

The Harappan Legacy

The Indus and the Gangetic civilisations did not exist in isolation but have harmoniously laid the foundation of present India. **Michel Danino** explains

The dawn of Indian civilisation never fails to fascinate. What prompted people to build cities in the Indus plains in the 3rd millennium BCE (Before Common Era) or in the Gangetic plains from about 800 BCE? Why did the Indus cities collapse around 1900 BCE? Are there any connections between those two civilisations, the second of which has come to be regarded as India's classical civilisation?

Answers to those questions remain tentative; despite the mass of material available, numerous sites remain unexcavated and many excavation reports unpublished. Also, in the Indian environment, the passage of time destroys most objects of wood, cloth or bark, so that the archaeological record is necessarily incomplete — gone are ceremonies, processions, songs or stories. Finally, in the case of the Indus civilisation, the writing system used on thousands of small seals or pottery pieces remains undeciphered, leaving an important aspect of its culture mute.

Initially, the connection with the Indus (or Harappan) and Gangetic civilisations was regarded as virtually nonexistent: in the 1940s, Mortimer Wheeler, a director general

of the Archaeological Survey of India (ASI), proclaimed, on the basis of a few skeletons found in Mohenjo-daro's streets, that the city had been destroyed by invading Aryans.

The Harappan civilisation was thus 'pre-Aryan', while the Gangetic one was 'Aryan', i.e. founded on Vedic culture. But there was a few centuries' gap between Mohenjo-daro's collapse and the supposed arrival of the said Aryans around 1500 BCE, and in any case no archaeological evidence has been found for such an arrival; today, the Aryans have quietly disappeared from the technical literature: they are not needed to explain the evolution of India's protohistory.

Current thinking among archaeologists is that the Indus cities disappeared not because of any onslaught by barbarian invaders, but largely owing to environmental factors, such as droughts, increasing aridity, deforestation, shifts in the Indus or the loss of the Sarasvati river (the Sarasvati, a river flowing parallel to the Indus, was another major lifeline of the Harappan civilisation, which is why the latter is sometimes also called 'Indus-Sarasvati civilisation').

Nevertheless, the dogma somehow survived that the Indus civilisation was a

sort of island in time and space, a brilliant realisation with no sequel or legacy: a millennium-long 'Dark Age' was said to separate it from the historical phase. However, in the last two or three decades the picture has drastically changed. Numerous points of contact between the Indus and Gangetic civilisations, or between Harappan and Vedic cultures, have come to light.

Town-planning and construction

One of the most striking features of the Indus-Sarasvati civilisation is the

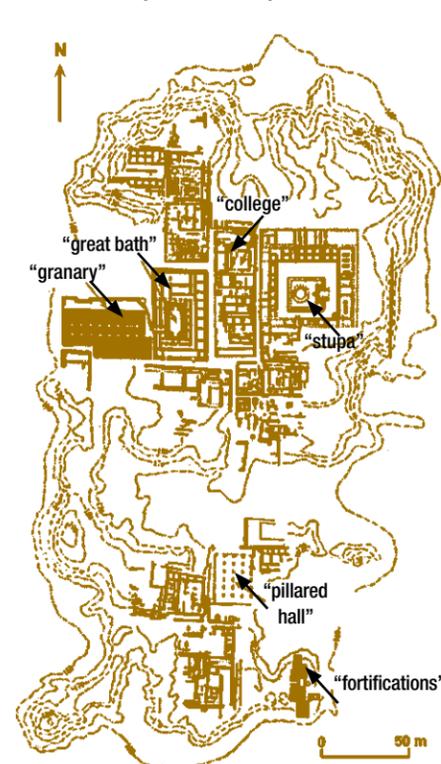
care it lavished on town-planning, water management, sanitation and civic administration. Cities of the Ganges civilisation, although not so geometrically laid down as, say, Mohenjo-daro's acropolis, still share some of those characteristics: a general orientation along the cardinal directions, an internal grid plan, and the use of enclosing fortifications as a symbol of authority. Garbage bins lined Mohenjo-daro's main streets, but also those of the historical city of Taxila (in today's northwestern Pakistan). Some sanitation system also emerged at Taxila and in

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Map of the Indus-Sarasvati civilisation



Plan of Mohenjo-daro's acropolis





A part of the Harappan weight system

COMPARISON BETWEEN HARAPPAN AND TRADITIONAL INDIAN WEIGHTS

Unit	Harappan weights							
	1	2	4	8	16	32	64	
Value in grams	0.8525	1.705	3.41	6.82	13.64	27.28	54.56	
	Traditional Indian weights							
	'Rattis'	8	16	32	64	128	256	512
			1	2	4	8	16	
Value in grams	0.8375	1.675	3.35	6.70	13.40	26.80	53.60	

(adapted from John E. Mitchiner)

●● Typical Harappan house plans have survived in rural parts of northwest India to this day ●●

▷ Gangetic cities, such as Hastinapur, Kaushambi or Mathura.

Architecturally, both civilisations erected pillars and pillared halls. Scholars have shown that the typical Harappan house plans (with a central courtyard and rooms on the sides) have survived in rural parts of northwest India to this day. Apsidal (or semi-circular) temples found at several historical sites, from Taxila to Atranjikhhera, find an antecedent in a structure at Banawali (Haryana), which was most probably used for fire rituals.

Even some building techniques have been preserved to the last detail: the trademark Harappan circular well with trapezoid bricks, whose shape prevents inward collapse in case of strong pressure of the subsoil, has been found at historical sites all the way to south India. Archaeologists excavating at Kalibangan found floors laid by mixing terracotta nodules with charcoal — a formula still in use in nearby villages some 4,500 years later.

Harappan town planning made systematic use of auspicious or sacred proportions; they are especially visible at Dholavira, but also in large structures elsewhere. As it happens, these ratios are the same as those mentioned in the classical literature on Hindu architecture.

For example, the ratio 5:4 (or 1.25) is that of Dholavira's outer fortifications as well as 'Castle' (a heavily fortified part of the upper city where the rulers must have lived); it also applies to the overall dimensions of the port-town of Lothal (near Ahmedabad), to Harappa's so-called 'granary' (a huge building measuring 50 m x 40 m), and to a large house in Mohenjo-daro's lower city. But it also dictates the proportions of a major Vedic altar (the *mahavedi*), and the

classical literature describes it as the ideal ratio for a king's palace; the same ratio is present in Ashoka's columns and in Delhi's Iron Pillar.

Other technologies

Connections between Harappan and classical linear units have come to light, especially as regards the *angula* or digit. The survival is even more striking with the standardised Harappan weight system, which resurfaced in the Gangetic kingdoms and ultimately formed the basis of India's traditional weight system.

Dancing Girl

Metallurgy is an important part of the Harappan technological legacy: the famous 'Dancing Girl' bronze figurine was cast by a method known as 'lost wax' or '*cire perdue*', which spread to the rest of India and is still in use by traditional bronze casters. As regards to agriculture, ox-carts have changed little in shape or size, and even some ploughing techniques have survived, as BB Lal, the doyen of Indian archaeologists, demonstrated at Kalibangan.

Irrigation Methods

Objects of daily use have survived with little change, as also illustrated by BB Lal. A traditional Indian villager would readily identify toiletry articles,

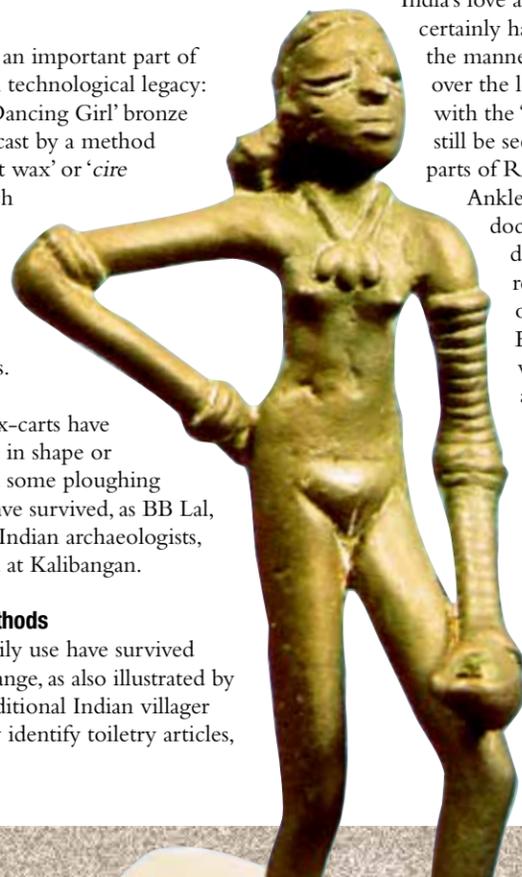
the frying pan, the humble *kamandalu* (a small water pot with a handle), or the wooden writing tablet (the *takhti*) found in Indus cities. Till recently, just like their Harappan predecessors, children of north India and Pakistan used to play with rattles, whistles, spinning tops and flat pottery disks. The Indus dice could easily be mistaken for modern ones. Harappans apparently loved board games, and a set of terracotta pieces found at Lothal does evoke the modern game of chess, as Lothal's excavator SR Rao pointed out, or at least an ancestor of it.

Ornaments, too, speak of continuity.

India's love affair with bangles

certainly has Harappan roots; even the manner of wearing it — fully over the left arm, for instance, as with the 'Dancing Girl' — can still be seen in the rural and tribal parts of Rajasthan and Gujarat.

Anklets and nose or ear studs, documented at Mohenjo-daro and other sites, remain part of the finery of today's Indian woman. Even the married Hindu woman's custom of applying vermilion at the parting of the hair has Harappan origins. Figurines found at Nausharo and elsewhere show traces of red pigment at the



The famous 'Dancing Girl' bronze figurine was created using the 'lost wax' method

same spot.

And whether we look at bead and bangle making, gold and bronze working, shell and ivory carving, traditional techniques in today's India have remained virtually unchanged since Harappan times. Faience craft included blue-glazed ceramics produced with the same copper oxide pigments that is used today. Indeed, to understand the Harappan techniques, archaeologists have often turned to local craftsmen.

Culture and religion

The Harappan legacy extends to less material aspects. The 'endless knot' and the *swastika*, both classical Indian symbols, have Harappan origins, and parallels between the animal motifs depicted on the Indus seals and those on silver punch-marked coins of the early historical era are striking.

The *linga* and the *trishula* (trident) are both present, though rare so far, in Harappan culture. Fire altars and the worship of a mother-goddess have also been documented at some sites. The pipal tree (*Ficus religiosa*), one of the most sacred Indian trees, was revered by Harappans. As early as in 1931, John Marshall, who directed excavations at Mohenjo-daro, could not help remark: "Taken as a whole, [the Harappan] religion is so characteristically Indian as hardly to be distinguished from still living Hinduism."

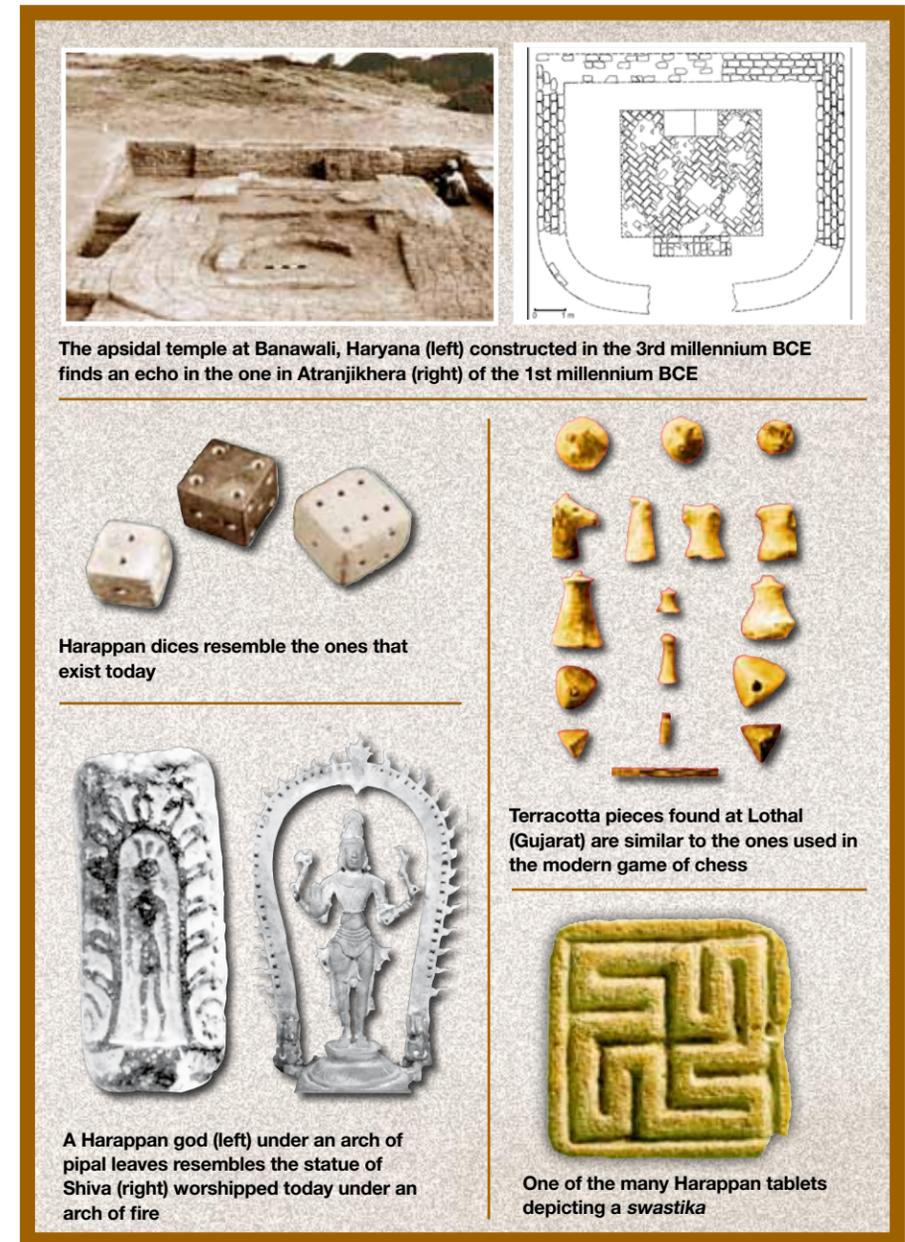
Iconography is another rich field for studies in continuity, with gods of both epochs sharing multiple faces, yogic postures or ornamental arches. A few figurines shown in various seated postures sometimes join their hands in a *namaste*. SR Rao showed how some traditional Indian folktales are already depicted on pottery from Lothal.

Examples could easily be multiplied.

●● The 'endless knot' and the swastika, both classical Indian symbols, have Harappan origins ●●

As archaeologist DP Agrawal puts it, "The Harappans' cultural and religious traditions provide the substratum for the latter-day Indian civilisation." Or as U.S. archaeologist JM Kenoyer says, "There is really no Dark Age isolating the protohistoric period from the historic period."

The urban collapse did not cause a cultural



The apsidal temple at Banawali, Haryana (left) constructed in the 3rd millennium BCE finds an echo in the one in Atranjikhhera (right) of the 1st millennium BCE

Harappan dice resemble the ones that exist today

Terracotta pieces found at Lothal (Gujarat) are similar to the ones used in the modern game of chess

A Harappan god (left) under an arch of pipal leaves resembles the statue of Shiva (right) worshipped today under an arch of fire

One of the many Harappan tablets depicting a swastika



French-born Michel Danino lectures on Indian civilization at renowned higher educational institutions. He studies India's culture and ancient history and some of his written works include *The Lost River: On the Trail of the Sarasvati* and *Indian Culture and India's Future*.

FIND OUT MORE

► *The Lost River: On the Trail of the Sarasvati* (Penguin India, 2010)

► <http://www.docstoc.com/profile/MichelD>
Revisiting the role of climate in the collapse of the Indus-Sarasvati Civilisation