



The observable relationship between the Minoan and Indus scripts

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Abstract

The presented paper demonstrates an effort to decipher the Indus (Valley) script, based on the pictographic affinity between the Minoan and the Indus scripts, as well as to the theory of monogenesis, according to which all languages originate from a single ProtoHuman language, therefore having more or less obvious cognates. The above guidelines comprise the core methodology of this ongoing research work, accompanied by the cultural evidence of the migrations of human populations, as bearers of their customs. After the comparison of these scripts (Minoan and Indus), several examples of deciphering Indus inscriptions are discussed, providing meaningful interpretations.

Keywords: Altaic, minoan scripts, cypro-minoan, mesopotamia, indus valley script, sumerians, protohuman language

Introduction

It is known that the Indus (Valley) script was an original creation of the people who spoke that language and not a script borrowed from some other people, speaking a different language, on account of its orderly appearance and because of the faithful application of the rebus principle, which means that each sign represents the name of the thing it depicts in the language of the people who created the script. For this reason, the people who created a script never lose the knowledge of what each sign depicts and what syllable it stands for. In contrast, if people with a different language borrow the script, they do not connect the signs' images to their phonetic value, consequently they do not care for what each sign depicted. Doing so, they distort the shape of signs and then the script becomes less tidy, while at the same time the signs become mere shapes and no more recognizable images of things.

Now, the Indus script is quite tidy and all signs are recognizable images of things (for the people who used the script, that is); this proves that those people created the script and did not borrow it from any other nation. If, anyway, we arbitrarily assume that they borrowed the script, who did they borrow it from? No other nation has used that script. But yes, not too far away there are scripts with obvious similarities, and the script resembling the most is the Proto-Linear (alias "Minoan") script of Crete and (even more) that of Cyprus. The similarity to the two Minoan scripts is outstanding and observed even at first sight, but we cannot say that one "borrowed" from the other, because the Indus script is made to precisely fit the Indus language, and it is not an adaptation of Minoan script to the Indus language. If it were an adaptation of a Minoan (or CyproMinoan) script for the Indus language, then it would have been read many decades ago, following the decipherment of the Cypriot Greek syllabic script and of Linear B. Therefore, it is argued herein that the Indus script is an indigenous simplification of the original picto-syllabic Altaic script; still we will try to demonstrate that there was indeed a decisive influence from the Proto-Linear (Minoan) script in the process of creating the Indus script and -why not - an influence in the opposite direction too.

Methodology

The outline of the herein theory is as follows: firstly, the origin of all writing systems is an ancient Altaic pictography with plenty of phonetic elements (through the rebus principle); relics of that primordial writing can be found from the 6th millennium BCE in China ^[1]. We prefer the term "Altaic" rather than "Turkic", because since the earliest recorded times, there were many Turkic speaking tribes with names other than "Türk(ü)". The earliest recorded branch of the Altaic nation were the Sumerians (of the Western "r-Altaic" group) who settled in Mesopotamia, while another branch of the same followed another direction and settled in the Indus valley. The scripts called Minoan or Cypro-Minoan are direct descendants of the Mesopotamian Sumerian pictography ^[2], while the so-called Proto-Elamite script is also regarded herein as a type of Mesopotamian Sumerian pictography. The Proto-Altaic script evolved into the Indus valley system, which is obviously similar to the Minoan writing (Proto-Linear), due to possible contact, and especially because both the Minoan and the Indus writing are descendants of the same script, both made for closely related languages and in similar social conditions.

Closer to the Indus valley is Mesopotamia and Elam, where the Old Sumerian pictography, and later Cuneiform, was used; but such a script was not at all interesting for the Indus people, because they already had a similar picto-syllabic system, descendant of the ProtoAltaic script; Cuneiform, in addition, was too difficult to learn. On the other hand, the Minoan ProtoLinear syllabic script was a bright and extremely useful idea; an adaptation of the ProtoLinear would make a script that a non-Sumerian speaking person could learn within one or two months of study; yet the simplification of the previous extant pictography to 67 phonetic signs would make a script that no study at all would be required for learning how to read, because each sign represented the name of the thing it depicted (e.g., see) ^[3]. But was there contact between the Indus valley and Crete and Cyprus?

Today it is possible to travel from Crete to North India within one day. In antiquity, travelling from Crete to Cyprus could take two days with favourable wind, and another two days for travelling from Cyprus to the east coast of the

Mediterranean. On the other side, the commercial relations between Mesopotamia and the Indus, through trodden commercial routes, are undoubted (e.g., see) ^[4]. Surely, it was possible to travel from Crete and Cyprus up to the Indus valley within less than a month, and there were strong motives for it: not only acquiring precious and exotic things through commerce, but also seeing far-away people and places. For example, Minoan art from Crete and the Aegean depicts animals, such as monkeys and gazelles, which were not native around the Aegean or Cyprus.

In those old times, there was mutual intelligibility between the Sumerian dialects of Crete, Cyprus, Mesopotamia, and some less, but still obvious, intelligibility between those and the closely related Indus language. So, four syllabic writing systems were developed separately, but not without influence and taking ideas from each other. Those four systems were:

- the Minoan ProtoLinear of Crete;
- The Minoan ProtoLinear of Cyprus;
- the Indus script;
- the Phaistos disc system, a type of which is the Luwian hieroglyphic.

In 1992, Kenanidis ^[5] wrote that the Phaistos disc belongs to a syllabic script made for the Hittite language, by imitation of the Cretan ProtoLinear, and that system was exported to Asia Minor in the form of “Hittite” hieroglyphics; the system had a small number of syllabic signs, because it distinguished only three vowels (a, i, u). Today we know that the Asia Minor “hieroglyphic” system was made for the Luwian language, although largely influenced by the closely related Hittite language. Also, we know that “Luwian hieroglyphics” was made according to the acrophonic principle rather than to the rebus principle: as the IE Luwian language scarcely had monosyllabic (CV type) picturable nouns, they could not use the whole names of nouns as the phonetic value of their signs (i.e., the rebus principle), so they used only the first syllable of each pictured noun. Consequently, the Phaistos disc system and the Luwian hieroglyphic merely got the basic idea of syllabic writing from Cretan ProtoLinear and neither the script nor the underlying language was substantially related to Minoan or to Indus script; still, we mention Luwian hieroglyphics to show that the ideas for making a system of writing could very easily migrate from Crete to Asia. The Phaistos disc and Luwian Hieroglyphic will not take any more space of the present work.

But, we must stress that while the original Altaic logo-syllabic script evolved into simple syllabic systems in different places (that is Crete, Cyprus and the Indus valley), there was communication and cultural influence between those lands. Another branch of simplification of the original Altaic writing resulted in the Turkic “kök” script, which also shares some characteristics with the aforementioned systems, but in all likelihood and by all available evidence, the “kök” script evolved quite independently.

Background

It has been shown in many studies (e.g., see) ^[6, 7, 8] that the Cretan ProtoLinear and the Cypriot ProtoLinear script was created by Sumerians from Mesopotamia, who had started colonizing Crete and Cyprus since about the year 3100 BCE. The Sumerians carried with them the Sumerian pictography (which is attested from about 3500 BCE, but its

origin goes back to the 6th millennium BCE, as mentioned above); the Sumerian pictography was largely phonetic: the signs to a great extent represented syllables rather than they depicted; reasonably, soon after the Sumerians colonized Crete and Cyprus, their systems evolved into full syllabic systems, using one sign for each CV syllable; however, around 3100 BCE, the Sumerian language must have had 21 consonants (the exact nature of some being doubtful ^[9]; we do not stick to the IPA for them except for /x/ and /k/; see Table 1):

Table 1: The Sumerian language consonants

velar	q, g, ŋ, /x/
palatal	k, c, ñ, š, /k/, j
retroflex	l
alveolar	t, s, r
dental	d, n, θ
labial	p, b, m, w

These, joined with the 6 vowels, would make 130 syllables, not counting the two vowels of Emesal (ü, ö) nor any signs that represented pairs of syllables. Such must have been the Sumerian ProtoLinear shortly after 3100 BCE in Crete and Cyprus, but there are no extant written documents from that script earlier than about 2100 BCE. The later Cretan Sumerian (Minoan) ProtoLinear, as reconstructed from the documents of Linear B and Linear A ^[10], no more represented ñ, /k/ (these merged with “n”, “l” respectively), also made “g” into “c” and “k” into “q”, the result being a total of 17 consonants, which made 17x6=102-2=100 simple syllables (-2 means that “wu” and “ji” syllabograms did not exist). So, more than 100 signs existed to represent pairs of syllables (see) ^[11].

On the other side, the Indus valley, the language was simplified much earlier, presumably about 2800 BCE, the date of the first documents of the mature syllabic Indus script. While we can say that the Minoan dialects (of Crete and Cyprus) are dialects of Sumerian, the Indus language was a different language, although closely related and with considerable mutual intelligibility to and from Sumerian. It is not reasonable to assume that Sumerians from Mesopotamia colonized the Indus valley. Given that Sumerians themselves was an Altaic branch originating from somewhere south of the Ural mountain range, the most reasonable theory is that the original Altaic branch split into two branches, one to the west reaching Mesopotamia and the other to the east reaching the Indus valley, each of them settling in a favourable land for agriculture and trade. If it is proven in the future (what is now suspected) that the Indus language was of the z-Altaic group, then it was really two different branches of the original Altaic nation, which settled in each of those two lands, Mesopotamia and Indus, because Sumerian clearly belongs to the r-Altaic linguistic group ^[9].

It is assumed herein that after the first migration into Mesopotamia and Indus, the second movement was from Mesopotamia to Cyprus and Crete, and a third movement was some commercial and cultural contact between Cyprus, Crete, and Indus Valley. Similar languages and similar social conditions of both the Minoan and the Indus would naturally result in a similar writing system - the similarity being enhanced by communication between the two sides. Both the Minoan and the Indus required a simple system of writing that could be used by the whole population who

spoke that language without the need for schooling ^[3]. Indeed, the Sumerian-speaking users of Cretan and Cypriot ProtoLinear did not have to attend school in order to learn reading, because they recognized each sign of the script with a name which was the phonetic value of the sign. The same was true for the Indus valley script, as it is obvious that the Indus scribes always made sure that their signs depicted readily recognizable objects. Moreover, many of the Indus texts do not at all look professional: they were not written by professional scribes.

The contacts between Minoan and Indus account for similarities of the two systems of writing (or should we say three systems, the Cypriot ProtoLinear being somewhat different than the Cretan one, due to the difference of dialect). The difference between the languages accounts for the differences between these systems. For example, if the axe was “to” in both languages, they would both use the <axe> sign for the syllable “to”. But if the image of the cow recalled different words in each language, then the <cow> sign would be used for different syllables.

Comparison

The reasons explained (race and/or language proximity, social conditions and communication between nations) resulted also in the arrangement of signs being essentially the same in both Minoan and Indus: the signs are written in horizontal rows (and not vertically), and all effort is made to fit each sign in a vertical rectangle (more tall than wide); for example, the <fish> sign in both scripts depicts a fish vertically, head up and tail down, in order to fit the space given for each sign. An even more convincing example is the <wheel> sign, which is usually elongated vertically, although the real wheel must be completely round and not elongated; some Indus scribes indeed make the <wheel> sign round, but more often they make it elongated, because so strong was the tendency to make every sign more tall than wide.

Cretan ProtoLinear was written rightwards, not only for practical reasons, but also because the rightward direction was considered auspicious: for the same reasons, the Greeks eventually used the rightward direction in writing, calling it “es euthy” (“straight, normal direction”). Wikipedia (under “Indus script”) says that the Indus script was written mostly leftwards; but we found no evidence for this. All inscriptions we have seen are to be read from left to right; typically, the extant inscriptions occupy one line only, and that single line is read rightwards. Usually, they are inscriptions on seals, recording the name, title, or personal deity of the owner, and most seals also bear the carved image of an animal, usually a bull, which faces right, and the inscription is read in the same direction, from the tail to the head of the animal. Only in the rare cases where the text continues to a second line, the direction is boustrophedon, as the scribe had to continue from where the previous line ended. Theoretically, there is a chance that a scribe could write on a seal rightwards, forgetting that the seal ought to be written reversely, so that the seal would be read rightwards, but in the whole corpus ^[12] we have noticed only one such case, a seal that shows a similar “erratum” (Fig. 1).



Fig 1: The seal of “erratum” ^[12]

Here again (Fig. 1), the impression would be read correctly (that is, rightwards), but the animal on the impression would face left. Such a case is the exception that proves the rule. Even this exception is justified because the scribe was not a professional one, and the inscription is only two (2) signs long, which does not make a long sequence to strongly indicate a direction. The seal-carver made the animal facing right because that was the typical representation of animals on seals, and overlooked that the sealing would have it facing left, but still was careful to carve the syllabograms leftwards, because it was important to read the impression rightwards.

It may be asked here: if the Indus script was influenced by the Minoan, and perhaps vice versa too, how is it explained that the Mesopotamian script, that is Cuneiform and pre-Cuneiform, was neither influenced by the Minoan nor by the Indus script? The answer is obvious: Cuneiform was an art, which required many years of study to master it; thanks to it, the scribes were at the top of the Mesopotamian societies; but if an easy way of writing were adopted, then all people would know how to read without even attending school, then what would become of the highly esteemed profession of the scribe? Obviously, an easy syllabic system of writing was despised and unwanted in Mesopotamia. Of course, they knew that neighbouring people used easy systems of writing, but they were too proud of their ancestral Cuneiform and pre-Cuneiform. Some analogy is found in English: English speaking people often complain about the way English is written. Everyone says that English writing is too difficult and wayward; it would be easy to modify the script so that each phoneme corresponds to one letter; some historical elements may still be added, e.g., a “q” might be used for any palatal or velar sound that has been silenced, for example “qnīqt” could be written instead of “knight”, “rīqt” instead of “right”, and w- could be kept even when silent, e.g., “wrīt” instead of “write”, but with all other phonemes corresponding to single letters; still, no English speaking country wants such a modification of writing, let alone adopting a different system of writing, as would be the case of Mesopotamia adopting an easy syllabic system. Here also remember that the profession of the scribe in Mesopotamia was strongly bonded with the Sumerian ethnicity, while many people of other nations were keeping

migrating into the Sumerian city states; so, preserving the art of Cuneiform writing was also defending the higher social position and esteem of Sumerians.

Samples

Every Indus script sign has its similar or identical in a Minoan script, but some of the signs are extraordinarily impressive. In the picture below (Fig. 2), we see (first sign on the left) the most famous Minoan symbol, the double axe, which represented the highest Minoan deity, God “An”, the celestial God.

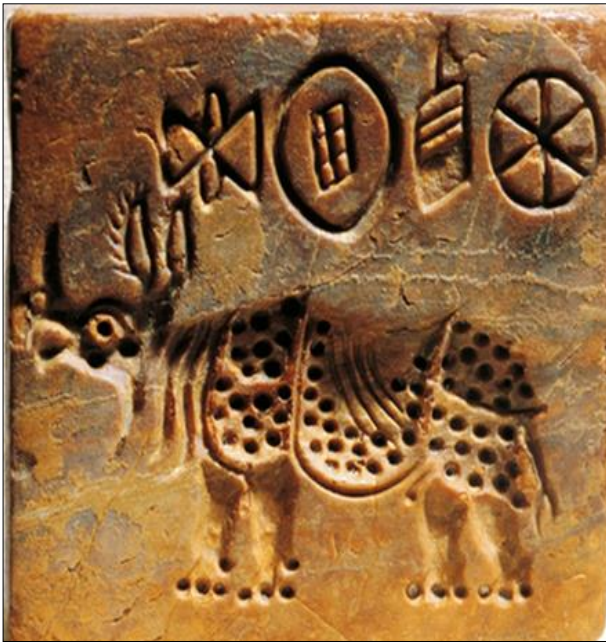


Fig 2: The seal of “Rhinoceros” [13]

That symbol as a syllabogram is very common in all types of Minoan script, used for the syllable “a”. After more careful scrutiny, we realized that this sign on this seal is not really a <double axe> but the <crab> “ba” sign in ligature with the <hundred> “šə” sign, that is the typical way of indicating a syllable ending in -š; in this instance, the crab’s claws are bent in such a way that a triangle is formed symmetrical to the crab’s body, and with the oval sign being slender, the image of a <double axe> is formed; but as explained, that is misleading, and this variant of the sign is not listed in Mahadevan [14] or Parpola [15]. This sign is in fact ba+šə for “baš”.

After the thorough scrutiny, we may read the above Rhinoceros seal (Fig. 2), keeping in mind that the sealing is to be read in the opposite direction (Fig. 3); it is copied in Mahadevan page 78, numbered 2651 101102 [14]; here, we give the copy from the book (Fig. 3), along with the inscription from the photograph (Fig. 2).

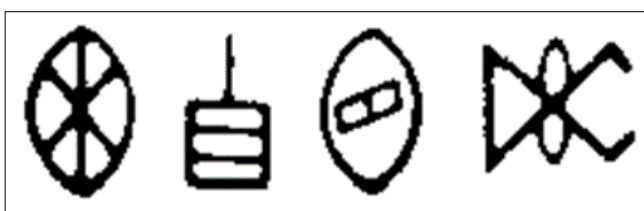


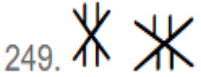
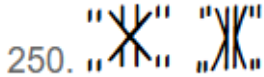

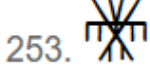



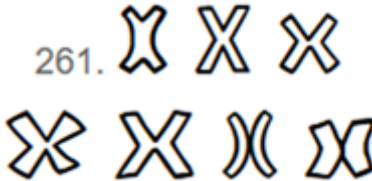

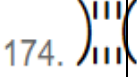

Fig 3: The reading direction of the Rhinoceros seal [14]

So, the last sign (right side in the copy; Fig. 3) is “baš”; third from left in the copy is “mi+šə” for “miš”; the first sign (left in the copy) is the <wheel> sign “ga”, as found in our study. The second from left in the copy is a rather frequent sign, depicting a <written document>, a <tablet> or “dub” in Sumerian; we have noticed this <written tablet> sign in many inscriptions of the “ProtoElamite” script, which was in fact Sumerian pictography; the “ProtoElamite” tablets often start with the word “tablet”, obviously meaning “this is the tablet of (contract / purchase / ownership of...)”. Our scrutiny resulted in reading the <tablet> sign as “θo” in Indus; that “θo” is from the word “θo(b)”, which is the Indus form of the Sumerian “dub” (pronounced “dob”); from the same root is the Turkic “toprak”, meaning “dry earth”, because “tablet” for the Sumerians (and, obviously, for the Indus nation too) was a piece of dried clay; “d” to “z” (that is /t/ to /θ/) was a well-known phonetic change in Sumerian, and it seems that it happened in Indus too, as in this word “θo(b)”, which was previously *dob. Thus, this whole inscription records the name “ga θo miš baš”:

- “baš” is essentially identical to Turkic “baş” (“head, foremost, principal, leader”) and Sumerian “palil” (remember that Cuneiform is not read accurately; also, there is a correspondence between z-Altaiic “š” and r-Altaiic “l”);
- “miš” corresponds to Sumerian “mul” (/myl/) (“star”) and “melam” (brightness, dazzling); this root cannot be found in Altaic with m-, since all m- had turned to b-, but it does appear in many words like “belli” (“obvious, clear”), belür- (from the root bel-) “to appear”, and possibly also bil-, “to know”; so, “miš” meant “bright, impressive, admirable”;
- the first element “gaθo” is frequent in names recorded in Indus seals; the similarity to Greek “agatho” (good, good quality, good character, brave, virtuous) is not fortuitous; this meaning is conveyed in Old Turkic by “eðgü”, which probably was an earlier **“egöü”; that **“egöü” shows the same root as Indus “gaθo” and IE “agatho” (and cognates in other IE languages, including English “good”).

That said, the <double axe> syllabogram is not absent or infrequent in the Indus script (Table 2). Its main form is No. 249, often in quotation marks (No. 250), which means it is to be pronounced as the whole word, that is “xin”; or with the “tablecloth” diacritic (No. 252), which means that the syllable ends in a nasal, again “xin”) or in ligature with <comb> “i” (No. 253), which complements the reading “xi” with a long “i”; after thorough scrutiny, we estimate “xi” to be the phonetic value of this sign. It has many simplified forms, like No. 256 (this form being identical to the Cypriot syllabary sign of the <double axe>, which means in general that the Indus script is closer to the Cypriot type rather than the Cretan type of Minoan script, and this also means that there were more frequent contacts with the Sumerians of Cyprus), which also can take the covering diacritic of the nasal coda No. 257.

Table 2: The <double axe> sign variants and <axe>.

249. 	250. 	
252. 	253. 	
256. 	257. 	
260. 		
261. 		
173. 	174. 	100. 

Many variants of this sign lack the handle of the double axe (No. 260, 261, 173), and there is one variant which contains <six> (No. 174), implying that the sign <six> could be used instead of the <double axe> for “xi”, as sometimes numbers from 6 to 9 can be used phonetically instead of other signs. While in the Minoan scripts the <double axe> stands for <God An> and therefore for the syllable “a”, in Indus this sign stands for the syllable “xi” (as far as we could find out), and the syllable “xi” was probably the pronunciation of the name of the same God in the Indus language, that is **xi(n)*”; this seems to indicate that “xi(n)” preserves a guttural sound that was lost in Sumerian “An” and Greek “ana, anō” (“upon; high”) from the same ProtoHuman root [16]. When the Indus people made a libation or sacrifice or offer to God “xin” (An of the Sumerians), they would say “xin-ra”, meaning “to God Xin” (-ra is a dative suffix in Sumerian and in Old Turkic); then, the Sanskrit speaking Aryans would hear that as “Indra”, which explains the name of God “Indra”; they did not borrow it as, e.g., *Hindra, because “hin” would bring to the Aryans’ mind some negative concepts like “hina” (inferior, deficient) or “hinsa” (harm). Just as in Minoan script, the <double axe / God> sign is unrelated to the ordinary <axe> sign No. 100, which has been seen in another seal.

Another most important Minoan sacred symbol was used for the syllables “pete” [17] in writing, and it represented the completeness consisting of the “yin” and “yang” as we would say in modern terms; the same is pretty common in Indus, numbered 196 and 197 in Parpola [15] (Fig. 4).



Fig 4: The <pete> sign of Indus script.

Since we presented the “Gilgamesh seal” in [4], we should give at least a tentative reading of it. First of all, we must notice that the inscription is wrongly copied in Mahadevan [14], page 71, numbered 2086 106901 (Fig. 5a). Here, we put the copy above the photograph (Fig. 5b), so the reader may compare. Firstly, the text had to be copied in mirror image, because this is the seal made to make sealings read reversely. That is why we put numbers under the signs (Fig. 5b), so as to refer to each sign by its number. The signs are to be read in the order of this numbering. Second, the 4th sign is wrongly copied, as it is perfectly clear in the photograph that it is <one> “sa” enclosed in <hundred> “ša”; but the copy has <horn> enclosed in the <hundred> sign. As this ligature <horn>+<hundred> appears rather too often in Mahadevan’s book [14], there is a suspicion that this mistake has happened in other inscriptions’ copies too.

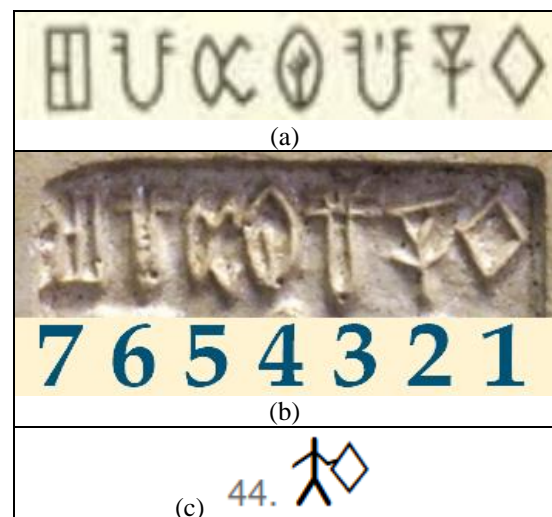


Fig 5: The “Gilgamesh seal”

Now, let us read the seal, sign by sign:

1. This is the <good> sign, read “ša”, because “good” was “ša(g)” in Indus; the word is found in UoP Sumerian dictionary [18] as “wr. sag₈; sag₉; sag₁₀; šeg₁₀; sag₁₂”, “(to be) good, sweet, beautiful; goodness, good (thing)”. In fact, it was “šag”, attested in the name of the island Zakynthos, originally “šag-utu”, meaning “the goodness of the Sun (god)”. In Turkic it is “yég”, meaning “better”. This sign is common in Sumerian Cuneiform and pre-Cuneiform in the meaning “good, sweet etc.”, as of the word “sag/šag” mentioned, although the word “sag/šag” is written with different signs in Cuneiform. Still, this <rhombus> sign keeps its original reading “šag” in Indus. It is understood herein that the Indus script ideograms indicate the profession of the seal owner; among those, there is the ideogram No. 44 (Fig. 5c), depicting a man holding a “ša”; so

what object is that “ša”, indicating what profession? Given the meaning “good, sweet etc.” of “ša”, the object must be the ancient type of a beehive (then this is the pictorial origin of “ša”), so the profession is a beekeeper.

2. <flower> “rə”, of the same image and phonetic value as in (Minoan) Cretan ProtoLinear script.
3. <cow> +<one>, that is “a+sa” for “as”.
4. <one>+<hundred>, that is “sa+šo” for “saš”.
5. <crab> “ba”, one of the first signs to be known with their phonetic value.
6. <cow> “a”, also one of the first signs to be known with their phonetic value.
7. <house> “wa”, of the same pictorial origin and same phonetic value as in the Cretan ProtoLinear script.

All these signs together make the sentence “ša rə as saš ba wa”:

- The first word “šarə” is cognate to many known words in various languages: Akkadian šar- “king”; Turkic çor “an army dignitary”; Sumerian sur_x (written UR) “brave man, hero”. That sur_x (in fact, pronounced “šor”) was a frequent word, often a part of personal names. UoP [18] reads this as “ur”, but in fact the sign “UR” (itself meaning “a lion”) is to be read “sur_x” (that is “šor”) as Edmond Sollberger, the best Sumerologist of our era, notices [19]. Also, it is the same ProtoHuman root that has given Greek hērō- (hero).
- As for “assaš”, we have discovered in our research that “one” in Indus was “asa”, hence the phonetic value “sa” is of <one>. Spelt “as saš” in this inscription, it is probably to be read simply “asaš”, keeping in mind the habits of the Indus scribes; “asa” meaning “one”, “asaš” is a derived adverb meaning “being one; being alone”; -š was an adverbializing suffix, common in Turkic as -çe/-ça; in the form -iš, it is the common adverbializing suffix in Akkadian. In Sumerian, it is probably the suffix -eše, which indicates direction, consequently way/manner.
- “Ba” is a particle that was used in a large area and across many different languages, as found in the Pontic Greek dialect (pronounced “pa”), in the “Mariupolitan” Greek dialect (so both south and north of the Black Sea) and in the many languages of the Philippines, meaning “still, also, even though”; this inscription shows that this particle was also used in the Indus language.
- “Awa” is a word found in many Indus inscriptions; also, a word “awija/awijə” is quite frequent; the context shows that it was a stem “aw-” meaning “victorious, winner, successful”. This seems to be cognate with the Sanskrit root “av” meaning “to save, help out of a difficult situation, overcome a difficulty, solve a problem”.

Putting these words together, the inscription reads “šarə assaš-ba awa”, which means “the hero who, even alone, is victorious”; the image of the hero who defeats the two lions illustrates the meaning of this name.

Another seal quite convenient for a short and comprehensive publication is in Mahadevan, page 328, numbered 1011 00 [14]. This inscription comes from a seal shown in Fig.6 below, taken from [20]. The author of that page is pessimistic about the possibility to decipher the Indus script, as so many researchers have tried with no

satisfactory results. We say that the Indus script is quite easy to decipher, because we have a sufficiently large and legible corpus, but it has not been deciphered because all hitherto research has been done to wrong directions: no researcher until now has been familiar with the Minoan writing systems or with the Altaic languages, the oldest recorded Altaic language being Sumerian, and even that is very poorly known if we ignore the relation of Cuneiform Sumerian with the Sumerian dialects of Crete and Cyprus and with all other Altaic languages. Even the knowledge of any language is insufficient, if we ignore that all languages of the world originate in one ProtoHuman language [16].

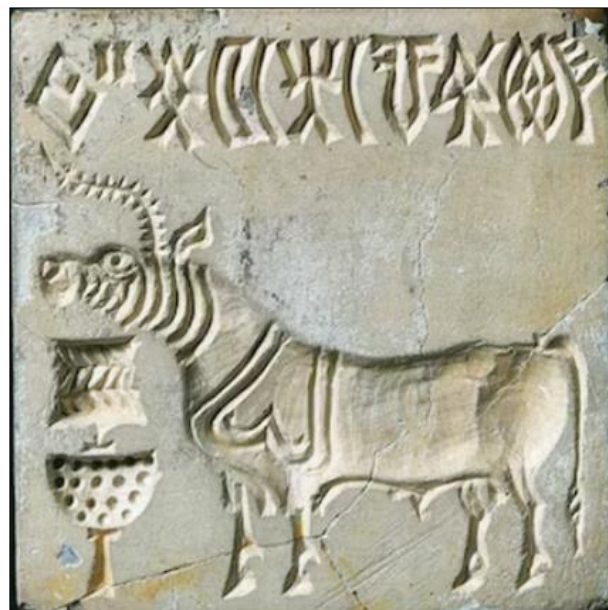


Fig 6: The seal numbered 1011 00 [14]

The seal depicted in Fig. 6 is an ideal document as an introduction to understanding the Indus script. The signs are numbered here in the order that they must be read (Fig. 7a), because the seal produces its mirror image, which was to be read from left to right, as in the copy in Mahadevan’s book (Fig. 7b). The numbers here refer to the photograph (Fig. 7a) and not to the book’s copy (Fig. 7b). Should we remark again that no single-line inscription was to be read unless from left to right. This is a calligraphic text made by a good professional seal-maker.

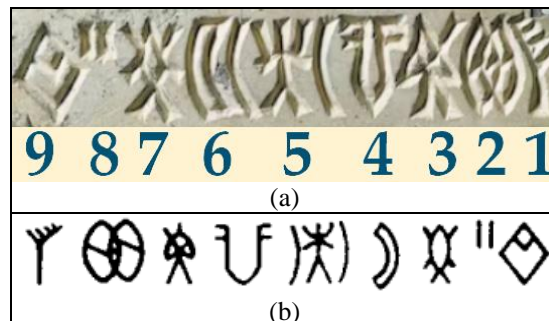


Fig 7: The inscription of seal numbered 1011 00 [14]

- The signs are (according to our research):
1. <horn> “o”, from the word “o(s)” = “horn”; in Sumerian “u(s)” = tusk.
 2. <pair of eggs or testicles>, “ni”; the word for “egg” being the same as for “testicle”, cognate to Sumerian

“nu”; so, originally we thought that this sign could be “mo” (its counterpart in the Cypriot syllabary is “mu”); later we concluded that <eggs> was “ni” (“mo” being the image of a stork, <walking bird> being “mo” in Cretan Protolinar; walking bird being “mušen” in Cuneiform Sumerian; “manuk” in Austronesian). Here, there are short single lines in each oval shape of this sign, and those little lines could be small “sa”, to indicate that the syllable ended in -s, so it would be “nis”. Still, the same name appears in the inscription 1431 100001, Mahadevan, page 63 [14] there without these little calligraphic lines in “ni”; so, the sign here is indeed “ni” without the -s, the little lines inside being only a calligraphic device.

3. <the ideogram for “soldier” or “guard”>; this is not a phonetic sign (not a syllabogram).
4. <cow> “a”, according to our research (to be discussed shortly).
5. The ideogram for “priest”, also used for “god”; this is not a phonetic sign (not a syllabogram), it is enclosed in brackets to show that it is only a determinative, not affecting the name as expressed by the syllabograms.
6. <throwing stick / boomerang> “ri”. This sign has many variants in Indus, all variants belong to one of two main types, the “arch” type No. 210-211 (Fig. 8a) and the “upright” type No. 177-178 (Fig. 8b). All forms of this sign carry the same phonetic value “ri”. This sign is quite common in Minoan Cretan and Cypriot ProtoLinear, usually in the “arch” type, used for “re”. It is also common in Mesopotamian Sumerian (Fig. 8c), there named “RU” in Cuneiform.
7. <fish> “ga”, being a very common sign (to be discussed shortly).
8. <two> “ma”, also a very common sign (to be discussed shortly).
9. <coconut> “no”; one of the commonest signs in Indus, used in the most common word which is “mano”. This is the first sign that we recognised in the Indus script, and even at first sight. It is clearly a coconut. Even the phonetic value “no” of it was understood immediately. Although in rhombus form in this calligraphic inscription, it was usually drawn round or oval, like a real coconut. The name of the coconut came from the Austronesian nation, where it was originally “noy”, coinciding with a ProtoHuman word meaning “a fruit, usually big, with a hard or thick shell”. As even in the ProtoHuman language, it has been observed that western populations tended to pronounce “r” in place of “s/z” and /R/ in place of /x/ or /y/, so also some Austronesian tribes called the coconut “noy”, whereas other tribes called it “nor”. In Sumerian (being an r-Altaic language), that ProtoHuman word has given “nur” (together with the determinative “MA”, meaning “fruit”), but that “nur” (pronounced “nor”) means “pomegranate” (that “nor” is probably the origin of Persian “nar” =pomegranate). In Indus (being a z-Altaic language), the word must have been “no(x)”, and it meant “coconut”, and the <coconut> sign was used for “no”. The word “mano” is the commonest component in Indus names (of people and gods); the same appears in Turkic as “beñ” meaning “brain”; originally “meñ”, but as repeatedly noted in our research, all m- in Turkic turned to b-, since old times. Of course, IE “menos” (Sanskrit “manah”) is a cognate. Therefore, “mano” in

Indus meant “wise”. Used as an adjective, it is usually found at the end of compounds, as in all ancient languages the adjective followed its noun.

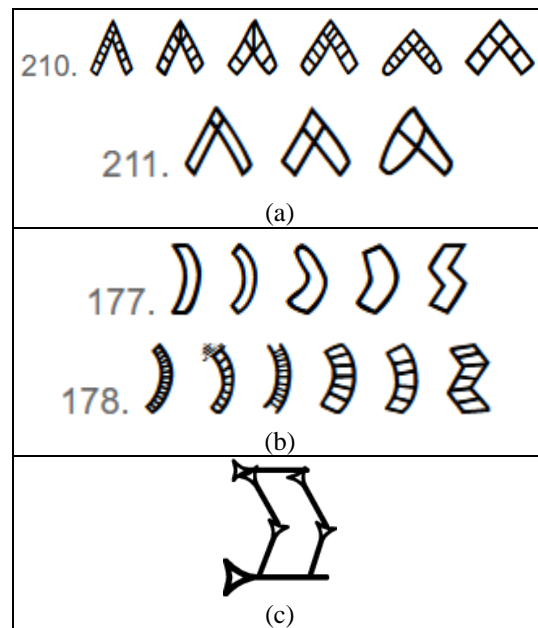


Fig 8: The signs of a throwing stick / boomerang [14]

Now, we may read the text as follows: “Oni the guard of priest ArigəMano (Arigə the Wise)” or “Oni the soldier of god ArigəMano (Arigə the Wise)”. The name “Oni” meant “beneficent”, from a Turkic root “on-” = “to get better, to recover, to prosper”; “oñar-” = “to heal, improve, benefit”. The same root exists in Greek, where we have proper names like Onēsimos “beneficent”. The name “Arigə mano” appears in many other inscriptions, e.g., Mahadevan, page 249: 4343 10 [14] and elsewhere, as in Fig. 9a; also 1351 00 in Fig. 9b has only “Arigə mano” without the priest/god sketch. In these texts that read only “Arigə mano”, this was simply a priest’s name, who was the owner of the seal.

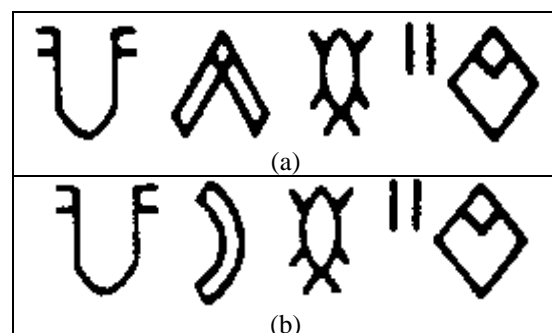


Fig 9: The name “Arigə mano” [14]

The name “Arigə” is very common in Indus inscriptions; it was a name of a deity and of brahmins. It must be a form of the Turkic word “arığ” = “clean, pure”. The name appears also in the famous longest extant Indus inscription (Fig. 10), with the three signs “a ri gə” highlighted by inverted colouring. As all texts longer than one line are written boustrophedon, the 2nd line runs leftwards; there we see the signs “a ri” and the “gə” is immediately below in the third line, which runs rightwards. The inscriptions like this, written on copper plates, are samples of the “everyday” type of Indus script, differing from the calligraphy employed on carved seals.

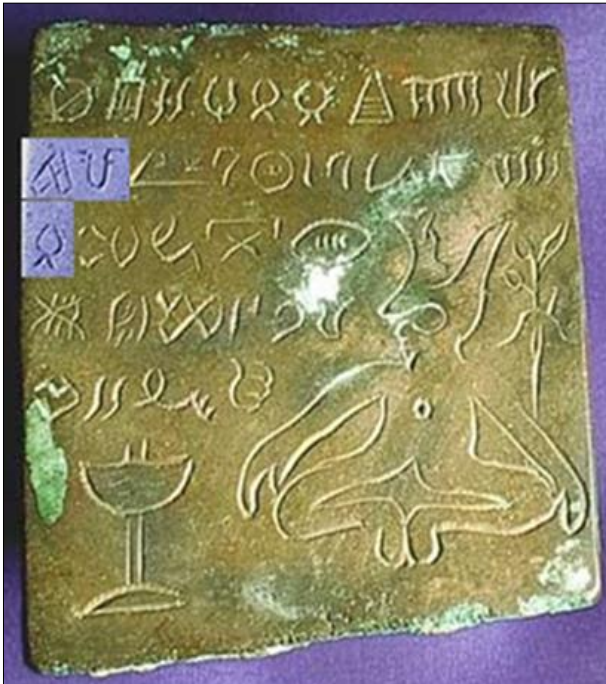
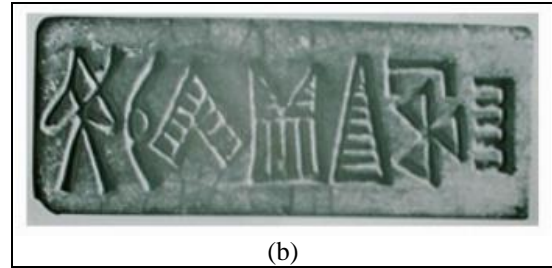


Fig 10: The longest extant Indus inscription [21]

A really curious reader may ask what the name for “guard” or “soldier” was, which is not written phonetically in the mentioned inscription (Mahadevan 1011 00) [14] but only indicated by the determinative for “guard / soldier”, which is a sketch of a man with his weapon on his shoulder. The answer may be given by a copper plate and a seal which can be seen in Fig. 11: the seal on the right (Fig. 11b) reads (starting from the right because the impression was meant to be read from the left) “i jon dā pē ri nā <guard>”, while the copper plate (Fig. 11a), again starting from top right because that too was meant for printing, reads “dā <guard> ri nā i jon nā a sa”. Apart from the name “i jon”, which is in both texts, and the word “nā a sa”, which is only in the copper plate, both texts have the word “dā pē ri nā” and the <guard> determinative, but while in the seal the determinative is in the end of the word, in the copper plate it has taken the place of the syllabogram “pā” <completion, perfection>; so, it is obvious that the word for “guard” or “soldier” sounded like “pā(r)” or “pā(s)”, probably cognate to Latin “ferus” and “ferox” (given the cognateness of all ancient languages).



(a)



(b)

Fig 11: Inscriptions on copper artefacts [22]

Conclusion

In conclusion, it was demonstrated in this paper that the Indus script is a syllabary that can be completely deciphered, by using two principles and one observation. The first principle is the one of monogenesis, which argues that all human languages originate from a single one, called ProtoHuman language. Therefore, the more we go back in time, the more obvious cognates we can find among languages. The second principle is similar to the first one, regarding scripts. Specifically, a pictographic script was developed in Central Asia by a ProtoAltaic nation, using the rebus principle; there, every sign was a simplified sketch of an object/entity, having as its phonetic value the whole name of the object/entity, mainly of a simple syllabic pattern, having a couple of phonemes. Subsequently, every sign of this script took a corresponding phonetic value not identical but according to the conveyed language(s), following the various migrations of the several branches of this ProtoAltaic nation. Considering the previous principles, the observation herein regards the pictographic affinity of the Minoan and the Indus scripts. Based on this affinity, meaningful interpretations of a sample of Indus inscriptions were presented. More evidence of this ongoing research work will be presented in the near future.

Acknowledgements

The authors express their thankfulness to Professors Elias Sideras-Haddad and Bruce Mellado, of the University of the Witwatersrand, South Africa, and to the Department of Industrial Design and Production Engineering of the University of West Attica, Greece, for facilitating the research herein.

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