

ARCHAEOLOGY

Toy Town 5,000 Years Ago

In India Long Ago, Toymakers Fashioned Wagons, Rattles, Whistles, Marbles for Good Boys and Girls

By EMILY C. DAVIS

A SANTA CLAUS town that made toys for the good little children in 3000 B.C. has been unearthed—in India.

And what toys, you promptly ask, did the good little children ask for?

What could the jolly toymakers make in those "high and far-off times"?

For answer, archaeologists can now produce a large assortment of 5,000-year-old toys. They show you marbles and whistles, gay rattles, sheep that rolled nicely on two wheels and had strings attached for leading the painted beasts. They display ox carts ready to be loaded with pebbles and pulled around the floor. Any modern child could amuse itself with these old, old playthings.

Unearthing this oldest of Santa Claus towns has fallen to the good luck of American archaeologists.

When the Indian government let down the bars that forbade foreigners to dig in this region, two years ago, two American organizations promptly seized the chance. Forming a joint expedition, the Boston Museum of Fine Arts and the American School of Indic and Iranian Studies arranged to dig into three mounds of earth at Chanhu-daro.

Dead Cities

Hidden inside many such mounds of earth have been found dead cities of the East, with streets and stumps of walls piled layer upon layer, just as the people leveled off wreckage of one demolished city to build anew on the ruins.

At Chanhu-daro, the American archaeologists, led by field director

Ernest Mackay, burrowed through two layers of cities and probed down 13 feet, when they found themselves in the town of toys.

More and more playthings they picked out of this third layer of ruins. The toys were like rare plums or prizes hidden in a big earthen pudding. Mr. Mackay came to realize that here were far too many playthings to supply children of one town alone, however fortunate.

Center of Toy Trade

The only explanation seems to be this: Chanhu-daro in its distant day was like Germany's Nuremberg, a picturesque and flourishing center of toy trade.

Toys found at Chanhu-daro break at least one record for antiquity. Certainly no archaeologist ever before has made such a haul of early toys in quantity. And as individual objects these toys of 3000 B.C. rank high among the world's oldest playthings.

There are, of course, objects thousands of years older that may be toys—or they may not. Nobody can tell about them. There is a little brown Teddy Bear 20,000 years old, for example, found in a grotto of southern France. The little stone bear is a gem of realistic Stone Age art. But whether it was the familiar plaything of a cave man's child, or whether it was a charm used in dangerous magic and not for children to dare touch, will probably never be proved.

A set of chessmen discovered last season dates from almost 4000 B.C. These alabaster game pieces were found in the grave of a little boy who lived

in the city of Tepe Gawra, in Mesopotamia. But they represent amusements of a rather older lad, not exactly in a class with the very young children's toys that the Indian town has so lavishly revealed.

People examining the Indian playthings are struck by their modern appearance. But that modern touch is what archaeologists have come to expect when they dig up any bit of ancient toy history.

Toys for the littlest children have not changed much in 5,000 years. Same old wheel-toy-on-string. Same rattles, whistles, balls, and carts to load and unload.

It is a curious touch of human psychology, that mothers and fathers of so early a time seized upon essential features of play that would amuse the babies.

The relative appeals of color, noise, shape, and other fine points of toy psychology can now be explored scientifically. But so far as the toys go, in basic principle, the Bronze Age toy makers did their work so well that there has been little change or improvement these thousands of years.

Wheels That Turn

Toy makers of Chanhu-daro put time and care into their work. A toy ox cart from the ruins is found equipped with clay wheels that turn, and with stakes around the cart edge to keep the load from tumbling off. A shaft is attached to the cart, and two humped oxen of clay to pull it. Real carts of this very type can be seen on Indian roads today.

When the Indian toy makers cut marbles out of shell, they took trouble to carve designs around the surface to make the little balls pretty. Rattles for the babies were brightly painted.

If there were wood carvers in Chanhu-daro, who cut wooden animals and dolls and painted them for the children, that evidence is lost. Wood was too perishable to survive so long in that climate.

Clay, however, is more enduring, and fortunately for the archaeologists who are re-discovering the ancient history of toys, clay was standard stuff for toy making.

A toy maker would shape a clay hen, with holes for producing a whistle.

Then he, or she—for women have often been the potters in early civilization—would paint the little hen with a pleasing striped pattern. And no modern critic can object that hens are not striped like tigers, when modern toy makers revel in pink plush elephants and checked gingham dogs.

Even children made toys in the world's oldest known town of this trade. Imitating their elders for the fun of it, they shaped toys of mud and baked them hard in holes in the ground covered with fuel.

Your eyes take in the familiar, and the strange, details of these ancient toys. And you try to imagine youngsters so very long ago laughing and playing with these very objects, in a town just progressing from the Stone Age into the Age of Bronze. It is not too easy to picture the scene.

But archaeologists come to the rescue of modern imagination. They can report from their discoveries what the toy town in India looked like.

Even in its ruined state, this ancient town is surprisingly modern. It was a well-planned settlement, and a progressive one. The brick houses were equipped with central heating; flues under the floors warmed the rooms in cold weather. Mr. Mackay declared that nearly every house had its bathroom and drains. Houses were aligned along streets and lanes in true city fashion. And every street had drainage.

Superior Sanitation

With high praise for this system, Mr. Mackay pronounces it superior in sanitation to that found in cities of other civilizations of its time. Many cities of the Orient today are not so well equipped, he declares.

Like many other buried cities, Chanhu-daro is known mainly by the durable articles it produced. Clothing and other fragile things have long since vanished in the earth. The ancient people of India did, however, engrave pictures on seal amulets showing what their clothing, furnishings, and other

features of their life were like, and these add greatly to information gathered from the real relics of stone, clay, metal and bone that have survived.

People of Chanhu-daro, it seems, took to the new fashion of using copper and bronze to replace old-fashioned stone. Their ruined city contains metal chisels, spear heads, blade axes, and vessels. But just as motorized America still has its horses, so Bronze Age Chanhu-daro still used old reliable stone for kitchen knives and some other utensils.

Toilet tables of clay with four short legs are among trophies from the ancient city, showing that personal appearance was rated important. A bronze jar that held a cosmetic is another relic of the beauty table. And a great many stone palettes, on which eye paints and other beautifiers could be mixed and prepared, have been discovered.

Elaborate Headdresses

Headdresses were elaborate, so Mr. Mackay learned from styles worn by clay figurines of goddesses. And like Egyptian women, the Indian woman who had her hair freshly done could sleep on a nice hard head-rest that would not crush the coiffure. This Indian pillow was made of painted pottery.

First and foremost, so the digging reveals, Chanhu-daro was a trade town. It had the economic good fortune to stand on an Indian trade route. Toy makers could stuff their packs and dis-

patch them by ox-load or caravan over well-traveled highways to distant cities.

Beads were another notable product, for which the town may have gained fame. In the ruins, the American archaeologists have discovered many agate and carnelian beads. So fine is the polish on these beads that craftsmen of the Indian town are hailed as experts at working hard stones.

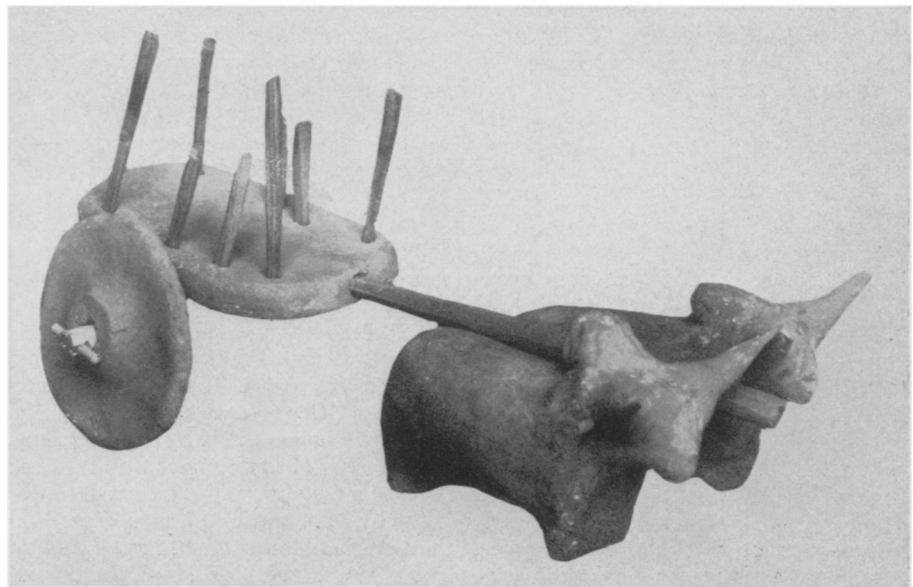
Used Stone Drills

And what is particularly remarkable about this bead work is that they used stone drills—not copper, as archaeologists had always supposed the ancients must have used to bore bead holes. What abrasive helped them is still to be learned. It may have been emery.

Bead makers of Chanu-daro did amazingly tiny work. Buried in their city for 5,000 years has lain a string of beads so small that 40 can be strung to the inch. Nothing coarser than a hair would string these pin-point beads. The beads are of soft material, as stone goes. But how those craftsmen with their simple tools ever bored the tiny objects is a puzzle to the archaeologists who have discovered them.

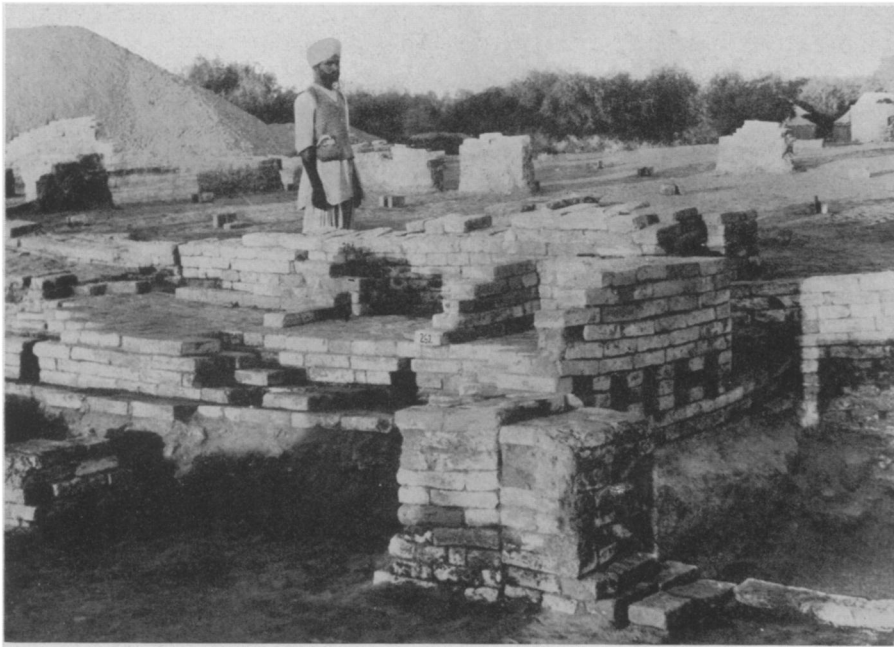
When unearthed, these beads were stuck together by the salty soil. They had apparently been put away in a basket, long since vanished.

There can be no doubt that Chanhu-daro was a keen business center. Good evidence is the large number of stone



AND THE WHEELS GO ROUND

This wagon which gladdened the hearts of children long before the first Christmas might be enjoyed equally by any modern youngster. Carts of this same type may be seen on the roads of India today drawn by oxen like those here reproduced in clay.



CENTRAL HEATING

For a modern home of 3000 B. C.—five flues are shown in right foreground with branch flues at right angles, to carry warmth under the brick floor throughout the building.

weights found through the ruins. These weights are mainly cubes, carefully polished and graded to a simple ratio of 1, 2, 4, and so on. Business was supervised, even as far back as the dawn of the Bronze Age, so archaeologists surmise, for similar weights recovered from the two other Indian towns of the age that archaeologists have so far explored, are of similar size. And that means that weighing of goods for sale was strictly supervised, with short measure not allowed.

How far trade of the Indian cities spread is not yet known. Toys from this place may have given pleasure to children many miles away. But did they reach the cities of Mesopotamia—Tepe Gawra, Erech, Ur of the Chaldees, and others—1,400 miles to the northwest? The land of Egypt was even more distant, with the Arabian desert to be crossed.

With only two or three Indian towns of 3000 B.C. unearthed, archaeologists are already convinced that India was not aloof from its great rivals and neighbors in the dawn of civilization. Heretofore, the cradle lands of our civilization have been considered two—Egypt and Mesopotamia. Now, India is revealing itself as a third civilizing power at the third corner of a great sprawling triangle.

Objects proving to archaeological

satisfaction that India did have contacts with Mesopotamian cities have already been discovered. And this part of the world's ancient story is only beginning to open up.

Until a few years ago, the oldest civilization in India that was clearly demonstrated was no older than 300 B.C. Yet, the literature of India testified to people far older than this, and mentioned strong forts left by people before 1500 B.C.

Then British archaeologists struck the first discovery of India's real antiquity, and announced finding city ruins at Mohenjo-daro as old as 3000 B.C., and since then India has been drawn more and more closely into the tangled pattern of civilization.

The new-found city, Chanhu-daro, had its greatest glory when it was young, so the ruins reveal. The later settlements shrank. After the age of the toy and bead makers, there followed a people who lived in matting houses and walked on rough paving, very different from the old city's substantial dignity. These later people made great quantities of pottery, which archaeologists hope will shed more light on migrations and trade relations of 2000 B.C.

Last on the toy town site were a few primitive folk who made dark gray pottery and marked it with geometric de-

signs. This curious ware is unfamiliar even to archaeologists well acquainted with the clay craftwork of the past. Wandering gypsy-like tribes, Mr. Mackay believes, may have been the last industrialists at the once-thriving town of the toys.

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Science News Letter, December 19, 1936

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apes, of white men, and of Negroes. He finds:

"In these points the cartilages of the anthropoid apes are nearer those found in the Negro than in white individuals. The cartilages in man are proportionately much larger than in the anthropoid apes as would follow from the difference in the prominence of the noses of the two. In the Negro, however, though the cartilages are much larger than in the gorilla, yet there is comparatively little difference in the prominence of their noses."

Smallest Monkey Embryos

Embryos of the common macaque monkey (the organ-grinder's favorite assistant) in their very earliest stages of development have been studied by Dr. George L. Streeter, director of the department of embryology, in collaboration with Dr. G. B. Wislocki of the Harvard Medical School. Embryos only a few days old, before they had become attached to the wall of the uterus, were found in numbers sufficient to make detailed microscopic examinations possible.

One of the outcomes of this study has been a considerable modification of the classic germ-layer doctrine, which teaches that all parts of the developing embryo originate from three primitive layers of cells: endoderm, ectoderm, and mesoderm. Drs. Streeter and Wislocki have found that while these layers do account for the development of the parts of the body itself, the several membranes in which the unborn infant is wrapped, as well as other accessory structures, originate from primitive initial tissues that are laid down before the three germ layers are formed.

Science News Letter, December 19, 1936

The "Father of Botany," Theophrastus, described many plants so carefully that botanists today can identify these trees and shrubs that grew in Greek gardens.