
Indus Valley, Inc.

No golden tombs, no fancy ziggurats. Four thousand years ago city builders in the Indus Valley made deals, not war, and created a stable, peaceful, and prosperous culture.

By Shanti Menon

THE RAILWAY LINKING LAHORE to Multan in Pakistan is 4,600 years old. In truth, the rails were laid down in the middle of the nineteenth century, but to build the railway bed, British engineers smashed bricks from crumbling buildings and rubble heaps in a town called Harappa, halfway between the two cities. Back in 1856, Alexander Cunningham, director of the newly formed Archaeological Survey of India, thought the brick ruins were all related to nearby seventh-century Buddhist temples. Local legend told a different story: the brick mounds were the remnants of an ancient city, destroyed when its king committed incest with his niece. Neither Cunningham nor the locals were entirely correct. In small, desultory excavations a few years later, Cunningham found no temples or traces of kings, incestuous or otherwise. Instead he reported the recovery of some pottery, carved shell, and a badly damaged seal depicting a one-horned animal, bearing an inscription in an unfamiliar writing.

That seal was a mark of one of the world's great ancient civilizations, but mid-nineteenth-century archeologists like Cunningham knew nothing of it. The Vedas, the oldest texts of the subcontinent, dating from some 3,500 years ago, made no mention of it, nor did the Bible. No pyramids or burial mounds marked the area as the site of an ancient power. Yet 4,600 years ago, at the same time as the early civilizations of Mesopotamia and Egypt, great cities arose along the floodplains of the ancient Indus and Saraswati

in what is now Pakistan and north-west India. The people of the Indus Valley didn't build towering monuments, bury their riches along with their dead, or fight legendary and bloody battles. They didn't have a mighty army or a divine emperor. Yet they were a highly organized and stupendously successful civilization. They built some of the world's first planned cities, created one of the world's first written languages, and thrived in an area twice the size of Egypt and Mesopotamia for 700 years.

To archeologists of this century and the last, Harappa and Mohenjo-Daro, a neighboring city some 350 miles to the southwest, posed an interesting, if unglamorous puzzle. Excavations revealed large, orderly walled cities of massive brick buildings, with highly sophisticated sanitation and drainage systems and a drab, institutional feel. The streets of Harappa, remarked British archeologist Mortimer Wheeler, "however impressive quantitatively, and significant sociologically, are aesthetically miles of monotony." The archeologist and popular author Leonard Cottrell, a contemporary of Wheeler's, wrote in 1956, "While admiring the efficiency of Harappan planning and sanitary engineering, one's general impression of Harappan culture is unattractive.... One imagines those warrens of streets, baking under the fierce sun of the Punjab, as human ant heaps, full of disciplined, energetic activity, supervised and controlled by a powerful, centralized state machine; a civilization in which there was little joy,

much labor, and a strong emphasis on material things."

Superior plumbing and uniform housing, no matter how well designed, don't fire the imagination like ziggurats and gold-laden tombs. "But there's more to society than big temples and golden burials," argues Jonathan Mark Kenoyer, an archeologist at the University of Wisconsin in Madison. "Those are the worst things that ancient societies did, because they led to their collapse. When you take gold and put it in the ground, it's bad for the economy. When you waste money on huge monuments instead of shipping, it's bad for the economy. The Indus Valley started out with a very different basis and made South Asia the center of economic interactions in the ancient world."

Kenoyer, who was born in India to missionary parents, has been excavating at Harappa for the past 12 years. His work, and that of his colleagues, is changing the image of Harappa from a stark, state-run city into a vibrant, diverse metropolis, teeming with artisans and well-traveled merchants.

"What we're finding at Harappa, for the first time," says Kenoyer, "is how the first cities started." Mesopotamian texts suggest that cities sprang up around deities and their temples, and once archeologists found these temples, they didn't look much further. "People assumed this is how cities evolved, but we don't know that for a fact," says Kenoyer. At Harappa, a temple of the glitzy Mesopotamian variety has yet to be found.



Map by Bette Duke

Indus Valley cities lay along major trade routes.

Kenoyer's archeological evidence suggests that the city got its start as a farming village around 3300 B.C. Situated near the Ravi River, one of several tributaries of the ancient Indus River system of Pakistan and northwestern India, Harappa lay on a fertile floodplain. Good land and a reliable food supply allowed the village to thrive, but the key to urbanization was its location at the crossroads of several major trading routes.

Traders from the highlands of Baluchistan and northern Afghanistan to the west brought in copper, tin, and lapis lazuli; clam and conch shells were brought in from the southern seacoast, timber from the Himalayas, semiprecious stones from Gujarat, silver and gold from Central Asia. The influx of goods allowed Harappans to become traders and artisans as well as farmers. And specialists from across the land arrived to set up shop in the new metropolis.

The city had room to expand and an entrepreneurial spirit driven by access to several sources of raw materials. "You had two sources of lapis, three of copper, and several for shell," says Kenoyer. "The way I envision it, if you had entrepreneurial go-get-'em, and you had a

new resource, you could make a million in Harappa. It was a mercantile base for rapid growth and expansion." Enterprising Harappan traders exported finely crafted Indus Valley products to Mesopotamia, Iran, and Central Asia and brought back payment in precious metals and more raw materials. By 2200 B.C., Harappa covered about 370 acres and may have held 80,000 people, making it roughly as populous as the ancient city of Ur in Mesopotamia. And it soon had plenty of neighbors. Over the course of 700 years, some 1,500 Indus Valley settlements were scattered over 280,000 square miles of the subcontinent.

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Unlike the haphazard arrangement of Mesopotamian cities, Indus Valley settlements all followed the same basic plan. Streets and houses were laid out on a

north-south, east-west grid, and houses and walls were built of standard-size bricks. Even early agricultural settlements were constructed on a grid, "People had a ritual conception of the universe, of universal order," says Kenoyer. "The Indus cities and earlier villages reflect that." This organization, he believes, could have helped the growing city avoid conflicts, giving newcomers their own space rather than leaving them to elbow their way into established territories.

Part of that ritual conception included a devotion to sanitation. Nearly every Harappan home had a bathing platform and a latrine, says Kenoyer, and some Indus Valley cities reached heights of 40 feet in part because of concern about hygiene. Cities often grow upon their foundations over time, but in the Indus Valley, homes were also periodically elevated to avoid the risk of runoff from a neighbor's sewage, "It's keeping up with the Joneses' bathroom," he quips, "that made these cities rise so high so quickly." Each neighborhood had its own well, and elaborate covered drainage systems carried dirty water outside the city. By contrast, city dwellers in Mesopotamian cities tended to draw water from the river or irrigation canals, and they had no drains.

The towering brick cities, surrounded by sturdy walls with imposing gateways, reminded early researchers of the medieval forts in Delhi and Lahore. But Kenoyer points out that a single wall, with no moat and with no sudden turns to lead enemies into an ambush, would have been ill-suited for defense. He thinks the walls were created to control the flow of goods in and out of the city. At Harappa, standardized cubical stone weights have been found at the gates, and Kenoyer suggests they were used to levy taxes on trade goods coming into the city. The main gateway at Harappa is nine feet across, just wide enough to allow one oxcart in or out. "If you were a trader," he explains, "you wanted to bring goods into a city to trade in a safe place, so bandits wouldn't rip you off. To get into the city, you had to pay a tax. If you produced things, you had to pay a tax to take goods out of the city. This is how a city gets revenues."

THE IDENTITY OF THE TAX collectors and those they served remains a mystery. Unlike the rulers of Mesopotamia and Egypt, Indus Valley rulers did not immortalize themselves with mummies or monuments. They did, however, leave behind elaborately carved stone seals, used to impress tokens or clay tabs on goods bound for market. The seals bore images of animals, like the humped bull, the elephant, the rhinoceros, and the crocodile, which were probably emblems of powerful clans. The most common image is the unicorn, a symbol that originated in the Indus Valley.

Frustratingly, though, those seals carry inscriptions that no one has been able to decipher. Not only are the inscriptions short, but they don't resemble any known language. From analyzing overlapping strokes, it is clear that the script reads right to left. It is also clear that the script is a mix of phonetic symbols and pictographs. Early Mesopotamian cuneiform, which used only pictographs, was thought to be the world's first written language, says Kenoyer, but the Indus Valley script emerged independently around the same time—at least by around 3300 B.C.

As long as the language remains a mystery, so too will the identities of the

Indus Valley elites. Kenoyer thinks each of the large cities may have functioned as an independent city-state, controlled by a small group of merchants, landowners, and religious leaders. "They controlled taxation, access to the city, and communication with the gods," he says. While the balance of power may have shifted between these groups, they seem to have ruled without a standing army. Sculptures, paintings, and texts from Egypt and Mesopotamia clearly illustrate battles between cities and pharaonic wars of conquest. But in the Indus Valley, not a single depiction of a military act, of taking prisoners, of a human killing another human has been found. It's possible these acts were illustrated on cloth or paper or some other perishable and simply did not survive. Yet none of the cities show signs of battle damage to buildings or city walls, and very few weapons have been recovered.

Human remains show no signs of violence either. Only a few cemeteries have been found, suggesting that burial of the dead may have been limited to high-ranking individuals (others may have been disposed of through cremation or river burials). The bones from excavated burials show few signs of disease or malnourishment. Preliminary genetic studies from a cemetery in Harappa have suggested that women were buried near their mothers and grandmothers. Men do not seem to be related to those near them, so they were probably buried with their wives' families. There is evidence that people believed in an afterlife: personal items like amulets and simple pottery have been recovered from a few burials. But true to their practical, businesslike nature, the Harappans didn't bury their dead with riches. Unlike the elites of the Near East, Harappans kept their valuable items in circulation, trading for new, often extraordinary ornaments for themselves and their descendants.

In spite of this practice, excavators have turned up some hints of the wealth an individual could accumulate. Two decades ago, in the rural settlement of Allahdino, near modern Karachi in Pakistan, archeologists stumbled upon a buried pot filled with jewelry, the secret hoard of a rich landowner. Among the silver and gold necklaces and gold

bands, beads, and rings was a belt or necklace made of 36 elongated carnelian beads interspersed with bronze beads. Shaping and drilling these long, slender beads out of hard stone is immensely difficult and time-consuming. Indus craftsmen made a special drill for this purpose by heating a rare metamorphic rock to create a superhard material. Even these high-tech drills could perforate carnelian at a rate of only a hundredth of an inch per hour. Kenoyer estimates that a large carnelian belt like the one at Allahdino would have taken a single person 480 working days to complete. It was most likely made by a group of artisans over a period of two or three years.

Such intensive devotion to craftsmanship and trade, Kenoyer argues, is what allowed Indus Valley culture to spread over a region twice the size of Mesopotamia without a trace of military domination. Just as American culture is currently exported along with goods and media, so too were the seals, pottery styles, and script of the Indus Valley spread among the local settlements. Figurines from the Indus Valley also testify to a complex social fabric. People within the same city often wore different styles of dress and hair, a practice that could reflect differences in ethnicity or status. Men are shown with long hair or short, bearded or clean-shaven. Women's hairstyles could be as simple as one long braid, or complex convolutions of tresses piled high on a supporting structure.

Eventually, between 1900 and 1700 B.C., the extensive trading networks and productive farms supporting this cultural integration collapsed, says Kenoyer, and distinct local cultures emerged. "They stopped writing," he says. "They stopped using the weight system for taxation. And the unicorn motif disappeared." Speculation as to the reasons for the disintegration has ranged from warfare to weather. Early archeologists believed that Indo-Aryan invaders from the north swept through and conquered the peaceful Harappans, but that theory has since been disproved. None of the major cities show evidence of warfare, though some smaller settlements appear to have been abandoned. There is evidence that the Indus River shifted, flooding many settlements and disrupting agriculture. It is

likely that when these smaller settlements were abandoned, trade routes were affected. In the Ganges River valley to the east, on the outskirts of the Indus Valley sphere of influence, the newly settled Indo-Aryans, with their own customs, grew to prominence while cities like Harappa faded.

But the legacy of the ancient Indus cities and their craftspeople remains. The bead makers of Khambhat in India continue to make beads based on Harappan techniques—though the carnelian is now bored with diamond-tipped drills. Shell workers in Bengal still make bangles out of conch shells. And in the crowded

marketplaces of Delhi and Lahore, as merchants hawk the superiority of their silver over the low-quality ore of their neighbors, as gold and jewels are weighed in bronze balances, it's hard to imagine that a 4,000-year-old Harappan bazaar could have been terribly different.

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