

GOTHIC ARCHITECTURE

ANATOMY OF FORM

History and Theory - Week 1
Introduction Setting the Scene

Ian Standen

Week 1 – Introduction, Setting the Scene – Greek, Roman and Early Christian Architecture

- Aims – To describe the key features and characteristics of Greek, Roman and Early Christian Architecture ; how they are related and subsequently influenced in terms of architectural ‘style’ and form Gothic Architecture.
- Objectives- By the end of the session students should be able to identify the basic features of each style and appreciate how these have developed, adapted over a period of time.

Preface

Lets consider the following statements:

- No architectural style was suddenly developed. There was always a preparatory period when innovation was introduced into old and tried methods.
- Through the ages this process continued until a recognised form was apparent and received sufficient support from the architects and craftsman of the time to give it continuity.

Preface

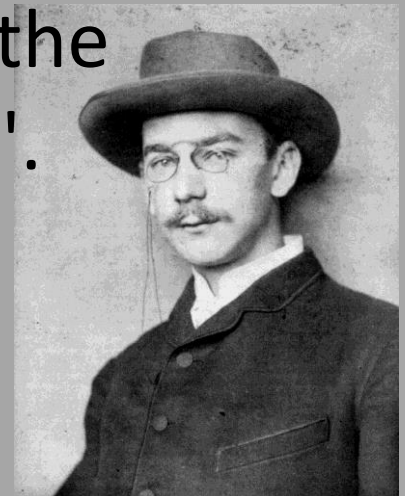
- Change happened through a form of evolutionary process.
- Individual mannerisms occurred in buildings at all stages and the periods were often labelled with titles such as 'transitional' 'high' and 'late'.
- A chronological sequence and an evolutionary order of recognition to the progress of development was established.

Architectural Style

- Historians are sometimes divided on exactly when and where a 'style' began with different names given to different periods.
- In every age there has also been a local and national expression (English, French, Italian for example) of a style influenced to a stronger or lesser degree by local conditions, building traditions and materials.

Architectural Style

- The notion of 'architectural style' was largely a creation of the 19th century with the advent of the discipline of architectural history.
- A Swiss architectural historian Heinrich Wölfflin developed the concept of style.
- He described architectural history as the 'problem of the development of style'.



Heinrich Wölfflin 1864 -1945

Architectural Style

Principles of art history

- Linear/painterly
- Plane /recession
- Closed form/open form
- Multiplicity/unity
- Absolute clarity/relative clarity

Architectural Style

- From this framework Wölfflin asserted that any architectural historian with the necessary 'visual' education would be able to ascertain the 'style' of a particular work of architecture and chart its 'progression' over time.

Architectural Style

If we consider style in the broadest sense:

- A) to group and analyse buildings showing very particular traits.
- B) highlight cultural trends.
- C) demonstrate architectural strategies - this may also show buildings that superficially might appear unrelated.

Architectural Style

STYLE

Conceived as:

- 1. Formal characteristics
- 2. Broad cultural trends and
- 3. Movements/ideologies.

Time to ask the Audience

Questions?

- What features do you associate with Gothic Architecture?
- When do you think the Gothic Style began?
- In which country did it originate?
- Name two British Gothic Cathedrals that you admire and maybe have visited?
- When do you think they were built?
- Name two European Gothic Cathedrals that you admire and maybe have visited?
- When do you think they were built?

Which Style? Where? When?
A question of Architectural Genealogy?

ARCHITECTURAL FORM AND LANGUAGE

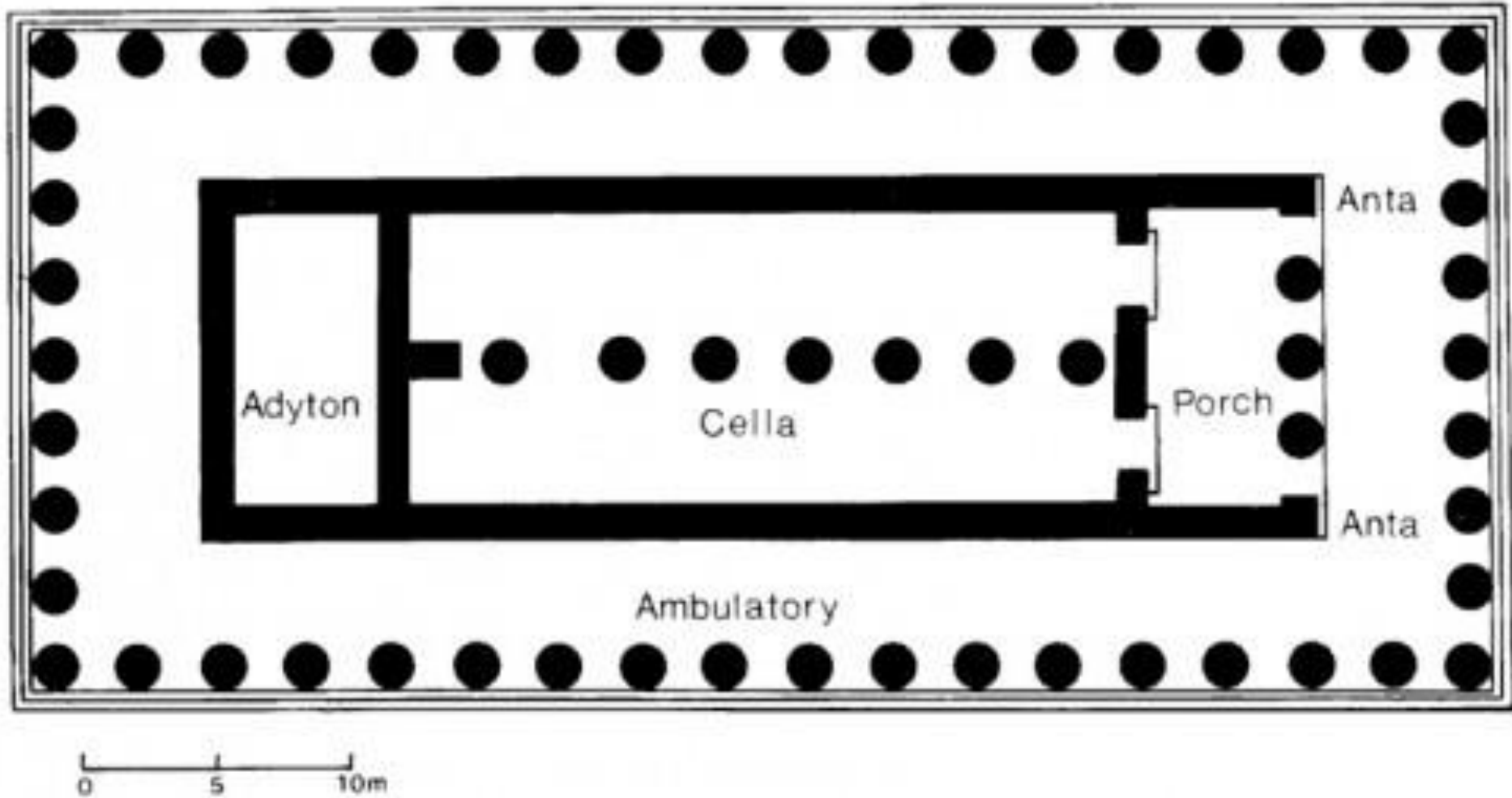
Early Greek Architecture

- Greek architecture originated in the use of timber columns and beams.
- It developed to use stone in its construction.
- It embodies the principle of beam and post construction.
- This developed into the trabeated system.
- Buildings were typified by lines of columns with beams spanning between the columns.



Temple of Hera I at Paestum, Italy mid sixth century BCE

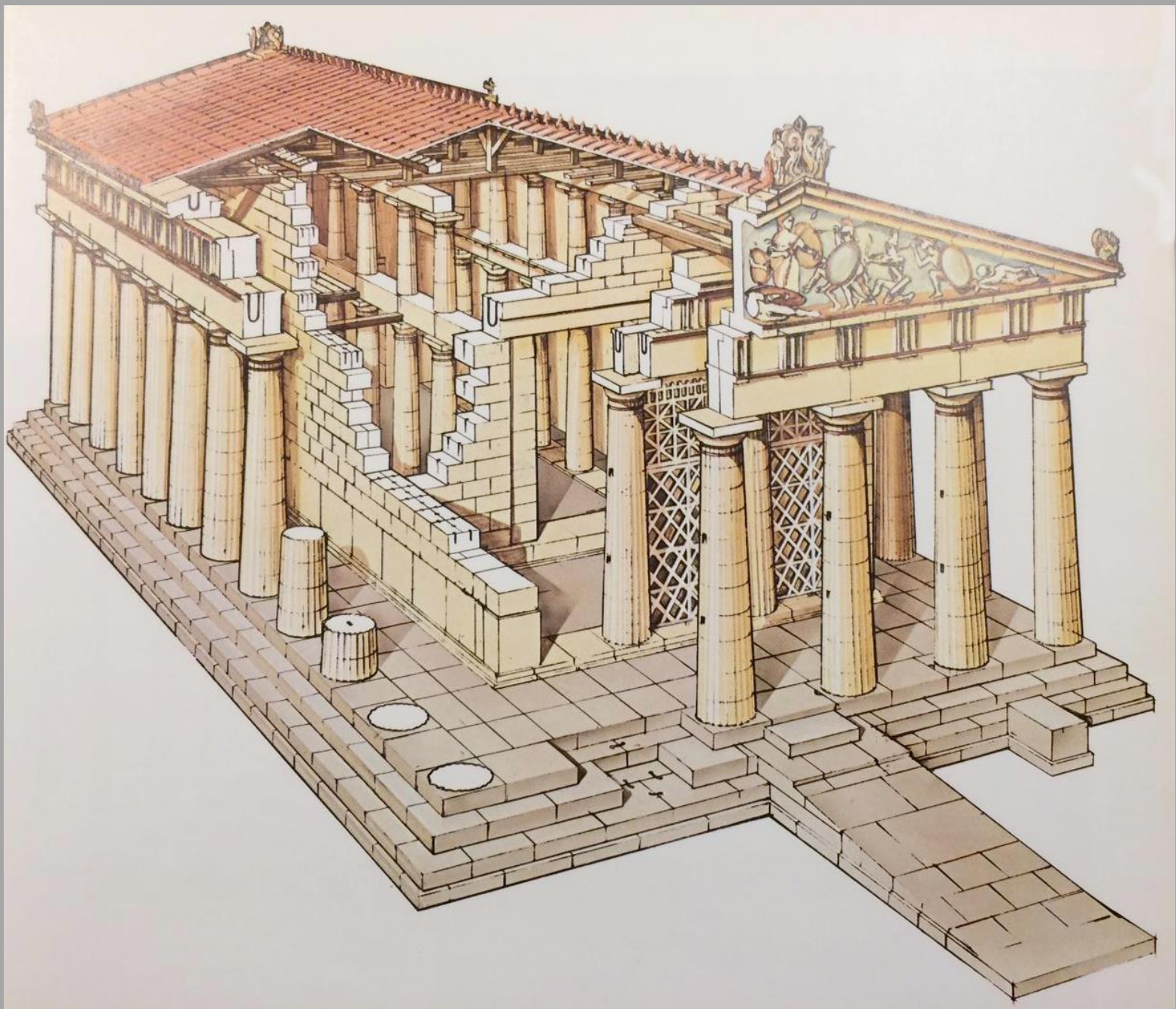
<http://www.paestum.org.uk/temples/basilica/>



Temple of Hera at Paestum Italy mid sixth century BCE



Temple of Hera at Paestum Italy mid sixth century BCE



Drawing showing a typical Greek Temple

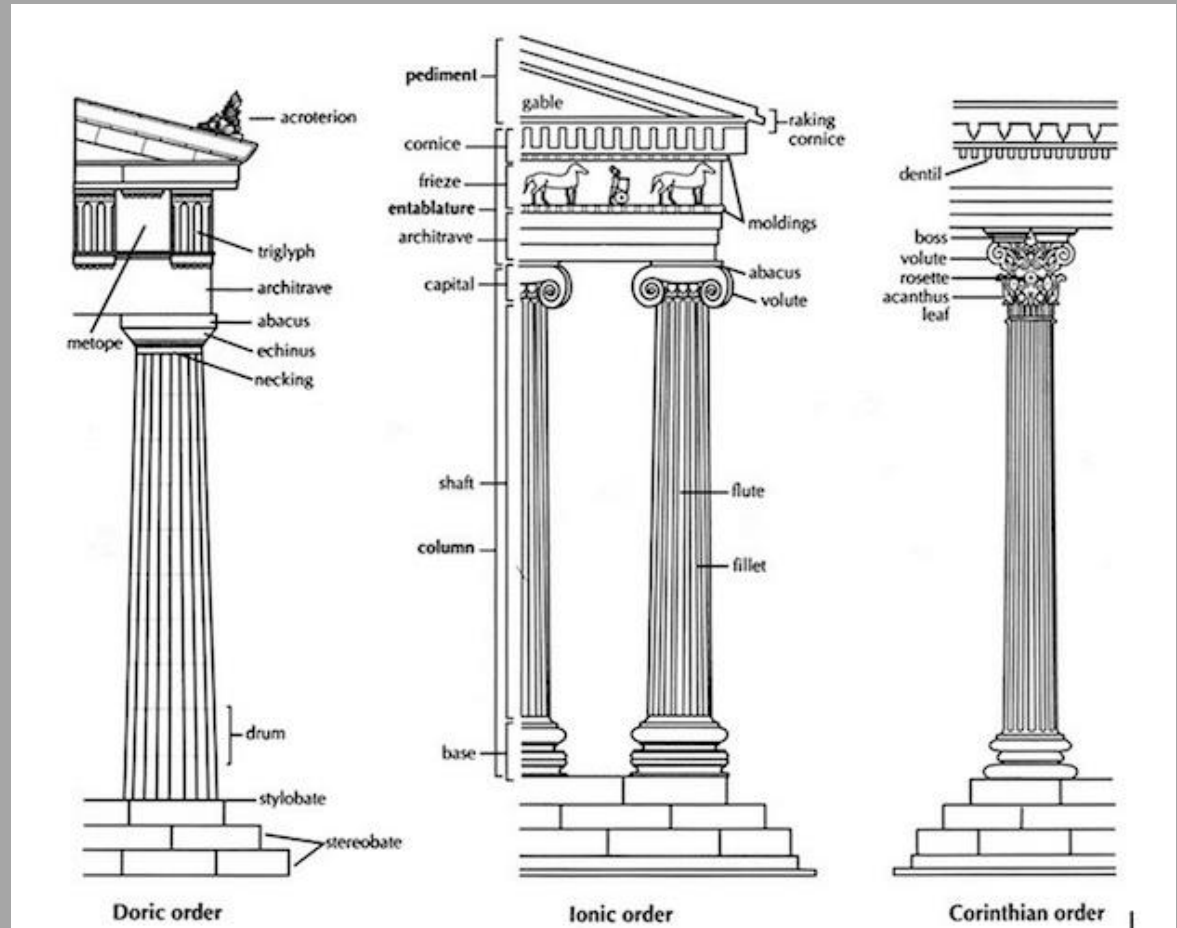
- Greek temples embodied architectural articulation, proportion and structural logic. It intended to create an impact when viewed from outside to match their ideal of a house for a god.
- This combined and was integrated with the symbolic language.

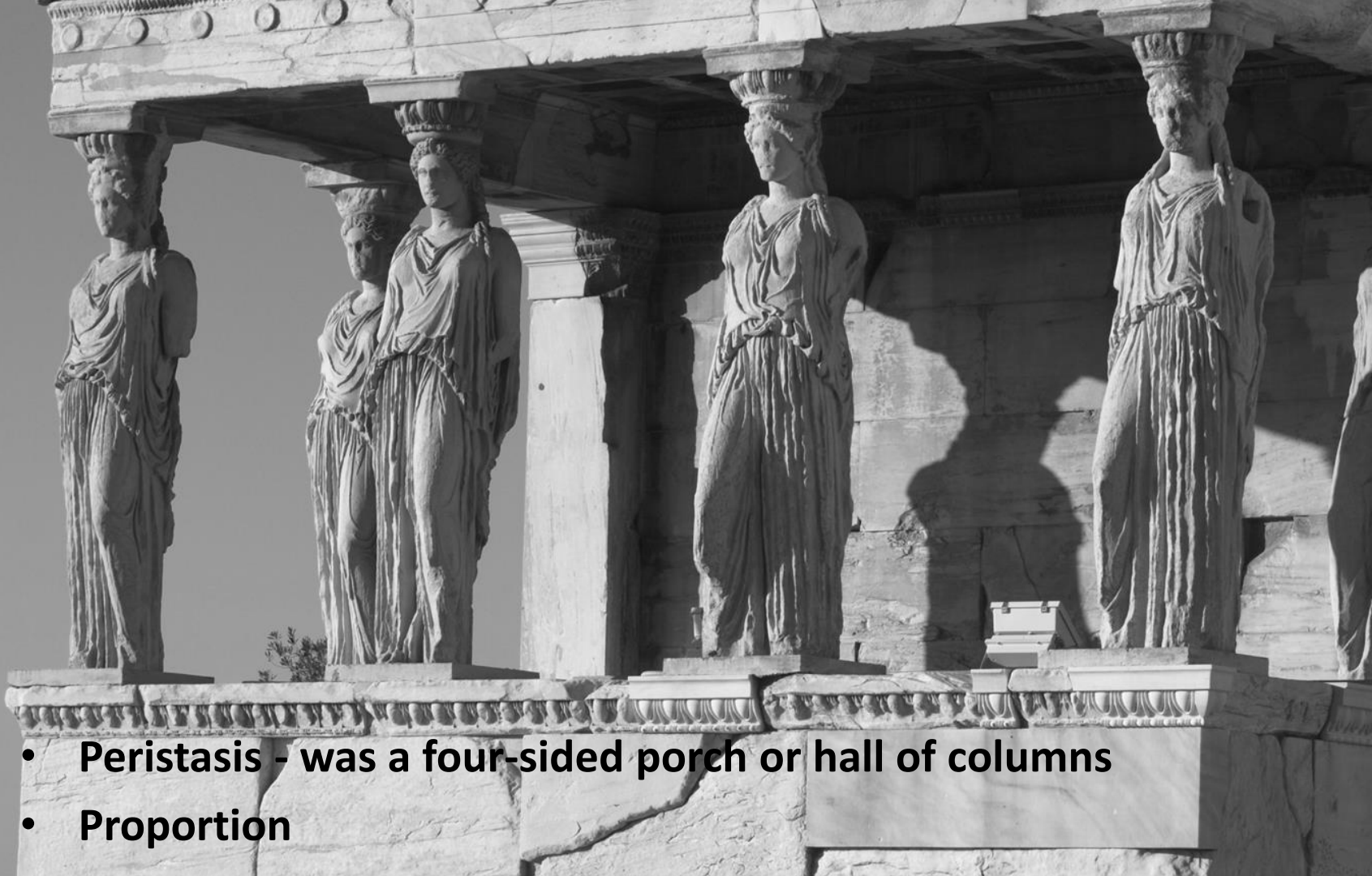


Early Greek Architecture

- **ORDERS**

- The Greeks developed a system of orders to the columns Doric, Ionic and Corinthian
- Each had its own proportional system with the diameter of the columns related to its height.





- **Peristasis** - was a four-sided porch or hall of columns
- **Proportion**
- **Sculpture**
- **Greek architecture considered scales and ratios both in plan and elevation. Derived from rigid geometry which also took into account the distorting effect of human eye. i.e. Entasis**

ROMAN ARCHITECTURE

- Features common of Roman architecture include the arch, walls, orders, vaults, domes and new building types.
- The Romans adopted the classical style developed by the Greeks in their architectural language but they adapted it for new uses/situations.
- Roman architecture became urban, enclosed.

ROMAN ARCHITECTURE

- The Roman Empire introduced a universal architecture with buildings of any Roman colony bearing a strong resemblance to those of every colony.
- They varied in extent/magnificence.
- The design language remained the same.

ROMAN ARCHITECTURE

- However the technologies employed in developing load-bearing masonry construction utilised by the Romans were more advanced for instance in the use of concrete in the Pantheon.
- Concrete, which allowed the mortar to achieve a stone-like strength, mixing volcanic ash, lime and water was also very malleable. By adding pumice the concrete was lighter.

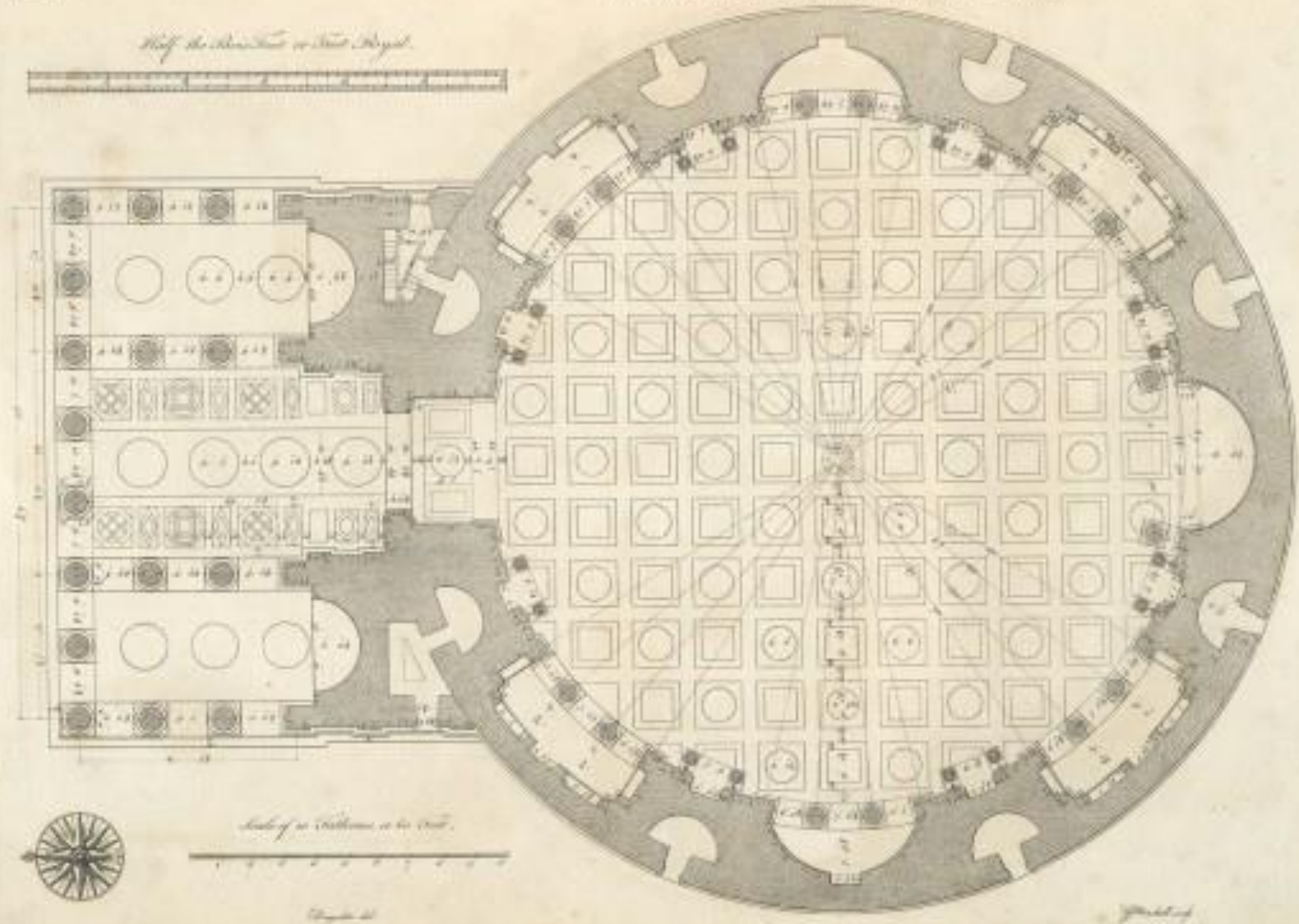


Pantheon (aerial view), Rome, Italy, 118-125 CE

ROMAN ARCHITECTURE

Table

THE GROUND-PLAN OF THE PANTHEON AT ROME.



ROMAN ARCHITECTURE





ROMAN ARCHITECTURE

THE ARCH

- The development of the arch meant wider distances could be spanned by comparison to the trabeated system.
- The arch lead to the development of the vault and domes.

ROMAN ARCHITECTURE

THE ARCH



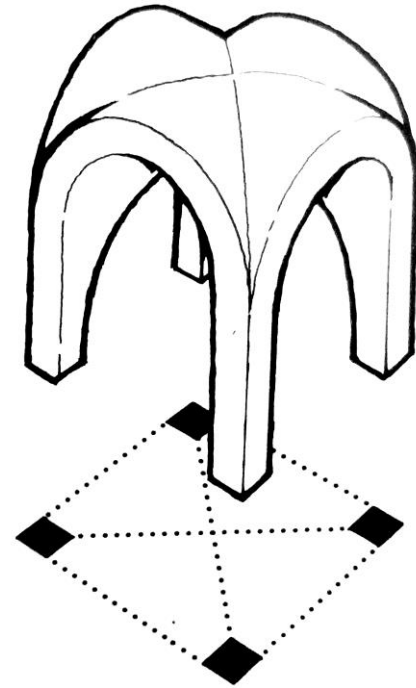
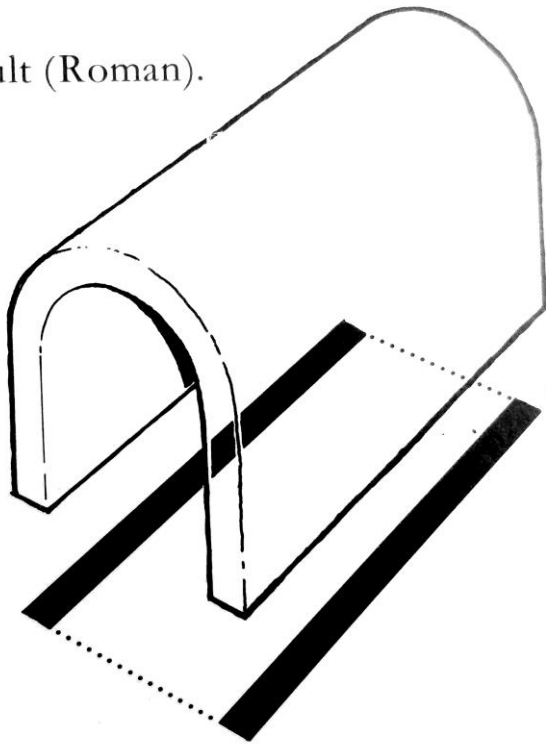
Pont du Gard, Aqueduct Nimes, France

ROMAN ARCHITECTURE

VAULTS AND DOMES

- The arch provided the geometric basis for the vault and dome development.

Barrel vault (Roman).



Groin vault with equal spans.

ROMAN ARCHITECTURE

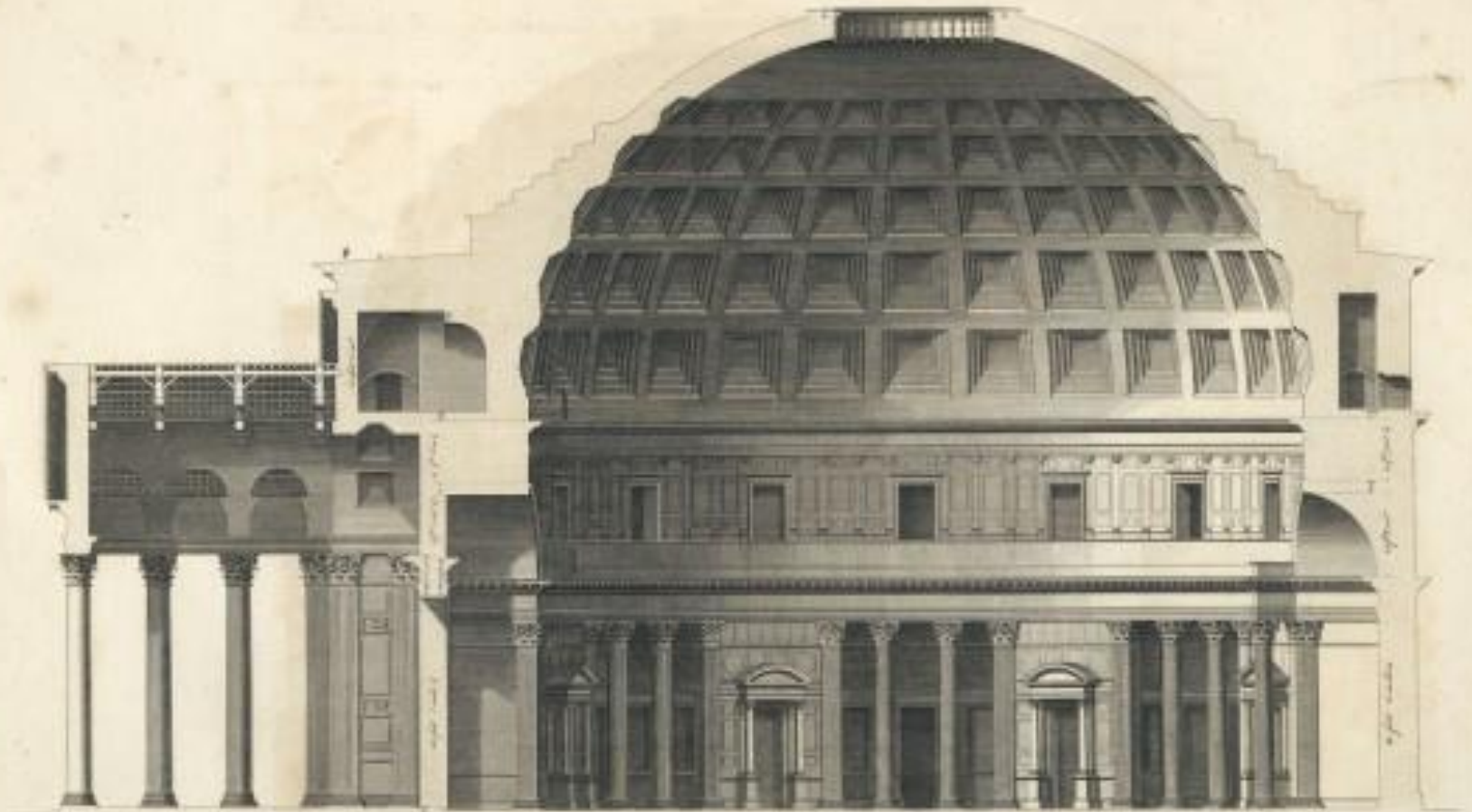
WALLS

- Enclosing space
- As an urbanised form Roman architecture moved away from the use of the Colonnade towards the use of applied columns and pilasters to articulate the walls.

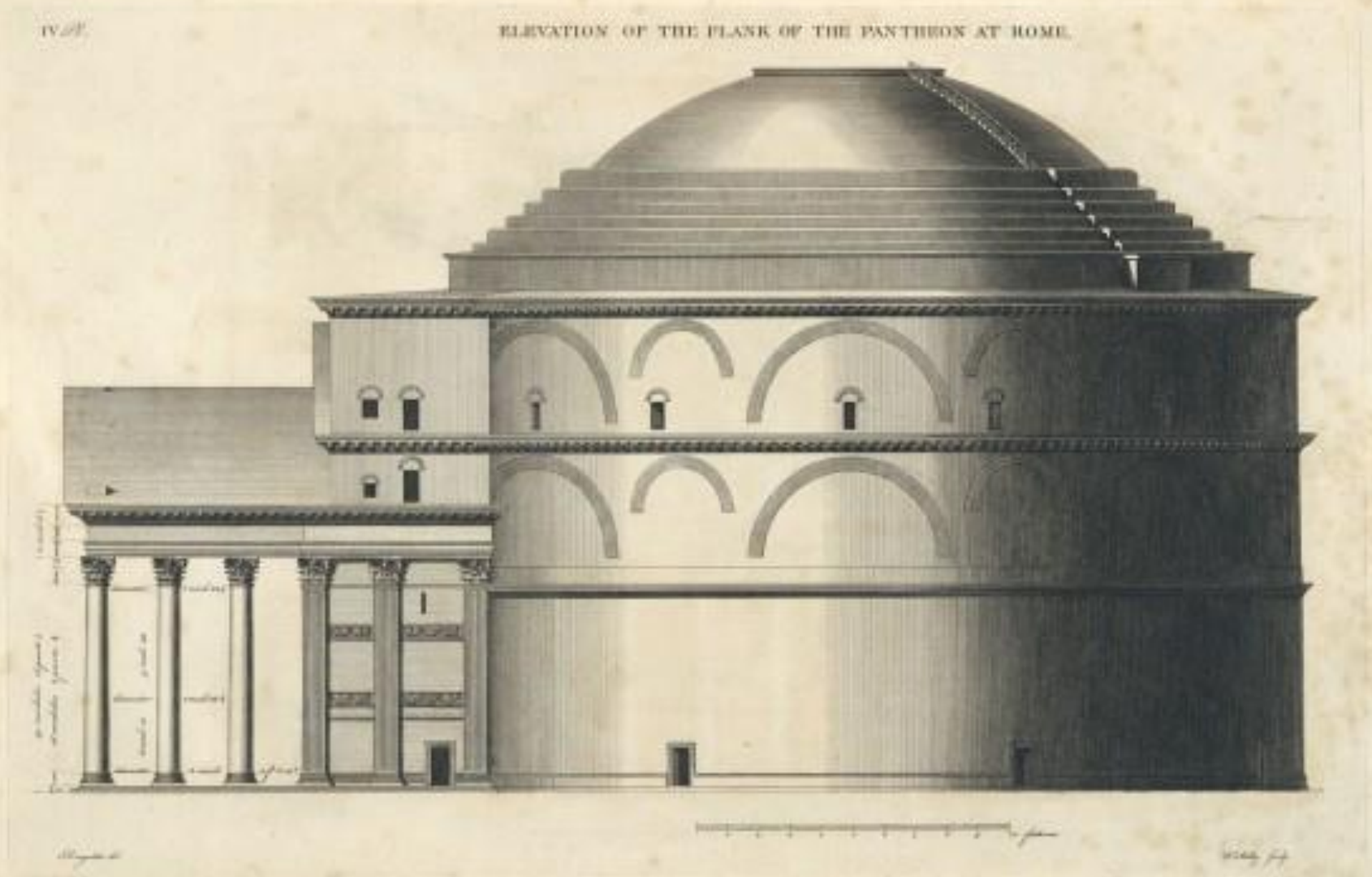
ROMAN ARCHITECTURE

VI.

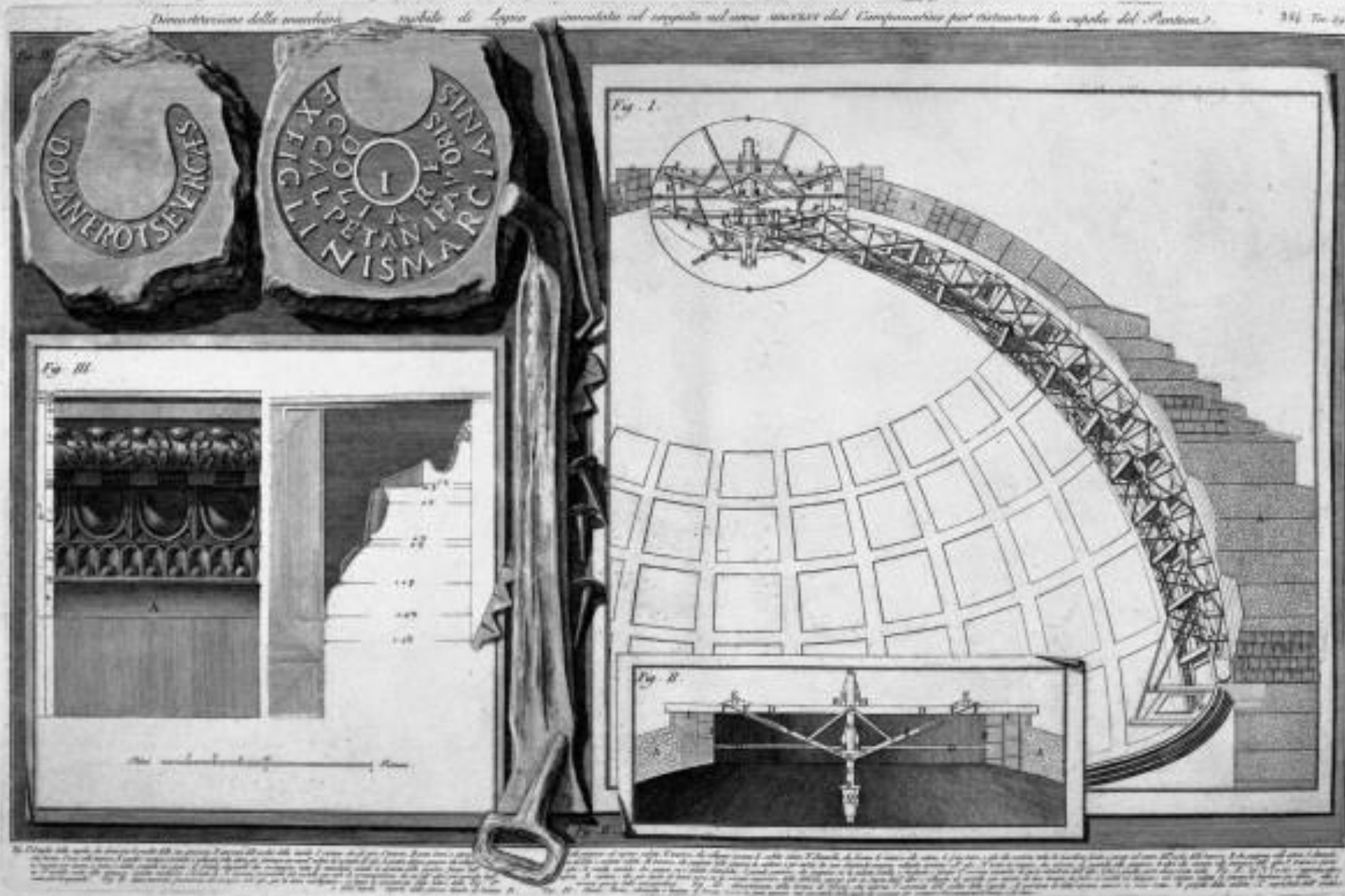
PROFILE ON THE LENGTH OF THE PANTHEON AT ROME.



ROMAN ARCHITECTURE



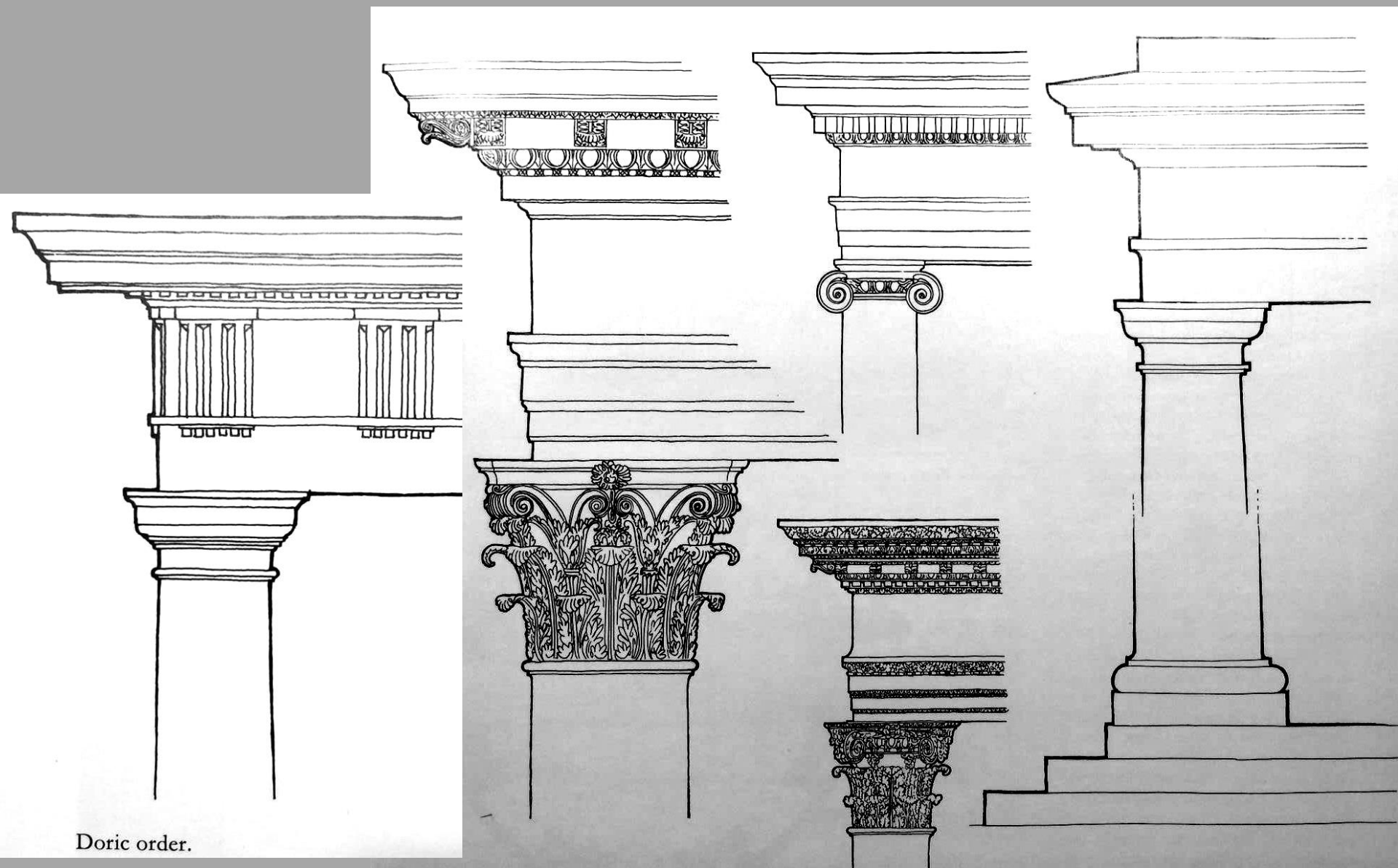
ROMAN ARCHITECTURE



ROMAN ARCHITECTURE

Orders

- Romans adapted the existing classical language of architecture.
- They also developed the orders into Doric, Ionic, Corinthian, Tuscan and Composite.
- This is an example of architecture evolving to redefine itself.



Doric order.

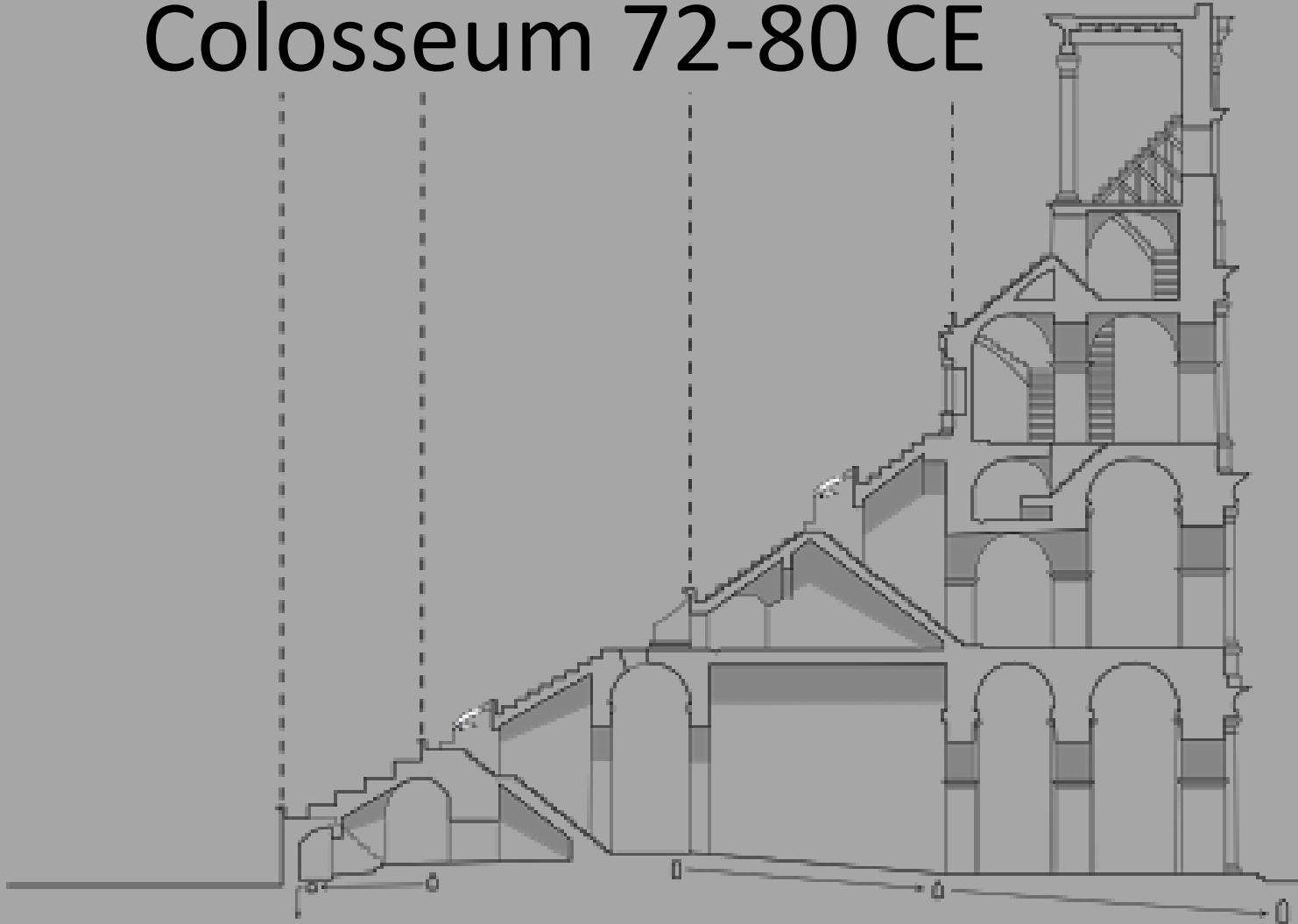
Ionic, Corinthian, Tuscan, Composite

ROMAN ARCHITECTURE

NEW BUILDING FORMS

- Amphitheatrum Flavium or more commonly known as the Colosseum 72-80 CE
- Oval in plan and showed a stacking of orders on the elevations.
- This was not done before in Greek architecture.

Colosseum 72-80 CE

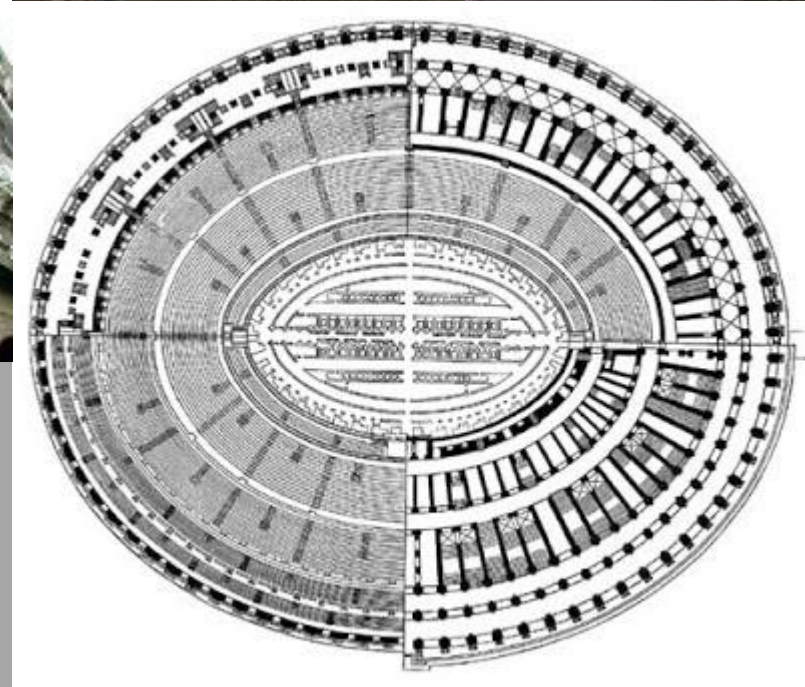


Section through part of the Colosseum

Colosseum 72-80 CE



Colosseum 72-80 CE



ROMAN ARCHITECTURE

MONUMENTALITY

- Architecture was highly important reflecting power and prestige of the Roman Empire.
- For example the arch of Constantine Rome 315 CE



EARLY CHRISTIAN ARCHITECTURE

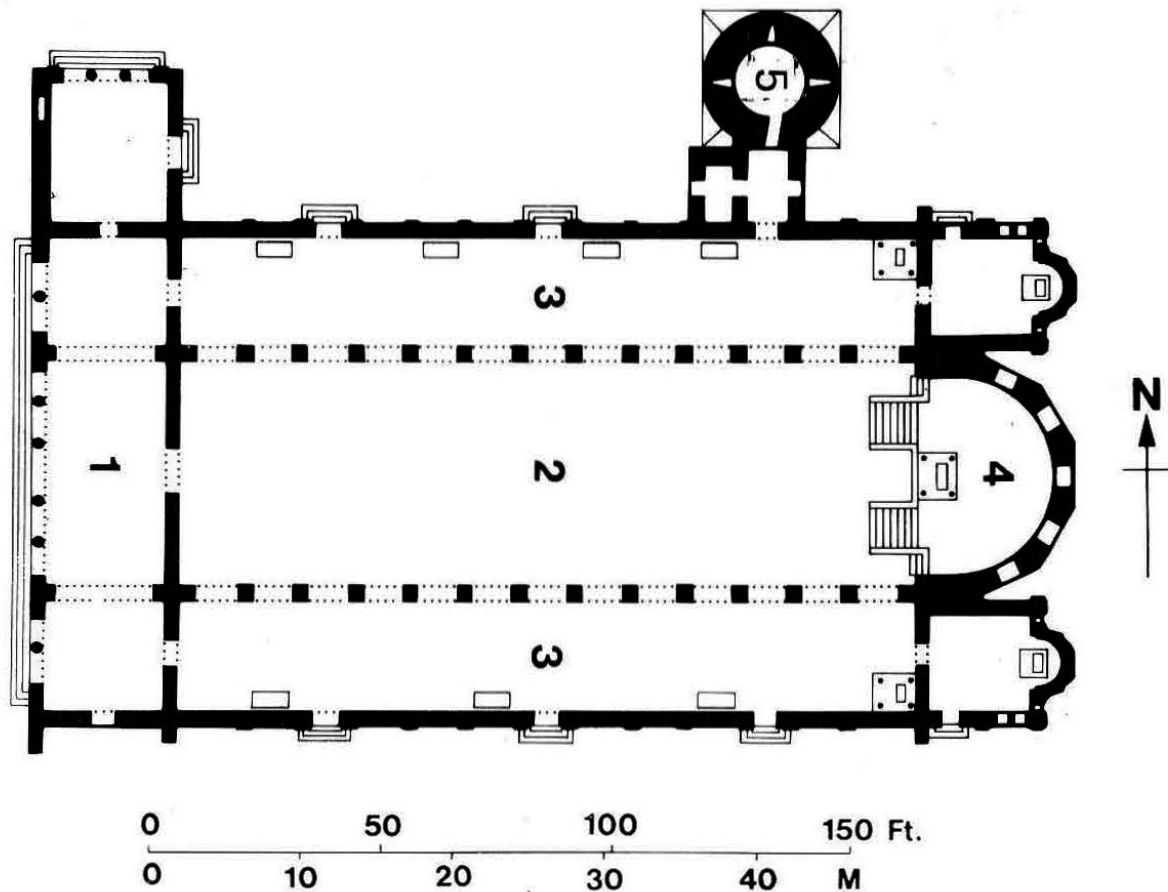
- Edict of Milan - Emperor Constantine legalised Christian Worship across the Empire 313 CE
- It was supported through political and legal reform.
- It became the official religion of Rome in 326 CE
- Constantine built a number of churches including St Peters in Rome.

EARLY CHRISTIAN ARCHITECTURE

- It started the development of the Basilica form - Basilica floor plan
- This formed the basis for the development of many churches.
- It also marked a period of turbulence and change in the Empire as the west came under pressure of invading German hordes.
- The Roman Empire was divided between Rome in the West and Constantinople in the East. The Eastern Roman Empire survived until its fall and the rise of the Ottoman Empire in 1453.

THE BASILICAN CHURCH

- **PLAN**
- Typified by narrow central hall with aisles on either side
- Apse at the end
- Derived from the Basilica (Roman Hall of Justice or Roman Villa) *subject of debate*.
- Entrance from the West through a colonnaded open court (but not always).
- Leads to the Narthex - a narrowed covered vestibule running the full width of the church.
- Examples - Church of the Nativity Bethlehem (marks the birth place of Christ). 330 CE containing 3 apses, triapsial.
- Other examples - Dome of the Rock Jerusalem 688



S. APOLLINARE IN CLASSE, Ravenna.

Plan:

1 narthex,

2 nave,

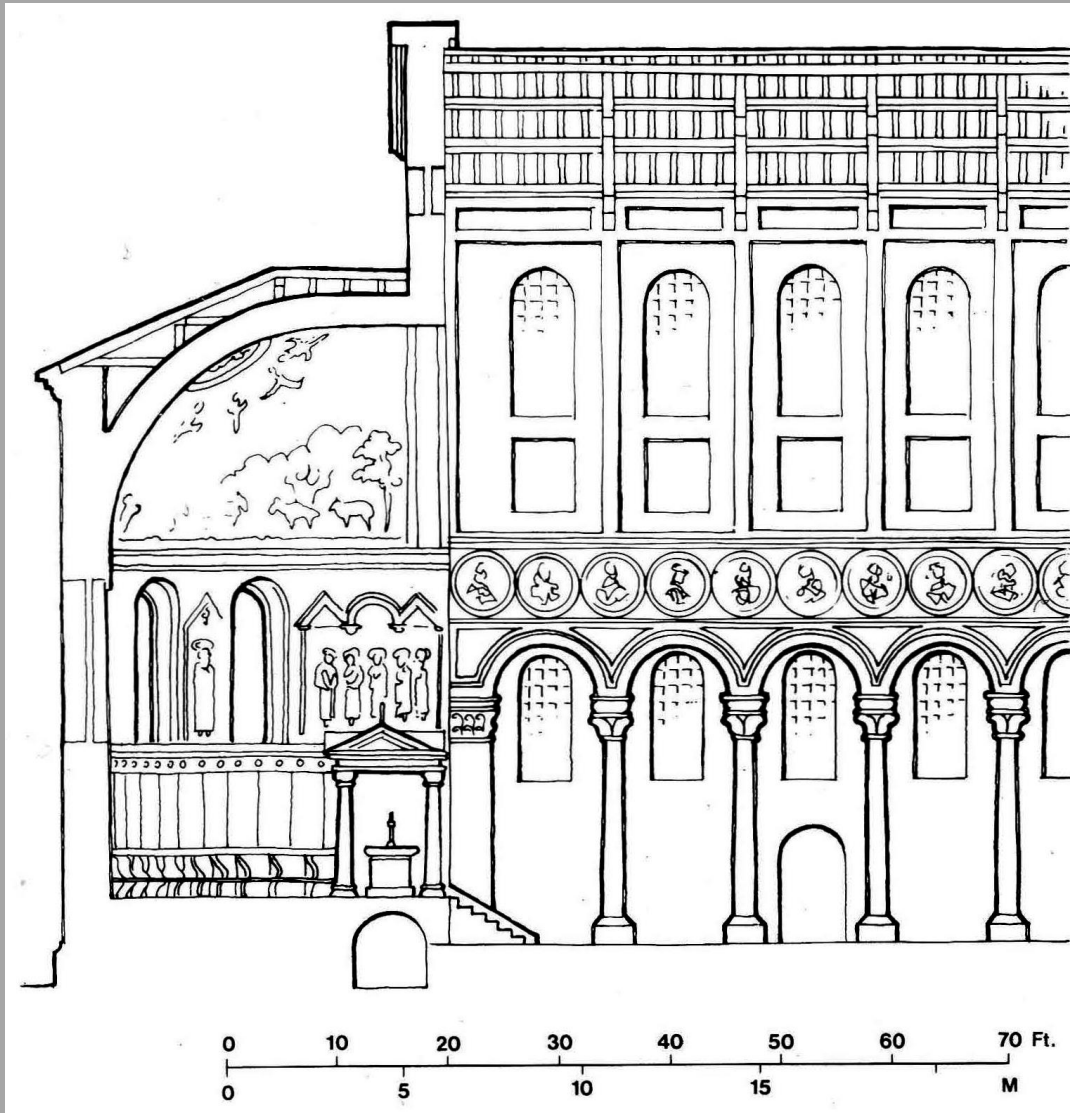
3 aisle,

4 apse,

5 *campanile*.

S. Apollinaire in Classe, Ravenna
Mid 6th Century CE

EARLY CHRISTIAN ARCHITECTURE



Section showing apse (left)

S. Apollinare in Classe, Ravenna
Mid 6th Century CE

EARLY CHRISTIAN ARCHITECTURE



S. Apollinare in Classe, Ravenna
Mid 6th Century CE

EARLY CHRISTIAN ARCHITECTURE



S.Apollinaire in Classe, Ravenna
Mid 6th Century CE

EARLY CHRISTIAN ARCHITECTURE



S.Apollinaire in Classe, Ravenna
Mid 6th Century CE

EARLY CHRISTIAN ARCHITECTURE



S.Apollinaire in Classe, Ravenna
Mid 6th Century CE

EARLY CHRISTIAN ARCHITECTURE

- For all its simplicity it was from the Basilican Church that the Great Romanesque and Gothic Cathedrals developed.

Discussion/ Reflection/Recap