UC Berkeley
Proposals from the Script Encoding Initiative

Title
Proposal to encode the Gunjala Gondi script in Unicode

Permalink
https://escholarship.org/uc/item/9zg8c7f9

Author
Pandey, Anshuman

Publication Date
2015-12-07

Peer reviewed

Proposal to encode the Gunjala Gondi script in Unicode

Anshuman Pandey
Department of Linguistics
University of California, Berkeley
Berkeley, California, U.S.A.
anshuman.pandey@berkeley.edu

December 7, 2015

1   Introduction

This is a proposal to encode the 'Gunjala Gondi' script in Unicode. It provides a brief description of the writing system, a character repertoire with representative glyphs, character properties, and specimens that illustrate usage of the script in hand-writing and print. This document supersedes "Preliminary Proposal to Encode the Gunjala Gondi Script in Unicode" (L2/15-086).

2   Background

The writing system described here is referred to as 'Gunjala Gondi Lipi' (गुंजाला गोंडी लिपि, గుంజాల గోండి లిపి), or simply 'Gunjala Gondi'. The script is also known in some circles as 'Koytura Gunjala Lipi', the term 'Koya' being the indigenous name used by Gonds of Telangana and Gondwana for referring to their language. The script is named after the village Gunjala in the Adilabad district of Telangana, where manuscripts written in the script were recently found. Gunjala Gondi is associated with Southern Gondi (ISO 639-3: ggo), a Dravidian language presently spoken by 100,000 people across Telangana, Maharashtra, and Chhattisgarh. It is not the primary script for Southern Gondi, but is used alongside Telugu and Devanagari orthographies.

There is substantial interest in the Gunjala Gondi script within the Gondi-speaking and broader scholarly communities in India. The script is being actively taught. Documents in the script are being published. In 2008, the Integrated Tribal Development Authority published a book originally written in the script by Pendur Lingu in 1942. A digitized font has been developed and a script primer has been produced using the font. A presentation on the script and font was given by S. Sridhara Murthy and Jayadhir Tirumalrao at Typography Day 2014 in Pune, Maharashtra.

The Gunjala Gondi script differs from the writing system invented by Munshi Mangal Singh Masaram in 1918, which was proposed for encoding (see L2/15-090) and approved for inclusion in a future version of the Unicode standard.

3 Script Details

3.1 Structure

Gunjala Gondi is an alphasyllabic script that is written from left to right. It is based upon the Brahmi model. Consonant letters possess the inherent vowel *a*. Consonant clusters are represented as conjuncts, which are rendered linearly using half-forms of all letters expect for the final consonant. Independent vowels are written using letters, while dependent signs are used for medial and final vowels. All vowel signs and modifiers are placed to the right of the consonant or above the head-stroke at the right edge. Consonant-vowel combinations involving certain vowel signs are rendered systematically for all consonants as ligatures.

3.2 Character repertoire

There are 63 characters proposed for encoding in the 'Gunjala Gondi' block. The repertoire is based upon characters found in primary sources and script primers.

3.3 Representative glyphs

The representative glyphs are modern interpretations of forms found in manuscripts. They are of a sans serif style with uniform stroke widths and accentuated loops. The manuscript forms are more caligraphic.

The glyphs are sourced from a font designed by Sridhar Murthy and developed further by Karambir Singh Rohilla. The copyright is held by the Centre for Dalit and Adivasi Studies (CDAST), University of Hyderabad, India. The font glyphs are used with permission. Modifications to some glyphs and the addition of new glyphs have been made by the proposal author.

3.4 Character order

The arrangement of the script is notable. The vowel order follows the typical Brahmi pattern, but the consonant order is entirely different. Although consonants are not arranged according to classes of articulation, script charts reveal some presence of that logic in the pairing of unaspirated and aspirated consonants and in the alternating rows of voiced and unvoiced letters.

3.5 Writing style

Gunjala Gondi is an inherently cursive writing system. Hand-written sources show syllables of a word connected using pen strokes. These sources also show the script written upon pages with pre-drawn lines, in a fashion similar to Modi scribal traditions. The script is written such that it hangs from these lines. The intent of these pre-drawn lines may be to facilitate rapid writing by eliminating the need to draw the head-stroke for each letter. Alternately, the head-stroke that is shown as a component of the graphical structure of each letter in scripts charts may mimic the pre-drawn line.

3.6 Relationship to other scripts

The Gunjala script does not appear to be genetically related to other scripts. Nevertheless, it strongly resembles the Modi script in appearance and style, as well as in the structure of letterforms, the forms of some vowel signs, and the ligating behavior of vowel signs (see L2/11-212R2 and tables 4–6 here). Despite these similarities, Gunjala Gondi is a distinct script and is a suitable candidate for encoding in Unicode.

4 Encoding model

4.1 Vowel Letters

There are 10 vowel letters:

ಚ	GUNJALA GONDI LETTER A	ಜ಼	GUNJALA GONDI LETTER UU
ಚಿ಼	GUNJALA GONDI LETTER AA	ಚ಼	GUNJALA GONDI LETTER EE
ಚಿ	GUNJALA GONDI LETTER I	ಚ಼	GUNJALA GONDI LETTER AI
ಚಿ಼	GUNJALA GONDI LETTER II	ಚಿ಼	GUNJALA GONDI LETTER OO
ಜ಼	GUNJALA GONDI LETTER U	ಚಿ಼	GUNJALA GONDI LETTER AU

The script does not distinguish between the vowels /e/, /e:/ and /o/, /o:/ as do other scripts for Dravidian languages, eg. Telugu ఎ /e/, ఏ /e:/ and ఒ /o/, ఓ /o:/. The pairs of vowels are represented using ಚ಼ /e:/ and ಚ಼ /o:/, respectively. The user community is discussing introducing new letters for these short vowels. In order to accommodate this, the letter ಚ಼ is assigned the name VOWEL LETTER EE and ಚ಼ is named VOWEL LETTER OO. Space is reserved in the block for the future inclusion of *VOWEL LETTER E and *VOWEL LETTER O.

4.2 Vowel signs

There are 9 dependent vowel signs:

○	GUNJALA GONDI VOWEL SIGN AA	○	GUNJALA GONDI VOWEL SIGN EE
○	GUNJALA GONDI VOWEL SIGN I	○	GUNJALA GONDI VOWEL SIGN AI
○	GUNJALA GONDI VOWEL SIGN II	○	GUNJALA GONDI VOWEL SIGN OO
○	GUNJALA GONDI VOWEL SIGN U	○	GUNJALA GONDI VOWEL SIGN AU
○	GUNJALA GONDI VOWEL SIGN UU		

The script lacks corresponding dependent vowel signs for the short vowels /e/ and /o/. The user community is discussing introducing new signs for these short vowels. In order to accommodate this, the sign ○ is assigned the name VOWEL SIGN EE and ○ is named VOWEL LETTER OO. Space is reserved in the block for the future inclusion of *VOWEL SIGN E and *VOWEL SIGN O.

The VOWEL SIGN AA, VOWEL SIGN OO, VOWEL SIGN AU have special rendering requirements (see § 4.7).

4.3 Vowel modifiers

There are 2 'vowel modifiers':

    ◌̊   GUNJALA GONDI SIGN ANUSVARA

    ◌ः̄   GUNJALA GONDI SIGN VISARGA

The ◌̊ ANUSVARA is used for marking nasalization. The ◌ः̄ VISARGA is used for the representation of post-vocalic aspiration in words of Sanskrit origin.

4.4 Consonants

There are 30 consonant letters:

ౘ	GUNJALA GONDI LETTER YA	ౙ	GUNJALA GONDI LETTER CA
ౚ	GUNJALA GONDI LETTER VA	ౚ	GUNJALA GONDI LETTER CHA
౮	GUNJALA GONDI LETTER BA	ౚ	GUNJALA GONDI LETTER TTA
ౚ	GUNJALA GONDI LETTER BHA	ౚ	GUNJALA GONDI LETTER TTHA
ౘ	GUNJALA GONDI LETTER MA	ౚ	GUNJALA GONDI LETTER LLA
ౚ	GUNJALA GONDI LETTER KA	ౚ	GUNJALA GONDI LETTER JA
ౚ	GUNJALA GONDI LETTER KHA	ౚ	GUNJALA GONDI LETTER JHA
ౚ	GUNJALA GONDI LETTER TA	ౚ	GUNJALA GONDI LETTER DDA
ౚ	GUNJALA GONDI LETTER THA	ౚ	GUNJALA GONDI LETTER DDHA
ౚ	GUNJALA GONDI LETTER LA	ౚ	GUNJALA GONDI LETTER NGA
ౚ	GUNJALA GONDI LETTER GA	ౚ	GUNJALA GONDI LETTER PA
ౚ	GUNJALA GONDI LETTER GHA	ౚ	GUNJALA GONDI LETTER PHA
ౚ	GUNJALA GONDI LETTER DA	ౚ	GUNJALA GONDI LETTER HA
ౚ	GUNJALA GONDI LETTER DHA	ౚ	GUNJALA GONDI LETTER RA
�U	GUNJALA GONDI LETTER NA	ౚ	GUNJALA GONDI LETTER SA

The script does not have letters for *ña* and *ṇa*. These sounds are represented using ◌̊ SIGN ANUSVARA. Also lacking are distinct letters for *śa* and *ṣa*, which are represented using ౚ SA.

Contextual alternates of some vowel signs are used with ౚ VA, ౮ BA, ౚ NA, ౚ CHA on account of the ascending right terminals in these letters (see § 4.7).

4.5   Virama

The following character is proposed as an addition to the script block:

◌ꯠ   GUNJALA GONDI VIRAMA

The ◌ꯠ GUNJALA GONDI VIRAMA is a control character that is used for producing the half form of a consonant letter for use in a conjunct. It is represented in the code chart as ◌ꯠ in order to indicate that it is a special character. The Gunjala Gondi VIRAMA behaves similarly to the function of ◌ U+094D DEVANAGARI SIGN VIRAMA in forming conjuncts, but unlike the Devanagari VIRAMA it does not silence the inherent vowel of a consonant. In fact, there is no *halanta* in Gunjala Gondi for supressing the inherent vowel.

4.6   Consonant-Vowel Combinations

Vowel signs are written with consonant letters as follows:

| �
| ya | yā | yi | yī | yu | yū | yē | yai | yō | yau |

The encoded representations of the above are as follows:

yā   ꝇꝣ   <ꝇ YA, ◌ꝣ VOWEL SIGN AA>

yi   ꝇꝯ   <ꝇ YA, ◌ꝯ VOWEL SIGN I>

yī   ꝇꝱ   <ꝇ YA, ◌ꝱ VOWEL SIGN II>

yu   ꝇꝺ   <ꝇ YA, ◌ꝺ VOWEL SIGN U>

yū   ꝇꝸ   <ꝇ YA, ◌ꝸ VOWEL SIGN UU>

yē   ꝇ   <ꝇ YA, ◌ VOWEL SIGN EE>

yai   ꝇ   <ꝇ YA, ◌ VOWEL SIGN AI>

yō   ꝇꝣ   <ꝇ YA, ◌ꝣ VOWEL SIGN OO>

yau   ꝇꝣ   <ꝇ YA, ◌ꝣ VOWEL SIGN AU>

The ANUSVARA and VISARGA are always placed after any a base letter and any accompanying vowel signs:
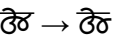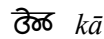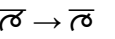
yaṃ   ꝇ   <ꝇ YA, ◌ SIGN ANUSVARA>
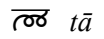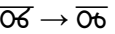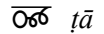
yāṃ	ꧤꧣ꧰	<ꧤ YA, ꧰ SIGN AA, ° SIGN ANUSVARA>
yaḥ	ꧤ꧟	<ꧤ YA, ꧟ SIGN VISARGA>
yāḥ	ꧤꧣ꧟	<ꧤ YA, ꧰ SIGN AA, ꧟ SIGN VISARGA>

4.7 Contextual forms of vowel signs
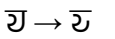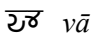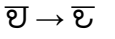
Consonant-vowel combinations that involve ꧰ VOWEL SIGN AA, ꧱ VOWEL SIGN OO, ꧲ VOWEL SIGN AU are normatively rendered as ligatures:

		Correct	Incorrect
yā	<ꧤ YA, ꧰ VOWEL SIGN AA>	ꧤꧣ	ꧤꧣ
yō	<ꧤ YA, ꧱ VOWEL SIGN OO>	ꧤꧤ	ꧤꧤ
yau	<ꧤ YA, ꧲ VOWEL SIGN AU>	ꧤꧥ	ꧤꧥ

These ligatures are formed using a modified form of all consonants. For letters with looped strokes at the right edge, modified form is produced by truncating the upward stroke and turning it to the right, such that it joins with the left stroke of the vowel sign:
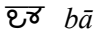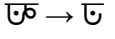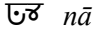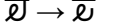
KA	ꦏ → ꦏ	ꦏꦴ	*kā*
TA	ꦠ → ꦠ	ꦠꦴ	*tā*
TTA	ꦛ → ꦛ	ꦛꦴ	*ṭā*

With letters that have a straight ascending stroke at the right edge, the stroke is truncated and curved rightward to join with the vowel sign. This occurs with the letters ꧗ VA, ꧐ BA, ꧏ NA, ꧑ CHA.

VA	꧗ → ꧗	꧗ꧣ	*vā*
BA	꧐ → ꧐	꧐ꧣ	*bā*
NA	ꧏ → ꧏ	ꧏꧣ	*nā*
CHA	꧑ → ꧑	꧑ꧣ	*chā*

4.8 Consonant Conjuncts

Consonant clusters are written as conjuncts, which are rendered linearly using half-forms of all but the final letter in a cluster. Conjuncts are represented in encoded text by placing the sign ꠦ VIRAMA after each non-final consonant in a cluster. Consonants are ordered as they occur in the cluster.

6

kka   ठैठठै   <ठै KA, ⟨VIRAMA⟩ VIRAMA, ठै KA>

dna   ꝫU   <ꝫ DA, ⟨VIRAMA⟩ VIRAMA, U NA>

tra   �????   <ᅟ TA, ⟨VIRAMA⟩ VIRAMA, ꝫ RA>

rka   ꝫठै   <ꝫ RA, ⟨VIRAMA⟩ VIRAMA, ठै KA>

Unlike the *ra* in other Indic scripts, the Gunjala Gondi ꝫ RA does not have any special forms, such as *repha* or *vattu*, when it occurs in conjuncts. The half-form is used when it occurs in cluster-initial position.

A half-form of a consonant is similar to the modified form of the letter that is used in consonant-vowel ligatures. It is produced by truncating the upward right stroke at half its height. A complete list of half-forms is shown below:

	full	half		full	half		full	half
YA	ꝫ	ꝫ	GA	ꝫ	ꝫ	JA	ꝫ	ꝫ
VA	ꝫ	ꝫ	GHA	ꝫ	ꝫ	JHA	ꝫ	ꝫ
BA	ꝫ	ꝫ	DA	ꝫ	ꝫ	DDA	ꝫ	ꝫ
BHA	ꝫ	ꝫ	DHA	ꝫ	ꝫ	DDHA	ꝫ	ꝫ
MA	ꝫ	ꝫ	NA	U	U	NGA	ꝫ	ꝫ
KA	ꝫ	ꝫ	CA	ꝫ	ꝫ	PA	ꝫ	ꝫ
KHA	ꝫ	ꝫ	CHA	ꝫ	ꝫ	PHA	ꝫ	ꝫ
TA	ꝫ	ꝫ	TTA	ꝫ	ꝫ	HA	ꝫ	ꝫ
THA	ꝫ	ꝫ	TTHA	ꝫ	ꝫ	RA	ꝫ	ꝫ
LA	ꝫ	ꝫ	LLA	ꝫ	ꝫ	SA	ꝫ	ꝫ

4.9 Punctuation

Script-specific marks of punctuation are not attested. The manuscript sources show usage of spaces, middle dots, periods, and colons for marking word and sentence boundaries. Some sources show usage of the ∣ *daṇḍā* or ∥ double *daṇḍā*. The *daṇḍā*-s are not proposed for separate encoding as part of the Gunjala Gondi block, but are to be unified with ∣ U+0964 DEVANAGARI DANDA and ∥ U+0965 DEVANAGARI DOUBLE DANDA.

4.10   Symbol

The ௐ GUNJALA GONDI OM is a sacred symbol.

4.11   Digits

There is a full set of digits:

O	GONDI DIGIT ZERO	௨	GONDI DIGIT FOUR	౮	GONDI DIGIT EIGHT
௧	GONDI DIGIT ONE	౫	GONDI DIGIT FIVE	౯	GONDI DIGIT NINE
౽	GONDI DIGIT TWO	౬	GONDI DIGIT SIX		
౩	GONDI DIGIT THREE	౭	GONDI DIGIT SEVEN		

4.12   Collation

It is uncertain at present if Gunjala Gondi should be sorted according to the traditional order or the usual Brahmi pattern. Collation information for the script will be determined through discussions with the user community. The absence of collation data does not impair the encoding of the script.

5   Character Data

5.1   Character Properties

In the format of the Unicode Character Database:

```
11D60;GUNJALA GONDI LETTER A;Lo;0;L;;;;;N;;;;;
11D61;GUNJALA GONDI LETTER AA;Lo;0;L;;;;;N;;;;;
11D62;GUNJALA GONDI LETTER I;Lo;0;L;;;;;N;;;;;
11D63;GUNJALA GONDI LETTER II;Lo;0;L;;;;;N;;;;;
11D64;GUNJALA GONDI LETTER U;Lo;0;L;;;;;N;;;;;
11D65;GUNJALA GONDI LETTER UU;Lo;0;L;;;;;N;;;;;
11D67;GUNJALA GONDI LETTER EE;Lo;0;L;;;;;N;;;;;
11D68;GUNJALA GONDI LETTER AI;Lo;0;L;;;;;N;;;;;
11D6A;GUNJALA GONDI LETTER OO;Lo;0;L;;;;;N;;;;;
11D6B;GUNJALA GONDI LETTER AU;Lo;0;L;;;;;N;;;;;
11D6C;GUNJALA GONDI LETTER YA;Lo;0;L;;;;;N;;;;;
11D6D;GUNJALA GONDI LETTER VA;Lo;0;L;;;;;N;;;;;
11D6E;GUNJALA GONDI LETTER BA;Lo;0;L;;;;;N;;;;;
11D6F;GUNJALA GONDI LETTER BHA;Lo;0;L;;;;;N;;;;;
11D70;GUNJALA GONDI LETTER MA;Lo;0;L;;;;;N;;;;;
11D71;GUNJALA GONDI LETTER KA;Lo;0;L;;;;;N;;;;;
11D72;GUNJALA GONDI LETTER KHA;Lo;0;L;;;;;N;;;;;
11D73;GUNJALA GONDI LETTER TA;Lo;0;L;;;;;N;;;;;
11D74;GUNJALA GONDI LETTER THA;Lo;0;L;;;;;N;;;;;
11D75;GUNJALA GONDI LETTER LA;Lo;0;L;;;;;N;;;;;
11D76;GUNJALA GONDI LETTER GA;Lo;0;L;;;;;N;;;;;
11D77;GUNJALA GONDI LETTER GHA;Lo;0;L;;;;;N;;;;;
11D78;GUNJALA GONDI LETTER DA;Lo;0;L;;;;;N;;;;;
11D79;GUNJALA GONDI LETTER DHA;Lo;0;L;;;;;N;;;;;
11D7A;GUNJALA GONDI LETTER NA;Lo;0;L;;;;;N;;;;;
```

```
11D7B;GUNJALA GONDI LETTER CA;Lo;0;L;;;;;N;;;;;
11D7C;GUNJALA GONDI LETTER CHA;Lo;0;L;;;;;N;;;;;
11D7D;GUNJALA GONDI LETTER TTA;Lo;0;L;;;;;N;;;;;
11D7E;GUNJALA GONDI LETTER TTHA;Lo;0;L;;;;;N;;;;;
11D7F;GUNJALA GONDI LETTER LLA;Lo;0;L;;;;;N;;;;;
11D80;GUNJALA GONDI LETTER JA;Lo;0;L;;;;;N;;;;;
11D81;GUNJALA GONDI LETTER JHA;Lo;0;L;;;;;N;;;;;
11D82;GUNJALA GONDI LETTER DDA;Lo;0;L;;;;;N;;;;;
11D83;GUNJALA GONDI LETTER DDHA;Lo;0;L;;;;;N;;;;;
11D84;GUNJALA GONDI LETTER NGA;Lo;0;L;;;;;N;;;;;
11D85;GUNJALA GONDI LETTER PA;Lo;0;L;;;;;N;;;;;
11D86;GUNJALA GONDI LETTER PHA;Lo;0;L;;;;;N;;;;;
11D87;GUNJALA GONDI LETTER HA;Lo;0;L;;;;;N;;;;;
11D88;GUNJALA GONDI LETTER RA;Lo;0;L;;;;;N;;;;;
11D89;GUNJALA GONDI LETTER SA;Lo;0;L;;;;;N;;;;;
11D8A;GUNJALA GONDI VOWEL SIGN AA;Mc;0;L;;;;;N;;;;;
11D8B;GUNJALA GONDI VOWEL SIGN I;Mc;0;L;;;;;N;;;;;
11D8C;GUNJALA GONDI VOWEL SIGN II;Mc;0;L;;;;;N;;;;;
11D8D;GUNJALA GONDI VOWEL SIGN U;Mc;0;L;;;;;N;;;;;
11D8E;GUNJALA GONDI VOWEL SIGN UU;Mc;0;L;;;;;N;;;;;
11D90;GUNJALA GONDI VOWEL SIGN EE;Mn;0;NSM;;;;;N;;;;;
11D91;GUNJALA GONDI VOWEL SIGN AI;Mn;0;NSM;;;;;N;;;;;
11D93;GUNJALA GONDI VOWEL SIGN OO;Mc;0;L;;;;;N;;;;;
11D94;GUNJALA GONDI VOWEL SIGN AU;Mc;0;L;;;;;N;;;;;
11D95;GUNJALA GONDI SIGN ANUSVARA;Mn;0;NSM;;;;;N;;;;;
11D96;GUNJALA GONDI SIGN VISARGA;Mc;0;L;;;;;N;;;;;
11D97;GUNJALA GONDI VIRAMA;Mn;9;NSM;;;;;N;;;;;
11D98;GUNJALA GONDI OM;Lo;0;L;;;;;N;;;;;
11DA0;GUNJALA GONDI DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
11DA1;GUNJALA GONDI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
11DA2;GUNJALA GONDI DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
11DA3;GUNJALA GONDI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
11DA4;GUNJALA GONDI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
11DA5;GUNJALA GONDI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
11DA6;GUNJALA GONDI DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
11DA7;GUNJALA GONDI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
11DA8;GUNJALA GONDI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
11DA9;GUNJALA GONDI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
```

5.2 Linebreaking

In the format of `LineBreak.txt`:

```
11D60..11D65; AL   # GUNJALA GONDI LETTER A .. GUNJALA GONDI LETTER UU
11D67..11D68; AL   # GUNJALA GONDI LETTER EE .. GUNJALA GONDI LETTER AI
11D6A..11D89; AL   # GUNJALA GONDI LETTER OO .. GUNJALA GONDI LETTER SA
11D8A..11D8E; CM   # GUNJALA GONDI VOWEL SIGN AA .. GUNJALA GONDI VOWEL SIGN UU
11D90..11D91; CM   # GUNJALA GONDI VOWEL SIGN EE .. GUNJALA GONDI VOWEL SIGN AI
11D93..11D96; CM   # GUNJALA GONDI VOWEL SIGN OO .. GUNJALA GONDI SIGN VISARGA
11D97; CM          # GUNJALA GONDI SIGN VIRAMA
11D98; AL          # GUNJALA GONDI OM
11DA0..11DA9; NU   # GUNJALA GONDI DIGIT ZERO .. GUNJALA GONDI DIGIT NINE
```

5.3 Syllabic Categories

In the format of `IndicSyllabicCategory.txt`:

```
# Indic_Syllabic_Category=Bindu
```

```
11D95           ; Bindu                  # Mn        SIGN ANUSVARA

# Indic_Syllabic_Category=Visarga
11D96           ; Visarga                # Mc        SIGN VISARGA

# Indic_Syllabic_Category=Virama
11D97           ; Virama                 # Mn        VIRAMA

# Indic_Syllabic_Category=Vowel_Independent
11D60..11D65  ; Vowel_Independent        # Lo    [6] LETTER A .. LETTER UU
11D67..11D68  ; Vowel_Independent        # Lo    [2] LETTER EE .. LETTER AI
11D6A..11D6B  ; Vowel_Independent        # Lo    [2] LETTER OO .. LETTER AU


# Indic_Syllabic_Category=Vowel_Dependent
11D8A..11D8E  ; Vowel_Dependent          # Mc    [5] VOWEL SIGN AA .. VOWEL SIGN UU
11D90..11D91  ; Vowel_Dependent          # Mn    [2] VOWEL SIGN EE .. VOWEL SIGN AI
11D93..11D94  ; Vowel_Dependent          # Mc    [2] VOWEL SIGN OO .. VOWEL SIGN AU

# Indic_Syllabic_Category=Consonant
11D6C..11D89  ; Consonant                # Lo   [30] LETTER YA .. LETTER SA
```

5.4 Positional Categories

In the format of `IndicPositionalCategory.txt`:

```
# Indic_Positional_Category=Top
11D90..11D91  ; Top    # Mn    [2] VOWEL SIGN EE .. VOWEL SIGN AI
11D95         ; Top    # Mn        SIGN ANUSVARA

# Indic_Positional_Category=Right
11D8A..11D8E  ; Right  # Mc    [5] VOWEL SIGN AA .. VOWEL SIGN UU
11D93..11D94  ; Right  # Mc    [2] VOWEL SIGN OO .. VOWEL SIGN AU
11D96         ; Right  # Mc        SIGN VISARGA
```

5.5 Script extensions

The following characters should be extended for usage with Gunjala Gondi in `ScriptExtensions.txt`:

```
0964          ; # Po      DEVANAGARI DANDA
0965          ; # Po      DEVANAGARI DOUBLE DANDA
```

6 References

Murthy, S. Sridhara; and Jayadhir Tirumalrao. 2014. "Gunjala Gondi Script: A New Tracing". Typography Day presentation. Pune.

Pandey, Anshuman. 2011. "Proposal to Encode the Modi Script in ISO/IEC 10646". N4034 L2/11-212R2.
http://www.unicode.org/L2/L2011/11212r2-n4034-modi.pdf

———. 2015a. "Preliminary Proposal to Encode the Gunjala Gondi Script in Unicode". L2/15-086.
http://www.unicode.org/L2/L2015/15086-gunjala-gondi.pdf

———. 2015b. "Proposal to Encode the Masaram Gondi Script in Unicode" L2/15-090R.
http://www.unicode.org/L2/L2015/15090r-masaram-gondi.pdf

Rao, Arka Manik; Pendur Durnath Rao; and Mark Penny [eds]. 2008. "Let's read with Kōṭnaka Jangu from Gunjaḍa: A historical reader in the Gondi language which is spoken in Adilabad District of Andhra Pradesh". Based upon the original manuscript of Pendur Lingu from 1942, read by Kōṭnaka Jangu. Utnoor, Andhra Pradesh: Integrated Tribal Development Agency. `https://dl.dropboxusercontent.com/u/10140161/Published%20Books/1942%20Primer%20with%20modern%20script.pdf`

7   Acknowledgments

	11D6	11D7	11D8	11D9	11DA
0	౿ 11D60	౿ 11D70	౿ 11D80	౿ 11D90	O 11DA0
1	౿ 11D61	౿ 11D71	౿ 11D81	౿ 11D91	౿ 11DA1
2	౿ 11D62	౿ 11D72	౿ 11D82		౿ 11DA2
3	౿ 11D63	౿ 11D73	౿ 11D83	౿ 11D93	౿ 11DA3
4	౿ 11D64	౿ 11D74	౿ 11D84	౿ 11D94	౿ 11DA4
5	౿ 11D65	౿ 11D75	౿ 11D85	౿ 11D95	౿ 11DA5
6		౿ 11D76	౿ 11D86	౿ 11D96	౿ 11DA6
7	౿ 11D67	౿ 11D77	౿ 11D87	౿ 11D97	౿ 11DA7
8	౿ 11D68	౿ 11D78	౿ 11D88	౿ 11D98	౿ 11DA8
9		౿ 11D79	౿ 11D89		౿ 11DA9
A	౿ 11D6A	౿ 11D7A	౿ 11D8A		
B	౿ 11D6B	౿ 11D7B	౿ 11D8B		
C	౿ 11D6C	౿ 11D7C	౿ 11D8C		
D	౿ 11D6D	౿ 11D7D	౿ 11D8D		
E	౿ 11D6E	౿ 11D7E	౿ 11D8E		
F	౿ 11D6F	౿ 11D7F			

The script is also known as Koytura Gunjala Lipi.

Vowels

11D60	ఴ	GUNJALA GONDI LETTER A
11D61	ఴ	GUNJALA GONDI LETTER AA
11D62	ఴ	GUNJALA GONDI LETTER I
11D63	ఴ	GUNJALA GONDI LETTER II
11D64	ఴ	GUNJALA GONDI LETTER U
11D65	ఴ	GUNJALA GONDI LETTER UU
11D66	▨	<reserved>
11D67	ఴ	GUNJALA GONDI LETTER EE
11D68	ఴ	GUNJALA GONDI LETTER AI
11D69	▨	<reserved>
11D6A	ఴ	GUNJALA GONDI LETTER OO
11D6B	ఴ	GUNJALA GONDI LETTER AU

Consonants

11D6C	ఴ	GUNJALA GONDI LETTER YA
11D6D	ఴ	GUNJALA GONDI LETTER VA
11D6E	ఴ	GUNJALA GONDI LETTER BA
11D6F	ఴ	GUNJALA GONDI LETTER BHA
11D70	ఴ	GUNJALA GONDI LETTER MA
11D71	ఴ	GUNJALA GONDI LETTER KA
11D72	ఴ	GUNJALA GONDI LETTER KHA
11D73	ఴ	GUNJALA GONDI LETTER TA
11D74	ఴ	GUNJALA GONDI LETTER THA
11D75	ఴ	GUNJALA GONDI LETTER LA
11D76	ఴ	GUNJALA GONDI LETTER GA
11D77	ఴ	GUNJALA GONDI LETTER GHA
11D78	ఴ	GUNJALA GONDI LETTER DA
11D79	ఴ	GUNJALA GONDI LETTER DHA
11D7A	ఴ	GUNJALA GONDI LETTER NA
11D7B	ఴ	GUNJALA GONDI LETTER CA
11D7C	ఴ	GUNJALA GONDI LETTER CHA
11D7D	ఴ	GUNJALA GONDI LETTER TTA
11D7E	ఴ	GUNJALA GONDI LETTER TTHA
11D7F	ఴ	GUNJALA GONDI LETTER LLA
11D80	ఴ	GUNJALA GONDI LETTER JA
11D81	ఴ	GUNJALA GONDI LETTER JHA
11D82	ఴ	GUNJALA GONDI LETTER DDA
11D83	ఴ	GUNJALA GONDI LETTER DDHA
11D84	ఴ	GUNJALA GONDI LETTER NGA
11D85	ఴ	GUNJALA GONDI LETTER PA
11D86	ఴ	GUNJALA GONDI LETTER PHA
11D87	ఴ	GUNJALA GONDI LETTER HA
11D88	ఴ	GUNJALA GONDI LETTER RA
11D89	ఴ	GUNJALA GONDI LETTER SA

Dependent vowel signs

11D8A	◌ఴ	GUNJALA GONDI VOWEL SIGN AA
11D8B	◌ఴ	GUNJALA GONDI VOWEL SIGN I
11D8C	◌ఴ	GUNJALA GONDI VOWEL SIGN II
11D8D	◌ఴ	GUNJALA GONDI VOWEL SIGN U
11D8E	◌ఴ	GUNJALA GONDI VOWEL SIGN UU
11D8F	▨	<reserved>
11D90	◌	GUNJALA GONDI VOWEL SIGN EE
11D91	◌	GUNJALA GONDI VOWEL SIGN AI
11D92	▨	<reserved>
11D93	◌ఴ	GUNJALA GONDI VOWEL SIGN OO
11D94	◌ఴ	GUNJALA GONDI VOWEL SIGN AU

Various signs

11D95	◌	GUNJALA GONDI SIGN ANUSVARA
11D96	◌	GUNJALA GONDI SIGN VISARGA

Virama

11D97	◌	GUNJALA GONDI VIRAMA
		• used for producing conjuncts

Symbol

11D98	ఴ	GUNJALA GONDI OM

Digits

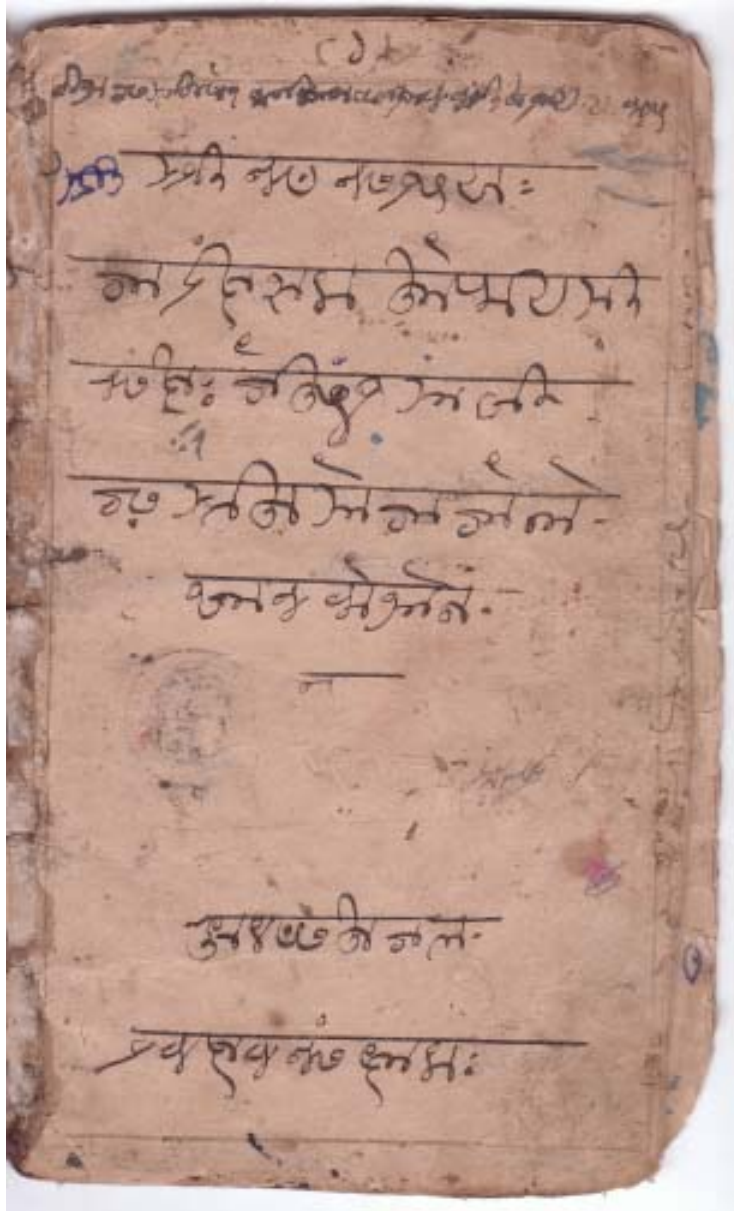|		
11DA0	౦	GUNJALA GONDI DIGIT ZERO
11DA1	౧	GUNJALA GONDI DIGIT ONE
11DA2	౨	GUNJALA GONDI DIGIT TWO
11DA3	౩	GUNJALA GONDI DIGIT THREE
11DA4	౪	GUNJALA GONDI DIGIT FOUR
11DA5	౫	GUNJALA GONDI DIGIT FIVE
11DA6	౬	GUNJALA GONDI DIGIT SIX
11DA7	౭	GUNJALA GONDI DIGIT SEVEN
11DA8	౮	GUNJALA GONDI DIGIT EIGHT
11DA9	౯	GUNJALA GONDI DIGIT NINE

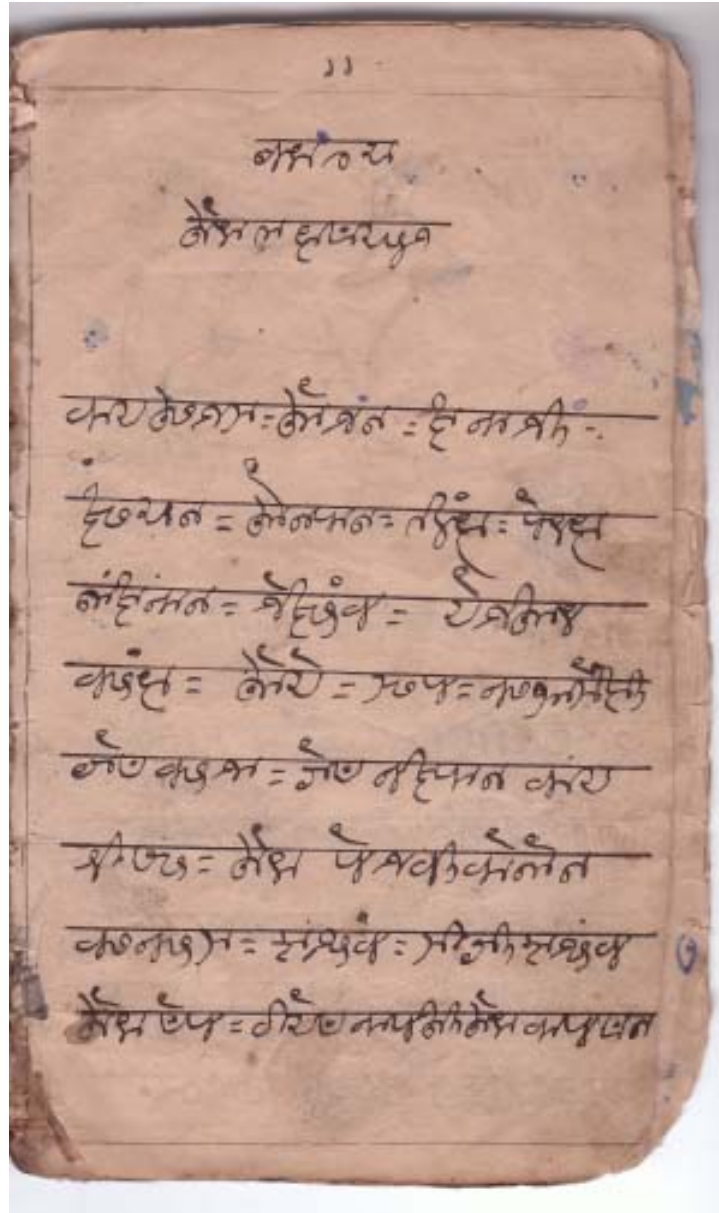Figure 1: Title page from a hand-written book in Gunjala Gondi (from Rao, et al. 2008).

Figure 2: Page from a hand-written book in Gunjala Gondi (from Rao, et al. 2008).
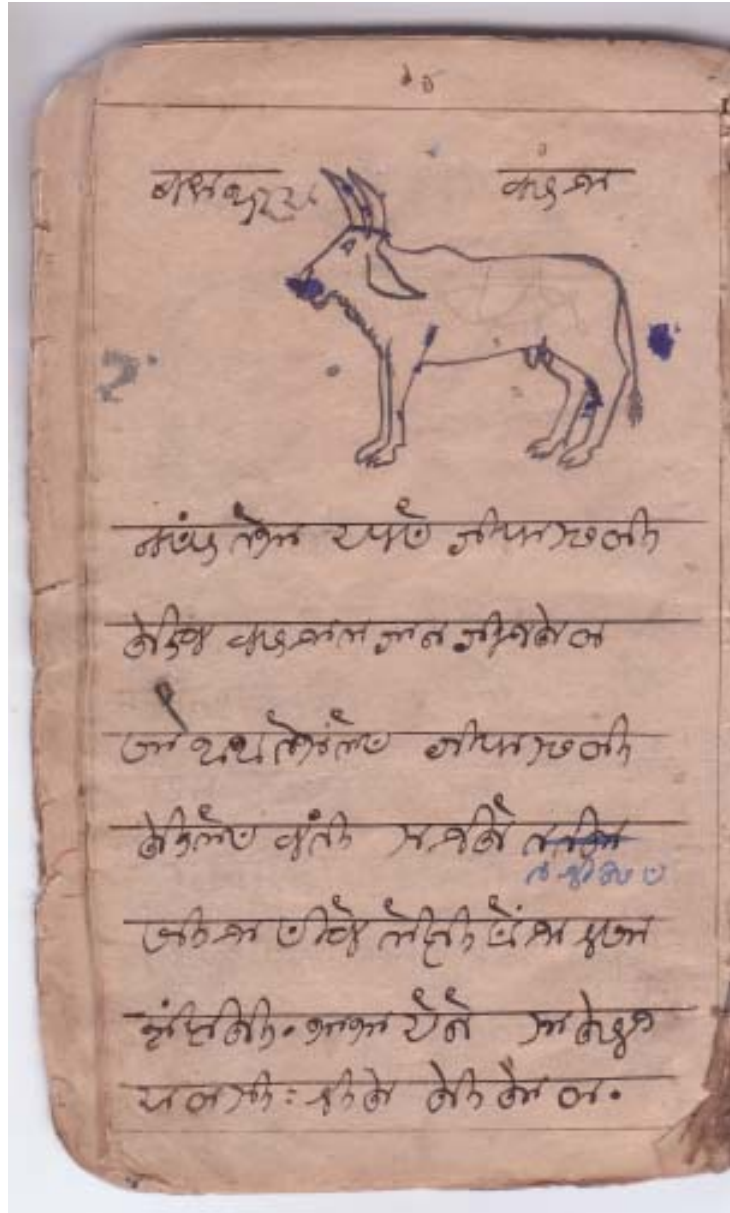
Figure 3: Page from a hand-written book in Gunjala Gondi (from Rao, et al. 2008).
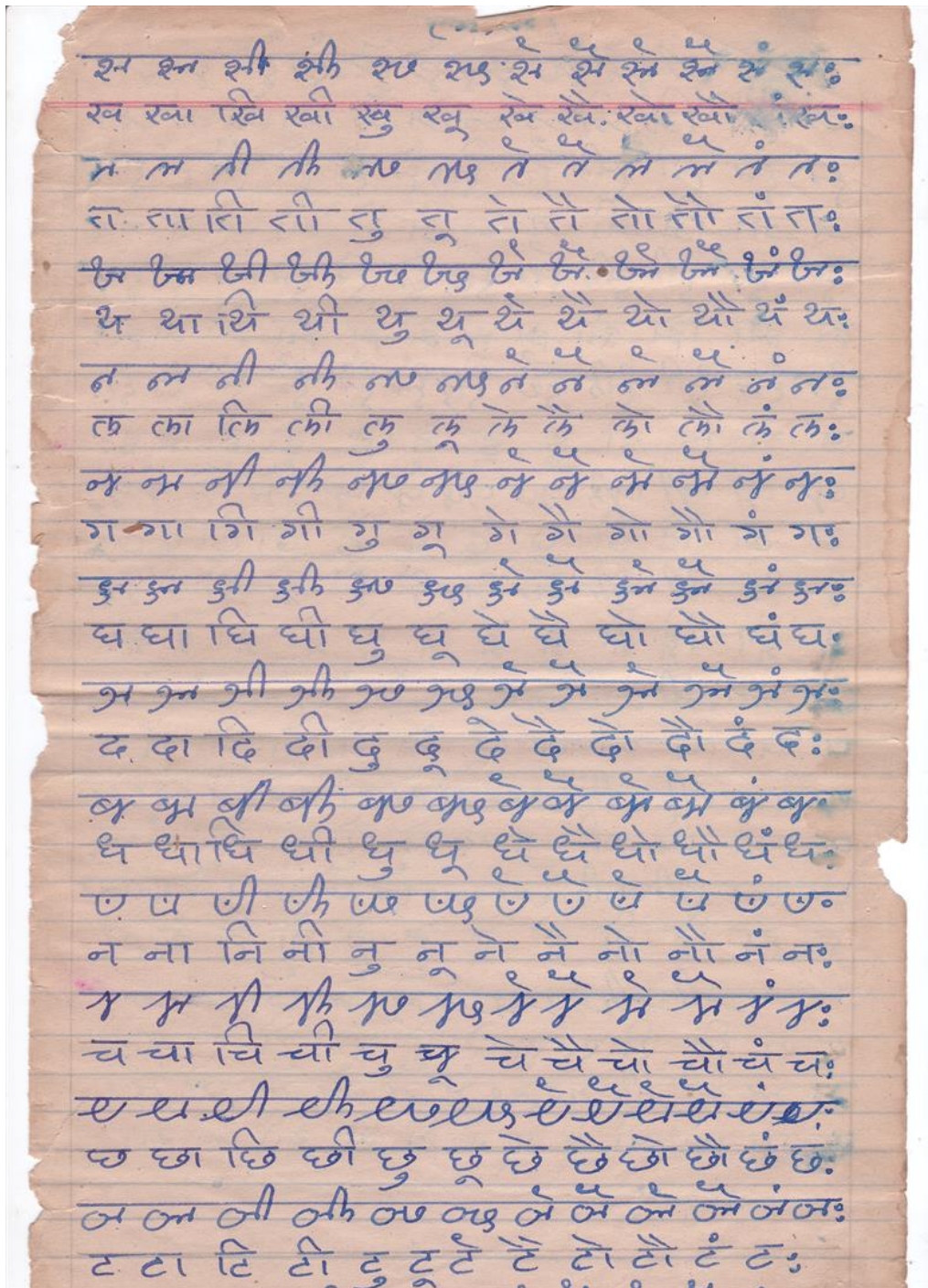
Figure 4: Hand-written page showing the Gunjala Gondi vowel letters, consonants, and vowel signs. The ॐ GUNJALA GONDI OM is shown at the top of the page.

Figure 5: Hand-written description of consonant-vowel combinations. Shown here is the series for YA .. MA. The KA series has been cut in the original scan.

Figure 6: Hand-written forms of consonant-vowel combinations for KHA .. TTA. The TTHA series has been cut in the original scan.
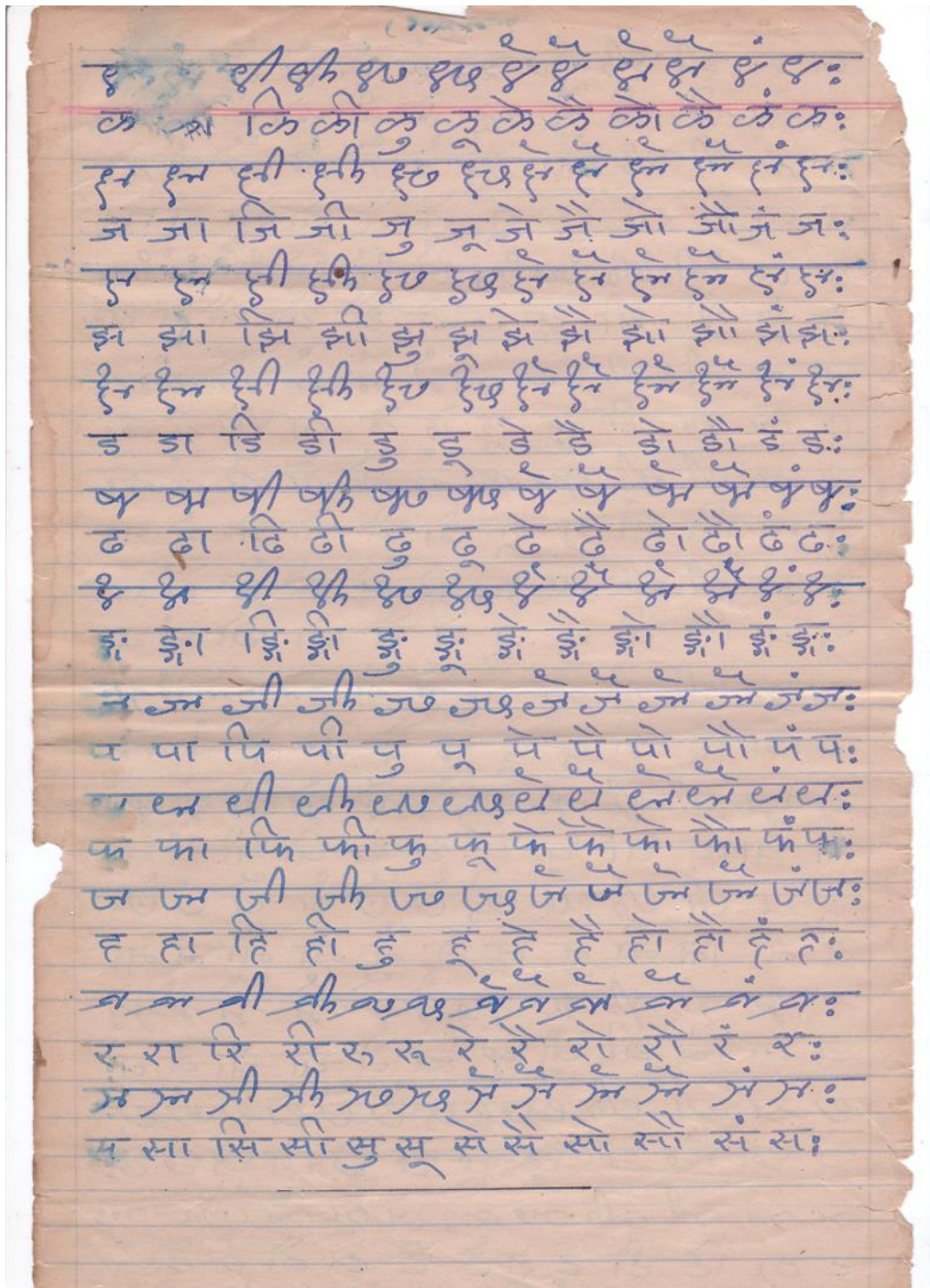
Figure 7: Hand-written forms of consonant-vowel combinations for LLA .. SA

Figure 8: A chart of Gunjala Gondi vowel and consonants letters from a printed primer, with Telugu correspondences.

Figure 9: A chart of Gunjala Gondi dependent vowel signs from a printed primer, with Telugu correspondences.

Figure 10: A chart showing Gunjala Gondi digits from a printed primer, with Telugu correspondences.

Figure 11: A chart containing examples of Gunjala Gondi conjuncts from a printed primer.

	Gunjala Gondi	Modi			Gunjala Gondi	Modi
YA	ଌ	ଏ		CA	ଷ	ਤ
VA	ਧ	੫		CHA	ੴ	ਟ
BA	ਥ	घ		TTA	ੴ	ਤ
BHA	ਥਰ	भ		TTHA	ੴ	ਤ
MA	ਝ	म		LLA	ਝ	ਝ
KA	ਠੴ	ਝ		JA	ਝ	ਝ
KHA	ਝ	ਧ		JHA	ਝ	ਝ
TA	ਣ	त		DDA	ਝ	ਤ
THA	ਥ	ਧ		DDHA	ਝ	ਤ
LA	ਣ	ਝ		NGA	ਝ	ਤ
GA	ਝ	ग		PA	ਥ	ਧ
GHA	ਝ	घ		PHA	ਥ	भ
DA	ਥ	ड		HA	ਥ	ਧ
DHA	ਝ	ਧ		RA	ਝ	ਤ
NA	ਧ	ਝ		SA	ਥ	ਧ

Table 4: Comparison of Gunjala Gondi and Modi consonant letters.

	Gunjala Gondi	Modi			Gunjala Gondi	Modi
A	ਹ	ੴ				
AA	ਹਾ	ਪ	VOWEL SIGN AA	ੋਰ	ੋਪ
I	ਜੀ	ੲ	VOWEL SIGN I	ੋੀ	ੋੀ
II	ਜੀ	ੲੀ	VOWEL SIGN II	ੋੀ	ੋੲ
U	ਝ	ੲੁ	VOWEL SIGN U	ੋ	ੋ
UU	ਝ	ੲੁ	VOWEL SIGN UU	ੋ	ੋ
E	—	ੲੇ	VOWEL SIGN E	—	ੋ
EE	ਹੇ	—	VOWEL SIGN EE	ੋ	—
AI	ਹੈ	ੲੈ	VOWEL SIGN AI	ੋ	ੋ
O	—	ੲੋ	VOWEL SIGN O	—	ੋ
OO	ਹੋ	—	VOWEL SIGN OO	ੋ	—
AU	ਹੌ	ੲੌ	VOWEL SIGN AU	ੋ	ੋ

Table 5: Comparison of Gunjala Gondi and Modi vowel letters and signs.

	Gunjala Gondi	Modi
ZERO	O	०
ONE	ᚦ	१
TWO	ꙅ	२
THREE	ꙍ	३
FOUR	ꙙ	४
FIVE	ꙅ	५
SIX	ꙩ	६
SEVEN	ꙍ	७
EIGHT	ꙅ	८
NINE	�	९

Table 6: Comparison of Gunjala Gondi and Modi digits.