Macro structures in Indus script

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The logo-syllabic Indus script has been deciphered using Dravidian Etymology Dictionary. Complete list of signs of the Mahadevan corpus deciphered are described in the <u>other document</u>. A threshold point has been reached now that one is able to not only read all the lines of text but also understand them with clear-cut semantics.

Apart from the decipherment we are also able to provide a picture of the production activities in Indus Valley as reflected in the text.

Glyphs grouped under categories

A word of caution must be mentioned here: since these are primarily syllables, their actual use in a text may not correlate to below category.

Description	M77 Signs	Glyphs	Tamil
Activity-based counties [1]	261, 391, 162, 245, 12, 326, 400, 311	◇, ⊕,), Ⅲ, 妫, 伞, ⊀, №	கோவன், பல்லவன், வலையன், தட்டான், உழவன், இலையன், நுழம்பன், பானன்
Farming: farmer, farm town	12, 15, 178, 124	吹, 続, ふ, 人	உழவன், உழவூர், கலப்பை, ஏர்
Horticulture: leaf, flower	326, 54	♠, ₩	செடி, பூ
Hunting: trapping, spear	35, 293, 162	★3 ,), Y	வலையன், வலையன், வேலன்
Cattle farming: herding and selling	30, 301	₺, (,	கோவன், இடையன்
Carpentry and metallurgy: metal and wood work	245		தட்டி (தட்டான்)
Tayloring: stitching	400, 219, 182	%, Ø, ℍ	நுழல், தை
Honey gathering	180	M	கொட்டு தேன்
Singing: harp, musician	311, 31	D, \$®	யாழ், பானன்
Trade: barter, buy/sell	51, 130	复, √	மாறன், மாற்று, கொள்
Transportation: ship, boat, raft, manual cart, bullock cart	59, 65, 70, 72, 67	♦, ♦, ♦, ♦, ₩	கன்னி, பெருங்கன்னி, கல், கொல், கொண்ட
Movement: send, receive, speed	153, 155, 211	个, 十, f	அனுப்பு

The Indus barter exchange system

We only illustrate the key points here. The local barter happens in the undocumented unorganized sector at the cross-roads ($\mbox{\%}$), in what is termed as "cantai" (\mbox{sp}) in modern Tamil. The exchange is abstracted by the symbol $\mbox{\mbox{$\mathbb{X}$}}$ and the barter mediated by $\mbox{\mbox{$\mathbb{S}$}}$ (maran?), who is usually qualified by great reliable ancestary (flowery self-praise by the system). The exchange is done by symbol $\mbox{\mbox{$\mathbb{V}$}}$ (kol, the dagger of exchange) and $\mbox{\mbox{$\mathbb{X}$}}$ (an abstraction of the cross-road, $\mbox{\mbox{$\mathbb{M}$}}$). Most of the script pertains to official barter transactions of Indus, which are really instructions of transporation mode and the origin/destination. The clitics like $\mbox{\mbox{$\mathbb{E}$}}$ (M77-99) orchestrate the sentence structure of the lines of the seals. An highly compressed form of information exchange mechanism is enabled by the drsastic use of poly-semantic logo-syllables script with each of these logo-syllables having many semantic possibilities with high degree of pun. This is so deeply wedded to Indus culture and mode of exchange that the deciphering of it has taken so long. The skills of bronze-age artisans is in ful display here with those hundreds of poly-semantic logo-syllables crafted and designed with care to work in those small spaces available in the seals. What is interesting that the deeply mysterious swastic symbol (M77-148) is now understood as the mundane:

i.e., declaration of an important exchange, which is usually followed by drum beats \mathbb{Q} . The drum beats are also a way to invite more people to the square for exchange (at cross-roads).

Relative volume of trade

We consider the absolute occurance numbers in the text and also the association to the right of sign no. 99 $\stackrel{\text{\tiny II}}{}$. If we assume that what procedes (to the right of) sign. 99 $\stackrel{\text{\tiny II}}{}$ is the sender of goods then we get the following data:

Glyph	Description	No. occurances	Forward transactions
♦	Cattle	369	290
Ψ	Agriculture	225	18
\otimes	Ivory	182	82
#	Carpentry, Bronze work	134	6
(Honey	44	18
②	Cross-road	41	8
•	Elephant herding?	15	10
*	Tailoring	14	4

Among 634 occurances in IVC text with sign no. 99, assuming that what comes to it's right is the region that is sending commodities to the other regions, we can summarize that cattle and

agriculture were the dominant activities, closely followed by carpentry and elephant-based products. Hunting, honey-gathering, fishing, carpentry, weaving and stitching were the other important activities that created products participating in the organized barter system of IVC. Hunting, honey-gathering, fishing, carpentry, metallurgy, weaving and stitching were the other important activities that created products participating in the organized barter system of IVC.

Class structure of IVC

It seems from the table above that the cattle herders had the dominant trade surplus and probably the agriculturists had the highest trade deficit. Sign-41 & kr̄rān (DED 1621) & proi refers to a poor person and studying his concordance we see that he is strongly associated with sign-137 $\[mathbb{X}\]$ cēri (DED 207) G+f), a place where many people assemble, associated in modern terms with the hut dwelvements or slums in cities. It is quite surprising that this association has remained true for 5000 years! It is also noted that sign-41 & (kr̄rān) has at least one association with all professions, except cattle hearding (sign-267 \diamondsuit). So it is clear that there is a class structure associated with IVC which puts cattle-herders (\diamondsuit) at the top.

Praise heaped on the farmer

The barter system's accumulation of wealth by the ruling elite (sign-30 ☆ "kovan"), accumulated in store-houses (sign-267 ⋄ "koṭṭa") necessiates a rhetoric of praise on the toiling farmer (sign-12 ♥ "vuṛavan") like:

M77 signs	Glyphs	Syllable	Tamil	Description
12-75	吹 貧	peru.mu.kanni-vuṛavan	பெரும்மூக்கன்னி	Enormously mature
			உழவன்	and soft farmer
12-2-86	次	mutal-kāvalan-vuṛavan	முதன்மை காவலன் உழவன்	First guardian farmer
12-325-86		mutal-ilai-vuṛavan	முன்னிலை உழவன்	The foremost farmer

Such eulogy of farmer and farming has continued even 2000 years after IVC culture in Thirukkural:

Kural 1031: Howe'er they roam, the world must follow still the plougher's team;

Kural 1032: The ploughers are the linch-pin of the world; they bear.

Broad observations about the text

One of the surprising observation in this decipherment is that almost no individual identities like personal names are found in the text. All trade transactions are from one collective identity like country, village/town to another country, village/town. Individuals are extolled within the colective identity of farmers, workers, etc. There are however, strong leadership role identitites like chief "mutalvan", "peru(m)-kanni", "mu-velan", "iru-velan" etc. It seems that there are store houses were the items are sent and dispersed through some social mechanism of distribution. It seems that the distribution process could be related to sign-37 \(\mathbb{F} \) "vilampu" and sign-28, \(\mathbb{D} \) "vilampan" seems more like the supervisor of distribution of goods. Probably the sign-176 \(\mathbb{E} \) "anjih" is a place each of the specialized workers like Tailors, Bead makers, Carpenters, Bronze workers, Ivory workers, each

having a separate location for each specialization where others can reach them as targets for exchange. This tradition continues in town in India even now.

References

[1] M.V. பாஸ்கர், அன்றைய தலைப்பு செய்திகள் (Yesterday's headlines), சிந்துவெளி நாகரீக சிறப்பு வெளியீடு (Indus Valley Civilization Special Issue), கிருஷ்ணகிரி மாவட்ட வரலாற்று ஆய்வு மைய்யம் (Krishnagiri District History Research Center), சாசனம் (Sasanam), 2025.

[2] MASI 77 Indus Script Texts Concordances & Tables Iravatham Mahadevan, https://indusscript.in/