

Title: Introducing Another Script for Writing Balti
Author: Anshuman Pandey (pandey@umich.edu)
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1 Introduction

A script named ‘Balti’ was brought to the attention of UTC and WG2 by Rick McGowan in 1997 in “Unicode Technical Report #3” (N2042). It was allocated in the roadmap to the Supplementary Multilingual Plane, but has not yet been encoded.

The present author recently learned about another script used for writing the Balti language, which differs entirely from the script identified in N2042. The information available about this second script is limited, but script charts and a manuscript are available. This document provides some background details on the script as well as a basic character repertoire with tentative names and properties. Research is ongoing and a preliminary proposal to encode the script in the Universal Character Set will be submitted once additional details have been gathered.

2 Background

Balti [bft] (Tibetan བོད་སྐད་ *sBal-ti*; Urdu بلتی *baltī*) is Tibeto-Burman language that belongs to the Western Tibetan sub-family, which also includes Ladakhi [lbj], Purik [prx], and Zangskari [zau]. It is spoken primarily in the Baltistan (Baltiyul) region of northern Pakistan and in neighboring Ladakh in India. There is no official script for Balti. The Tibetan script was introduced in the 8th century when the region was brought under Tibetan control.¹ The Arabic script replaced the Tibetan in the 17th century as the influence of Islam grew in the region. An extended form of Devanagari was developed for Balti and related languages by the Central Institute of Indian Languages in the 1970s.² In recent years there have been efforts by Balti speakers to revive usage of the Tibetan script.

In addition to the use of the aforementioned major scripts, at least two indigenous scripts have been devised for representing Balti. The current status of these two scripts is unknown; it is likely that they are extinct. Formal names for these scripts either do not exist or have not yet been identified. They are labelled here as ‘Balti A’ and ‘Balti B’ for ease of reference.

2.1 ‘Balti A’

‘Balti A’ is the script identified in “Unicode Technical Report #3” (N2042). It is listed as script ‘009’ in the Script Encoding Initiative’s (SEI) report “Unicode Scripts Research” (2007).

Information on ‘Balti A’ is scarcely. George Grierson made brief mention of the script in the *Linguistic Survey of India* (1909) and published a small specimen of it. The text is given with interlinear Arabic

¹ Hasnain 2002.

² Rangan 1975.

transliteration, an English translation, and Latin transliteration (see Figure 1 and Figure 2). Grierson writes that the script was devised around 1400, at the time of the arrival of Islam in Baltistan.³ He also notes that historical books were written in this script, which were in the possession of royal families. Writing in the late 1970s, Sydney Schuler stated that when he inquired of the old ruling families about these books, he was told that “they were loaned years ago to scholars who never returned them, and with whom contact has been lost.”⁴ Thus, it appears that the specimen published in the *Linguistic Survey of India* is the only text available in ‘Balti A’. Examples of the script in other secondary works are derived from Grierson’s specimen, ie. the ‘Balti script’ in *Writing Systems of the World* by Akira Nakanishi (1990: 69).

The script was a puzzle to specialists of Baltistan. In *Baltistan in History* (1988), Banat Gul Afridi quotes A. H. Franke, a Tibetologist, saying “I am told, the Baltis make use of a particular kind of script which runs from right to left ... Professors A. Fischer and Hultze tell me, it is not based on any form of Arabic character but rather resembles the Indian form of script.”⁵ Afridi adds that “[t]he script referred to above that runs from right to left has not been seen by anybody. In fact that Balti script was written from left to right.”⁶

A chart of ‘Balti A’ was recently posted on a Japanese website called “Stod Phyogs” (2009). The letters appear similar to those used in the Grierson specimen. The chart shows the ‘Balti A’ characters with Latin transliteration and correspondences in the Tibetan and Arabic scripts (see Figure 3). The date of the website suggests that there is current interest in the script or at least in the Balti language and its representation.

2.2 ‘Balti B’

The second script used for writing Balti appears in a manuscript containing the text of ‘The Story of the Creation of Shigar’ by Wazir Ahmad. Schuler writes that the alphabet was created by the grandfather of Wazir Ahmad, a man named Farhat.⁷ This script is here referred to as ‘Balti B’.

Records and information on ‘Balti B’ have been published in secondary literature. Photographs of the Wazir Ahmad manuscript were published by Schuler in the *Central Asiatic Journal* (1978) and the text given in Latin transliteration and English translation. Two script charts have also been published, the first by Schuler (Figure 5) and the other by Afridi (Figure 6). The present author was able only to identify one extant record in ‘Balti B’, that being the manuscript of Wazir Ahmad, which consists of six folios, two of which are shown here in Figure 7. The manuscript may be the only surviving example of a literary tradition.⁸

The two charts of ‘Balti B’ show great similarity in character repertoire and glyph shapes. There are a few variant glyph shapes, but these are negligible. The letters shown in Schuler’s chart appear to be derived from the Wazir Ahmad manuscript. The source of the characters shown in Afridi’s chart is unknown.

Based upon a comparison with corresponding Arabic letters, it is clear that the letters of ‘Balti B’ are not derived from those of the Arabic script. At the very least, some influence from Tibetan is visible in the shapes of glyphs.

It is possible that ‘Balti B’ is the ‘Balti script’ described by Afridi as being ‘written from left to right’. However, Afridi does not provide any details apart from the directionality of the script that would assist in an identification.

³ Grierson 1909: 32. ⁴ Schuler 1978: 102. ⁵ Afridi 1988: 29. ⁶ Ibid. ⁷ Schuler 1978: 103. ⁸ Schuler 1978: 102.

2.3 Comparison

The relationship between the two Balti scripts is unknown. They do not appear to be related. Some glyph shapes are similar, but there are no correspondences between the characters of the two scripts. No digits are attested for ‘Balti A’, while ‘Balti B’ has a complete set. The largest difference is directionality: ‘Balti A’ is written from right-to-left, while ‘Balti B’ is left-to-right.

3 Character Repertoire

‘Balti B’ consists of 47 characters: 32 letters, 4 vowel signs, 1 VIRAMA-type sign, and 10 digits. Script-specific punctuation marks are not attested. Periods and marks similar to Latin punctuation are used. This repertoire is based upon a cursory analysis of the available script charts and the folios of the Wazir Ahmad manuscript.

3.1 Character Properties

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xx00;BALTI B LETTER A;Lo;0;L;;;;N;;;;;
xx01;BALTI B LETTER BA;Lo;0;L;;;;N;;;;;
xx02;BALTI B LETTER CA;Lo;0;L;;;;N;;;;;
xx03;BALTI B LETTER CHA;Lo;0;L;;;;N;;;;;
xx04;BALTI B LETTER DA;Lo;0;L;;;;N;;;;;
xx05;BALTI B LETTER DDA;Lo;0;L;;;;N;;;;;
xx06;BALTI B LETTER YA;Lo;0;L;;;;N;;;;;
xx07;BALTI B LETTER FA;Lo;0;L;;;;N;;;;;
xx07;BALTI B LETTER PHA;Lo;0;L;;;;N;;;;;
xx08;BALTI B LETTER GA;Lo;0;L;;;;N;;;;;
xx09;BALTI B LETTER GHHA;Lo;0;L;;;;N;;;;;
xx0A;BALTI B LETTER HA;Lo;0;L;;;;N;;;;;
xx0B;BALTI B LETTER JA;Lo;0;L;;;;N;;;;;
xx0C;BALTI B LETTER KA;Lo;0;L;;;;N;;;;;
xx0D;BALTI B LETTER KHA;Lo;0;L;;;;N;;;;;
xx0E;BALTI B LETTER XA;Lo;0;L;;;;N;;;;;
xx0F;BALTI B LETTER LA;Lo;0;L;;;;N;;;;;
xx10;BALTI B LETTER MA;Lo;0;L;;;;N;;;;;
xx11;BALTI B LETTER NA;Lo;0;L;;;;N;;;;;
xx12;BALTI B LETTER WA;Lo;0;L;;;;N;;;;;
xx13;BALTI B LETTER PA;Lo;0;L;;;;N;;;;;
xx14;BALTI B LETTER RA;Lo;0;L;;;;N;;;;;
xx15;BALTI B LETTER RRA;Lo;0;L;;;;N;;;;;
xx16;BALTI B LETTER SA;Lo;0;L;;;;N;;;;;
xx17;BALTI B LETTER SHA;Lo;0;L;;;;N;;;;;
xx18;BALTI B LETTER TA;Lo;0;L;;;;N;;;;;
xx19;BALTI B LETTER THA;Lo;0;L;;;;N;;;;;
xx1A;BALTI B LETTER TTA;Lo;0;L;;;;N;;;;;
xx1B;BALTI B LETTER TSHA;Lo;0;L;;;;N;;;;;
xx1C;BALTI B LETTER ZA;Lo;0;L;;;;N;;;;;
xx1D;BALTI B LETTER ZHA;Lo;0;L;;;;N;;;;;
xx1E;BALTI B LETTER QA;Lo;0;L;;;;N;;;;;
xx1F;BALTI B VOWEL SIGN A;Mn;0;NSM;;;;N;;;;;
xx20;BALTI B VOWEL SIGN I;Mn;0;NSM;;;;N;;;;;
xx21;BALTI B VOWEL SIGN U;Mn;0;NSM;;;;N;;;;;
xx22;BALTI B VOWEL SIGN E;Mn;0;NSM;;;;N;;;;;
xx23;BALTI B VOWEL SIGN O;Mn;0;NSM;;;;N;;;;;
xx24;BALTI B SIGN VIRAMA;Mn;9;NSM;;;;N;;;;;
xx25;BALTI B DIGIT ZERO;Nd;0;L;0;0;0;N;;;;;
xx26;BALTI B DIGIT ONE;Nd;0;L;1;1;1;N;;;;;

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xx27;BALTI B DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
xx28;BALTI B DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
xx29;BALTI B DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
xx2A;BALTI B DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
xx2B;BALTI B DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
xx2C;BALTI B DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
xx2D;BALTI B DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
xx2E;BALTI B DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;

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4 Recommendations

It is requested that the script be allocated in the roadmap to the Supplementary Multilingual Plane (Plane 1) alongside other Brahmi-based scripts.

A name for the script has not yet been identified. For purposes of allocation and reference, it may be given the temporary name ‘Balti B’. A permanent name will be assigned in the formal proposal to encode the script.

5 References

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Figure 1: An excerpt from “Gospel of John” 3:16 into ‘Balti A’ with interlinear Arabic transliteration (from Grierson 1909: 33).

Figure 2: Latin transliteration and English translation of text in Figure 1 (from Grierson 1909: 34).

ཁ	ཎ	ཀ	ཁ	ཀ
k□	kh□	g□	g□	ng□
ཁ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ*	ཀ	ཀ*	ཀ*

ཀ	ཀ	ཀ	ཀ	ཀ
c□	ch□	j□	j□	ny□
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ*	ཀ	ཀ*	ཀ*

ཀ	ཀ	ཀ	ཀ	ཀ
t□	th□	d□	d□	n□
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ*	ཀ	ཀ*	ཀ

ཀ	ཀ	ཀ	ཀ	ཀ
p□	ph□	b□	b□	m□
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ*	ཀ	ཀ*	ཀ

ཀ	ཀ	ཀ	ཀ	ཀ
ts□	tsh□	dz□	dz□	w□
ཀ	ཀ	ཀ	ཀ*	ཀ
ཀ	ཀ*	ཀ	ཀ*	ཀ

ཀ	ཀ	ཀ	ཀ	ཀ
zh□	z□	ཀ	ཀ	y□
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ*	ཀ	ཀ	ཀ	ཀ

ཀ	ཀ	ཀ	ཀ	ཀ
r□	l□	sh□	sh□	s□
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ	ཀ	ཀ	ཀ

ཀ	ཀ	ཀ	ཀ	ཀ
h□	alueo	ཀ	ཀ	ཀ
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ	ཀ	ཀ	ཀ

ཀ	ཀ	ཀ	ཀ	ཀ
a□	aa□	aa	aa	ai□
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ	ཀ	ཀ	ཀ	ཀ (iii)

ཀ	ཀ	ཀ	ཀ	ཀ
u□	e□	o□	o□	o□ (子音の)
ཀ	ཀ	ཀ	ཀ	ཀ
ཀ (uuu)	ཀ	ཀ (ooo)	ཀ	ཀ

Figure 3: Chart showing 'Balti A' and corresponding letters in Tibetan and Arabic (adapted from "Stod Phyogs" 2009).

Balti

The Balti script is now extinct, but was formerly used to write the Balti language of Baltistan, in what is now part of Ladakh in Northern Kashmir. The script was apparently introduced in about the fifteenth century CE when the people converted to Islam. It is related to the Arabic script.

In contrast to many other Brahmic scripts, Balti is written from *right to left* horizontally, in the Arabic manner. All of the vowel signs except long *a* are integrated into the glyphs used for consonants, becoming projections from the consonants rather than being separate marks as in most of the modern Brahmic scripts. The consonants apparently have an inherent *a* vowel (or an explicit vowel sign *a* may appear; there may not be a distinction between long and short *a*). There appears to be a sign (overdot) used to indicate the end of a word, but no interword spacing seems to be used.

The base form of *b* is the same as *p* and *t*; only the dots distinguish these. There are two other similar pairs. These appear to approximately parallel similar dotted versus dotless letters in Arabic.

Issues: The set of Balti consonants is too small to make it worth encoding parallel to any of the other Brahmic scripts, or to Arabic. Not enough information is available at this time to determine the completeness of the accompanying chart. The digits, if any, are unknown. It is unknown how much literature is available in the old Balti script, or what the level of scholarly interest in it is. The function of the character listed in the names list as “Balti null vowel or word ending” is uncertain.

Grierson, G. A. *Linguistic Survey of India*, Vol. 3.

One photocopy of 2 pages (326 and 327) from an unknown volume in German.

Balti Names, draft 1999-07-20

00 BALTI LETTER A	10 BALTI LETTER NA
01 BALTI LETTER BA	11 BALTI LETTER HA
02 BALTI LETTER PA	12 BALTI LETTER JA
03 BALTI LETTER TA	13 BALTI LETTER KHA
04 BALTI LETTER GA	14 BALTI LETTER THA
05 BALTI LETTER HHA	15 BALTI LETTER TSA
06 BALTI LETTER CA	16 BALTI LETTER NGA
07 BALTI LETTER CHA	17 BALTI VOWEL SIGN A
08 BALTI LETTER DA	18 BALTI VOWEL SIGN AA
09 BALTI LETTER RA	19 BALTI VOWEL SIGN E
0A BALTI LETTER ZA	1A BALTI VOWEL SIGN I
0B BALTI LETTER SA	1B BALTI VOWEL SIGN O
0C BALTI LETTER SHA	1C BALTI VOWEL SIGN U
0D BALTI LETTER KA	1D BALTI NULL VOWEL OR WORD
0E BALTI LETTER LA	ENDING?
0F BALTI LETTER MA	

	0	1
0	𑖀	𑖁
1	𑖂	𑖃
2	𑖄	𑖅
3	𑖆	𑖇
4	𑖈	𑖉
5	𑖊	𑖋
6	𑖌	𑖍
7	𑖎	𑖏
8	𑖐	𑖑
9	𑖒	𑖓
A	𑖔	𑖕
B	𑖖	𑖗
C	𑖘	𑖙
D	𑖚	𑖛
E	𑖜	
F	𑖝	

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Figure 4: Report on ‘Balti A’ as given in N2042 (from McGowan 1997: 3).

a	ا	آ (ہ)	l	ل	ل
b	ب	ب	m	م	م
c	چ	چ	n	ن	ن
ch	چھ	چھ	o, u, w	و	و (و, و)
d	د	د	p	پ	پ
D	ڈ	ڈ	r	ر	ر
e, i, y	ی	ی (ہ)	R	ڑ	ڑ
f, ph	ف	ف	s	س	س
g	گ	گ	š	ش	ش
γ	غ	غ	t	ت	ت
h	ھ	ھ	th	تھ	تھ
j	ج	ج	T	ٹ	ٹ
k	ک	ک	tsh	تسھ	تسھ
kh	کھ	کھ	z	ز	ز, ر
x	خ	خ			

1	2	3	4	5	6	7	8	9	10
✓	۲	۳	۴	۵	۶	۷	۸	۹	۱۰

Figure 5: Chart of 'Balti B' (from Schuler 1978: 120).

ALPHABETS

آ غا با پا تا خا سا چا
 ع ح ب ك م ن ا ر ز
 ھا ھا ھا ھا ھا ھا ھا ھا
 ڄ ڄ ڄ ڄ ڄ ڄ ڄ ڄ
 ڙ ڙ ڙ ڙ ڙ ڙ ڙ ڙ
 ڻ ڻ ڻ ڻ ڻ ڻ ڻ ڻ

FIGURES

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A BALTI SENTENCE

ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ
 ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ
 ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ ڄاڻ

TRANSLATION

'By the timely help and cooperation of the people of Shigar, the Azad Forces maintained their positions and this area was liberated from the Indfidels.'

One school of thought is of the view that only Hindi is best suited for the writing of Balti language, while the other prefers Roman script. It is for the experts in languages to evolve a suitable script.

Figure 6: Chart of 'Balti B' (from Afridi 1988: 30).

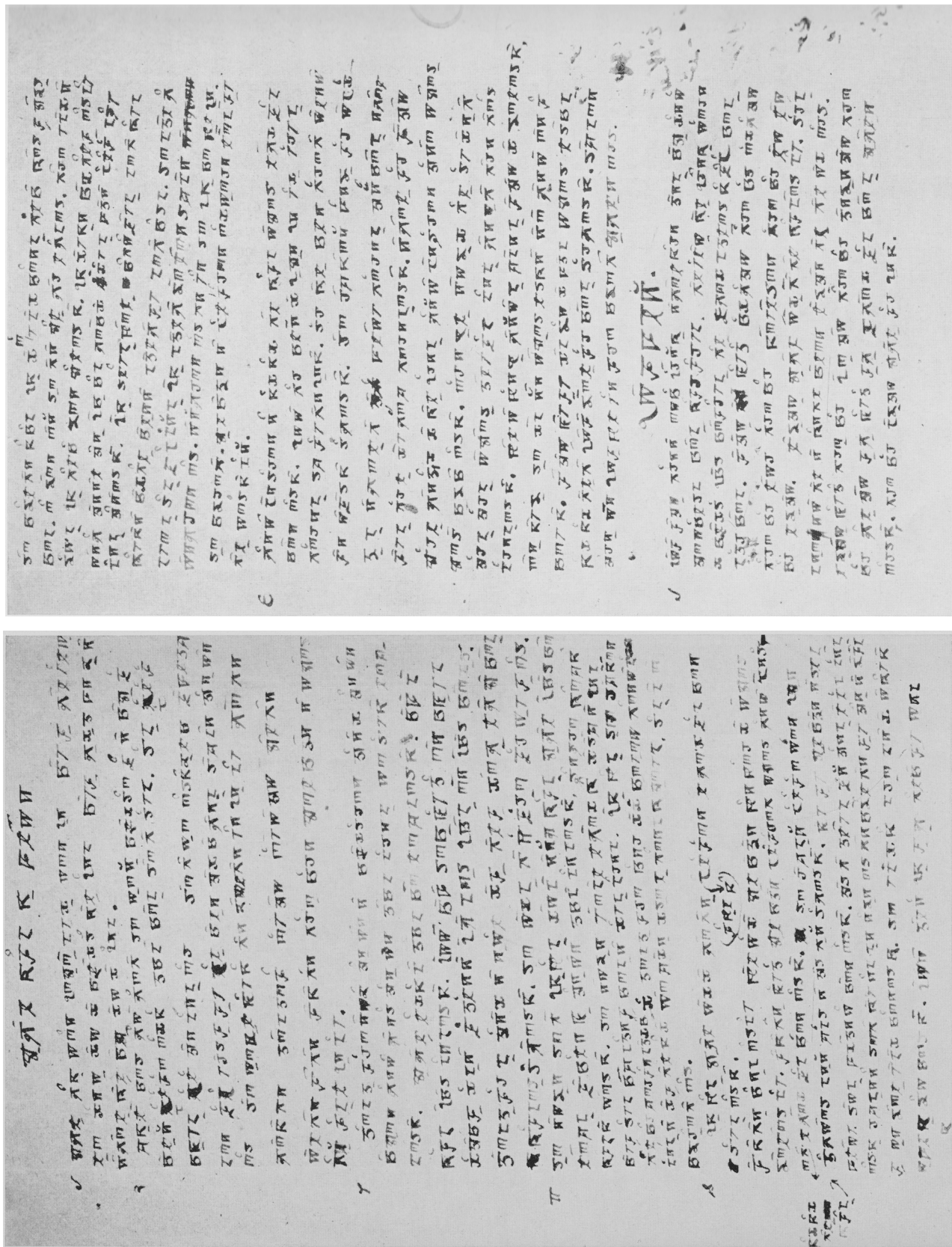


Figure 7: Folios 1 and 2 of the Wazir Ahmad manuscript in 'Balti B' (from Schuler 1978: Plate 1 and Plate 2).