

*One of the World's First  
Great Civilizations is Still a Puzzle*

by Richard H. Meadow and Jonathan Mark Kenoyer

One of the great civilizations of the ancient world — that of the enigmatic people and cities of the Indus Valley — grew from roots that reach deep into the past of Pakistan and India. During the last three years, excavations at the once-great city of Harappa have exposed the depth of Indus roots and the breadth of its influence. Many mysteries remain, but tantalizing clues are emerging about these remarkably sophisticated and “industrialized” urbanites of the Bronze Age in South Asia.





A molded, cylindrical tablet from Harappa (left) shows an elephant beneath the scene of a female deity grappling with two tigers. The tablet is 3.91 centimeters (1.5 inches) tall.

The miniature terra-cotta mask, far left, depicts a horned deity. It was recovered from the ancient Indus Valley city of Mohenjo-daro.



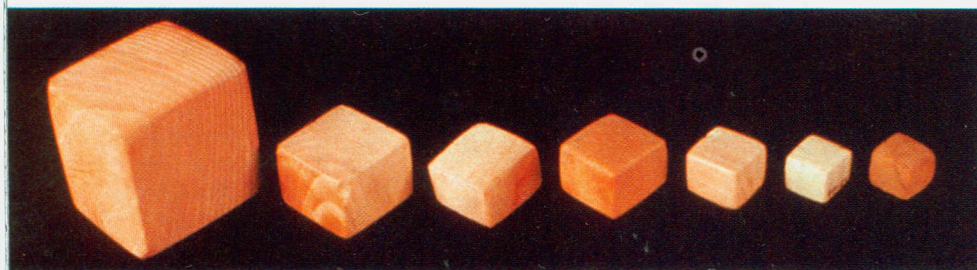
The Indus Valley (or Harappan) culture at its peak some 4,000 years ago knit together more than 1,000 cities, towns, and settlements scattered across 725,000 square kilometers (280,000 square miles) of Pakistan and northwestern India. A unique culture that flourished from 2600 to 1900 B.C., it featured urban planning, a rich veneer of standardized material culture, and social differentiation that blended local innovations into civilization-wide patterns.

Key characteristics found throughout the Indus Valley domain include one of the world's earliest writing systems, still undeciphered after nearly 75 years of effort; a uniform system of weights; carefully planned residential complexes complete with wastewater systems; special shapes and decorative styles of ceramic vessels, which were often turned on potter's wheels; and an array of products from sophisticated craft industries.

## An Evolving City

Continuing excavations at the ancient urban center of Harappa in Pakistan by the Harappa Archaeological Research Project (HARP), in collaboration with Pakistan's Federal Department of Archaeology and Museums, are providing new insight into the evolution of one of South Asia's first cities. Situated in the flood plain of the River Ravi of Punjab Province, the mounded ruins of Harappa were the first to be identified as part of the Indus Civilization.

A uniform system of weights was established throughout the sprawling Indus Valley. Each of the stone cubes shown below represents a multiple of the basic measuring unit.



HARP recently unearthed evidence of the earliest occupation of Harappa — a "Ravi Phase" (Period 1) settlement built on an elevated terrace of the river more than 5,300 years ago. This small village was a far cry from the great city that would rise in later centuries.

Excavations revealed the remains of wattle-and-daub structures (with walls of wooden slats or reeds surfaced with mud), storage pits, hearths, and activity areas with ceramic vessels, steatite (soapstone) and terra-cotta necklaces, shell ornaments, bone and stone tools, and small pieces of copper. The ceramics were hand-formed, without benefit of a wheel. Unlike other sites of this period, early Harappa has yielded motifs and vessel shapes that clearly presage those of the later Indus Civilization.

Products of the potter's wheel begin to appear during the Ravi Phase, and by the time of the "Kot Dijian Phase" (Period 2, 2800-2600 B.C.), much of the pottery was completely shaped and at least partly decorated on the wheel. Individualized, polychrome decoration was largely replaced by simpler, brown or black decorations and more standardized shapes. Indeed, standardization in much of the material culture is a hallmark of the Indus Civilization.

This growing industrialization of the ceramics industry is paralleled by increasingly elaborate architectural remains, with substantial structures made of standardized mud bricks. Harappa's Kot Dijian Phase shows clear precursors to the later Indus Civilization (Harappan Phase or Period 3) in all aspects of material culture.

Of particular note is the discovery in



Kot Dijian deposits of a standardized weight and a seal impression in clay. The cuboid weight measures 1.7 grams (0.059 ounces) — the same as many Harappan Phase weights. The seal impression found near the weight is of a square stamp that had been pressed into a lump of clay, which was preserved because it had been accidentally baked. The insignia bears at least two Harappan-type signs.

Signs engraved on ceramic vessels after firing also confirm the use of Harappan Phase-type script during this earlier period. These "graffiti" marks differ from so-called "potter's" marks, which were impressed or incised on pottery before firing. Some sign combinations among the graffiti indicate continuous use at





The intaglio seal above shows two popular Indus motifs: the "unicorn" and an offering stand. Above them are examples of the still-undeciphered Indus Valley script. The exquisite necklace, from the excavations at Mohenjo-daro, contains gold, agate, jasper, steatite, and greenstone beads.

Harappa of particular signs and combinations from the Kot Dijian into the Harappan Phase; similar signs reach back to the very beginning of settlement at the site.

## Unread Writing

The meaning of these signs or symbols remains unknown, as the script has yet to be convincingly deciphered. Sign combinations found on steatite seals might represent the name or social affiliation of the owner. Graffiti on ceramic jars could do the same or perhaps designate the contents or destination of the vessel. Other inscribed materials from the Indus Civilization period include incised steatite tablets; molded terra-cotta, faience (a fired paste of silica or steatite), and copper tablets; terra-cotta or stoneware bangles with incised or painted signs; and incised metal implements and ornaments.

The tablets (or tokens) are common at Harappa, and multiple copies were often produced. In 1997, HARP excavators found 22 three-sided steatite tablets, all with the same inscriptions, from the middle Harappan Phase (about 2300 B.C.). Sixteen were discovered in a single group, as if they had been in a perishable container that was thrown over the city

wall with other trash. In a street deposit of similar age just inside the wall, a seal was found with two of the same characters as seen on one side of the tablets.

Why were these intact seals or tablets discarded? They were individually manufactured by craftsmen from models or molds at the demand of an individual or group. They were used for a time, then discarded. Unlike coins, they apparently had value only in relation to the individual or group permitted to employ them. They have never been found in graves — either the grave of a seal-owning individual has not been excavated, or the seals were not integral to an individual's identity. Perhaps a change in an individual's status made a specific seal or tablet invalid.

Or perhaps the use of a seal or tablet was validated only when competent authority used it; otherwise, it was worthless.

Inscribed materials are concentrated only in certain parts of Harappa. This suggests considerable socioeconomic variability within the community, something that is confirmed by other archaeological remains, including architecture, ornaments, implements, and ceramics.

Indus sites are internally differentiated, often with the highest area (the "citadel") holding special buildings. At Harappa, however, such buildings are in low-lying areas. In one of these, three unusual types of structures were identified decades ago: the "Great Granary," the "Working Platforms," and the "Workers' Quarters." Since 1997, HARP archaeologists have been re-excavating parts of the first two complexes to determine their function and dates of construction.

The Great Granary was originally built near the end of the mid-Harappan Phase

(about 2250 B.C.). Although earlier investigators assumed the Working Platforms were built at the same time, they actually appeared about a century later. With careful control over chronology, we are finally able to view Indus sites as dynamic communities, rather than lumping together under one rubric developments that were spread over centuries.

We have yet to figure out the function of the Granary and Working Platforms. Sir John Marshall of the Archaeological Survey of (British) India in the 1920s designated the larger structure the Granary because it reminded him of smaller complexes used for storing grain in the Classical World. The trouble is, there is no



The famous "priest-king" from Mohenjo-daro is sculpted of steatite (soapstone) and measures 17.5 centimeters (6.9 inches) tall. Whether it actually represents a king or priest remains unknown.



solid evidence for this interpretation.

Built on a mud-brick platform faced with baked brick and covering more than 2,000 square meters (21,500 square feet), the Granary at Harappa is the largest structure known from the Indus civilization. It was built along a wide, central passage that was flanked on either side by six blocks, each with four parallel walls of baked brick.

## Where's the Grain?

The spaces between the parallel walls were probably open, and each block likely served as the foundation for wooden flooring. We find no evidence for any kind of brick superstructure, although there are slots for wooden beams, suggesting some kind of wooden superstructure may have existed. Nothing found so far suggests the function of this structure.

The Working Platforms are about 100 meters (328 feet) south of the Granary. Seventeen platforms were found early in the twentieth century. Each is 3.35 meters (11 feet) in diameter and made of concentric circles of baked brick set on edge. Each seems to have had a hollow in the center, but its function also is a mystery.

British archaeologist Sir Mortimer Wheeler excavated a platform in 1946 and concluded it was used for threshing or pounding grain. But HARP's excavation of another example just west of Wheeler's suggests that what he took for the remains of a decayed wooden mortar was, in fact, the remnants of a circular pit or posthole dug through archaeological deposits from half a meter above the platform. We found that both platforms had been enclosed on all four sides by baked-brick walls, although few bricks remained because of subsequent brick robbing — some of it by the ancient Harappans themselves.

So the question remains: What was going on atop these baked-brick, circular platforms inside enclosed structures? At Harappan sites, platforms of closely fitted bricks laid on edge are usually associated

The "Granary" at Harappa, the largest structure from the Indus Valley culture, was built about 4,250 years ago and covered some 2,000 square meters (21,500 square feet). Misnamed by earlier researchers, it apparently had nothing to do with grain. The purpose of this oversized construction remains unclear.



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with the use of water. Perhaps these circular platform installations were used to prepare indigo dye, which in South Asia traditionally involved fermentation in a darkened room. Sediment taken from between the bricks and in the center cavity of the HARP platform is being analyzed to test this hypothesis.

## A Mysterious End

Nearby, in what appears to have been a wealthy part of Harappa from about 2000 to 1900 B.C., excavators found part of a small statue. Made of black soapstone, it is similar to those of the "Bactro-Margiana Archaeological Complex" that dates to the same period in present-day Turkmenistan, Uzbekistan, Tajikistan, and northern Afghanistan. Central Asia obviously was no stranger to the Harappan world of the late third millennium B.C. (which also traded extensively with Mesopotamia).

Indeed, the development of these dynamic cultures on the western fringe of the Indus Valley at this time may well have helped stimulate major cultural and social change during the final phase of the Indus Civilization. After about 1900 B.C., the great Indus cities became largely depopulated; Harappa continued to be occupied, albeit on a smaller scale. What happened during this time of change is yet another mystery for archaeologists to solve. □

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### Further Reading

*Ancient Cities of the Indus Valley Civilization*, J. Mark Kenoyer. Karachi: Oxford University Press, 1998.

*Indus Age: The Beginnings*, Gregory L. Possehl. Philadelphia: The University of Pennsylvania Press, 1999.