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CANADIAN MUSEUM OF ARCHITECTURE

IN PERSPECTIVE

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YOU'RE A BRICK ...

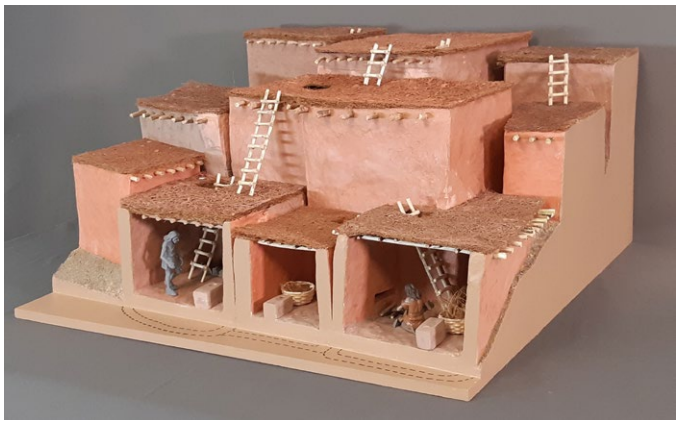
"You say to a brick, 'What do you want, brick?' And brick says to you, 'I like an arch.' And you say to brick, 'Look, I want one, too, but arches are expensive and I can use a concrete lintel.' And then you say: 'What do you think of that, brick?' Brick says: 'I like an arch.'" - Louis Kahn

Louis Kahn's whimsically imagined conversation with a brick belies deeper relationships that we have with architectural materials and how these have evolved over time.

Brick is arguably the most commonly used construction material. Its great versatility with respect to both structural and decorative functions has led to its use in the most elementary as well as the most complex of structures.

So, when was brick born? Caitie Chornous, with an interest in both architecture and museums, has constructed a model depicting the use of brick in a Neolithic society at a time when nomadic ways of life were giving way to a sedentary existence.

- Peter Brueckner

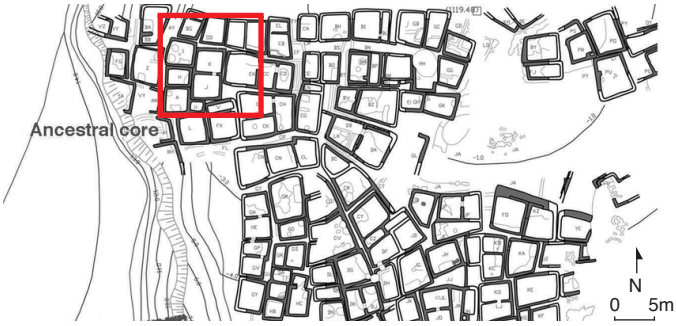


The CMA's model of Aşıklı Höyük houses at a scale of 1:20

AN ANCIENT TECHNOLOGY

The development of mudbricks represents a giant step in the discovery and invention of architectural materials. Perhaps initially used as a substitute for stone, brick has played a seminal role in the course of architectural design and the evolution of our built environment.

The oldest identified mudbricks date from the 10th millennium BCE. By 8000 BCE, this technology was being used to construct small settlements as depicted in our display of a group of houses from Aşıklı Höyük, a pre-pottery Neolithic settlement in Anatolia, now in modern Turkey.



Plan of Excavation Site. Model location is highlighted.

During the 1000 years or so that this site was inhabited, its occupants were in transition from a hunter-gatherer society to an agrarian one. The houses, initially semisubterranean round structures, gave way to above ground rectangular buildings. Corners, as required by the angular forms, seem to have been a significant architectural innovation. The houses are believed to have been entered and exited by ladders through openings in the roof. A need to keep out predators as well as the absence of hinging mechanisms may account for the lack of windows and doors.

Mudbricks were typically made of *kerpiç*, a mixture of mud, water and binding agents of plant material such as grass. Shaped either by hand or by using a mould, the formed bricks were dried and hardened in the sun. To build walls, the bricks were bonded with mud mortar and

plastered with a thin layer of *kerpiç* for a smooth finish. The continued use of this technology in many parts of the world, even today, attests to its practicality.

With the kind assistance of Dr. Mary Stiner, Regents' Professor of Anthropology at the University of Arizona and Curator of Zooarchaeology at the Arizona State Museum, we were able to construct a model of ten houses from Aşıklı Höyük from about 7550 BCE. Built by hand from clay, wood, coir and wire mesh, this model and that of the wall structure demonstrate the early use and capability of mudbrick.

Caitie Chornous reconstructing a mudbrick wall at a scale of 1:10.

The second chapter in the story of brick begins in the fifth millennium BCE with the invention of fired brick. When clay is heated to 950^{0}C or more, some of the material fuses so it becomes harder, water resistant and more durable. These properties enhance the usefulness of this building material. Its versatility is evident in the thousands of ancient and modern brick structures of greatly varied design and artistry throughout the world.

Sun-dried bricks have minimal adverse environmental impact. Even most types of fired brick are relatively environmentally friendly, particularly if the buildings stand for a long time.

Kahn's conversation with a brick playfully summarizes an important lesson which he would impart to his students. He encouraged them to develop a deeper relationship with, and understanding of, architectural materials as he believed that materials should be respected and used appropriately. For brick, this conversation between architect and material has persisted for thousands of years, illustrating the infinite possibilities of this ancient technology.

- Caitie Chornous

BRICK THROUGH THE AGES

Ancient: Glazed Brick, Babylon, 605 BCE.

Medieval: Church of St. Anne, Vilnius, 1500.

Contemporary: MARTa Herford, Germany, 2005.

Image 2: Duru, Gunes. *Figure 6.2.* In *Sedentism and Solitude Exploring the Impact of Private Space on Social Cohesion in the Neolithic*, 174. Denver: University Press Colorado, 2018.
Image 4: Courtesy of ROM (Royal Ontario Museum), Toronto, Canada. ©ROM
Image 5: iwishmynamewasmarsha. "Cathedral". Digital image. Flickr, January 24, 2013. Accessed May, 1 2023. flickr.com/photos/morganmorgan/
Image 6: S., Oliver. "Marta". Digital image. Flickr, May 1, 2005. Accessed May, 1 2023. flickr.com/photos/7266700@N08/