

## CHAPTER 7

# TRASH AND TOILETS

## THE CITIES OF THE INDUS

66 TOILET, STONE  
HEAD, AND GREAT  
BATH IN PAKISTAN

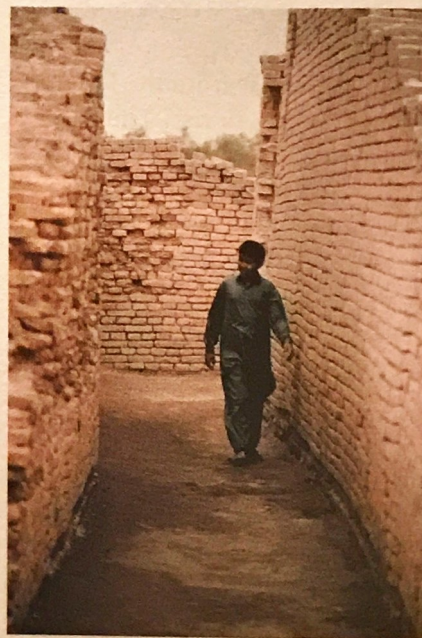
Archaeologists can't read the records the people of the Indus Valley left because they haven't decoded the script. So they have to use other clues—like trash. What's left of people's ruined basements, garbage, and sewers tell us a lot about what it was like to live in the Indus Valley 4,000 years ago.

Sometimes ancient cities are buried through tragic events such as an earthquake or a volcanic eruption. But usually cities get buried bit by bit, while people are still living there. Old buildings fall down and are covered with dust and garbage. Because it's easier, people build on top of the old buildings rather than clear them out and start from the ground again. As this happens, the streets are repaved and get higher and higher over time.

The cities of Mohenjo Daro and Harappa, located in what is now Pakistan, had enough room for 40,000 to 80,000 people. That's about as many people as can fit into the huge Olympic stadium in Athens. But no one is sure if that many people actually lived there full-time. How many of those buildings were empty during the farming season, when people may have gone home to their family farms to help with planting and harvesting? How many of the buildings sheltered merchants or pilgrims who were just passing through? Or people who had come to celebrate religious festivals?

The streets of Indus towns and cities in India and Pakistan are strangely similar. Each has streets that run north and south and east and west. Why? No one knows, although religious beliefs might have had something to do with it. For example, Christian cathedrals face the rising sun in the east and Muslims pray facing their sacred city, Mecca.

Although they were made by hand and not machine, the fired bricks used for building in the cities came in just one size and shape: a rectangle about 11 inches long and 5½



*Narrow side streets at Mohenjo Daro, Pakistan, connect the private neighborhoods with the main streets. High walls keep the streets in cool shadows during the hot summer.*



“Orient” is from the Latin word *orior*, to rise. The sun rises in the east each day, and when you orient yourself, you are figuring out where you are and which direction you are facing.

inches wide (28 cm by 14 cm). These fired bricks were so strong that some of them have been recycled and are being reused in modern buildings. Bricks weren't the only things that were the same size—walls and doorways throughout the Indus Valley are about the same size and design. Even wells were lined with the same styles of wedge-shaped bricks. And every city had a drainage system for carrying away rainwater and sewage from toilets and bathing areas.

Who decided to make one-size-fits-all bricks? Who said that streets *had* to run north/south and east/west? Today's cities are full of differences—the size, style, **orientation**, and building materials of any ten buildings are almost never the same. So why were the ancient Indus cities so similar?

Maybe because one person—or one small group of people—was making all the decisions. Maybe a strong government or strong religious leaders told everyone what to do. But there is no sign of large palaces or temples—the buildings of powerful governments and religious leaders. Perhaps the people of the Indus Valley had religious or historical beliefs that taught them that they should build everything in the same way. No one knows for sure.

The cities of the Indus Valley were very well organized. They were divided into walled neighborhoods, with each neighborhood specializing in one kind of work. Potters lived in one area, and coppersmiths lived in another. People probably lived with their extended families—children, parents, cousins, aunts and uncles, and grandparents—all doing the same kind of work.

Say you were a merchant from Oman, in what is now known as the Middle East, come to Harappa to trade alabaster vases and fine woolen cloth for shell bangles and stone beads. The first thing you would have noticed was what *wasn't* there—no great temples or monuments, like the ones you had seen in the cities of Mesopotamia and Persia. You probably would have thought Harappa a poor place, without the grandeur of home. But then you would have noticed the tidy, neat streets. Even as a stranger in a strange city, you didn't have to leave extra time in case you got lost in the maze of streets every time you went to the



market. The streets were straight and predictable, and quieter than you were used to. Houses weren't open to the street, so you didn't hear every word that people were saying inside as you walked by. Instead, the main doorway of each house was located along a side street and had an entryway that screened the inside from curious eyes. The windows opened onto the courtyard at its center.

You'd have noticed that the city smelled better than most cities you visited. Major streets had built-in garbage bins. Each block of houses had a private well and bathrooms with drains.



“ Toilet, Harappa, Pakistan, about 2000 BCE

The small drains leading from the bathing areas and toilets emptied into slightly larger drains in the side streets that flowed into huge covered sewers in the main streets, big enough for people to climb inside and clean. These big city sewers emptied outside of the city wall into gullies and were washed out every year by the rains.

As you wandered through the city, you would have seen one building that stood out from all the others, the so-called Great Hall. Not only was it bigger than all of the other buildings, but it was also built of wood on a brick foundation. (Because the local trees were small, the builders probably bought the wood in the highlands, then floated it down the rivers to the city during the monsoon.) Archaeologists don't know what the building was used for. At first, they guessed that it was used to store grain, but there's no evidence of that. Today, they believe that Harappa's Great Hall, as well as a similar large building in Mohenjo Daro, was probably a government or public meeting place.

Although the great cities of the Indus were very similar, they were not identical. If you were a pilgrim from Harappa arriving in Mohenjo Daro for a religious festival, you might have felt that the people in Mohenjo Daro were a little bit more formal than your friends at home. For one thing,

#### GOING TO THE BATHROOM, HARAPPAN STYLE

Some people may have walked outside the city wall to the nearby fields to go to the bathroom, as is commonly done today in much of rural Asia. But many houses had toilets that were separate from the bathing areas. The toilets were large jars called sump pots sunk into the floor, and many of them contained a small jar of water for washing after using the toilet. Sometimes these sump pots were connected to a drain to let sewage flow out, and most had a tiny hole at the bottom to let water seep into the ground. To keep the whole thing smelling better, people occasionally scattered clean sand in the bathroom and toilet.

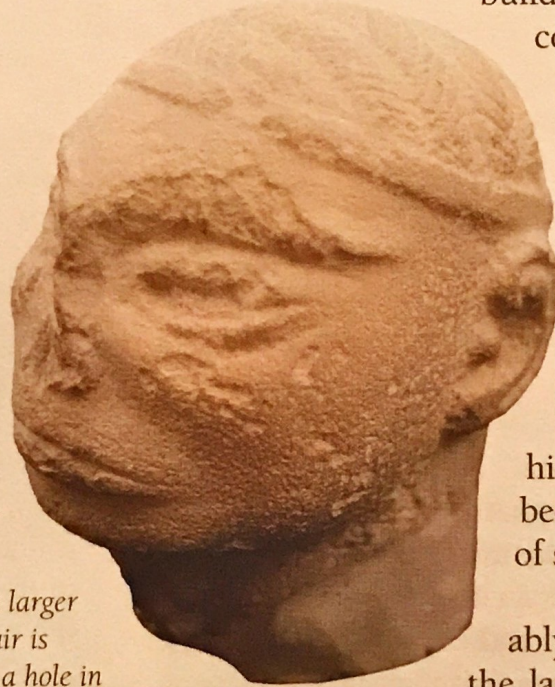


Mohenjo Daro didn't have just a Great Hall, but many other large buildings as well. Each section of the city had several large complexes. Some of these buildings may have been religious buildings or mansions for wealthy merchants. One

building had a circle of bricks in its courtyard, which might have been the site of a sacred tree. A double staircase led to an upper courtyard surrounded by several rooms. When archaeologists excavated it, they found that the house was littered with lots of seals and fragments of a stone sculpture depicting a seated man wearing a cloak over his left shoulder who might have been a political or religious leader of some kind.

But as a pilgrim, you would probably have been most interested in the large building that today is called the Great Bath. You would go first into a small bathing area that was supplied with a well. You'd take off your outer clothes, which were dusty from your journey, and wash yourself. Once you were clean, you would move on into a large courtyard. You might walk along the roofed edges of the courtyard to better admire the sacred pool in the center. When you were ready for the bath that would clean your spirit as well as your body, you would walk into the large pool by one of the two wide stairways that led down into the healing water.

Travelers from both Mohenjo Daro and Harappa probably would have felt least at home in Dholavira, the third major city of the Indus. Dholavira, located in what is now the modern country of India, was on an island in an inland bay far to the south of Mohenjo Daro. The farming was not good in the areas around Dholavira—the climate was too dry—so most people supported themselves by herding, fishing, and trading. To collect and store enough rainwater,



“ Stone head, Mohenjo Daro, Pakistan, 2200–2000 BCE

*This stone head is a part of a larger seated statue. The braided hair is bound with a headband, and a hole in the top of the head may have held an elaborate headdress.*



the people of Dholavira built stone tanks or reservoirs that stretched over more than a third of their city.

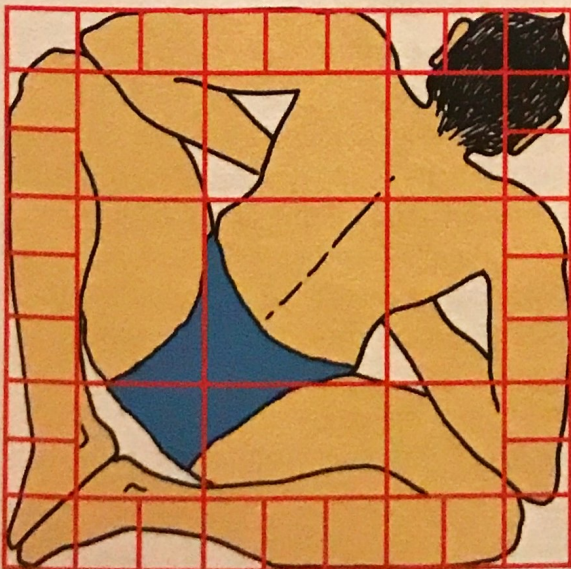
Dry Dholavira may not have had much mud, but it had lots of stone. Most of its houses and drains were made of sandstone blocks. Dholavira was the grandest of the cities, with huge walls and ceremonial gates separating the quarters of the city. One of the gates was even topped by an inscription of ten symbols, each one a little more than a foot tall.



Dholavira's magnificent gates couldn't change the fact that, in general, the people of the Indus Valley cities did not choose to build huge monuments to a king or religious ruler. Their cities were simple and workaday, without unnecessary flourishes or great pieces of monumental art. But towering high above the plain, with gleaming red-brick gateways and light gray mud-brick walls, they still must have been a commanding sight.

“ Great Bath, Mohenjo Daro, Pakistan, about 2000 BCE

*The Great Bath at Mohenjo Daro, the only one of its kind, was used for public ceremonies and bathing rituals.*



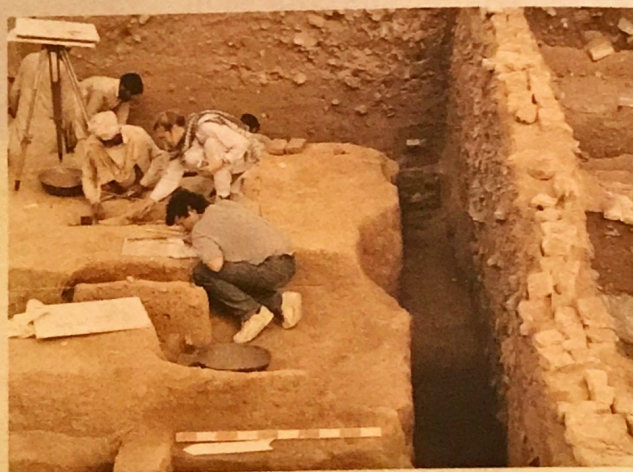
#### MY LIFE AS A HOUSE

The orientation of a house and the placement of its rooms is based on the sacred “foundation man,” or *Vastu Purusha*. When drawn as a square, the head is located in the northeast corner. This was supposed to be the most fortunate part of the house. The kitchen goes here. The southwest corner, where the feet are located is thought to be facing the direction of Yama, the god of death. There are no doors on this side, so that the evil spirits from the land of death can't enter the house.



**ARCHAEOLOGIST AT WORK:  
AN INTERVIEW WITH  
HEATHER M.-L. MILLER**

Heather M.-L. Miller is an assistant professor of anthropology at the University of Toronto. She specializes in Harappan pyrotechnics, processes that use fire to change materials, such as turning clay into pottery, ore into copper, and sand into faience. She is also interested in medieval trade routes between South Asia and Central Asia.



*When did you begin to go on digs?*

While I was in college. But I started late. Some of my colleagues started when they were kids by going to day programs where you'd volunteer for a day and do some digging.

*Did you decide to go to South Asia because that's where your professors were working?*

No. Not at all. I had to work really hard to get over there. I knew I wanted to work on ancient cities, but there are lots of places where I could do that. I'm from southern California, kind of the edge of the desert, and it's what I was used to, so I wanted to work some place arid, where you aren't tortured to death by bugs. I also wanted to go somewhere the snakes stay on the ground instead of dropping on you. My undergraduate professors at Rice University worked in West Africa, where there is completely fascinating archaeology, but way too many diseases.

*What did you do at Harappa?*

I looked for kiln sites, to see where in the city people were manufacturing pottery, copper, faience, and other things. I did what's

called a total walkover. That means I walked over the entire surface of the site at one-meter intervals with a very good assistant looking for a special type of debris characteristic of these crafts. You get melted bits of pottery, or pieces of crucible [small pots used for melting metal] with a little bit of metal left on it. We found that they were manufacturing in lots of different parts of the city. There wasn't a special quarter, like an industrial park.

*Was there anything especially interesting in the debris?*

One thing was kind of cool. They melted their metal in clay containers called crucibles. But this clay melts at a lower temperature than metal, so they figured out how to temper the clay by adding straw. The straw insulated the clay so that it didn't melt. Adding straw also reduced the cracking that happens when you fire pots. The straw burns away, and there's room for the clay to expand where the straw used to be, so it doesn't crack. We also found some little dish things with powdered steatite on it. We



think they used it kind of like Teflon. Steatite doesn't melt at these temperatures, so whatever was on it would slip off instead of melting together with clay.

*What do you like best about being an archaeologist?*

I like the combination of physical work and mental work and plain old accounting. I like that sometimes you're inside, sometimes you're outside. Sometimes you're being very scientific. Sometimes you're just standing there, shoveling dirt. But mostly it's solving puzzles. We all like working out puzzles. I've noticed that a lot of archaeologists like murder mysteries. It's all about curiosity. That's the real draw—you're curious about people that lived before.

*What do you not like about it?*

I've managed to avoid all the things I was sure I wouldn't like, like working in swamps and stuff. It's not easy for me to write, but writing is a very important part of what I do, so I'm constantly trying to be a better writer.

*What has surprised you the most about being an archaeologist?*

What I had to get accustomed to is that you never find out the answer, because there are always more questions. And if you don't like surprises, you won't like being an archaeologist. It's one surprise after another.

*Do you feel that you get to know the people who lived in the places you are excavating?*

You really do. For one thing, there are fingerprints all over everything. You know, they're patting the clay and then it gets fired. And even though Harappa is a pretty dis-

turbed site, every once in a while you stumble on something that is obviously just the way someone left it. We were digging in this little alley behind a house and found a little pit someone had dug, with some river mussels in it. It was their leftover lunch. And the Harappans are very creative people. Their figurines have a lot of character. It's hard to see humor across the centuries, but I certainly see people having a lot of fun with those figurines. Or maybe having a connection would be a better way to say it, since some of them are scary. Plus, my colleague is very good at that sort of thing. We'll find a pendant and he'll say someone must have been really upset to lose that.

*If you could have one question answered about the sites you've excavated, what would it be?*

I think I would probably want to know how the five great cities of the Indus were connected. Were they independent? Did the same family rule them all? That's what I'd like to know.

I think the really important thing about archaeology is that it connects people with the past. It's something we all share. No one in my family came from South Asia, but now I feel like that's a part of my heritage, too. Knowing about how those people solved their problems of living together in cities makes me think about the ways we try to solve a lot of the same problems in our cities today. The Indus people were so creative. I feel a lot of respect for them. And I feel like I share something with my colleagues in Pakistan. I think people need to appreciate each other's history.