

Pre-Columbian, African, and Asian Architecture

ARCH 1121

History of Architectural Technology

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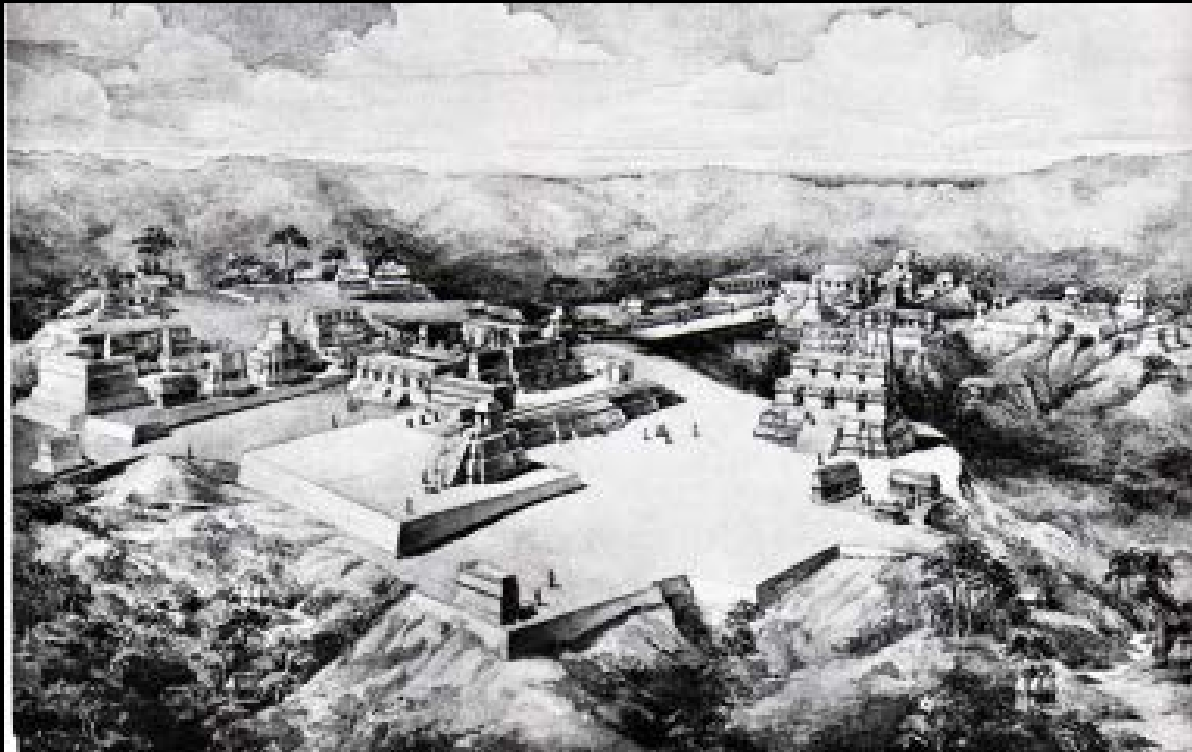
Pre-Columbian Architecture

- Refers to building in the Americas before the European 15th c. explorations, conquests, and settlements.
- Much architecture, except for Aztec, Inca, and Mayan works in Meso- and South America, were of impermanent materials, such as wood.
- Mayan, Aztec, and Inca civilizations left monumental, stone ruins of impressive scale.

Mayan Temple Complexes

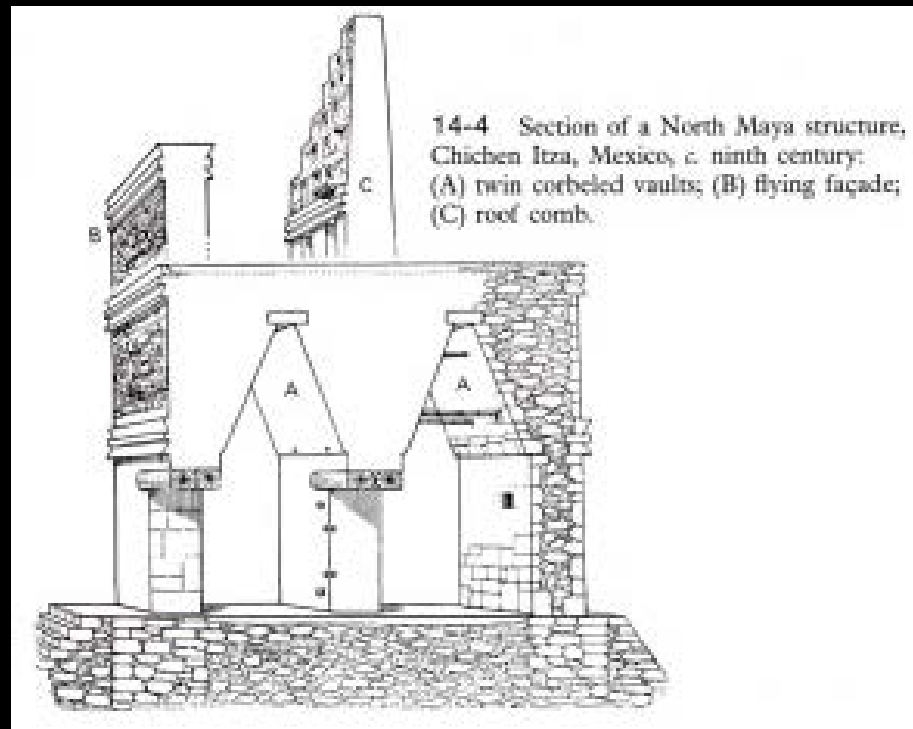
- Typically part of larger groups of temple complexes on hilltops, interconnected by roads.
- Enormous temple roofs were crowned by ornate and towering roof combs.
- Roofs and combs were polished and painted to have a brilliant luster.
- Plaza surfaces plastered making seamless transition of forms arising from landscape.

Mayan Temple Complexes



Typical Chichen-Itza Temple Complex, Mexico, 700 AD
Image: Gardner, Art Through the Ages, 1980.

Chichen Itza structure section- system of construction with roof comb



Chichen-Itza, Mexico

Image: Gardner, Art Through the Ages, 1980.

Temple of the Moon, Teotihuacan, Pre-Classical Mayan, Mexico, before 300 AD



- Bilateral and front to rear symmetry
- Repetition of form of hill behind.

Source: Skully, *Modern Architecture and Other Essays*, 2005.

Temple City, Teotihuacan, Pre- Classical- Classical Mayan, Mexico, before 250-600 AD

- Vast, covering 8 sq. miles
- Over 100,000 residents
- Much of the city painted and the temples adorned with gold
- Laid out on a grid plan
- 600 pyramids, 500 workshop areas, a marketplace, 2000 apartment complexes,

Sacsahuaman, Inca Fortress, 1438 AD

Peru



- Engineering Feat of large, precisely cut stones, made with only wood and stone tools
- Some stones 27 feet tall

Source: Norwich, *Great Architecture of the World*, 2003

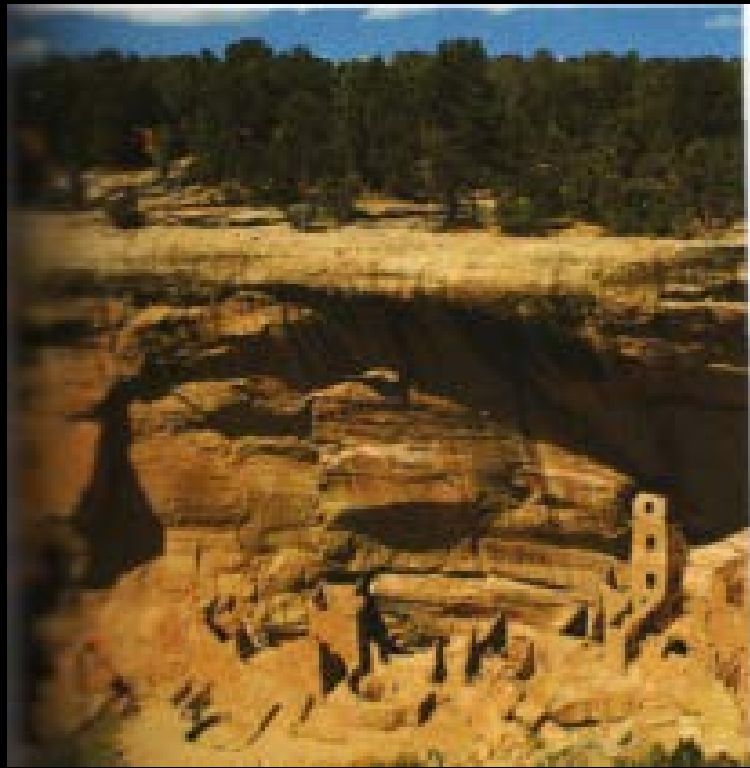
Machu Picchu, Inca Town, 1500 AD, Peru



- Impressive siting on steep slope that falls 2700 feet to river below: use of masonry terracing to hold soil for gardens.
- Various types of walling from coursed ashlar to roughly dressed rubble.

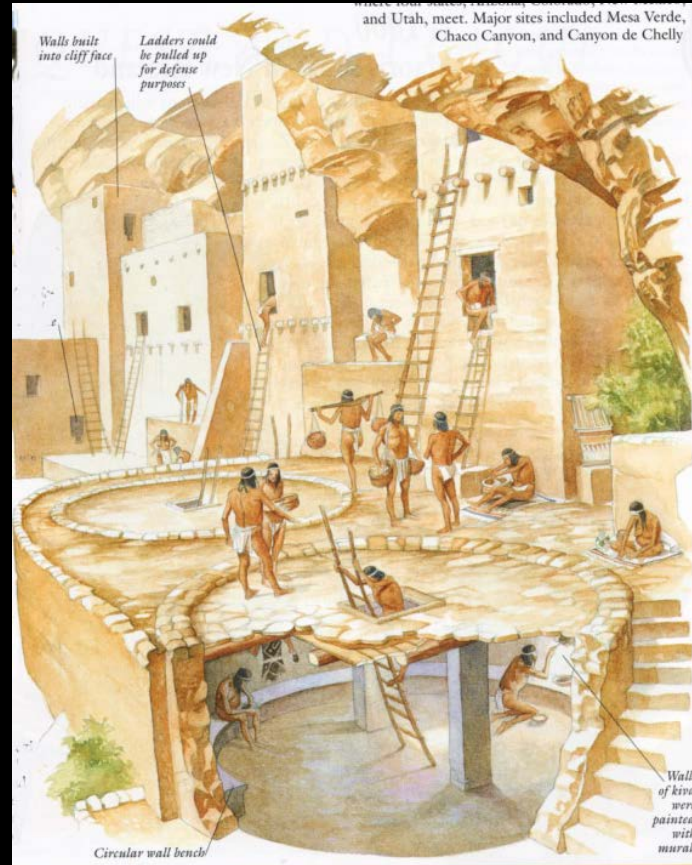
Source: Norwich, *Great Architecture of the World*, 2003

Mesa Verde, Anasazi Settlement, 1100 AD, Colorado



Source: Platagenet Sommerset Fry, *History of the World*, 2005.

Mesa Verde, Anasazi Settlement, 1100 AD, Colorado



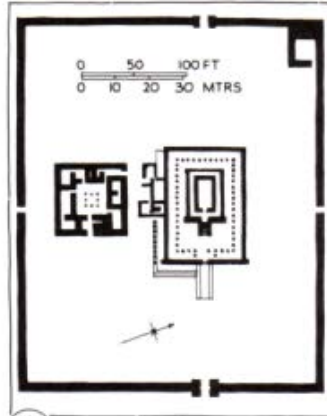
Source: Platagenet Sommerset Fry, *History of the World*, 2005.

African Architecture

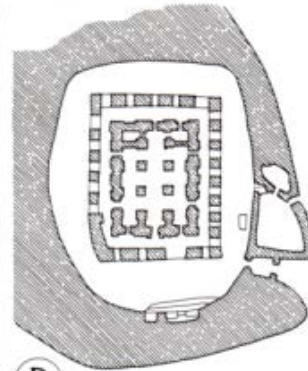
- Characterized by strong, sophisticated conceptual forms
- Rhythmical and abstract

PRE-COLONIAL AFRICA

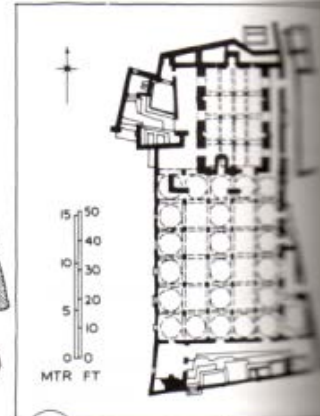
RELIGIOUS



A SUN TEMPLE: MEROE



B GANETA MARIAM

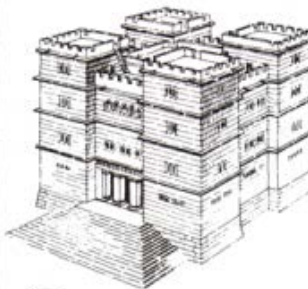


C GT. MOSQUE: KILWA



D MUSAWWARAT ES-SOFRA

PALACES

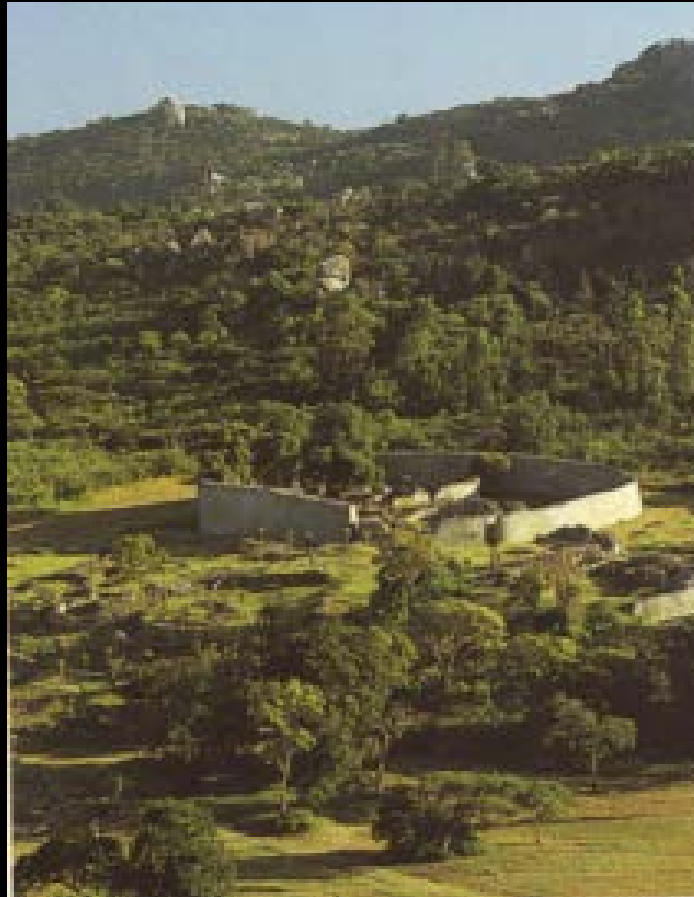


E ENDA MIKA'EL, AXUM



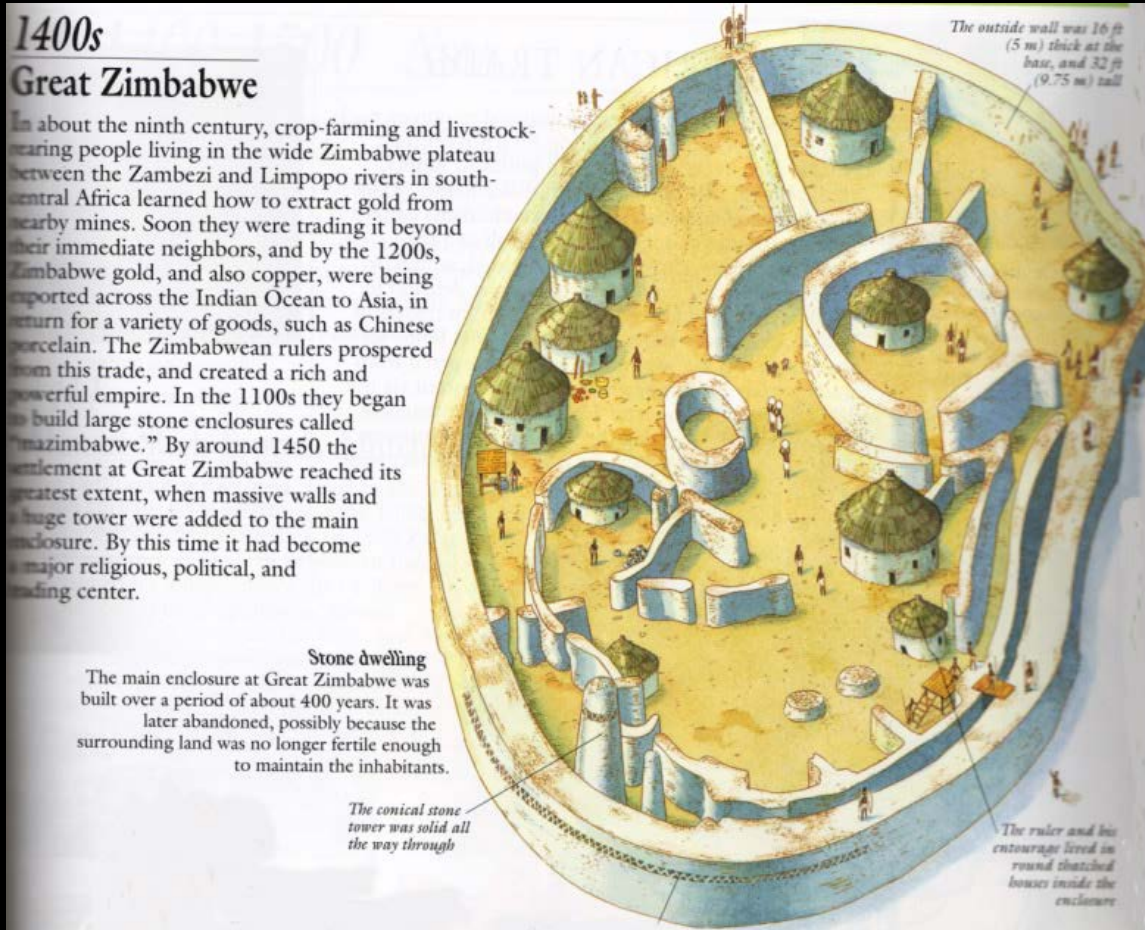
F GREAT ZIMBABWE

Great Zimbabwe, Zimbabwe, 1200-1450



Source: Platagenet Sommerset Fry, *History of the World*, 2005

Great Zimbabwe, Zimbabwe, 1200-1450



Source: Platagenet Sommerset Fry, *History of the World*, 2005

Aksum Obelisks, Ethiopia, c. 400 AD

- Carved from single pieces of stone
- Some were up to 100' high
- Likely burial monuments
- Christian empire, remained powerful until 7th c AD



Stone obelisk

More than 100 obelisks (stelae) were erected at Aksum. Carved from single stone slabs, some were up to 100 ft (30 m) high. Many of them remain today, but only one of the giant ones still stands. They were probably royal burial monuments.

Source: Platagenet Sommerset Fry, *History of the World*, 2005

Jenne Mosque, Gao, Mali, 1300s AD



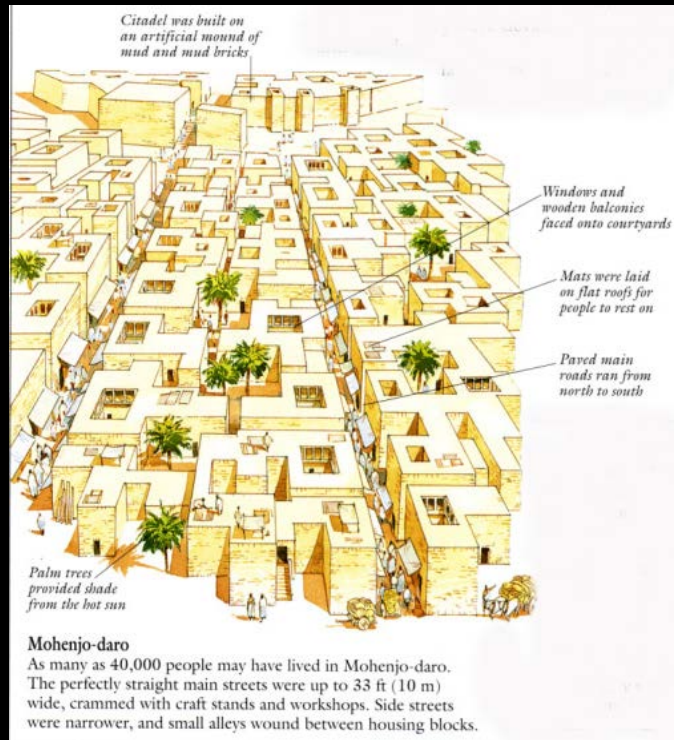
- Mudbrick walls, with permanent wood scaffolding, which permits continual renewal
- Central mosque of the powerful Songhai empire that controlled northwestern Africa for 150 years

Source: Platagenet Sommerset Fry, *History of the World*, 2005

Asian Architecture

- Buddhism represents common element in much of the significant architecture
- Sensitivity to relationship between decorative designs and natural forms

Mohenjo Daro, Pakistan, 2700-1700 BC



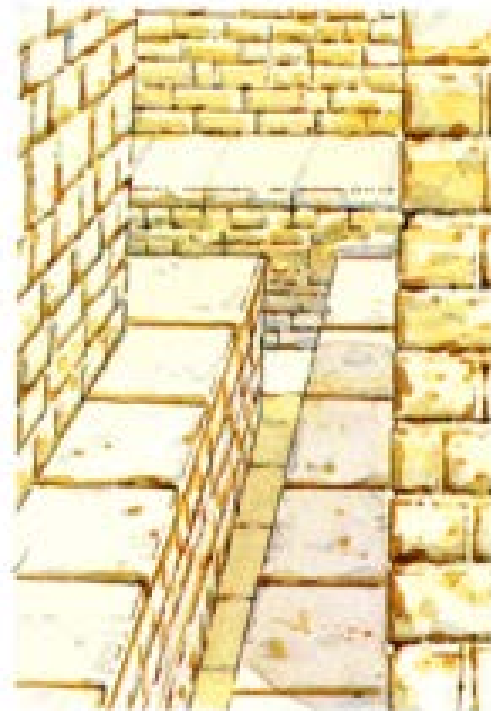
- **40,000 inhabitants, with central bathhouse, halls, palaces, a raised citadel containing temples**
- **First city plumbing system: houses had toilets and bathrooms**

Source: Platagenet Sommerset Fry, *History of the World*, 2005

Mohenjo Daro, Pakistan, 2700-1700 BC

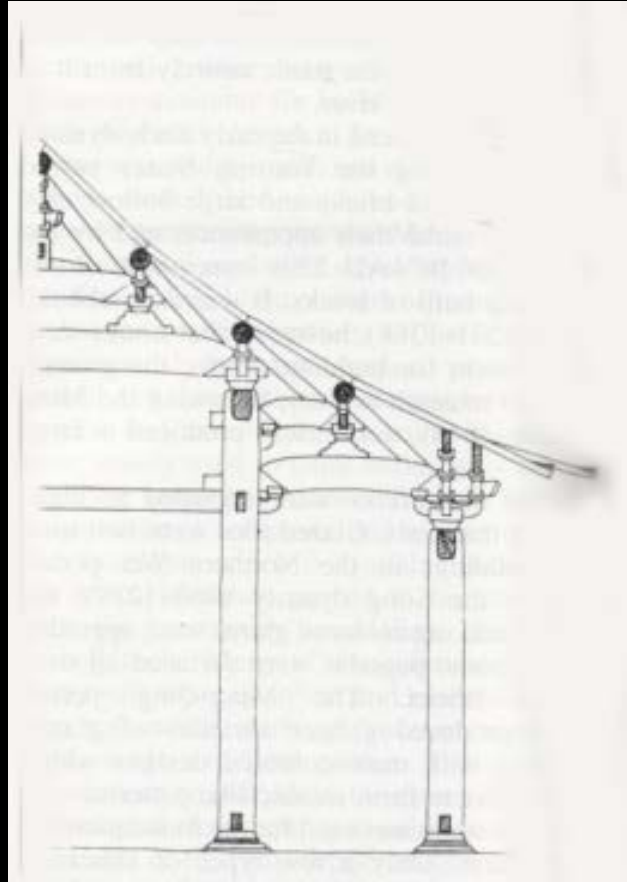
DRAINAGE

The people of Mohenjo-daro built the world's first drainage system. Houses had bathrooms and toilets. Water and sewage ran out of them through pipes (right) into drains, which ran under the streets. Utility covers were placed over drains at intervals, allowing municipal cleaners to climb down and clear blockages. Waste finally went to disposal points outside the city.



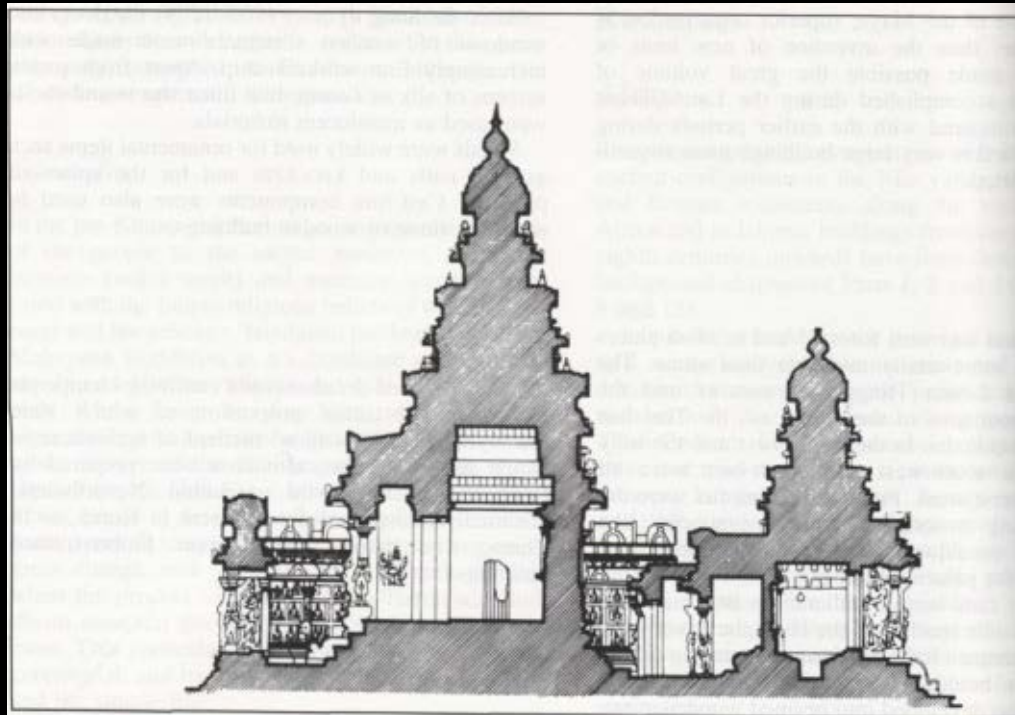
Source: Platagenet Sommerset Fry, *History of the World*, 2005

Chinese Timber Construction, Section Bracket, Traditional form



Source: Bannister Fletcher, *A History of Architecture*, 2004

Shore Temple, Mamallapuram, Section, India, 600-900 AD



- Example of rock cut temples

Source: Bannister Fletcher, *A History of Architecture*, 2004

Adinatha (Vimala Vasahi) Temple, Dilwara, Mont Abu, India, 12th c.



Source: Bannister Fletcher, *A History of Architecture*, 2004

www.stonepages.com