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The Cult Object on Unicorn Seals: A Sacred Filter?

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1. The Harappan Cult Object

1.1 The most characteristic artefact of the Indus Civilization is the square stamp seal made of stone, featuring a one-horned bull (the so-called 'unicorn') with a cult object placed in front of the animal and a brief inscription above (Fig. 1). The cult object is depicted as a device consisting essentially of two parts, namely a generally cylindrical upper vessel and a hemispherical lower vessel with a long stem at the base. It has been variously identified as an incense burner or a bird-cage, or a crib and stable rack or as a calendar system to indicate the Jovian cycle of sixty years. The present paper suggests a new identification of the cult object as a 'Sacred Filter' on the basis of pictorial representations of the object on Harappan artefacts as well as parallels from the Soma ritual in the Rgveda (RV).

1.2 The Harappan cult object appears as a pictorial symbol on seals, sealings, miniature tablets and a few other miscellaneous objects. No actual object resembling this symbol has so far been found from any Harappan site and it is thus likely that the original was made of some perishable material like wood. The following Table summarises the statistics of frequency and distribution of this symbol:

<table>
<thead>
<tr>
<th>Sites</th>
<th>Occurrences of the cult object symbol on seals</th>
<th>Sealing</th>
<th>Miniature tablets</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohenjodaro</td>
<td>658</td>
<td>12</td>
<td></td>
<td>670</td>
</tr>
<tr>
<td>Harappa</td>
<td>187</td>
<td>19</td>
<td>4</td>
<td>210</td>
</tr>
<tr>
<td>Chanhuaro</td>
<td>37</td>
<td></td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>Lothal</td>
<td>31</td>
<td>26</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Kalibangan</td>
<td>22</td>
<td>9</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Other sites</td>
<td>7</td>
<td>3</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>942</td>
<td>69</td>
<td>4</td>
<td>1,015</td>
</tr>
</tbody>
</table>

Note: The statistics relate only to inscribed objects with texts included in my book, *The Indus Script: Texts, Concordance and Tables* (IS).

The cult object is the third most frequent symbol depicted on the Harappan inscribed objects, next only to the JAR sign (IS, sign 342) of the Indus Script (1395 times) and the unicorn among the field symbols (1159 times). The cult object appears almost always paired with the unicorn (985 times). The most common arrangement of this classic Harappan motif has the

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unicorn facing right (as seen in impression) with the cult object placed in front under the head of the animal (e.g. MIC 38). In a few cases the unicorn faces left and the cult object is also found at the left (e.g. FEM 8).

1.3 There are a few exceptional cases where the cult object is associated with animals other than the unicorn. Such cases include the two-horned urus ox, probably identical with the ‘unicorn’, though this is not certain, as the horns are of different types (e.g. FEM 234); a fabulous animal resembling in parts both rhinoceros and urus ox (FEM 140); the long-tailed ox-antelope on a seal from Chanhu-daro (CE, LI: 21); the short-tailed goat-antelope on a seal from Lothal (IS 7025); and the horned tiger on a seal from Banawali (IS 9201). It is noteworthy that with the two partial exceptions listed first above, only the unicorn is accorded the honour of being accompanied by the cult object at Mohenjo-daro and Harappa, and the rare association of this object with other animals on seals found at other Harappan settlements may perhaps represent local or later developments.

1.4 The cult object also appears a few times as the sole pictorial motif on inscribed objects indicating its status as an object of veneration in its own right. A unique seal from Harappa (EH 256) depicts the cult object on the left half of the field and a two-line text on the right half (Fig. 2). A few sealings (EH 320, 321, 652, 665, and duplicates in IS) and miniature tablets (EH 440, 441, 443, 533) depict the cult object as the sole motif on one side and carry the text on the other side (or sometimes on both sides).

1.5 Three sealings which depict the cult object as part of ritual scenes are of special interest as they provide an insight into the true nature and function of this enigmatic device:

(i) Cult object in procession (Fig. 3)

Two identical prismatic sealings from Mohenjo-daro (MIC, CXVI: 5, 8) depict four persons in procession, each carrying a tall standard with a different cult object on the top. One of these objects appears to be the cult object studied here (with only the lower vessel visible) and another, probably the unicorn (with the horn missing). The third object appears to be some kind of a cloth banner, while the fourth has been obliterated. The other two sides carry a text of six signs. Marshall (MIC, p. 69) compares these standards with the sacred Nome standards of Egypt. Mackay (MIC, p. 384) compares the scene with the one found on the mace of Narmer of Egypt.

(ii) Cult object as a standard (Fig. 4)

An oblong sealing from Harappa (EH 309) depicts the cult object on both sides. On one side, the object is drawn on an immense scale in comparison with the person who holds it aloft with both hands as a ceremonial standard. One line of inscription is found by the side of the stem of the cult object. On the other side the cult object occupies the field flanked by one line of text on either side of the stem.

(iii) Cult object as part of a frieze (Fig. 5)

Three identical oblong sealings from Harappa (EH 322; IS 5243, 5244) depict a frieze on one side and a text of four signs on the other. The frieze consists of alternate representations of the cult object and small circles arranged in vertical columns. The exceptional importance of the motif which is one of the major clues to the identification of the cult object will be considered presently.

1.6 We may also notice here the occurrence of the cult object on three other interesting artefacts not bearing any inscriptions:

(i) A gold fillet from Mohenjo-daro depicting the cult object at both ends (MIC, p. 219; pl. CXVIII: 14);

(ii) A circular steatite pectoral of exceptional workmanship from Mohenjo-daro depicting the unicorn facing right with the cult object in front and a vase above the animal. (For a beautiful colour reproduction see, Civilization of the Indus Valley and Beyond, Mortimer Wheeler, ill. 44);

(iii) An unpublished oblong sealing from Harapp
depicting the cult object on one side and a tree within a railing on the other (ASI 63.11.226; Pu. 63.4394-95).

1.7 Marshall (1931: 69) identified the cult object as an incense-burner which possibly served simultaneously as a lamp also. According to him the object consisted of two vessels fixed on to a short central staff and was intended to be carried in hand. The lower bowl carried the fire as indicated in some cases by short thin lines rising from its upper surface indicating flame (e.g. EH 3). The upper vessel appeared to be of open metal work, possibly revolving on a stem, and containing incense. He suggested that incense played a prominent part in the cult of the one-horned ox. Vats (1940: 321-22) agreed with Marshall on the identification of the cult object as an incense-burner and expressed the view that as it was depicted alone on sealings and tablets from the lower levels of Harappa, it was worshipped even before it came to be associated with the cult of the unicorn.

1.8 Marshall’s identification of the cult object however suffers from a fatal flaw. One would expect any representation of an incense-burner to indicate smoke rising from the incense, rather than flame. In more than a thousand representations of the cult object available to us, there is not a single instance indicating smoke or fumes arising from the incense supposed to be contained in the upper vessel. Even if the short lines appearing above the lower vessel in a few instances could possibly indicate flame, this explanation cannot be valid for the rows of small circles or lines arranged radially below the lower vessel in a much larger number of specimens. Marshall’s explanation of these as “points” representing “small flames rising above the sides of the vessel” (Marshall 1931: 69, 383) is not convincing.

1.9 Mackay (383-84) regarded the upper vessel as more likely to be made of basket-work with varying coarse or loose weaves as suggested by the grid-like lines appearing on its surface. He thought that the lower vessel was made of leather or wood, as some specimens seem to show embossed rosette-like marks on the sides, while other specimens resemble basket-work. He also thought that the upper and the lower vessels are held together by a staff made of wood or metal running through both. He suggested ‘with diffidence’ that the cult object was a cage and that it held a bird.

1.10 It is surprising that if the upper vessel were indeed a cage made of loosely woven open-type basket-work as suggested by Mackay, the bird inside is never once visible! However, it is only fair to add that Mackay himself implicitly withdrew this somewhat odd suggestion when he later admitted that “no really satisfactory explanation of the meaning or purpose of these cult objects has yet been recorded” and added that “this cult-stand presents a problem which one day, no doubt, will be satisfactorily solved” (Mackay, CE, 147).

1.11 H.F. Friederichs, in a paper mainly devoted to the identification of the animals appearing on the Harappan inscribed objects (Der Alte Orient, Vol. 32, 1933, pts. 3 & 4, pp. 1-120) identified the lower receptacle of the cult object as a crib, the upper one as a stable rack and the upper projecting lines from the edge of the lower basin as representing fodder. I have had no access to the original paper, but I am inclined to agree with Mackay’s comment (670) that “this particular object cannot be so easily explained”, as it seems to be a ritual object carried in procession and venerated in its own right. There is no recorded tradition of cribs or racks being objects of worship.

1.12 After a long interval of four decades, the challenge of identifying the mysterious cult object was again picked up, this time by a group of Soviet scholars working on the decipherment of the Indus Script (Volchok in Knorozov et al., Proto-Indica: 1972; Knorozov et al., Proto-Indica: 1979). In brief, the Soviet scholars regard the cult object as a combination of two symbols, the top portion appearing in five variants and the bottom portion in twelve variants. The variants are distinguished by means of minor differentiation in the number and treatment of details like vertical strokes and horizontal lines of the upper part and the ornamentation of the lower part with curved lines, small circles etc. The Soviet scholars interpret the upper part as representing a five-year cycle based on solar-lunar correlation, and the lower part as representing a twelve-year cycle based on the correlation of the courses of the Sun and Jupiter. The
combination of the five-year and the twelve-year cycles formed the sixty-year cycle, pictorially represented by the combination of the upper and the lower parts of the cult object into a single device. Thus according to the Soviet interpretation, the cult object is a symbol representing, through variations of design, each of the sixty years of the Jovian Cycle, and usually used for dating the seals.

1.13 The problem with the Soviet theory of Maya-like calendar glyphs is that the variations in the details or ornamentation of the Harappan cult symbol are simply too many to admit of a precise total of sixty types only. Volchok herself admits that there are many variations not included in the 'recognized' list of sixty types, but explains, rather unconvincingly, that these may be "stylistic differences which are perhaps characteristics of certain twelve-year periods only" (Proto-Indica: 1972). Again as Volchok herself points out, there are many cases where the representations are too small to admit of much detail. The beautifully carved and well-preserved steatite pectoral from Mohenjodaro delineates only the contours of the cult object without any inner ornamentation, showing that such details (while they may not be devoid of significance) are not essential to the recognition of the symbol. It is difficult to explain why dates were represented on objects like the golden fillet and the steatite pectoral. For these reasons I feel that the Soviet interpretation of the Harappan cult object as a calendar device is not convincing.

1.14 The new interpretation of the Harappan cult object proposed here is based on a close study of over one thousand representations of the symbol seen by me in originals or photographs when I was engaged in copying the texts in the Indus Script. As I was looking closely at the unicorn seals in the magnificent collections of the Archaeological Survey of India and the National Museum, New Delhi, it occurred to me that the two basic elements pictorially emphasised most in the Harappan cult symbol, namely the 'flow' depicted by the parallel zigzag lines drawn through the upper vessel and the 'drops' depicted in and around the lower bowl, correspond rather precisely to the two central features of the Soma sacrifice as described in the RV, namely paramôna, the 'flowing (one)' and indu, the 'drop' mentioned in almost every hymn of the Ninth Mandala dedicated wholly to Soma. These are the two clues which gradually led to the recognition that the Harappan cult object is in fact a filter device, the upper vessel acting as a strainer and the lower perforated bowl as a sieve.

1.15 I shall first describe the component parts of the Harappan cult object and then proceed to explore the close parallelisms between the pictorial representations of this object and the rich and varied imagery of the Soma ritual in the RV. A representative selection of the main variants of the cult object depicted on the larger and better preserved unicorn seals from Mohenjodaro and Harappa is reproduced in Fig. 6 from the plates of MIC, FEM and EH. The illustration in Fig. 7 is a composite drawing bringing together twelve distinct features of the cult object depicted on different seals. The features (serially numbered 1 to 12 from top to bottom in Fig. 7) are described below in detail. In dealing with each feature, I shall cite the best examples from the plates of MIC, FEM and EH for comparative study.

Features of the Harappan cult object (Fig. 7).

(1) Ring or handle at the top of the upper vessel
This feature is seen clearly in MIC 3, 15, 17, 19; EH 2, 3, 5, 17. Its purpose is presumably to serve as a handle to carry the upper vessel by hand or for suspension from above. Thus it appears that the upper and the lower vessels were not joined to each other and were independently supported.

(2) The body of the upper vessel
The upper vessel is generally cylindrical in shape and often slightly flared at the top and the bottom. Excellent examples may be seen in MIC 9, 18, 38; FEM 149, 422; EH 1, 3, 6. A major variant depicts the upper vessel as hemispherical in shape giving it the appearance of an 'inverted basket'. This shape may be seen clearly in MIC 36, 88, 92; FEM 11, 398, 644; EH 72, 256. The upper vessel appears to be a hollow container.

(3) Schematic depiction of the downward flow of liqua through the upper vessel
The most conspicuous feature of the upper vesse...
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is a series of close parallel lines, drawn vertically or in a wavy zigzag fashion, traversing the length of the vessel. Straight vertical lines may be seen in examples like M1C 2, 18, 37; FEM 11, 225; EH 4, 6, 10. Good examples of the wavy or zigzag lines will be found in M1C 9, 38; FEM 19, 69, 149, 396, 436; EH 1, 3, 9, 12. The clue to the true function of the upper vessel is provided by the wavy, zigzag lines which represent schematically the downward flow of some liquid through the vessel.

(4) Schematic depiction of filtering medium in the upper vessel

The upper vessel is generally marked by a series of two to five parallel horizontal lines. These lines are straight when the shape of the vessel is cylindrical (e.g. M1C 9, 18; FEM 149; EH 4, 6), and generally curved or convex when the shape of the vessel is hemispherical (e.g. M1C 90, 100; FEM 11, 74, 147; EH 256). In some specimens the horizontal lines are arranged in three or four pairs giving the distinct impression of separate layers of some thick material (e.g. M1C 39, 69; EH 50, 256). Since the zigzag lines appear to indicate the downward flow of some liquid through the upper vessel, I interpret the horizontal lines (straight or curved) as schematically depicting successive layers of some kind of porous filtering medium placed inside the upper vessel.

(5) Schematic depiction of the streaming of liquid from the upper vessel into the lower vessel

Many of the larger seals depict realistically the stream of liquid pouring from upper vessel through the intervening space into the lower vessel. (See especially the examples in M1C 18, 38; FEM 149, 422, 616; EH 3, 6). Depiction of this feature as a thin straight column is to be regarded as conventional (e.g. M1C 19, 22; FEM 14; EH 693).

(6) A small circular device between the two vessels

Just above the upper rim of the lower vessel, a small circular device sometimes with slightly upturned ends is seen on some specimens (e.g. M1C 9, 18, 38, 66; EH 693). This is probably a channel or funnel-like device to receive the liquid flowing from the upper vessel and to regulate its flow into the lower vessel.

(7) Splash of liquid above the top of the lower vessel

In some examples short, thin and sometimes curved lines are shown rising from the top of the lower vessel (e.g. M1C 38; EH 3). These short lines depict the splash of liquid as it pours in a stream from the upper vessel into the lower vessel.

(8) The lower vessel

The lower vessel is a hemispherical bowl (e.g. M1C 9, 18, 38; FEM 616; EH 1, 3, 6). Occasionally the bowl is shown with a concave upper rim giving it a crescent-like appearance (e.g. M1C 8; FEM 422), or with a conical projection at the middle point where the liquid flows into vessel (e.g. M1C 126; FEM 74, 644; EH 256).

(9) Perforations on the sides of the lower vessel

The most conspicuous feature of the lower vessel consists of the markings seen on its sides. These are of three main types:

(a) 'eyes' or 'rosettes' formed by small circles with central dots (e.g. M1C 16, 38; FEM 422, 616; EH 4, 7, 8);
(b) 'knobs' or 'bosses' which appear as round projections from the sides of the vessel (e.g. M1C 9, 18, 29, 124; FEM 19, 26, 149, 340; EH 6, 17, 40);
(c) curved, wavy or circular lines (e.g. M1C 30, 33, 40, 61, 66, 92; FEM 33; EH 1, 3, 9, 12, 24, 30).

The feature in type (a) above, namely circles with small central dots, provides the clue to the real function of the lower vessel which appears to be a perforated bowl. It acts as a sieve receiving the filtered liquid from the upper vessel and allowing the clear filtrate to trickle out as drops through the orifices on the sides, while impurities still remaining after filtration would settle at the bottom of the vessel. What makes this interpretation very likely is the depiction of 'drops' actually emerging out of the sides of the lower vessel and also surrounding it. This feature is dealt with in (10) below.

As regards type (b) above, I suggest that what appear to be 'knobs' or 'bosses' are in fact a schematic representation of 'drops' of liquid inside the lower
vessel, as if the bowl holds a collection of 'drops' rather than the liquid in mass. The reason for this unusual representation seems to lie in the ritual importance attached to 'drops' of the liquid in the filtering ceremony, judging from the parallelism of the role of \textit{indu} ('drop') in the Soma ritual to be considered more fully in the next section.

The design in type (c) above, namely the curls or circular or wavy lines may be interpreted as artistic depiction of the swirl or eddy of the liquid or the waves on its surface generated by the streaming of the liquid from the upper vessel into the lower bowl. In general, wavy lines represent conventionally water or any other liquid.

(10) \textit{Drops of liquid around the lower vessel}

The most vital clue to the true function of the Harappan cult object is the depiction of 'drops' of liquid emerging through the perforations on the sides of the lower vessel and also surrounding the vessel in a symbolic manner. There are several examples which depict the drops in the actual process of trickling through the orifices on the sides of the vessel. These drops have the characteristic hemispherical or elongated shapes with 'waists' or shown as thin lines radially arranged around the lower sides of the bowl suggesting the spurting of the liquid in jets.

Examples of the motif of 'emerging drops' can be seen in:

\textit{MIC} 3 shows two parallel rows of 'drops' around the bowl.
\textit{FEM} 7, 68, 80, 141, 147, 233, 348, 398, 492, 585, 644.
\textit{EH} 68, 73, 78, 195, 256.

The interpretation of the small circles around the lower vessel as 'drops' of liquid is supported by several lines of evidence, namely the flow of liquid through the upper vessel, the pouring of liquid as a stream into the lower vessel, perforations on the sides of the lower vessel, the depiction of emerging 'drops' through the orifices, and wave-like lines on the sides of the lower bowl. It is also significant that while the circles on the bowl may or may not have central dots (representing respectively orifices or 'drops'), the circles around the bowl are never shown with the central dots as they can represent only the 'drops'. Further the drops surround even those bowls in which perforations are not depicted (e.g. \textit{MIC} 40, 61; \textit{EH} 10, 256). This is evidence to show that the lower bowl was perforated in all cases and the artistic convention permitted the depiction of different aspects of the liquid as 'drops', 'waves' etc.

(11) \textit{The stem attached to the lower vessel}

The lower bowl is supported by a slender vertical stem attached to its base (e.g. \textit{MIC} 38; \textit{FEM} 422; \textit{EH} 1). The stem is generally thicker at the lower end. The purpose of the stem is presumably to hold the lower bowl by hand as in fact shown on some sealings (\textit{MIC}, CXVI: 5, 8; \textit{EH} 309). I venture to suggest that the stem was perhaps not a part of real life-size filter device and was attached only to small-scale hand-held models used in processions or for symbolic ritual purposes.

(12) \textit{The pin-like device on the stem}

There is a short pin-like device inserted horizontally in the vertical stem just below the base of the lower vessel, probably to prevent the bowl from slipping down the stem. The pin is thicker or slightly bent at one end. Examples of this device can be seen in \textit{MIC} 38, 66: XCVI: 5, 8; \textit{EH} 2). This feature appears to indicate that the lower bowl had a hole at the bottom into which the stem was inserted tightly (at least in the hand-held models seen in the pictorial representations).
II. Parallelsism with the Soma Ritual of the Rgveda

2.1 Before I proceed further with a comparative study of the Harappan cult represented by the Filter symbol and the Soma ritual of the RV, I must emphasise that I shall be dealing only with the physical or naturalistic aspects of Soma as the pressed juice and with the mechanical details of its purification through a filter device. Soma is also of course one of the most important deities of the Vedic religion and the Soma poetry, no less than the other parts of the RV, is often couched in metaphysical language with deeper mystical significance. I have no competence to go into these aspects, but happily this is not necessary for the present purpose.

2.2 Soma sacrifice forms the main feature of the ritual of the RV. The Ninth Mandala of the RV is entirely dedicated to the praise of Soma. The word soma means 'pressed (juice)'. The Soma ritual consists essentially of three stages, namely

(a) **PRESSING** (sawana) the stalk (anśiś) of the Soma plant between stones (adri, grāvan) or in a mortar (ulākhala) to extract the juice;
(b) **PURIFYING** (punāna) the Soma juice by allowing it to flow (paramāna) through a strainer (pavitra) made of wool (vāra, roman) of sheep (avya, mesya) and through a sieve (anvi) before collecting the filtered juice in wooden vessels (kalaśa, kośa, drotā);
(c) **MIXING** (āśr) the purified juice with milk curds or barley and offering it to the gods, especially to Indra, the Soma drinker; *par excellence* (somapāh).

2.3 A comparative study of the pictorial variants of the Harappan Filter symbol and the descriptions of the Soma ritual in the RV, especially in the Ninth Mandala, has led to the identification of five principal features which appear to be common to the Harappan and the Rgvedic rituals, namely

A. The Strainer (pavitra)
B. The Sieve (anvi)
C. The Flow (paramāna)
D. The Drop (indu)
E. The Bull (vṛṣan)

These parallelisms are considered below in detail.

A. The Strainer (pavitra)

Components of the Filter Device

2.4 The filter and its component parts are very frequently mentioned in the Soma verses of the RV. (For a list of the ‘filter’ words see *Vedic Index*, I.508; Hillebrandt, *Vedic Mythology Eng. tr.*, I.297.) The RV does not however describe how the filter apparatus was assembled. In the absence of this information the technical terms associated with the filter have been interpreted by the commentators in the light of the later ritual practices which differed in many respects from those of the Rgvedic times. Modern scholars are also not in agreement as to the significance of several of these expressions. The translators in English (Wilson, Griffith and Bhave) employ the terms ‘filter’, ‘strainer’ or ‘sieve’ generally as synonyms. I shall translate *pavitra* as ‘strainer’ and *anvi* or *anvi* as ‘sieve’, reserving the term ‘filter’ to denote the composite device consisting of both the elements. The necessity for this distinction will become clear as I proceed with the argument. We shall see presently that the identification of the Harappan cult object as a filter with a two-tier arrangement consisting of a strainer above and a sieve below provides us with new insights into the significance of several technical terms, metaphors and allusions in the Soma verses of the RV, which have so far remained obscure.

Sheep wool (avyaḥ vāram)

2.5 Sheep wool was used for straining the Soma juice. This is very often mentioned in the RV:

`tirah pavitram vi vāram avyaḥ (9.109.16).`  
"Through the sheep wool strainer".

The association between the strainer and the sheep wool was so close that the RV often uses the terms ‘sheep wool’ or even merely ‘sheep’ to stand for the ‘strainer’ in the Soma verses:

`pavate vāre avyaḥ (9.36.4).`  
"(Soma) flows into the sheep wool (strainer)".

`somah pavitār arṣati sahasradhāra avyaḥ (9.13.1).`
"Soma, being purified, flows thousand-streamed, beyond the sheep (wool) (strainer)".

It appears that loose woollen fibres were employed for straining as there is no mention of woven or plaited fabrics in this context. The words vāra and roman both mean 'hair' and it is unlikely that they were used in the sense of 'cloth'. (The term dasāpavitra, 'fringed woollen strainer cloth' cited in the commentaries occurs only in the later texts).

'Top' of the filter device (sānu)

2.6 The loose woollen fibres must have been supported by being placed or packed inside a container or vessel through which the raw juice must have been strained into the receptacle placed below. This arrangement is in fact suggested by the term sānu, interpreted by Macdonell as the 'top of the contrivance' (Vedic Mythology, p. 106). The two words avya and sānu occur so often together as to suggest that the sheep wool was placed at the top of the filter device:

yad avya eṣi sānuvi (9.50.2).

"When (thou) goest into the top of the sheep (wool) (strainer)".

pavītra adhi sānu avyaye (9.86.3).

"At the top of the sheep (wool) strainer".

Translations of the phrase sānu avye (9.97.3) as "elevated fleece" (Wilson) or "fleecy summit" (Griffith) have tended to obscure its simple and natural meaning. A comparison of the Harappan Filter symbol with the Rigvedic expressions cited above indicates that the upper vessel corresponds to sānu, the 'top' of the Vedic filter device, and the horizontal bands of lines drawn across the upper vessel represent layers of some porous medium for straining (probably sheep wool as described in the RV).

B. The Sieve (avya)

2.7 The terms avya and avyē generally denote a 'fine sieve' in the Soma verses of the RV:

śūra avyaṃ vi yāti (9.91.3).

"Soma (lit., the sun) goes through the fine sieve".

Both Veṅkaṭa Mādhava and Sāyaṇa explain avyaṃ here as sākṣmaeçhīram pavīram, 'a sieve with fine holes'. Sāyaṇa also connects avyaṃ with the uparāva holes (dug into the ground in later ritual). Sāyaṇa again refers to 'holes in the filter cloth' in his gloss on 9.14.4. Wilson translates avyaṃ in 9.91.3 as 'filter'. Griffith translates avyaṃ in 9.10.5 as 'through the openings of cloth' and avyēsa in 9.16.2 as 'through the sieve'. Bhaṅga generally renders avya or avyē as 'slender fingers', probably taking their cue from 9.1.7 where avyē definitely refers to the 'slender (maidens)', a metaphor for the 'fingers' of the Soma presses. Bhaṅga (SH, 1.66) refers approvingly to Grassmann's view that avya (avī) in the singular stands for the 'fine soma-sieve' while the plural forms refer to the 'fingers'. However Bhaṅga himself interprets the plural avyēsa in 9.16.2 as 'fine (strainer chords)'. After a careful review of the occurrences of avya, avī and the related grammatical forms, I consider that with the exceptions of 9.1.7 where avī refers to the 'slender (maidens)', 9.86.47 and 9.107.11 where avīna means refer to the 'fine (hairs) of the sheep', all other occurrences can be interpreted as 'fine (sieve) in the singular or as 'fine holes (of the sieve)' in the plural (cf. 1.3.4; 9.10.5; 14.6; 15.1; 16.2; 26.1 and 91.3). It now appears likely that the lower perforated bowl of the Harappan Filter device corresponds to avya or avyē, the 'fine Soma sieve' of the RV. This means that the Rigvedic filter device was, like its Harappan prototype, an assemblage of two vessels one below the other, an upper vessel (sānu) filled with sheep wool (aryāḥ vāram) acting as a strainer (pavītra) and a lower perforated bowl acting as a fine sieve (avya or avyē).

The Sieve as Soma's place of birth (yoni)

2.8 The receptacle in which Soma 'settles down' or is 'seated' is often referred to as the Yoni in the RV:

ā yoniṃ s均衡 Sukhram niśiditam (9.70.7).

"Soma sifs on the well-made place".

Yoni means literally the 'womb', but conventionally translated in this context as 'place', 'seat' etc. The problem here is why the Soma
receptacle is called the yoni, rather than the mountain, the pressing stones or the sheep wool strainer where the Soma plant, its raw juice and the purified drink respectively arise. Bhawe suggests a solution to this puzzle on the basis of the later ritual practice in which the droṣṭākālasā is placed on wooden pressing boards which may be regarded as the place of birth of the Soma juice (SH, I, pp. 9-10). Quite apart from the fact that there is no mention of the pressing boards in the RV, this interpretation is somewhat contrived and does not really explain why the vessel is called the yoni. I suggest that the expression makes sense once it is interpreted in the light of the Harappan cult object. The Soma vessel which is perforated and functions as a sieve produces clarified Soma juice through its orifices. Thus it is here that Soma, the sacrificial drink, is 'born'. Hence the Soma receptacle is in fact literally the yoni, the womb, place of birth or origin of Soma.

**Interpretation of legends of Indra based on the Soma sieve**

2.9 This new interpretation leads in turn to the recognition that the fine, sieve of Soma is the physical basis of three legends connected with Indra, one of them being mentioned in the RV itself:

(a) *Indra's birth through the 'side' of his mother*  
Indra is often spoken of as 'having been born'. In a hymn dealing with his birth (4.18) he is described as wishing to be born in an 'unnatural' way through the 'side' of his mother, says Indra:

nāham ato nirayā durgahalit

* tīrāceaţ pārśvān nirgamāni (4.18.2).

"Not this way go I forth: hard is the passage.  
Forth from the side obliquely will I issue" (Griffith).

The key word here is tīrāceaţ, 'obliquely', 'slantingly' or 'transversely'. The same word is used once again in the Ninth Mandala where it describes the path of the Soma juice through the sieve (aṇhydrā):

* "att ārī śīl tīrāceatā gāryā jīdāty aṇyāt (9.14.6).  
For the sake of resort, he (Soma) goes over the slanting (path) through the sieve towards the cows' (milk)" (Bhave).

Now we can solve the mystery of both the allusions. The Soma sieve was a vessel perforated on its sides, through which the drops of the filtered juice came out (as vividly represented on many Harappan seals). While it is natural for a liquid to be poured out of the top or even the bottom of a vessel, it is quite unusual (and hence unnatural) for a liquid to come out of the sides of the vessel. It is this unusual course that is referred to in 9.14.6 with the expression tīrāceatā (‘obliquely, slantingly or transversely’). This confirms that the RV did indeed know of a sieve-like Soma bowl perforated on the sides (aṇhydrā, aṇyāt) as represented by the lower vessel in the Harappan Filter symbol. By a well-known process in the Vedic hymns, the traits of Soma are transferred to its greatest drinker, Indra. The physical basis of the myth about Indra's birth through the 'side' of his mother now becomes clear. Indra is so depicted because this is how indu, the 'drops' come out of the Soma sieve, through the orifices on the sides of the vessel, obliquely, slantingly or transversely.

(b) *Soma coming out of every pore on Indra's body*  
According to a later legend, Indra drank pure Soma which pressed forward again through all the openings of his body so that the gods had to cure him by means of the sautiṃāṇi ceremony (ŚBr. V.5.4.9.R). Hillebrandt (VM, I.423, n. 238) points out that this ceremony was known by name as early as in AV. III.3.2, and expresses his conviction that the ritual was still older. Here again the physical basis of the myth is the equation of Indra's body with the Soma sieve. The trickling of Soma drops through the orifices on the sides of the Soma sieve suggested the image of Soma pouring out of all the openings of Indra's body.

(c) *The 'thousand holes' on Indra's body*  
The RV often compares the flowing of the Soma juice into the receptacle with the flow of Soma into the stomach or heart of Indra:

—indrasya hārdi somaśānam ă viśa (9.70.9).  
"(O Soma) enter the Soma-vessel, the heart of Indra"

—indrasya endo jāṭhaṁ ă paśvaṁ (9.70.10).  
"O Indu, flow into the stomach of Indra".

—indrasya kuksā paśva ṛmadṁā (9.80.3).
"He (Soma) flows into Indra's stomach for his food."

We can see now that the constant comparison of Indra's stomach, heart or body with the Soma vessel, a sieve with numerous fine holes on its sides, is the physical basis behind the post-Vedic myth of Indra's covered body being marked with a thousand holes. According to later legends, Indra seduced Ahalyā, the wife of Gautama, and the sage laid upon Harappan filter device as a perforated bowl naturally one of the most characteristic of the ceramic ware of Harappan Pottery, mostly cylindrical jars (unlike the hemispherical bowl suggested that the vessels were used as braziers and the other as a sieve, it is instructive to re-examine the references to the twin Soma vessels in the RV.

(a) onyoḥ: This expression in the ablative dual form occurs thrice in the Ninth Mandala and refers, in its primary sense, to some parts of the Soma filter (9.16.1; 65.11; 101.14). Griffith points out (in his note on 9.16.1) that the term signifies apparently an implement or a vessel, consisting of two pieces used in the preparation of the Soma juice. He translated the word as 'Soma-press' and Bhawe as 'pressing boards' (9.16.1) as they probably considered that the only twin objects involved in the Soma ritual were the two pressing boards. However, there is no evidence for the existence of the pressing boards in the RV. In the light of the new evidence furnished by the Harappan Filter symbol we can interpret onyoḥ (dual) in its primary sense as the twin vessels (strainer and sieve). While the filter vessels support the flowing Soma, verse 9.65.11 reverses the situation for poetic surprise, and describes Soma Pavamāṇa as the supporter of the onyoḥ (dhārtāram onyoḥ), literally the two (filter) vessels, but metaphorically 'heaven and earth'.

(b) camvah: The use of the locative dual in the phrase camvah suah, 'pressed in the (two) camvah' (e.g. 9.36.1) has caused a problem in interpretation because Soma is not pressed in vessels but between stones. According to Hillebrandt (VM, I.280), camvah is probably one of the elliptical duals and denotes the mortar as well as the pestle at the same time. Bhawe has followed the traditional interpretation and translated the phrase camvah suah as 'pressed out on the (two) wooden boards' (9.36.1). We may now consider an example of words of mleča origin without etymology in Sanskrit. The description bears a striking resemblance to the pictorial representation of the hemispherical perforated bowl seen in the Harappan Filter symbol.

The Twin Soma vessels of the RV

2.12 The RV often refers to some Soma vessels in the dual number. According to the traditional interpretation, the twin bowls stand metaphorically for 'heaven and earth'. We are concerned here with the physical basis of this description. Now that there is evidence that the filter device in the RV was an assembly of two vessels, one functioning as a strainer and the other as a sieve, it is instructive to re-examine the references to the twin Soma vessels in the RV.

Harappan perforated ware

2.10 The identification of the lower vessel of the Harappan filter device as a perforated bowl naturally invites comparison with perforated pottery which is one of the most characteristic of the ceramic ware of the Indus Civilization (Manchanda, A Study of the Harappan Pottery, p. 141). The perforated vessels are mostly cylindrical jars (unlike the hemispherical bowl seen on the Harappan seals) of widely varying sizes (1.4 to 22 inches in height). The holes on the sides of the vessel are pierced from outside, leaving the inner edges ragged. There is generally a large hole at the bottom centre of the perforated jar. It has been suggested that the vessels were used as braziers or ritualistic incense-burners or lamp-shades etc. In West Asia, perforated vessels were used as strainers or colanders. But Manchanda thinks that such use "cannot be so unequivocally vouched for the tall cylindrical perforated vessels of the Harappan type". While perforated ware was known to several ancient cultures, its abundant use is a characteristic feature of the Indus Civilization, perhaps in a ritualistic context as suggested by the perforated bowl seen in the Harappan Filter symbol.

Perforated vessels in later tradition

2.11 A sacrificial vessel called sata used in ritual is mentioned in later Vedic literature and the ritual texts (Vedic Index II.419). Šāgarasvāmin in his commentary on Mīmāṃsa Sūtra Bhāṣya (1.3.10) describes sata as 'a wooden vessel round in shape and perforated with a hundred holes' (sata iti dārmaṇyam pātram pari-māṇḍalam satacchidram). He cites the term as an
the possibility that camā in the dual form stands for the twin vessels of the filter device as in the following verse:

mahi samairac camā samici
ubhe te aṣya vasunā nyṛṣte (3.55.20).

“He (Tvasti) united the (two) great Bowls that face each other; both of them being packed full with his treasure”.

The term camā can be interpreted in its primary sense to stand for the twin vessels (of the filter device) which face each other as represented in the Harappan symbol. The expression camāḥ sutāḥ can be understood to mean ‘pressed into the (two) vessels’.

(c) dhamānī: There is an interesting reference in the RV to the two abodes of Soma ‘which stand facing’ (the priests):

tābyāṁ viśvasya Vājasye ye pavamāna dhamānī pratiṣṭi soma ihasthatuh (9.66.2).

“By means of those (two) abodes which stand facing (us), thou rulest over all, O Pavamāna Soma.”

The word dhamānī (in the dual) has been variously interpreted, as the two lunar halves of the month (by Venkata Madhava), as the stalk (avāśa) and the juice (soma) (by Sāyana), as heaven and earth (by Ludwig) or as Soma, the deity and the juice (by Bhaue). Gordon Wasson (Soma, pp. 25-34) has suggested a novel interpretation of the two forms of Soma as the juice itself and the urine of the Soma-drinker, which again intoxicates those who consume it, as a psychotropic metabolite. None of these interpretations is in accordance with the specific requirement in the verse that the two forms should actually ‘stand facing’ (pratiṣṭi) the priests. We can now interpret dhamānī as the ‘two Abodes’ of Soma, that is, the two prominent vessels of the filter apparatus (the strainer and the sieve) facing the priests during the ritual. Alternatively, if dhamānī is taken to mean ‘form’ (rather than ‘abode’), the expression dhamānī can also be interpreted to stand for the two most important forms of the Soma juice, namely pavamāna (the ‘flowing one’) and iḍu (the ‘drop’), both actually seen during the filtering ritual.

(d) dhiṣane : dhiṣanā is also a Soma bowl and the word is often used in the dual as in the other instances noticed above to represent ‘heaven and earth’ as the ‘two great bowls’ which close upon each other at the horizon:

samcitē dhīṣane vi śākabhāyati (10.44.3).

“He props apart the (two) Bowls (dhiṣane) that face each other”.

It appears likely that like camā, dhiṣane also in its primary sense refers to the two bowls (of the filter device) which stand apart but facing each other as depicted by the Harappan Filter symbol.

(c) Other references to the Twin Vessels:

vi yo mame yamyāl somatī māthā (9.68.3)

“(He) who, (as) the exhilarating juice, has traversed the united twins”.

In the context of the Soma ritual and the flow of Soma Pavamāna, the ‘twins’ (yamyāl) which are ‘united’ (samyaṭi) and which are ‘traversed’ (māthā) by the ‘juice’ (māthā) refers, on the physical plane, to the twin vessels of the filter. In the next verse (9.68.4), the phrase sa māṭarā vicaraṇ ‘he (Soma) wandering through (his) (two) mothers’ makes sense only when related to the twin filter vessels through which the juice flows. As in the case of the twin vessels discussed above, the traditional interpretation of ‘heaven and earth’ need not be excluded in these two cases also, but are to be regarded as metaphorical suggested by the twin bowls of the filter, the most prominent objects associated with the Soma ritual.

The Three Filters of Soma

2.13 The RV mentions trī pavitrā, ‘three filters’ of Soma twice:

—trī sa pavitrā hṛdy atiṣṭāda daśā (9.73.8).

“He (Soma) carries three filters inside his heart”.

san trī pavitrā vātānā dy ekam dhārasi pāyamāna (9.97.55).

“Thou comest unto the three filters stretched out; and runnest through each clarified”.

Venkata Madhava and Sāyana identify the three filters as Agni, Vāyu and Sārya, the three purifying
deities. Sāyaṇa also suggests that these filters are different from the strainer made of sheep wool. Bhawe (SH, III.101) has proposed that the doctrine of the three padītrās refers to the three forms of Soma viz., heavenly, mid-regional and earthy. Gordon Wasson (Soma, pp. 51-58) identifies the three filters in the order of their function, with (i) the Sun’s rays which ‘filter’ the celestial ambrosia as Soma juice into the plant, (ii) the woollen strainer, and (iii) Indra’s belly where Soma is said to be clarified prior to its being filtered out through the bladder into the urine.

I believe we can identify the physical basis for the three filters of Soma when we read the relevant passages in the RV keeping in view the construction of the Harappan Filter in which the liquid can be seen to pass through three distinct stages in the course of its downward flow:

FIRST, through the upper vessel corresponding to the sheep wool strainer (padītra) of the RV;
SECOND, through mid-air in the intervening open space between the two filter vessels, corresponding to Soma’s passage through antarikṣa (mid-region) or Vāyu’s place (mid-air) as often referred to in the RV;
THIRD, through the lower perforated bowl corresponding to the fine Soma sieve (anva or anvi) of the RV, before finally emerging as drops of Soma (indu).

This sequence is clearly referred to in the RV:

somah punāno arṣati sahasradhāra atya arth vāyor indrasya niśkr̥tan (9.13.1).

“Soma, being purified, flows thousand-streamed, beyond the sheep (wool) (strainer), To Vāyu’s and Indra’s place”.

The sequence is obvious when we understand ‘Vāyu’s place’ to be the mid-air (between the strainer and the sieve) and Indra’s place to be the receptacle of Soma, often identified with Indra’s heart or stomach. Again Soma is described,

antarikṣena rārajat (9.5.2).

“(Soma) shining through the mid-region”.

Sāyaṇa’s gloss dropsakalasam prati gacchati makes it clear that the reference to the mid-region here is to the space between the strainer and the receptacle, from the naturalistic point of view, the concept of the three filters is based on the successive filtering action of:

(i) the sheep wool strainer which removes the solid matter;
(ii) the passage through the air (in between the two vessels) which purifies the stream; and
(iii) the fine sieve which further filters off the remaining impurities before the pure drops of Soma emerge through the orifices on the sides of the vessel.

The Three Filters as interpreted here may also be the ‘three abodes’ of Soma (triṣṭaḥstatha, 8.94.5) though Sāyaṇa identifies them with three Soma vessels of later ritual.

C. The flow (pavamāṇa)

2.14 The presiding deity of the Ninth Maṇḍala of the RV is Soma in the form of Pavamāṇa. The word pavamāṇa means ‘the flowing one’. The supreme moment of the Soma ritual is reached when the juice starts flowing through the filter. The flow of Soma is “the all-absorbing them of the Soma-poetry” (Bhawe).

The flow is referred to virtually in every verse of the Ninth Maṇḍala and is extolled with endlessly varying imagery invoking movement of waters in varied forms, as rains falling, rivers streaming or waves billowing. The Soma verses are a veritable cornucopia of ‘flow’ words, verbs describing movement, adjectives emphasising swiftness, and nouns providing similes of speeding objects like birds, race horses or chariots. As Bhawe points out, the Rigvedic poets appear to take an almost sensuous pleasures in the running of Soma Pavamāṇa.

2.15 The flow of Soma as pavamāṇa is the first and most important clue I have to identify the function of the upper vessel of the Harappan cult object as a strainer. The series of parallel lines placed closely together and drawn vertically or in zigzag fashion through the length of the upper vessel depict pictorially the flowing of a liquid and correspond to the imagery of Soma as pavamāṇa in the RV.

2.16 The flow of Soma is also frequently described
The Cult Object on Unicorn Seals: A Sacred Filter?

as dhāraya, a 'continuous system'. The expression is often used to depict multiple streams as in satu-dhāraya, 'hundred streams' (9.86.27), or sahasra-dhāraya, 'thousand-streamed' (9.13.1). The thin stream of Soma is described as a 'thread' (tāntu) stretched out and extending to the highest place (9.22.6). The streams passing through the filter are also described as asaśētā, 'several, separate' (9.57.1; 62.28 etc.). Bhawe's comment (SH III.15) is apt: "Every observer of the Indian monsoon knows that the rain falls in continuous yet separate thin streams. Soma also flows in the same way". The pictorial depiction of flow by means of a series of thin vertical or slanted parallel lines drawn across the upper vessel of the Harappan cult object fits in exactly with these descriptions in the RV.

2.17 One of the more frequent verbs employed to describe the flow of Soma is dhāvah, 'to run'. An interesting feature here is the use of the verb in two distinct forms, dhāvah and vi-dhāvah in different contexts. While either form is used (but vi-dhāvah more frequently) to describe the flow of Soma through the sheep wool strainer, only dhāvah is used to refer to the flow beyond the strainer into the receptacles. Similarly the form vi-dhāvah occurs with pavamana (the 'flowing one') but never with indu (the 'drop'):

—(a)yā va ram vi pavamāna dhiivati (9.74.9).

"O Pavamāna, (thy juice) runs diversely through the sheep wool (strainer)".

abhī droṣṭi dhiivati (9.28.4).

"(Soma) runs towards the wooden vessels".

dhāvānti-indaṁ somā inrdāya gṛṣṭyaṁ (9.21.1).

"These drops, the strong Soma (juices), run for Indra".

It appears that the poets intended a distinction here, vi-dhāvah representing (optionally) the 'diverse' or 'meandering' flow through the sheep wool strainer, while dhāvah describes (invariably) the straight flow thereafter. Veckaṭa Mādhava and Sāyaṇa interpret vi-dhāvati as vidvāham dhiivati in a few places. Wilson and Griffith translate vidvāvasi (9.16.8) as 'thou wanderest' and Bhawe translates vidvāvati (9.37.3) as 'diverse runs'. There is a remarkably close correspondence between the (Gṛvedic imagery of the 'diversely' running flow of pavamāna and the zigzag or wavy lines depicted on the upper vessel of the Harappan Filter symbol.

2.18 The word hvarāṃsi occurs thrice in the Soma verses (9.3.2; 63.4; 106.13) and has been variously rendered as 'declivities' (Benfey), 'plaited cloth' (Zimmer), 'winding ways' or 'twisted obstacles' (Griffith) or 'impediments' (Bhawe). Bhawe considers that the term stands for the obstruction caused by the hairs of the strainer. While this meaning is not unlikely, it is more apt in the context of the flow of Soma to translate the word as 'diverse or winding ways'. (The root meaning of hvar is 'to deviate or diverge from the right line, to go deviously'; Monier Williams). The serpentine or winding paths of the Soma juice flowing across the sheep wool strainer correspond to the wavy, zigzag flow lines on the upper vessel of the Harappan Filter symbol.

D. The drop (indu)

2.19 While pavamāna (the 'flowing one') is regarded as the most important aspect of Soma, indu (the 'bright drop') is the most frequently applied epithet to the juice. Another term for 'drop' is dropsa which is used less often than indu. In their naturalistic aspects, pavamāna is the flowing stream of Soma, and indu is the drop coming out of the sieve. Both are defined and constitute together the core of the Soma ritual. Griswold put it well when he wrote, "As agni's theophanic moment is when the ghee-fed altar-flame blazes up, so the theophanic moment of Soma is when the round drops fall from the sieve into the wooden vat below” (Religion of the RV, p. 230). Even as the 'flow' of Soma as pavamāna was the first clue to identify the flow lines drawn through the upper vessel, the second clue is furnished by the 'drops' of Soma (indu) which correspond to the small circles or droplets surrounding the lower vessel and indicating its function as a sieve. The representations of the 'flow' through the strainer and the 'drops' in and around the sieve appear to symbolise the Sacred Elements of the Harappan ritual and correspond exactly to the concepts of pavamāna and indu in the RV respectively.

2.20 The sealing from Harappa (EH 322; duplicates in JS 5243, 5244) illustrated here in Fig. 5 is of exceptional importance in confirming my interpretation.
This sealing is a frieze of alternate representations of the filter device and the falling drops (small circles arranged in a vertical column). This motif of ‘Filter and the Falling Drops’ can now be interpreted as depicting the Harappan equivalents of pavitra and indu of the RV.

Pictorial parallels for metaphors of Indu

2.21 I shall now present three cases where the pictorial parallels from the Harappan seals help us to understand the metaphors of Indu in the RV which have hitherto remained obscure:

(a) Embrace of Soma by Indu

One of the Soma verses refers to the embracing of Soma by Indu:

yah somah kalaśey a antah pavitra a hitah
tam induh pari śasvaje (9.12.5).

“The Soma who is placed in the pitchers (and) in the strainer; him the drop has embraced”. (Bhawe)

Commenting on this verse, Bhawe (SH, 1.63) points out the ‘peculiar distinction’ between soma and indu here and draws attention to Sāyana’s gloss according to which Indu is the god who embraces Soma, the physical juice. When we look at the Harappan seals (e.g. MIC 3, 15, 18) showing the Filter with round drops of liquid surrounding the lower bowl, we realise what the poet meant when he sang of indu, the ‘drop’ embracing soma, the ‘pressed juice’ within the bowl!

(b) The ‘shining knots’ of Soma

The following Soma verse has caused considerable problems in interpretation mainly because the physical phenomenon alluded to in it has not been understood so far:

eṣa vasūni pibdanā paruṣā yayivān ati; ava śādeṣu gacchati (9.15.6).

“This (Soma) having gone beyond the shining (crushed) twig-knots sticking to (him), goes down into the pitchers.” (Bhawe)

The problem has been to identify what are the shining (vasūni) knots (paruṣā) sticking to (pibdanā) Soma’s body (or the sieve). With the help of Bhawe’s interpretation (SH, 1.71), Wasson (Soma, pp. 59-60) identifies the ‘knots’ with the scales of the white cap of the mushroom (fly-agaric) left behind in the strainer. However, in this case the thin wispy matter would be buried in the layers of the sheep wool strainer and would hardly be prominent enough to merit the description of ‘knots’ or ‘knots’. Here again the Harappan seals help us to understand the poetic metaphor with a precise pictorial parallel. As described earlier several seals depict drops of liquid in the process of emerging out of the orifices of the sieve (e.g. MIC 2, 36). These hemi-spherical drops, still sticking to the sides of the bowl and glistening in the sunlight, create the illusion of shining knots, knobs or studs on the sides of the sieve (or, metaphorically the body of Soma). On the basis of this parallel, we can now attempt a more meaningful translation of this verse:

“This (Soma) having gone beyond the shining knots (lit., drops) sticking to (the sieve), goes down into the pitchers.”

Notice how all the obscurities have vanished and the poem emerges as a natural and beautiful description of shining droplets of the juice sticking to the sides of the sieve.

(c) The ‘thousand knobs’ of Soma

Two nearly identical verses refer to Soma as sahasrabṛṣṭi, ‘(he) with a thousand studs’ (9.83.5; 86.40). One of the verses is given here:

rōjā pavitraraathā vājam śrīlah
sahasrabṛṣṭir jayasi śravō bhīvat (9.83.5).

“King, on thy chariot sieve thou goest unto war, and with a thousand weapons (lit. sharp points) winnest lofty fame”. (Griffith)

The word bhṛṣṭi means, ‘spike, point, top, corner, edge’ etc., (Monier Williams). The metaphor of bhṛṣṭi here is very similar to the one of paruṣā, ‘knot’, noticed earlier. Some of the Harappan seals (e.g. MIC 9, 18) depict the lower bowl with ‘bosses’ covering the whole surface giving the vessel the appearance of ‘knobbled’ ware. Mackay drew attention to this feature, but
Marshall pointed out that bowls made of knobbed ware were not found at Mohenjodaro (MIC, p. 383). Manchanda (A Study of the Harappan Pottery, p. 124) has surveyed the occurrence of knobbed ware at Mohenjodaro and Harappa and points out that the specimens are all very small jars with narrow mouths, and appear to be ‘luxury ware’ for keeping ‘expensive liquids’. As we have seen there is clear evidence that the lower hemispherical bowl of the Harappan filter device was a perforated vessel and could not have been made of knobbed ware. I interpret the round globular projections as a pictorial rendering of the concept that the bowl is filled with ‘drops’, as it were, rather than liquid in the mass, an idea which accords with the Rgvedic imagery of Soma as indavah, ‘drops’. It is however interesting that the ‘drops’ did suggest the imagery of ‘knobs’ even to the Rgvedic poets as seen in the verse cited here. The ‘thousand knobs’ refer to the drops formed on the Soma-sieve on the one hand, and the ‘thousand-spiked weapon’ of king Soma on the chariot-sieve, on the other.

E. The Bull (vrṣaṃ)

2.22 Soma is frequently compared to a bull (ukṣan, vrṣaṃ, vrṣabhā) in the RV. In the following verses there is a characteristic word-play on vrṣaṃ which is unfortunately lost in translation:

vrṣaṃ soma dyumān asī vrṣa deva vrṣavarataḥ
vrṣa dharmāni dadiṣe (9.64.1).

vrṣaṃ te vrṣayam sañca vrṣa vāman vrṣa madah
satyaṃ vrṣaṃ vṛṣed asī (9.64.2).

O Soma, bull, (thou) art full of lustre;
O god, bull, (thou) art possessed of manly wonders;

(As) a bull thou holdest sacred activities;
The strength of thine, the bull, is manly;
Strength-giving (is) thy worship, manly thy exhilaration;
O virile one, thou art indeed a Bull.

(Adapted from Bhawe)

Soma as the bull has far-gazing eyes (vicakṣana) and sharp horns (tigmāṣṭrīga). He is fond of sharpening his horns (śṛṅge śiśāno) and bellowing loudly (ruvati).

ruvati bhūno vrṣabhās tavisayə
śṛṅge śiśāno hariṇi vicakṣaṇaḥ (9.70.7).

“He (Soma) bellows, terrifying bull, with might,
sharpening his shining horns, gazing afar” (Renou).

2.23 It is somewhat strange that Soma, the juice extracted from a plant, should be so often compared with the bull, with which it has little in common. It is probable that the traits of Indra as a manly warrior stand transferred to Soma. When we turn to the Harappan seals we find the same association represented by the almost constant pairing of the unicorn and the Sacred Filter. The wide staring eye and the sharp horn of the unicorn so prominently depicted on the Harappan seals recall at once the epithets vicakṣana and tigmāṣṭrīga applied to Soma, the bull in the RV. As pointed out in the earlier section, the Filter seldom appears with other animals on the Harappan seals. It is therefore likely that the unicorn-bull (or the deity represented by the animal) occupied the same special position in the Harappan religion in respect of the Sacred Filter ritual as Indra did in respect of the Soma ritual in the religion of the Rgveda.

III. Evidence for Soma-like Ritual in the Indus Script

3.1 The very high frequency of the Sacred Filter symbol and the special place accorded to it on the unicorn seals indicate that it represents one of the most important, if not the central cult of the Harappan religion. It is therefore quite likely that inscriptions in the Indus Script may have references to this ritual. The Indus Script has not yet been deciphered; but it may be possible to identify the ideograms connected with the ritual by utilising the pictorial clues furnished by the signs themselves and the evidence of the RV describing a similar ritual. In the light of the new evidence provided by the Sacred Filter symbol, I have provisionally identified fifteen signs in the Indus Script (Fig. 8) as dealing with a Soma-like cult of the Harappan religion. The signs appear to cover all the stages of the ritual as described in the RV, namely

(a) Pressing in a mortar;
(b) Flow of the juice (through a strainer);
(c) Filtering through a sieve;
(d) Offering to the gods in sacrifice.
The evidence from the Indus Script thus supplements the information from the Sacred Filter symbol which depicts only the most important aspect of the ritual.

**Mortar in the Soma Ritual in the RV**

3.2 The common method of extracting the Soma juice in the *RV* was by crushing the stalks between ‘stones’ (*adri, grāvan*) which were placed on ox-hide or held in hand by the officiants. The ‘stones’ are not described further, but there are reasons to believe that the most ancient method of extraction of the juice was by using mortar and pestle. The ancient Avestan and the modern Parsi rituals employ only a mortar to extract the Haoma juice proving that this custom goes back to the Indo-Iranian period. The use of the mortar (*ulikhalā*) is specifically mentioned only in a single hymn in the *RV* (1.28) with the following refrain in the first four verses:

\[ulikhalasūtānām avēd v indra jalgułah.\]

“O Indra, drink with eager thirst the droppings which the mortar sheds”. (Griffith)

This hymn from the First Mandala may be a late one; but it appears to preserve an archaic tradition as seen from the unique references in it to the pestle being worked by a woman (*nārī), who otherwise takes no part in the Soma ritual, and to the mortar as operating ‘in every house’ (*gthe gthe*). Hillebrandt (*VM*, I.272) infers from this evidence that the Soma ritual was in the earliest period a domestic or household observance and that extraction by the mortar was the original method. Hillebrandt also cites the study of S.G. Oliphant (*Studies in honor of Maurice Bloomfield*, 1920, p. 325) according to whom the term *grāvan* even in the Vedas stood for mortar and pestle, while the term *adri* meant ‘press stones’ of the type described in the later ritual texts. Hillebrandt adds (*VM*, I.451, n.21) that the term *adri* (when used in the dual) could also denote stone mortar and pestle. According to Griswold (*Religion of the RV*, p. 226) there is nothing in the description of the press-stones which would not be appropriate for mortar and pestle except the multiplicity in number. I think however that the idea of duality is so inherent in the act of pressing with any implement that grammatical number is not very material to decide the issue. The use of singular or plural could well be meant to indicate the mortar or the presence of large numbers of the pressing implements. My suggestion is that just as *varna*, ‘wood’, and *vamya*, ‘wooden’ are used in the Soma verses in a generic sense to denote wooden vessels, even so the ‘stone’ words (*adri, grāvan*) could have been used generically for the stone mortar and pestle. It is also likely that the Soma mortar and pestle were small stone implements (somewhat like the ones used by the modern apothecary) judging from the fact that they were ‘held in hand’ (*grāva-hastaśah; 1.15.7*).

‘Mortar’ signs in the Indus Script (*IS* 34, 335-337)

3.3 Sign *IS* 336 is a self-evident pictogram depicting mortar and pestle. It is one of the dozen most frequent signs in the Indus Script occurring 236 times (*IS*: Concordance, pp. 585-95). The sign is found engraved singly on the boss at the back of a unicorn seal (*MIC* 18) indicating its character as a meaningful word-sign by itself. The identification of the cult object symbol on the unicorn seals as a Sacred Filter makes it likely that the ‘mortar’ sign is connected with the ritual pressing and extraction of the juice as in the Soma sacrifice of the RV. The sign may stand for ‘mortar and pestle’ or ‘pressing’ or even ‘presser’.

3.4 The ‘mortar’ sign (*IS* 336) occurs as two main variants (*IS*: List of sign variants, p. 791). In one of them the pestle appears as a straight staff of uniform thickness (e.g. *MIC* 30); in the other, the lower end has a bulbous attachment as in a churning staff (e.g. *MIC* 38). This unusual combination has an exact parallel in a verse in the *RV*, which associates the mortar with a churning staff:

\[yatram manthām vi bhadmate rasāṇy amītānā iva ulikhalasūtānām avēd v Indra jalgułah (1.28.4)\]

“Where, as with reins to guide a horse, they bind the churning-staff with chords, O Indra, drink with eager thirst the droppings which the mortar sheds.” (Griffith)

Several explanations have been offered for this apparently ill-fitting combination. According to Oldenberg (*RV*, Noten, I, 24, note 2) the combination refers to the production of fire as an integral part of the Soma
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ritual. Hillebrandt (VM I.274) has suggested that the twirling stick and the mortar formed a 'single apparatus' a kind of 'manual grinder' for crushing Soma. Griswold (The Religion of the RV, p. 223, n. 5) refers to the Parsi practice of turning round the pestle in the mortar to extract the juice further, and suggests, by analogy, that after Soma was crushed, the whole was churned by the 'regular twirling apparatus' the better to secure the juice. It is indeed remarkable that the Indus Sign (IS. 336) offers an exact pictorial parallel to this unusual combination proving that this sign depicts no ordinary mortar and pestle (such as the one used for pounding corn).

3.5 One of the verses in the RV refers to the pressing stones as 'Some times pierced and other times not pierced with holes' (irdilâ arpdilâsah; 10.94.11). The Same hymn refers in another line to a 'hole' (ákha) in the stones (10.94.3). Hillebrandt (PM, I.271) wondered whether occasionally holes were made in the stones 'in order to tie them to straps and thus to hold them better'. The true explanation becomes clear from the pictorial parallels offered by two Indus signs of the 'mortar' group (IS. 335 and 337). It appears now from these signs that the Soma mortar had perhaps a variant form combining the functions of a mortar and a sieve in one vessel. The sign IS 337 depicts a mortar (either with a pestle or with a churning staff) perforated at the bottom with five holes through which the liquid spurts out in thin jets. (IS: List of Sign Variants, p. 791). Another sign IS 335 depicts a mortar with a long stem at the base and streams of liquid spurting out as thin jets through two holes at the bottom of the vessel on either side of the stem. The sign appears to depict a mortar-cum-sieve to be held in hand, probably in a symbolical ritual. (cf. the hand-held filter depicted on the sealings MIC, CXVI:5, 8 and EH 309). The anthropomorphic sign IS 34 showing a person holding a mortar and pestle in his hand may represent an officiant connected with the ritual of pressing.

The 'Flow' signs (IS, 119-121)

3.6 Signs IS 120 and 121 are composed respectively of 9 or 12 short parallel strokes arranged in three tiers. Sign IS 119 has varying number of strokes (from 6 to 10) in different variants. (IS: List of sign variants, p. 787). These signs have sometimes been regarded as 'numerals', from which however they are clearly distinguishable by the following characteristics:

(i) The numerals have invariably vertical strokes, while these signs have characteristic variants with zigzag lines;
(ii) Sign 119 with variable number of strokes cannot represent a numeral;
(iii) Sign 121 occurs sometimes doubled unlike the numeral signs;
(iv) No sign for 'eleven' has been found to connect the two series;
(v) The present group of signs does not occur in numerical sequences.

G.R. Hunter (1934: p. 98) while concluding that these signs are not numerical also pointed out their close similarity with the flow lines depicted on the upper vessel of the cult object symbol on the unicorn seals (ibid, pl. I). Hunter regarded the signs IS 120 and 121 as simple variants. I consider that all the three signs of this group (IS 119-121) are most likely to be simple variants of single ideogram representing the 'flow' of a liquid. In other words, they represent in the Indus Script the same concept of 'flow' as depicted by similar lines on the upper vessel (strainer) of the Sacred Filter symbol on the unicorn seals.

The 'SIEVE' signs (IS 332 to 334)

3.7 The sign IS 332 depicts a hemispherical bowl with a perforated bottom with four or five holes through which a liquid issues in jets. (IS: List of variants, p. 792). The vessel is therefore a sieve exactly like the one forming the lower half of the Sacred Filter symbol on the unicorn seals. Compare this sign especially with the lower bowl depicted on the seal MIC 41 (reproduced by G.R. Hunter, 1934, pl. I, No. 322), showing the spurting of liquid by thin lines radiating from the bottom of the vessel. The next sign (IS: 333) is an even closer approximation to the lower perforated bowl of the Filter device since the long stem attached to the bowl at the base is also shown along with streams of liquid spurting out as thin jets from two holes at the bottom of the vessel on either side of the stem. The stem served the purpose of holding the perforated
bowl in hand or carrying it aloft as a standard in procession, as suggested by the hand-held filter symbols on some sealings (MIC, CXVI: 5, 8 and EH 309). Compare also the closely analogous sign IS 335 depicting a mortar-cum-sieve with a stem. The third sign in the 'sieve' group (IS 334) is a modification of the 'sieve with stem' sign (IS 333) with the addition of a mark above which probably has the meaning 'celestial' or 'divine'.

The 'offering' signs (IS 32, 44-46, 328)

3.8 The sign IS 328 depicts a small vessel resembling the ordinary drinking cup (IS, List of sign variants, p. 790). We can infer that the cup stands for a ritual offering from the following anthropomorphic 'cup-bearer' signs:

- IS 32: A standing adorant holding a cup;
- IS 44: A dancing adorant (shaman?) holding a cup;
- IS 45: A kneeling adorant holding a cup;
- IS 46: A kneeling adorant (female?) with bangles on one arm holding a cup.

It is also instructive to compare the frequent texts from Harappa consisting of the 'cup' sign and one to four long strokes preceding it (IS: concordance, pp. 565-82) with the unique text (EH 372) in which the simple 'cup' sign is replaced by the sign of the kneeling female (?) adorant with the cup (IS 46), there by indicating that the simple 'cup' sign itself stands for 'offering' as well as 'the person who makes the offering (worshipper or officiant)'. The signs with the kneeling cup-bearers (IS 45, 46) may also be compared with the kneeling priest depicted on a seal (FEM 430) and with the kneeling adorants on a sealing (MIC, CXVI: 29).

IV. Implications of the Parallelism

Is the Harappan Culture Indo-Aryan?

4.1 A new theory has been put forward in this paper that the Harappan religion had a central cult or ritual closely resembling the Soma sacrifice of the RV. The implications of the parallelism are far-reaching. The first question that will arise obviously is: can we not now consider that the Harappans were none other than the Vedic Aryans, as that would most naturally account for the resemblances between the Harappan pictorial motifs and the Soma ritual as described in the RV? We cannot however consider this question in isolation, but take into account other relevant circumstances. The Filter symbol occurs from the lowest levels at Harappa as pointed out by Vats. The date of the Aryan settlement of the Indo-Iranian regions is unknown, but unlikely to have been so early as to be contemporary with the beginnings of the Indus Civilization (c. 2800 B.C.). The RV describes many other features of the Aryan society, such as for example the light horse-drawn chariot with spiked wheels, which is not represented in the Harappan art. Soma is often compared in the RV to a speeding horse; but the horse is not among the many animals featured on the Harappan seals and sealings. On the whole it is still difficult to associate the largely pastoral way of life of the Vedic Aryans with the urban polity of the Indus Civilization. It is more likely that Soma (Avestan Haoma) was one of the elements taken over from the earlier Harappan culture and assimilated by the Indo-Iranians. In this context we briefly consider Gordon Wasson's theory regarding the identity of the Soma plant as it has a vital bearing on the problem considered here.

Wasson's identification of Soma

4.2 It is well known that the use of the original Soma was discontinued even by the time of the later Vedic Age and the knowledge of its real identity was totally lost. The later descriptions of the plant are based on substitutes having little or no resemblance with the original Soma. During the last two centuries of modern scholarship several attempts were made to identify the original Soma plant, but without success because, as it now turns out, no trained botanist investigated the problem. Gordon Wasson, a gifted amateur botanist achieved a major breakthrough in 1968 when he published his finding that Soma was a psychotropic mushroom, Amanita Muscaria or the flyagaric (Soma: Divine Mushroom of Immortality, New York, 1968). Wasson marshalled evidence from the RV itself to show that the original Soma plant had 'neither seed, nor blossom, nor leaf, nor root', and
therefore not a chlorophyll-bearing plant. It grew only on the mountains, but there was no record of its cultivation even in the highlands. It had a 'head' and fleshy stalk, was red in colour and yielded a tawny yellow extract. The juice could not have been alcoholic as it was pressed thrice a day and consumed immediately; but it was an inebriant which sent those consuming it into divine raptures, an indication that the juice was hallucinogenic. The evidence clearly points out to the fly-agaric as the original Soma plant. Wasson's brilliant discovery, based on cogent and irrefutable reasoning, holds the field, even though one may not agree with all the details of his theory, for example, his interpretation of the Two Forms of Soma or the Three Filters, involving the drinking of urine as psychotropic metabolite. I wish to clarify that I am not disputing Wasson's well-documented finding that the practice of urine-drinking went along with the consumption of fly-agaric. I am on the narrower ground that the two concepts of the RV mentioned above can be interpreted more plausibly, as I have done, with reference to the filter device in the light of the new evidence from the Harappan Filter symbol.

Fly-agaric and the Uralic Tribes

4.3 Gordon Wasson has pointed out that the fly-agaric is a mycorrhizal mushroom growing only in association with the birch trees and occasionally with the pines and the firs, which are found at sea-level in Northern Eurasia, but only at great heights in the mountains south of the Oxus. The fly-agaric had long been the Sacred Element in the Shamanic rites of the Uralic tribes of Northern Eurasia. These tribes must have been familiar with the use of the fly-agaric from at least 6000 B.C., judging from the linguistic evidence connecting the words for 'mushroom' and 'inebriation' in the Uralic languages. Wasson has suggested that as there is no evidence for the presence of Soma in the undivided Indo-European Period, the Aryans must have acquired the fly-agaric from the Uralic tribes with whom they lived in long and intimate contact in Northern Eurasia before moving down to the Iranian plateau and into India sometime in the second Millennium B.C.

4.4 The new evidence for the presence of a Soma-like cult with a Filter ritual in the Indus Valley during the Harappan Age indicates however that the Aryans did not bring the Soma cult with them but took it over from the Harappans. The Harappans in turn probably acquired the fly-agaric habit from Uralic-speaking North Eurasian tribes at a much earlier period in history. The recent discoveries of seals with legends in the Indus Script at Shortugai on the south plains of the Oxus in North-east Afghanistan and at Altin Depe in Soviet Central Asia strengthen such a possibility.

Uralian and Dravidian Inter-connection

4.5 Burrow (Dravidian Studies IV) compared the most primitive vocabulary relating to parts of the human body in the Uralian and Dravidian languages and concluded: "It would not be possible to produce between any two languages the same amount of detailed comparisons as can be made between Dravidian and Uralian without giving reason to believe that those languages were themselves related". Andronov investigated the comparative morphology of the languages (Proceedings of the Second International Seminar on Tamil Studies, 1968, Vol. I, p. 267) and observed: "If double and triple coincidences in the morphology of Dravidian and Uralian pointed out above are not accidental and, apparently, we have reasons to think they are not—they must testify to some remote relationship between the two families (as simultaneous borrowing of two or three inflectional suffixes in each case looks improbable)." Andronov concluded that the remote Dravidian-Uralian ties should be regarded as a vestige of their pre-historic connection rather than as genetic relationship in the normal linguistic sense. The ancient inter-relationship between the Uralian and the Dravidian makes it probable that the cult of Soma, Wasson's 'Divine Mushroom of Immortality', was passed on by the Uralians to the Dravidians long before the advent of the Aryans into the Indo-Iranian regions.

Soma Ritual from the Harappan Substratum

4.6 The evidence discussed above leads to the conclusion that the Soma (Haoma) rituals of the Indo-Iranian religions are based on a pre-Aryan Harappan substratum and that this is the reason for the remarkable resemblances between the Harappan symbolism of the Sacred Filter and the Soma ritual as described in the Rgveda.
Pl. 1: Harappan Inscribed Objects with the 'Sacred Filter' Symbol:
Fig. 1: MJC 38
Fig. 3: MJC, pl. CXVI: 8
Fig. 5: EH 322

Fig. 2: EH 256
Fig. 4: EH 369
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Fig. 6: A. MIC 9; B. MIC 18; C. MIC 38; D. PFM 42; E. MIC 2; F. MIC 41; G. EH 3; H. EH 256.

Fig. 7: A Composite Drawing of the Harappan Sacred Filter.

Pl. II: 'Sacred Filter' Symbols on Unicorn Seals:

A. 'MORTAR' SIGNS

B. 'FLOW' SIGNS

C. 'SIEVE' SIGNS

D. 'OFFERING' SIGNS

Pl. III: Signs of the Indus Script connected with the Sacred Filter:

A. 'Mortar' Signs: IS 335-337; 34.
B. 'Flow' Signs: IS 119-121.
C. 'Sieve' Signs: IS 332-334.
D. 'Offering' Signs: IS 328, 32, 44-46.
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Uralian-Dravidian Studies:


MODE OF CITATION

Harappan Inscribed Objects: The numbers immediately following MIC, FEM, EH and IS refer to the continuous serial numbers of inscribed objects as given in these publications. (Text numbers in IS are always in four digits). In other cases, plates (pl.), pages (pp.) or illustrations (ill.) in the source publications are cited.

Signs of the Indus Script: Numbers in one to three digits immediately following IS refer to signs. (See IS: Sign List, pp. 32-35).

Hymns from the RV: Relevant passages alone are cited from the samhita text, giving Mandala, sukta and mantra numbers separated by dots (e.g. 9.70.7).