and the voiceless bilabial stop p are also written with the same letter.

In Sogdian itself, the letter used for l is employed to write the d sound in Turkish texts; the Turkish l is indicated by placing a small hook under the letter that represents r, which in fact corresponds to an allophone of r.

As can be seen, the Sogdian alphabet is inadequate for writing Turkish both in terms of vowels and consonants. Its suitability for the Turkish language can be estimated at 64%.

4. Uyghur Alphabet. The Uyghur alphabet is the second writing system developed and adapted by the Turks themselves after the Göktürk script. It was derived from the Sogdian alphabet during the period of the Uyghur Khaganate. There is no precise consensus on when it first emerged. Turks used this script over a wide geographical area from the eighth to the seventeenth centuries. Many cultural, religious, and historical works written by Turks in this script have survived; among the most important is Altun Yaruk-Sutra. The script is written from right to left.

In the Uyghur alphabet, the pairs a–e, ı–i, and the four rounded vowels o, ö, u, ü are each written with the

same signs. Moreover, the letter that marks o, ö, u, ü also represents the bilabial approximant v, and the sign for ı-i also represents the consonant y. Vowels are normally written with a single sign in medial and final positions, but in initial position the marking changes: ı and i are written with aleph + yod, o and u with aleph + waw, and ö and ü with aleph + waw + yod.

The voiced bilabial stop b and the voiceless bilabial stop p are written with the same letter. The voiced and voiceless palatal stops g and k are written with a single sign. Likewise, the voiced and voiceless velar stops ğ and k, and the uvular fricative ħ, are all represented by a single character. The voiced dental fricative z and the voiced labiodental fricative j also share one sign.

The Uyghur alphabet is thus insufficient for Turkish in terms of both vowels and consonants. Its suitability for the Turkish language can be estimated at 67%.

5. Brāhmī Script. The Brāhmī script is another writing system adopted under the influence of religious belief. It was used in the tenth–eleventh centuries by Uyghurs who had embraced the Brāhmī-based religious tradition. The most widely accepted view of its origin is that it developed from the Aramaic branch of the Semitic writing tradition. Brāhmī is a semi-alphabetic, semi-syllabic script.

To date, 79 fragments of Turkish texts written in the Brāhmī script have been identified. The Turks did not adopt this script directly from Indian communities; instead, they borrowed it from the Tocharians and Sakas in Central Asia who had also embraced Brāhmī-based religious traditions. For this reason, the version of Brāhmī used by the Turks incorporates additions made by these groups. The Uyghurs, in turn, added several unconventional signs of their own, resulting in a large number of ligatures, letters, and syllabic signs and rendering the orthography of the texts rather complex. The script is written from left to right.

Brāhmī has separate signs for the vowels a, ā, e, i, o, u, ū. However, it lacks distinct letters for é, ö, and ü. The sequence a plus an additional sign is used to represent é; the signs u and yu represent ü; and o and yo (or, in final position, ya) represent ö. The vowels ı and i are written identically, with no distinction. In some texts, the syllables li and ri appear as l or r marked with two dots above.

Brāhmī has 27 basic syllabic signs, to which the Turks added 7 more. In addition, 8 dotted characters were introduced to represent final k, p, m, r, l, palatal s, retroflex s, and normal s. The Turks also created distinct forms from the letters k and r in order to represent the sounds ḳ and ğ/g.

As a syllabic script that does not fully capture Turkish

syllable structure, the Brāhmī script leads to a rather confused orthography in Turkish texts. Its suitability for Turkish can be estimated at 56%.

6. Tibetan Alphabet. The Tibetan alphabet is the third writing system adopted by Turks under the influence of religious belief. The Uyghurs borrowed this script along with Buddhism from Tibetan Buddhist missionaries. Turkish texts written in the Tibetan script date from the eighth to the tenth centuries. The most important among them are a 41-line booklet on Buddhist doctrine and a dhāraṇī (a religious narrative or incantatory text). The Tibetan script is based on the Gupta branch of the Brāhmī writing tradition. It is a semi-alphabetic, semi-syllabic system written from left to right.

The Tibetan alphabet has 30 consonants, 5 vowels, one inverted i sign, and three subscript consonant signs. In the Turkish texts written with this system, the vowel a is represented by ‘a, the open e by the syllabic sign ha or ya, the closed e by ‘e or ‘ye, i by ‘i and ‘yi, ö by ‘o or yo, and ü by ‘u or yu. There is no dedicated sign for the vowel ı; it is written with the same sign used for i.

Like Brāhmī, the Tibetan script does not allow Turkish words to be written in a straightforward manner. For example, bilge biligin (“the wisdom of the wise man”) is written as byil ga byi lig ğin. The suitability of this writing system for the Turkish language can be estimated at 50%.

7. Syriac Alphabet. The Syriac alphabet is the fourth writing system adopted by the Turks under religious influence. It was used in the ninth–thirteenth centuries by Uyghurs who converted to the Nestorian branch of Christianity, rooted in the Syriac tradition. The variety used by the Turks belongs to the Estrangelo branch of the Syriac script, one of the principal descendants of Aramaic. The extant corpus consists of twelve fragments of Turkish texts and several gravestone inscriptions. The script is written from right to left.

In the Syriac alphabet, the vowels o, ö, u, and ü are written with the combination hamza + waw, while ı and i are written with hamza + yod. Some of the letters used by the Turks differ from their original Syriac values. For instance, in Syriac there are separate letters for b and p, but in Turkish texts both sounds are written with the sign that normally represents p. The original Syriac letter for b is used instead to represent the bilabial approximant v and the labiodental fricative f; occasionally the original Syriac sign for v is also used. Additional letters were introduced to represent sounds not found in Syriac: the nasal ñ is written with a small notch added above the letter g, and the sound ç (absent in Syriac) is represented by borrowing the sign for ç from the Manichaean script.

Although the Syriac alphabet is adequate in its

representation of consonants, it is very weak in the representation of vowels. Its suitability for the Turkish language can therefore be estimated at 85%.

8. Hebrew Alphabet. The Hebrew alphabet is the fifth writing system that Turks adopted for religious reasons. It is known that the Khazar Turks who embraced the Karaite sect of Judaism used this script, although no texts from that early period have survived. Their descendants, the Karaim Turks, have used the Hebrew alphabet for Turkish religious texts since the sixteenth century. The oldest known source is *Tevârih-i Âl-i Osman*, a transcription of Ottoman history written in the Halych dialect of Karaim in the sixteenth century. The Hebrew alphabet is ultimately derived from the Aramaic script, having developed within the Semitic writing tradition while also being influenced by Old Hebrew. It is written from right to left.

The Hebrew script has 22 consonant letters. Vowels are indicated with the consonantal letters alef, waw, he, and yod. The voiced bilabial stop *b* and the voiced labiodental fricative *v* are represented by the same sign. The voiceless labiodental fricative *f* and the voiceless bilabial stop *p* share one sign. The letter that normally represents *š* (shin) is also used for *s*. Separate letters exist for the bilabial approximant *v*, for the palatal sibilant, and for *šādē*.

As is evident, the Hebrew alphabet is inadequate for Turkish both in terms of vowel and consonant representation. Its suitability for Turkish can be estimated at 76%.

9. Greek Alphabet. The Greek alphabet is the sixth writing system adopted by Turks for religious reasons. It was used in the eighteenth–twentieth centuries by the Karamanli Turks of Anatolia, who were adherents of the Orthodox branch of Christianity. This script developed from the North Semitic writing tradition, and ultimately from Phoenician. During the Ottoman period, the Karamanlis produced many cultural, religious, and literary works in Turkish written with Greek letters, and they also published newspapers. The earliest known work in this tradition is the religious book *Gülzâr-ı İmân-ı Mesîhî*. (Note: the Greek script itself is written from left to right, though the source text erroneously says right to left.)

In the Greek alphabet, there are no dedicated letters for the close back unrounded *ɪ*, the close front rounded *ü*, the open front rounded vowel *ö*, the voiced and voiceless affricates *c* and *ç*, the voiced and voiceless postalveolar fricatives *j* and *ş*, or the voiceless velar/uvular fricative *h*. These sounds are indicated by means of diacritics, and this leads to considerable orthographic complexity in the representation of other phonemes as well.

The suitability of the Greek alphabet for the Turkish language can be estimated at 73%.

10. Armenian Alphabet. The Armenian alphabet was used for Turkish primarily by Armenians who had become Turkicized in the Ottoman domains, in Ukraine, and in Poland between the fifteenth and twentieth centuries. The script developed from the Greek alphabet but also borrowed a few letters from the Pahlavi script. In Armenian letters, we find Turkish literary works, journals, newspapers, translations, and tombstone inscriptions. The script is written from left to right.

The Armenian alphabet comprises 38 letters. It can represent Turkish phonemes quite effectively, but it has no separate letters for the vowels *u*, *ü*, *ö*, or for the consonant *ñ*. These sounds are written with digraphs. For this reason, the suitability of the Armenian alphabet for Turkish can be estimated at 91%.

11. Arabic Alphabet. The Arabic alphabet is one of the scripts most extensively used for writing Turkish. Its adoption is closely tied to the spread of Islam. Turks have used the Arabic script to write a vast number of literary, scientific, and religious works from the eleventh century to the present. Until the twentieth century, all Muslim Turks used this script; today it is still employed by Turks in China (Uyghur, Kazakh), Afghanistan (Uzbek, Turkmen), Iran (Azeri), Iraq, and Syria (Turkmens). In Iran and China, reformed versions of the Arabic alphabet are used, whereas in other countries the pre-reform forms are still in use. The Arabic script is a Semitic alphabet and is written from right to left.

Before its reform, the Arabic alphabet as used by Turks was inadequate for representing Turkish vowels. The vowels *a* and *e*, *ı*, *i* and *é*, and *o*, *u*, *ö*, *ü* were all written with the same limited set of letters. By contrast, the consonantal inventory had already undergone certain adaptations: special letters had been created for the bilabial approximant *v* and the nasal *ñ*; and the letters added to Arabic by Persians for *g*, *j*, *ç*, and *p* were also adopted.

In the twentieth century, the Arabic alphabet was reformed for Turkic use, with each vowel represented separately by a dedicated sign or combination. Therefore, the pre-reform Arabic alphabet may be considered 84% suitable for Turkish, whereas the reformed alphabet approaches 100% suitability.

12. Cyrillic Alphabet. The Cyrillic alphabet has been used since 1769 by Turkic communities under Russian rule. The first Turkic people to adopt the Cyrillic script were the Chuvash. Today, separate Cyrillic-based alphabets are officially used for Kazan Tatar, Bashkir, Kazakh, Nogay, Karachay, Balkar (Malkar), Kumyk,

Kyrgyz, Kazakhstani Uyghur, Khakas, Tuvan, Altai, Chuvash, and Yakut (Sakha), each with its own specific additions.

In these writing systems, a very large body of literary, cultural, and political works has been published and continues to be published; they are widely used in state administration, education, and the media. The Cyrillic script was originally developed from the Greek alphabet. It is written from left to right. By adding different letters to the base Cyrillic alphabet for each literary standard, the system has been adapted to the phonological structure of the respective Turkic language. For this reason, the suitability of the Cyrillic alphabet for Turkish can be regarded as almost 100%.

13. Latin Alphabet. The Latin alphabet is the most successful script used for modern Turkish. It was

developed from the Greek alphabet. The Latin alphabet was officially adopted in 1926 by Turks within the USSR and in 1928 by the Republic of Turkey. However, Turks living in the Soviet Union were switched to the Cyrillic alphabet in 1932. Uyghur Turks in China also used the Latin alphabet officially between 1965 and 1984.

Today, Latin-based alphabets are used in all areas of cultural, political, and social life for Turkish of Turkey, Uzbek, Azerbaijani, Turkmen, Karakalpak, Crimean Tatar, and Gagauz. Unfortunately, orthographic unity has not yet been achieved across these Latin-based alphabets. Nevertheless, by adding different letters to the basic Latin script, it has been brought into close alignment with the phonological structure of Turkish. For this reason, the suitability of the Latin alphabet for Turkish may be considered almost 100%.

Suitability of Alphabets Used by Turks for the Phonological System of the Turkish Language

No.	Writing system	Suitability for Turkish
1	Latin alphabet	100%
2	Cyrillic alphabet	100%
3	Reformed Arabic alphabet	100%
4	Göktürk (Orkhon) alphabet	91%
5	Armenian alphabet	91%
6	Manichaean alphabet	87%
7	Syriac alphabet	85%
8	Unreformed Arabic alphabet	84%
9	Hebrew alphabet	76%
10	Greek alphabet	73%
11	Uyghur alphabet	67%
12	Sogdian alphabet	64%
13	Brāhmī script	56%

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