HISTORY OF ARCHITECTURE 1.
THE BEGINNINGS AND VERNACULAR ARCHITECTURE

DEPARTMENT FOR HISTORY OF ARCHITECTURE AND OF MONUMENTS / Dr. PETER RABB / 2019
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>september 9.</td>
<td><strong>Introduction / Basic informations</strong></td>
</tr>
<tr>
<td>2.</td>
<td>september 16.</td>
<td>Architecture of Paleolithics (caves, shelters, tents, early houses)</td>
</tr>
<tr>
<td>3.</td>
<td>september 23.</td>
<td>Architecture of Neolithics (houses, settlements)</td>
</tr>
<tr>
<td>4.</td>
<td>september 30.</td>
<td><strong>no lecture</strong></td>
</tr>
<tr>
<td>5.</td>
<td>october 7.</td>
<td>Architecture of the Bronze and Iron age in the Middle-east (houses, settlements)</td>
</tr>
<tr>
<td>7.</td>
<td>october 21.</td>
<td><strong>Design week / no lectures</strong></td>
</tr>
<tr>
<td>8.</td>
<td>october 28.</td>
<td><strong>1st test</strong></td>
</tr>
<tr>
<td>9.</td>
<td>november 4.</td>
<td>Vernacular architecture I. Africa</td>
</tr>
<tr>
<td>10.</td>
<td>november 11.</td>
<td>Vernacular architecture II. America</td>
</tr>
<tr>
<td>11.</td>
<td>november 18.</td>
<td>Vernacular architecture III. Asia</td>
</tr>
<tr>
<td>12.</td>
<td>november 25.</td>
<td>Vernacular Architecture IV. Europe and Hungary</td>
</tr>
<tr>
<td>13.</td>
<td>december 2.</td>
<td><strong>2nd test</strong></td>
</tr>
</tbody>
</table>

**Deadlines:**

- **Normal:** **9th of december,** Monday, 11:00 – 12:00 K.283. (at department)
- **Late:** **12th of december,** Friday, 11:00 – 12:00 K.283. (at department)
- **Very late:** last day of exam in january
MEGALITHIC PROJECTS

MENHIRS
Large upright standing stone. It may stand singly as monolith, or as part of a group of similar stones (= menhir-field).

DOLMENS
It consists of several blocks of stone. These structures are similar to tables. These were used as grave or sanctuary.

TOMBS
It is a huge artificial hill, there is a dolmen (grave) inside the mound.

HENGES
These are monumental circular constructions of large standing timber columns or stones surrounded by a circular earthwork.

TEMPLES
MENHIRS

breton word; it means men (stone) + hir (long) = long stone

Large upright (vertical) standing stone.

It may be found widely disputed across Europe, Africa and Asia,
But most numerous in Western Europe, Ireland, Great Britain and Brittany.
In northwest France there are more than 1,200 menhirs.

It appeared in 4000 BC.

It may be found singly as monoliths,
or as part of a group of similar stones

Motives of standing it upright:

- elements of a complex ideological system:
  - phallus: man-power, reproduction, fertility
  - axle of the world: all of the word, the whole life
  - everlasting life:
    stone resist forces of nature
  - spirit of ancestors:
    it stands as sculpture, like a man turn into stone
  - world transformed by men:
    the block of stone is natural material,
    but worked, transported and stood upright by men
  - human community and creative forces of men:
    it demanded intense concentration of forces
    and well organized work

- functioned as early calendars:
  - determined by position of sun or moon

- territorial markers

The biggest stanced stone in Brittany
It’s height: 22 metres, weight: cca 320 tons
MENHIR-FIELD / Ancient observatory? / Calendar?

**Carnac** / Bretagne / France / ca. 4000 BC / **Le Menec**: 950 m long, 14 rows, 1169 stones / **Kermario**: (orientation to summer solstice / midsummer) 982 stones / **Kerlascan**: (orientation to vernal equinox: 21th of March) 13 rows, 579 stones / **Petit Menec**: 8 rows
HOW IT’S MADE?

A: 1. dig a deep hole
    2. roll the stone into the mouth of hole on round timbers (as on wheels)

B: 1. erect the stone with raising timber beams
    2. put vertical beams to the opposite side of hole for help sliding stone into the hole
    3. stack beams one on top of the others
    4. erect again the stone with raising timber beams on beams

C: 1. erect the stone with cords (pull)
    2. support the stone with posts

D: stabilize the stone with stone-wedges

E: 1. transport the stone-beam on sledge
    2. erect the stone with raising timber beams on one of it’s end
    3. stack beams under the erected end of stone
    4. erect the stone on it’s other end
    5. stack beams under the erected end of stone

F: continue

G: continue

H: 1. roll the stone to the top of columns on round timbers
    2. take out the beams per line and pass the beam onto the columns
    3. pull down the wooden frame

BUT HOW ABOUT THE LONG-DISTANCE TRANSPORT OF STONES?
THE RELATIVES OF MENHIRS / OBELISKS AND COLUMNS

I. Thotmes’s obelisk transported to Constantinople (Istanbul)

Justinian’s column (Constantinople / Istanbul)
THE RELATIVES OF MENHIRS / STELES (VERTICAL STONE OR WOODEN SLABS)
Antropomorphic form / carvings / texts

VALLEY OF ORKHON-RIVER / THE CULTIC AREA OF THE TURKS / INNER-ASIA
Bumin kagan (†552) / Bilge kagan (684-734) / Kül Tegin (†731) / copy of one stele of Orkhon
THE LATE AND FAR DESCENDANTS OF MENHIRS – KHACHKARS AND RUNESTONES

ARMENIA AND SCANDINAVIA
DOLMENS

(Breton word; it means taol (table) + men (stone) = stone table.

It consist of several block of stone. These structures are similar to tables. These were usually used as grave covered by mound. It is TOMB. The naked (uncovered) dolmens were used perhaps as SANCTUARY.

UK / Ireland
Russia (both)
Ireland / Belgium / Spain
DOLMEN

Tverethy Quoit (House of Giants) / Cornwall / England / Ø = 6.5 m / originally: there was a dolmen inside of artificial hill / now: naked (uncovered) dolmen
DOLMEN

Kilclooney / Ardara / Donegal / Ireland
THE TOMBS

The biggest and most famous – Newgrange, Ireland
TOMBS / HALL-GRAVES
(more than one nave inside)

Dolmen de la Roche-aux-Fées / Essé / Bretagne / tipical hall-grave / 4600-3800 BC!
TOMBS / HALL-GRAVES

Dolmen de La Menga (Antequerra, Andalusia, Spain) / 3200 BC / hall-grave with two naves
Wayland's Smithy / Ashbury / Oxfordshire / 56 m long, 13 m wide, 1st: wooden framework, 3700 BC, 2nd: stone, 3400 BC
TOMBS / LONG BARROWS

Wayland's Smithy / Ashbury / Oxfordshire / 56 m long, 13 m wide, 1st: wooden framework, 3700 BC, 2nd: stone, 3400 BC
**TOMBS / LONG BARROWS**

**West Kennet / Wiltshire / 100 m long / 46 burials / 3600-2500 BC**
TOMBS / LONG BARROWS

West Kennet / Wiltshire / 100 m long / 46 burials / 3600-2500 BC
TOMBS / LONG BARROWS

West Kennet / Wiltshire / 100 m long / 46 burials / 3600-2500 BC / main passage / burial chambers / stone seeker Peter Knight
TOMBS / LONG BARROWS

**Belas Knap** / Cleeve Hill / Gloucestershire / 54 m long / 18 m wide / 4.3 m high / 38 burials / 2000 BC / false-entrance on the north end
**TOMBS / LONG BARROWS**

Tricky structure

**Belas Knap** / Cleeve Hill / Gloucestershire / 54 m long / 18 m wide / 4.3 m high / 38 burials / 2000 BC / false-entrance on the north end / to make the tomb-robbers crazy
Naveta dels Tudons (Menorca, Baleáres, Spain) / 3200 BC / long- or hall grave / ~100 burials / there was covered grave inside the artificial hill
TOMBS / SEPULCHAR MOUNDS

in the area of West Kennet / Wiltshire / England
TOMBS / SEPULCHER MOUNDS

Dolmen de El Romeral / Antequerra / Andalusia / Spain / ca. 3800 BC
TOMBS / SEPULCHAR MOUNDS

Los Millares / Andalusia / Spain / between 3300-2900 BC
TOMBS / SEPULCHAR MOUNDS

Knowth and Newgrange / Ireland (close to Dublin)
TOMBS / SEPULCHAR MOUNDS

Knowth / Ireland / 90 x 78 m / 7020 m² / 11 m high (today) / two passages (33 and 34 m long) / ca. 3000 BC
TOMBS / SEPULCHR MOUNDS

Knowth / Ireland / ca. 3000 BC / one of the cruciform burial chambers covered by false dome / the eastern passage
TOMBS / SEPULCHR MOUNDS

Knowth / Ireland / ca. 3000 BC / the eastern passage
Newgrange / Ireland / Ø = 80 m / 11 m high / 25 m long inner passage / ca. 3200 BC
New Grange / Ireland / \( \varnothing = 80 \text{ m} / 11 \text{ m high} / \text{ca. 3200 BC} \) / The 19 meter long inner passage leads to a cruciform chamber (grave) with a corbelled roof / the inner passage was orientated to midwinter (21th of December), when the morning sunlight shines through the roof box over the entrance and penetrates the passage to light up chambers. This dramatic event lasts for 17 minutes.
TOMBS / SEPULCHR MOUNDS

New Grange / Ireland / cs 3200 BC / orientated to midwinter (winter solstice)
TOMBS / SEPULCHAR MOUNDS

Fuente Blanquilla, Huidobro / close to Los Altos, Burgos area (500 megalitic object are known in the area of Burgos)
Dolmen de La Taula dels Lladres / Selva del Mar, Catalonia / 3200-3000 BC
Mound of Antiokhos I. / Nemrut Dağ (Mount of Nemrut) / Antiokhos I. (70-38BC) king of Komagene / ø 50 m / made of small pieces of stone = artificial hill / three terraces / there’s an altar on the eastern side
Komagene / ancient kingdom in the mountain of Anti-Tauros / 163-72: independent kingdom / Antiokhos and Zeus shaking hands
Mound of Antiokhos I. / Nemrut Dağı (Mount of Nemrut) / Antiokhos I. (70-38 BC) king of Komagene / ø 50 m / made of small pieces of stone = artificial hill / three terraces / there's an altar on the eastern side.
Nemrut Dağ / Eastern Terrace / from left to right: Apollo (in the body of Hermes), Fortuna (godness of fertility in Komagene), Zeus (in the body of Ahura Mazda), IAntiokhos Theos (as a god), Herakles
MEGALITHIC STRUCTURES / CULTIC OBJECTS

Göbekli Tepe (Fat Hill) / close to Şanlıurfa (Urfa, ancient city of Ur) cultic object / it was used between: **12000 – 8200 BC**

It was built **earlier than the first well known settlements** were founded / there weren’t any settlements near by this sanctuary / it was used as **cultic center of hunter-gatherer people** lived in this area / **well organized community** / there were some periods: new ring – new period / it was lost at 8200 BC
Göbekli Tepe (Fat Hill) / cultic object / sanctuary / 12000 – 8200 BC

Stone rings made of huge (5 m, 15 t) stone slabs / antropomorphic T-shaped vertical slabs / scales are same (thickness/width = 1/5) / the slabs are looking on to the center / there are a lot of trimmings and reliefs in the surface of stone slabs
Vultures / wolves / lions / snakes / lizards = carnivores
MEGALITHIC STRUCTURES / HENGES

Circular or oval-shaped bank with internal ditch
5 - 20 m in diameter: **Hengiform monument** (Dorchester henge) / > 20 m: **Henge** (Stonehenge) / > 300m: **Henge enclosure**

**Avebury** / Wiltshire / 420 m in diameter, ditch: 21 m width, 11 m deep / 3300-2600 BC
MEGALITHIC STRUCTURES / HENGES

Circular or oval-shaped bank with internal ditch

**Avebury** / Wiltshire / 420 m in diameter, ditch: 21 m width, 11 m deep / 3300-2600 BC
MEGALITHIC STRUCTURES / HENGES
Circular or oval-shaped bank with internal ditch
Avebury / Wiltshire / 420 m in diameter, ditch: 21 m width, 11 m deep / 3300-2600 BC
Woodhenge / Wiltshire

Timber circle henge with 168 timber posts.

Earthworks, surrounded by a massive ditch and internal bank henge.

60 metres in diameter.

There was a sanctuary within the henge. The plan of this building was cylindrical. The posts stood in four concentric circles. The weight of biggest timber posts probably was more than 11 tons.

The axes are illuminated by the midsummer (21th of June) sunrise.
Stonehenge / Wiltshire / England
PERIODS OF STONEHENGE

STONEHENGE I. about 3100 BC
The native neolithic people using deer antlers for picks, excavated a circular ditch 98 m in diameter; the ditch was about 6 m wide and 2 m deep. Within the ditch the high bank was built. They also erected two parallel entry stones and a station stones. Inside the circular bank they also dug a circle of 56 holes (Aubrey holes).
It was used for about 500 years.

STONEHENGE II. about 2100 BC
The complex was radically remodelled. 80 blustones pillars (weighting about up to 4 tons) were erected in the center of the sites in two concentric circles, but the circles were never completed.
(The bluestones came from Wales and were either transported directly by sea, river and overland. The distance is 285 km.)

STONEHENGE III. about 2000 BC
The erection of the lintened circle of sarsen stones (it can be seen today). Within this ring was erected a horseshoe formation of five trilithons. These stones up to 9 m long and 50 tons is weight.
Z holes were dug outside the sarsen circle to plant upright in these holes 60 other leftover bluestones from STONEHENGE II., but the plan was newer carried out.
MEGALITHIC TEMPLES OF MALTA

Skorba 4850 – 4100 BC
Ggantija 3600 – 3200 BC
Hagar Qim 3000 – 2500 BC
Mnajdra 3000 – 2500 BC
Tarxien 3150 – 2500 BC

There were more than 30 ruins (for example: Skorba, 4500-4100 BC, Ggantija, 3800-3000 BC, Tarxien, Hagar Quim, Mnajdra 3000-2500 BC)

316 km² / 30 temples = 10.5 → 1 temple / 10.5 km²

The structure seems irregular at first sight, but it has strict rule of symmetrical placing. It means that there is the main axis and the side-cells are stringed on it. The placing of side-cells is always symmetrical to the axis.

Lot of stones were worked, carved with megalithic art: spirals and (most typical) dotting.
Mnajdra / Malta / 3600 – 2500 BC

Temple de Mnajdra
3 600 - 2 500 av. J.-C.

A - Temple primitif avant 3 600 av. J.-C.
B - Temple central 3 600 - 3 000 av. J.-C.
C - Temple inférieur 3 000 - 2 500 av. J.-C.

1 - Abside de l’oracle
2 - Trou de l’oracle
3 - Autel orné
4 - Niche ornée
5 - Bas-relief au temple
6 - Autel
7 - Niche
**Temple of Hagar Quim / Malta**

It was built 3000-2500 BC

Process of building of walls:

1. The walls were built of vertical stone blocks
2. The external walls were built
3. Banked up the sphere between two walls
4. The cells were covered by stone slabs