A Grammar of Dravido
Harappan Writing

Introduction

Scientists have the responsibility to make scholars aware of the
decipherment methods used to assess ancient records. As a result
we can never fully understand Harappan society or history for that
matter, without an understanding of the Indus Valley/Harappan writing.
The purpose of this monograph is to help the student of Harappan
writing/history attain an understanding of the Harappan script and
show them how to interpret the signs.

Harappan writing is written in an aspect of Dravidian similar to
Tamil. This supports Mahadevan (1986) and Patnaik (1986), view
that the Harappan language might be related to the Tamil-Kannada
tongue. Moreover Parpola (1986) has also discussed the homonymy
between Harappan signs and Dravidian words.

The Harappan seals are amulets or talismans requesting some form
of blessing for its wearer, from his personal God. These seals usually
were formed by a simple brush or by the addition of introductory
elements. In Harappan script the same signs can serve both
as a noun and verb.

The discovery of seals in almost every room in many excavated
Harappan buildings of archaeologists, suggest that the knowledge of
writing was probably widespread in the Indus Valley. This view is
supported by the fact that inscriptions are found on many artefacts
discovered at Harappan sites including pottery, axes and copper plates.
(Parpola 1979)

2. The Harappan Signs

Although 62.4 percent of the Harappan inscriptions are found on
the seals, the Harappan writing is found on many portable artefacts
from the Indus Valley. They include 172 miniature tablets, 135 copper
tablets, 28 ivory or bone rods, 11 bronze implements and 110 groups
of graffiti. (Cowen 1985)

Out of a total of 419 Harappan signs there are only around 60-70
basic syllabic Harappan signs and 10 ideographic signs. (Winters 1991).
The remainder of Harappan signs are complex signs formed by the
joining of two or more basic syllabic signs.

This view is also supported by a statistical analysis of the Harappan
signs and their corresponding use in writing seal inscriptions. An anal-
ysis of the Harappan script indicates that out of the 419 Harappan
signs, 113 occur only once, 47 occur twice and 59 occur less than
5 times. This means that around 200 Harappan signs, many of them
ligatures, were in general use.
The Harappan signs are found on both seals and copper plaques/tablets. There are around 200 copper tablets, and 400 seals. The Harappan seals have been found at 60 different sites:

<table>
<thead>
<tr>
<th>Site</th>
<th>Number</th>
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<tbody>
<tr>
<td>Mohenjo-daro</td>
<td>2090</td>
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<tr>
<td>Harappan</td>
<td>1490</td>
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<td>Lothal</td>
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<td>Kalibangan</td>
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<td>Chanhawo-daro</td>
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<td>Near East</td>
<td>44 from 15 sites</td>
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The copper tablets were found only at Mohenjo-Daro. There are two major types of seals; one type is square with a short inscription above a carved animal motif. The second type of seal is rectangular and contains only an inscription.

Sixty percent of the seals are carved in steatite. Ninety percent of the seals are square, the remaining ten percent are rectangular.

The seals range in size from half-an-inch to around two-and-half inches. The Harappans perfected a unique technique of cutting and polishing the seals. The seals have raised boss on the back pierced with a hole for carrying or being placed on porcellin.

The Harappan seals carry messages addressed to their gods requesting support and assistance in obtaining daks (beneficence). (Winters, 1984)

Many Harappan seals were found in a worn condition and show signs of repair. Archaeologists have found holes on the back of the seals that suggest that they were tied with string and hung around the neck or from belts. Some seals may have been put in a small cases which may have served as amulet holders. (Parpola, 1978)

The Indus Valley writing is logo-syllabic. This means that the writing contains signs illustrating both logograms (a sign for a complete word) and syllabograms (set of phonetic syllables).

The sound values of the Harappan script and open syllables are of the CV (consonant-vowel) type and CVC type. The Harappan words were monosyllabic.
A Grammar of Dravid-Harappan Writing

In the Harappan script there are very few ideographic signs. The most common ideographic signs are न (n) and र (r).

The Harappan signs are clear and straight rectangular signs. The script shows little evolution in shape and style. The average length of the seal text is half a dozen signs, the longest inscription consists of 26 signs. (Parpola, 1986: 400)

3. Phonology

3.1. The Harappan language is a member of the Dravidian group. It is closely related to Tamil.

3.2. The order of the basic constituents in the Harappan language are subject (S), verb (V), object (O). The writing system is syllabic. The Harappan signs are of two basic types consonant (C), vowel (V) and CV(C). In some cases words have the ligature /a/ and /i/ prefixed to the initial component to form the VCV type, e.g., आ (a) 'stay', आ (i) 'to become', and आ (i) 'in this place'.

3.3. There are five Harappan vowels. The vowels have threefold distinction of lip rounded and unrounded.

3.4. The vowel in most Indus Valley CV constructions is long, especially in relation to nouns. The affixal elements on the otherhand such as -a-e, and -i are primarily short vowels, in the Harappan seals short and long vowels occur initially, medially and in the final position.

3.5. Vowels

| High | i | u |
| Mid | e | o |
| Low | a | ă |

3.6. There are six positions of articulation for obstruents: labial, dental, alveolar, retroflex series and velar. The retroflex series comprise a nasal /n/ and a lateral /l/. The Harappan roost are monosyllabic.

3.7. There are thirteen consonants in the Harappan script:

- प (p)
- य (y)
- ल (l)
- र (r)
- ल (l)

The consonantal system of the Harappan language is as follows:

- क (k) क्ष (ks)
- झ (g)
- ं (n)
- त (t) 

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<tr>
<th>High</th>
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<td>l</td>
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<table>
<thead>
<tr>
<th>p</th>
<th>t</th>
<th>s</th>
<th>k</th>
</tr>
</thead>
<tbody>
<tr>
<td>m</td>
<td>r (l)</td>
<td>n (m)</td>
<td>y</td>
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</table>

The consonantal system of the Harappan language is as follows:

- k-  g-  t-  s-  d-  t-
"Bring Excellence":

"Bring continuously virtue, here thou distribute it."

CREATE

Po vēy pa-i mēj ta
"Create prosperity give (it) distribution and illumination".

Blossom

kē vēy Umu mēj Pakal Umu
"Balance blooms God's justice -- a shining glorious Fate".

Make

tē ga tu vēy Umu
"Make virtue (my) Fate, to become illuminated to see Balance".

Dispense

Pē kusari Umu
"(God) Dispense Kusari (Paradise) (as my) Fate".
4.9 Mahadevan (1986a :21), has proposed that the Harappan roots are basically substantive or attributes in grammatical rule #3. He speculated that the noun (substantives) follow the adjective (attributive). This hypothesis regarding Harappan substantives agrees with Wieneke (1987), coordinate compounds.

4.10. The Harappan nouns are monosyllabic. Some of these nouns can also serve as verbs, e.g., śay 'to do, create', and mpu/ma 'birth, to go, proceed', and ṭā 'to see', experience, purity.

4.11. In the Harappan language the noun is the subject of the phrase. To give sense to the noun it is regularly suffixed by pronouns or plural elements.

4.12. The Harappan nouns can be classified into three categories as follows:

1. Personal pronoun such as: 

   "Thou bring here glowing aspiration":

   ॐ

2. Al type ṣrō

   "Thou increase now your servant’s virtue":

3. Ye type

   "Thou bear (to me) elevation":

4. U type

   "Thou bring here high character continually":

   ॐ
2. Nouns denoting quality, state of things, form, etc., e.g.

\[ \text{Glowing admiration, much virtue- give it and illumination (continually)}. \]

\[ \text{Righteousness Glowing} \]

4.12 The negative is formed by adding a particle to the verb.
The negative particle \text{I}, is frequently used e.g.,

\[ \text{ipā, "divide, to distribute"} \]

\[ \text{pā = I do not divide} \]

5. Sentence Formation

5.1. The corpus of Indus Valley seal inscriptions used in this paper provides a basic outline of the Harappan sentence structure. An examination of the sentence pattern of Harappan syntax confirms the view that the Harappan seal script is an aspect of Dravidian not to different from Tamil.

5.2. A feature common to the tel-matic messages contained on the Harappan seals is the terseness of expression, which allows considerable grammatical license, sometimes even ignoring the normal rules of Dravidian syntax:

\[ \text{Indeed give abundant virtue give it, (and) propriety glowing". (Lit. Indeed abundant purity give (and) increase propriety glowing)}]
5.3 The Harappan seals are amulets or talismans requesting some form of blessing for its bearer from his personal god, the imperatival mood is used in the sentences. Request sentences are formed by simple verbs or by the addition of introductory elements.

5.4 The inscriptions are primarily written in the second person since they are request sentences. Like Tamil cave inscriptions, the Harappan sentences are substantival sentences composed of a topic and a comment.

5.5 The order of the Harappan sentence is VOS. The Harappan sentence has a noun phrase (NP), verb phrase (VP) and article (Art).

As a result the pronominal suffix stood independently. The pronominal suffixes were a later development in the Dravidian languages.

5.6 Many Harappan expressions are formed by joining two or more Harappan bases to make compound signs. These compound signs are compound phrases. The bases of these signs represent either a noun or a verb. Often, the same Harappan sign can have the value both as a noun and verb.

5.7 There are three Harappan compound signs: coordinate compounds, subordinate compounds and synthetic compounds. (Winters 1987). The coordinate Harappan compounds have two parallel elements. The replication of the same element without change denotes pluralization. Thus the effect is reduplication.

5.8 Most Harappan compound signs are subordinate compounds. In this type of compound the base is formed by a noun or verb.

5.9 Below is an example of the Harappan VOS sentence pattern. The inscription is read from right to left, top to bottom.

\[
\begin{align*}
\text{Pāpe} & \quad \text{cātū} & \quad \text{sāy} & \quad \text{sāy} & \quad \text{mīga}\n
\text{VP} & \quad \text{NP} & \quad \text{VP} & \quad \text{Art.} & \quad \text{NP} & \quad \text{VP} \\
\text{Pāpe} & \quad \text{cātū} & \quad \text{sāy} & \quad \text{sāy} & \quad \text{mīga}
\end{align*}
\]

This inscription can be interpreted as follows: "Indeed give abundant virtue and propriety glowing".
6. Grammatical Rules Generally

6.1. No examination of the grammar of the Harappan script can take place in isolation from the research of numerous scholars that have worked on the interpretation of Harappan writing over the past 26 years. Mahadevan (1986a), Parpola (1979), and Konoroviz (1985), have been concerned with a structural analysis of the Harappan script and texts. Any decipierment of the Indus Valley script should be in accordance with many of their findings. The insight of these scholars helped in our interpretation of the Harappan writing system.

6.2. The Harappan script is read from right to left.

6.3. These signs are of two types CV and CVC. In the CV constructions the vowel is usually long in relation to the consonants. In the CVC class the vowel is short. The suffix elements on the other hand such as -aa, -a, -o and -to are primarily short vowels. The Harappan writing is monosyllabic. (Fairviss 1986 : 121)

6.4. A few Harappan signs can be read ideographically, since a few signs represent pictograms and/or logograms which can be interpreted as the object it represents, but most signs are read phonetically. The monosyllabic nature of the inscriptions fits the logophonic nature of the Harappan script.

6.5. The pictograms or logograms are given a phonetic value. Once this is done, the resulting words are assigned a singular or homophonic value.

6.6 The most common logograms are மு "fish; illumination, glitter" ம "man; servant". Parpola (1975) has suggested that ம is also a pictogram and calls it a 'pointed end' கூட்டுக்கு and assigns it the homophonetic meaning கூட்டுக்கு "to give, giving'. This is most interesting, because it coincides with the actual meaning of this sign ம "to give".

Harappan Particles

6.7. There are four particles used in the Harappan writing. They include the interrogative இ (y) "what, which, and three demonstratives: இ "this" close to the speaker; இ இ "this, that" at a
certain distance from the speaker's, and it's 'that' remote or being outside of the speaker's view. The grammatical elements used in this paper are taken from Among the Mists Illustrated in S.R. Rao's 'Phal', and the Indian Civilizations - P.M. Mackay's 'Further Excavations at Mohenjo-daro, John Marshall, Roberthodo and the Harappa Civilization and L.S. Vats, Excavations at Harappa.

U.8. The \[\text{।।।।}\] sign is ligatured to many Harappan signs. This ligature is the causal particle - it literally means 'give it' or 'to let, permit'.

Page 341 \[\text{ Bip.} \] still, still - sa. "Induce abundant virtue - give it (to me) (and) create result & good fortune". In this sentence 'is appended to the sign \[\text{।।।।} \] this 'abundant virtue', i.e., \[\text{।।।।} \] 'abundant virtue give it'.

\[\text{।।।।} \] उर्य जैसे

appel - to sing - u d may - to. "Much righteousness let it shine here virtue". In this inscription the causal particle \[\text{।।।।} \] is written inside of \[\text{।।।।} \] उर्य जैसे.

U.8. The Harappan conditional particle used in the script is the suffix \[\text{।।।।} \] which is appended to the root of the verb. This \[\text{।।।।} \] is usually suffixed to a noun and it is used to give the preceding word strength.

\[\text{।।।।} \] to (d) pu a to be vey few \[\text{।।।।} \] appal warn. "Ye who binds (men) make (my) virtue bloom, give, recount. Manage your servant's face".

\[\text{।।।।} \] उर्य (d) pu a to be vey few \[\text{।।।।} \] appal warn. "Create prosperity, give (men) illumination - a flourishing condition. Come into existence (a good) face, give your servant the Distribution, Grace (and) bring Virtue".
The request sentence on the Harappan seals is aimed at the deity represented by a zoomorphic picture on the seals. This makes for interesting patterns among the many Harappan seals. The Harappan sentence pattern depends on how the inscription is read. Inscriptions read from right to left are VOS, while inscriptions read from left to right are SVO. For example reading from right to left we have:

Po uso say say to-to

"Give birth to Fate, create rectitude (give continually) virtue".

Below we read a seal passage from left to right:

Usa utapa tu i i ka

"Fate brings greatness in abundance, thou give (me) Balance".
Ta vey e ta tippo Umi pē -ta. "Give me awareness, give (it) now. Give its distribution."

Demonstratives

6.10. Mahadevan (1986a), in Rule #5, of his proposed grammar of the Harappan script noted four signs /\ /\ ] and ] which he identified as case markers. These signs are demonstrative: or verbs. The ]] (you] ] ] a] and ]] ]] (pronoun and verb) can be both a demonstrative and verb.

6.11. There are three demonstratives in the Harappan script. They are ] ] u ] ] 11 e. The ] ] u demonstrative base expresses a person, place or thing occupying an intermediate position neither far or near. Below are several examples of its use.

(Marshall, plate C11, letter C)

u ta ti pē -a ti si. "Bring here (and) distribute to your servant a flourishing condition and purity".
(Marshall, plate CV, no.61)

Ta (-r) ya i u -tū ta. "Ye (-who) binds, thou bring virtue here".

6.12. The particle ]] ] 'which', is also frequently used in the Harappan writing. It seems that when ]] is used as demonstrative it is written small, for example: (Mackay,plate LXXXVI, no.58)

Ta (-r) ya e itū aį kā -nā. "Ye bind (your servant) to that which is pure supreme God". (Marshall, phto. CV, no.51)
The sign can be read ye, yë, the y is merely an euphonic addition to the root q.

6.13. The third common demonstrative is | q e.g. (Mackay, plate LXXXV, no.154)

I tū tū-mu tū tū um “So much virtue/So much virtue (and) Fate”.
(Mackay, plate XCV, no.443)

Ipa tū-um tāsā “Here thou bestow greatness and virtue”.

6.14. This sign (u), is also used as the past verbal particle, when not being used as a demonstrative or pronoun, it is also the causal particle as discussed earlier. (Marshall, plate CVII, no.123)

Vey tū tū pā tū “Blessom that which is pure, do not divide (my) purity”.

6.15. A common feature of the Harappan inscriptions is suffixation. Many of the suffixal elements identified by Mahadevan (1986) Rule 
#1 : tū tasā agrees with our findings. The Harappans used non-finite verbal forms (particles and imperatives) rather than finite verbal forms. The most common imperative suffix in the Harappan inscriptions is tū-ta, e.g.
appai ta sily u dity ta. "Much righteousness, let it always bring here-warehouse!"

Papa taikal a saa sity ta. "Indeed give abundance twinegrass, prophecy glowing!"

ko taas ta. "God bestow on (me) greatness!"

\( \Delta \) and \( \chi \) are signs that can be read -kā, -ge, or -kā 'to be, to do,' etc. This is also the imperative or infinitive. This form was popular in classical Tamil and Malayalam.

5.17. The locative suffix \( \kappa \), had three signs in Varappan:

\[ \text{Aka} \]

\( \Delta \)

Aka ta. "Mayest thou give (Vedal) or Vey ka ta, 'Blossom Perfection'.

Aka vey \( \kappa \) ge \( \Delta \) jay appal -mu ci. "Mayest thou blossom virtue and righteousness on your servant and that which is pure'. (Vata, no. 5170)

The \( E \) ci/du sign is also used as a suffix, ci/du.
I ai ti di "Thou servant to become pure".

Plural

5.18. The Harappan script used several signs to denote the plural.

A common plural sign was )P, this is the senu plural suffix. This sign is restricted in use to neuters. It seems that just as this sign was popular in classical dialects for pluralizing the neuter compound it was also used by the Harappans, e.g.,

\[ x \hat{\varepsilon} \]  

(\textit{xī aug.}) Brightly Shining.

5.19. Sometimes the plural is formed by reduplication e.g.,

\[ \begin{array}{c} \text{\textit{mī}} \text{\textit{mī}} \text{\textit{mī}} \text{\textit{mī}} \\ \text{\textit{mī}} \text{\textit{mī}} \text{\textit{mī}} \text{\textit{mī}} \end{array} \]  

\textit{mī} (abundant virtue).

5.20. In other cases the suffix \( \downarrow \text{\textit{pī}} \) is used to form the plural, e.g.,

\[ \begin{array}{c} \text{\textit{mī}} \text{\textit{pī}} \text{\textit{pī}} \\ \text{\textit{mī}} \text{\textit{pī}} \text{\textit{pī}} \end{array} \]  

\textit{mī} =\textit{pī} -\textit{pī} -\textit{pī} = \textit{mī} (much righteousness, let it shine. Bring more virtue!).

5.21. Another common plural element in the Harappan script is

\[ \text{\textit{gī}} \text{\textit{gī}} \]  

\textit{gī} (ge). This suffix is usually joined to nasal Harappan signs such as \( \hat{\varepsilon} \text{\textit{mī}} \) and \( \hat{\varepsilon} \text{\textit{sī}} \) (sweetness).

\[ \text{\textit{gī}} \text{\textit{gī}} \text{\textit{gī}} \]  

\textit{gī} (ge) ge \textit{gī} (ge) ge \textit{gī} (ge) ge \textit{gī} (ge) ge \textit{gī} (ge) ge \textit{gī} (ge).

"Give (me) a flourishing condition, bring thou (good) Fate to give birth to light (illumination) make (my) Fate (Wonderful)".
A very pē sē iṣi -ṣe ge fo. "Come into existence prosperity, indeed much eminence (for me oh) God".

Ta vey -ṣa appel tō ta. "Give (me) much awareness, righteousness, bring (me) purity". Or, Ta vey -ṣa amal sē tō. "Give (me) much awareness, righteousness, bring (me) excellence".

Pronoun

6.22. The Harappan seals are written in the second person. Thus, only one pronoun suffix [.] is used, you is mainly used in Harappan inscriptions.

6.23. In Rule 58 of Manadevan’s grammar he discussed his so called circumgraph which he read as a plural marker or number. Our findings suggest that the circumgraph sign [.] is not a plural marker or number. This sign represents in multiple use of the sign [.] as a pronoun ‘thou, you’ and the verb ‘to give’. A substantive is placed between the four vertical [.] signs forming the circumgraph.

Reading from right to left preceding the substantive sign we have I ḷ ‘thou give’, after the substantive the first [.] is the pronoun ‘thou, you’, followed by the causal particle I ḷ ‘let, give it or permit’, at the termination of the substantive e.g.

[I ḷ ]

[I ḷ ] appel [.] ḷ. "Thou give Righteousness, Thou give it now".

References

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