History of Architecture

Renaissance Architecture

Sara Khasib

Introduction

- Gothic architecture was not determined by formal, universal norms. It represented an uncivilized, brutal period

- People went looking for **intellectual** and **artistic** achievement that matched the ancient's work

- The term "Renaissance" would mean the **rebirth of classical solidity of human form and expression**

- They had new confidence in their intellectual abilities:

  - **Architecture with mathematical clarity and rationality**

  - **Architecture stress the human proportion**

Introduction

Italian architecture was naturally the first to be affected since the Gothic style had never taken a firm hold on the Italians

Timeline in Italy

- Early Renaissance (15th century)

- High Renaissance (1500-1525)

- Late Renaissance + Mannerism (1520-1600)

Social and Political

- A new intellectual movement started sooner in **literature** than in architecture

- Dante (1265-1321), Petrarch (1304-1374), and Boccaccio (1313-1375) aided in the spread of the newly-discovered classic literature, which caused a revolt against mediaeval art

- The fall of Constantinople in 1453 caused an **influx of Greek scholars into Italy**, whose learning was an important influence

Humanism

- Humanism began with a renewed interest in antiquity and rereading the works of the ancient (Plato and Aristotle)

- The Renaissance thinkers would be more interested in the Greek and Latin Literature than the literature of their close history which is considered tainted from religious medievalism

- Humanism:
  - Focused on the mathematical approach
  - Rejects the supernatural
  - Focused on the individual and mortal soul
  - Focus on the individual's ability to reason
  - Celebrated the wonder of human achievement

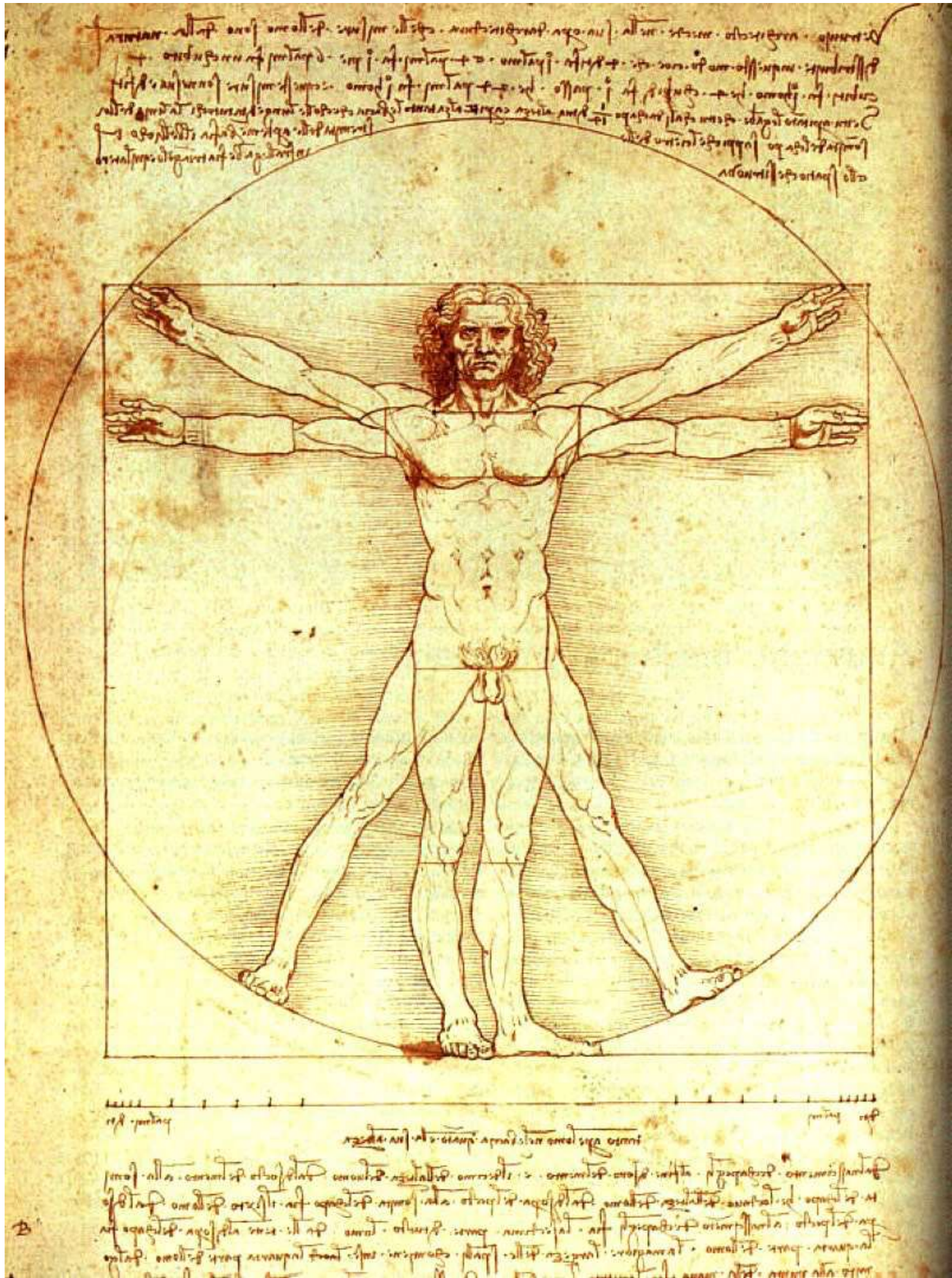
- Humans were still seen as god's creation but had free will to pursue their own destiny

Architecture - Ideal form

- The architectural bible for the new humanists was (the ten books of Architecture) written by **Vitruvius** - published in 1511

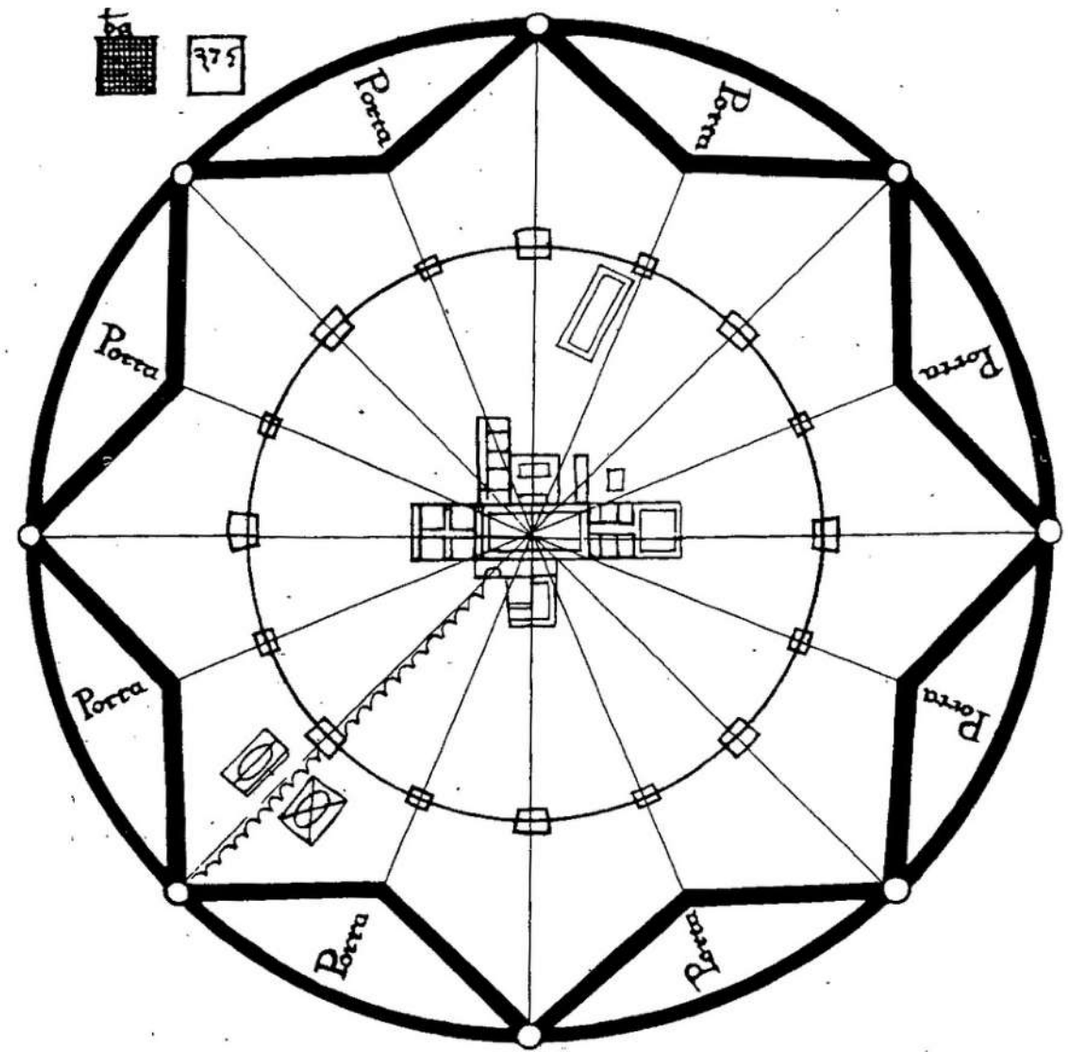
- For Vitruvius, **the ideal systems of proportion found in human body**

- He also noted how the ideal shapes of **square** and **circle** are also incorporated in the human body



What is Renaissance?

- Focus on the body
- Focus on what it means to be human
- Reason and classical virtue
- New self consciousness
- Focus on the individual
- Attention to proportions and geometry
- Perfect shapes found in the square and the circle
- Architecture as a mathematical science



Architectural Character

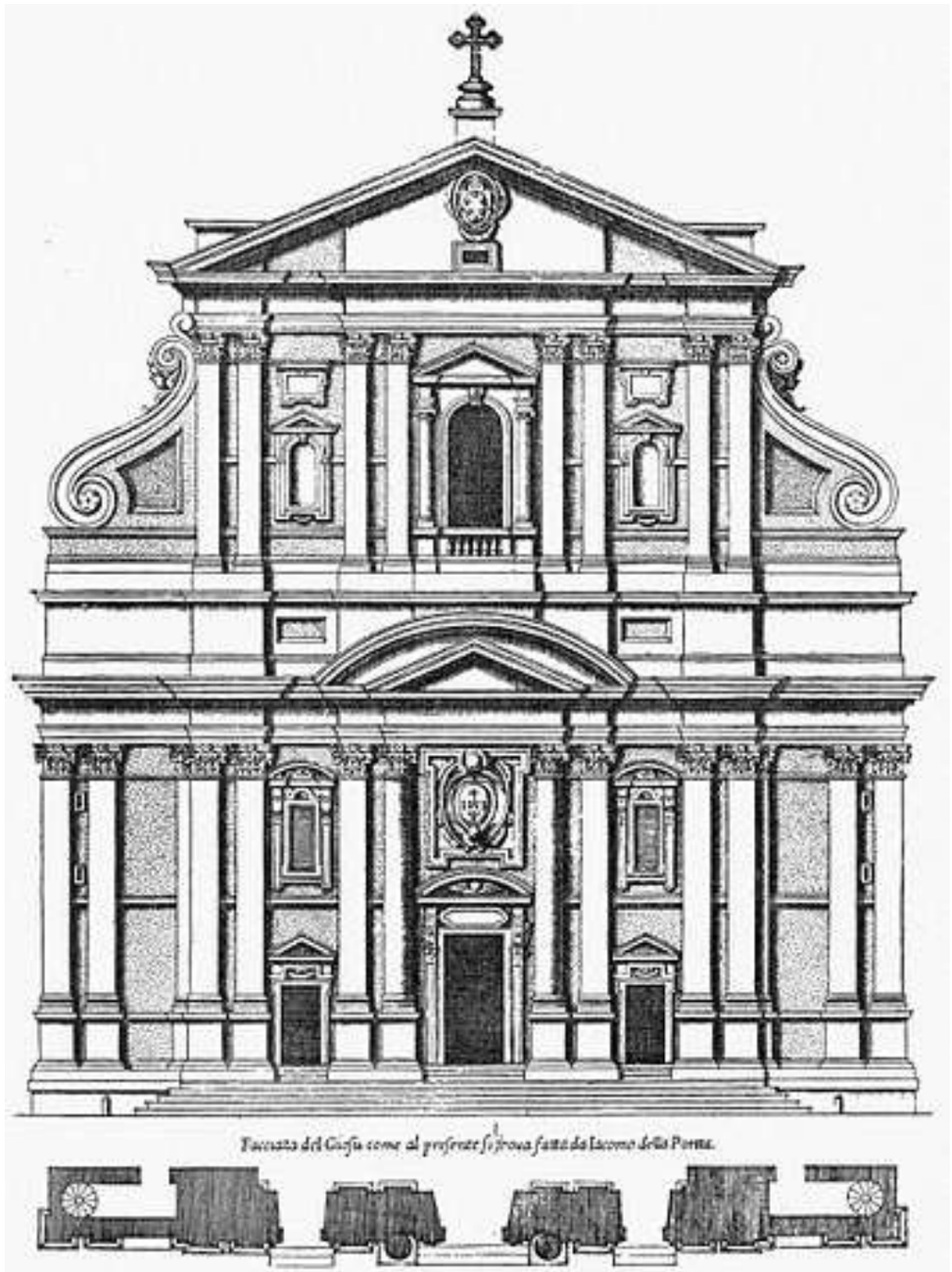
Scholars and thinkers as they reread old Greek and Roman texts faced the standard problem of how to reinvest in the past in a way that suits the needs, purposes, and imaginaries of the present

1. **Style** is very important, regardless of the materials of their execution

2. **Roman style** was used as an **envelope** while the **structure** was to large extent following the **traditions of the Middle Ages**

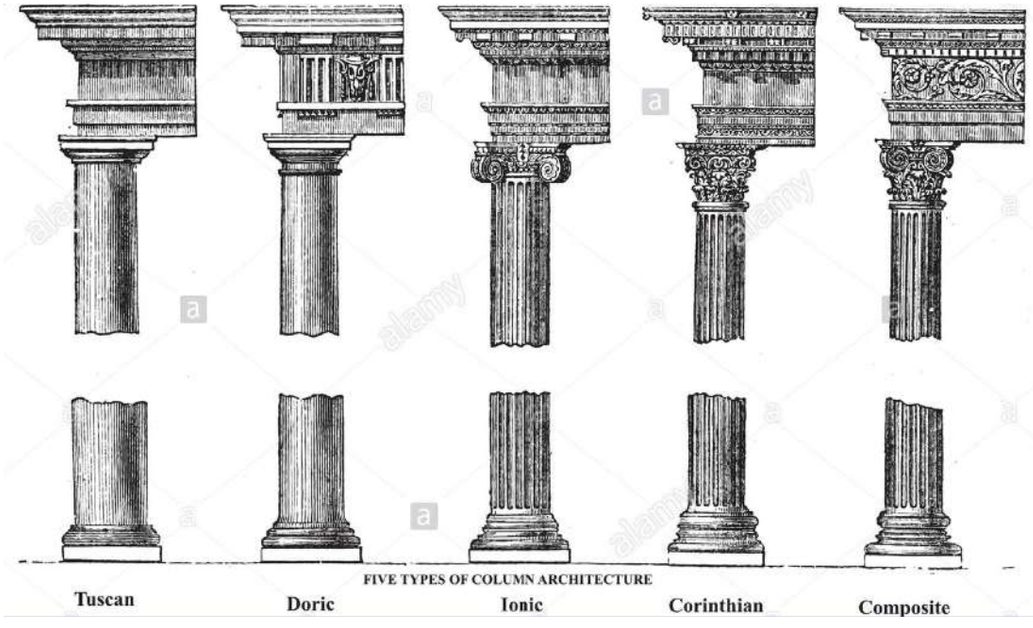
3. Attention to **proportion**

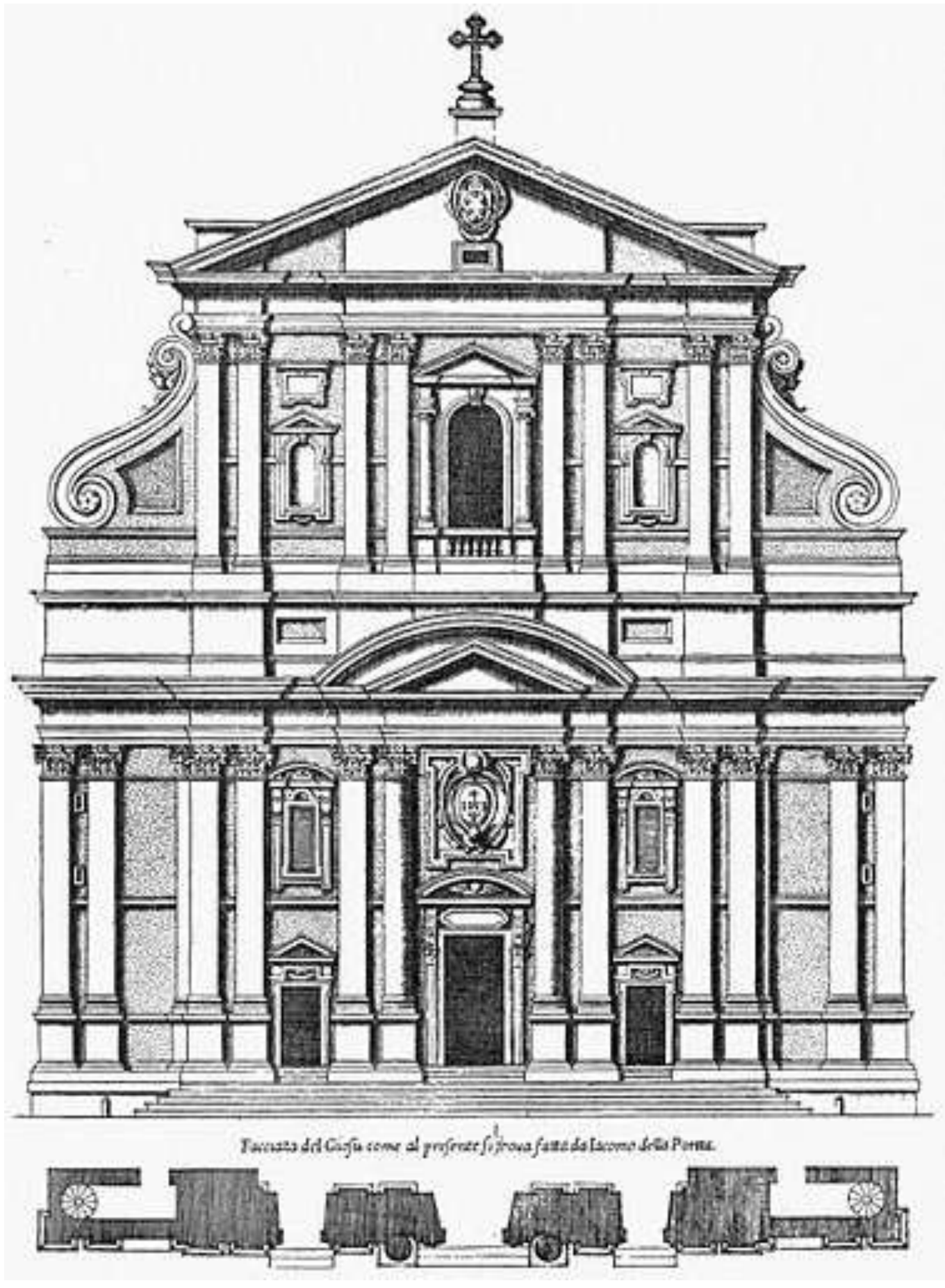
4. **Structures** as works of art rather than structural necessities



5. **Classical orders** - the Doric, Ionic, and Corinthian

6. The Gothic principles of ribbed vaulting were abandoned, giving place to the revival of the **Classic method of solid semicircular vaulting**





7. **Elaboration and detail design was important** - Artists were always employed in the design - philosophy in the craftsmanship

8. The Renaissance architects followed the **Byzantine treatment of the Dome**, especially at the crossing, and **preferred the centralized ideal forms of squares and circles**

9. **Facades become flatter and volumes more regularized**, the vertical dimension began to be articulated by horizontal layers of columns, entablatures, and cornices. The balance of vertical and horizontal elements in forms reflecting human proportions.

Early Renaissance Architects

Filippo Brunelleschi

Early Renaissance Architect
1377- 1446

- Upper middle class Florentine background

- Worked as a goldsmith and a sculptor as a young man

- Spent many years studying the ruins in Rome

- Credited for developing linear perspective

- Credited with creating the Renaissance “style” in architecture

Foundling Hospital, Florence (1419)

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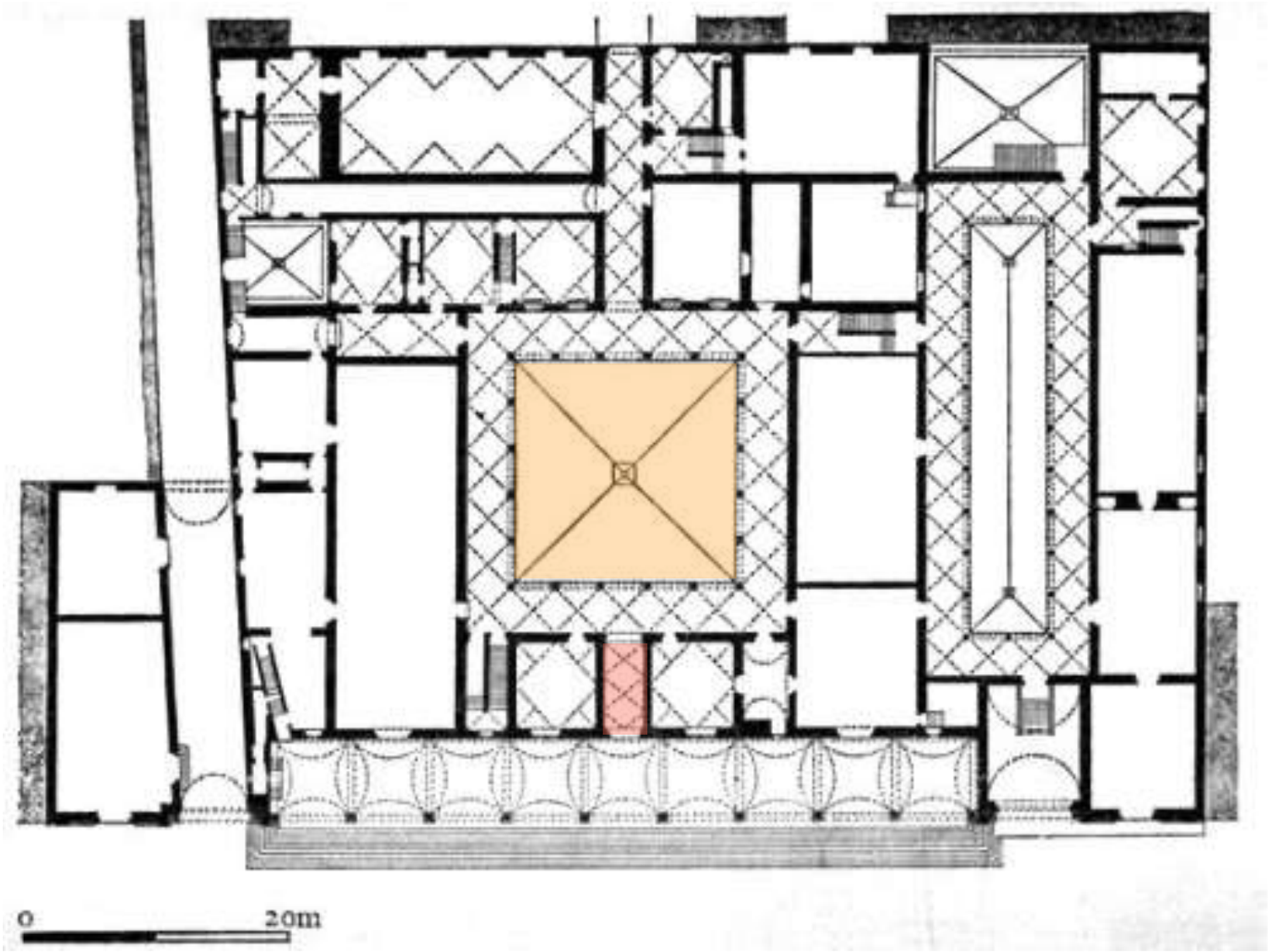


- Example of new **"civic spirit"** – first orphanage hospital ever built

- Regularity of plan with orthogonal, rectangular spaces

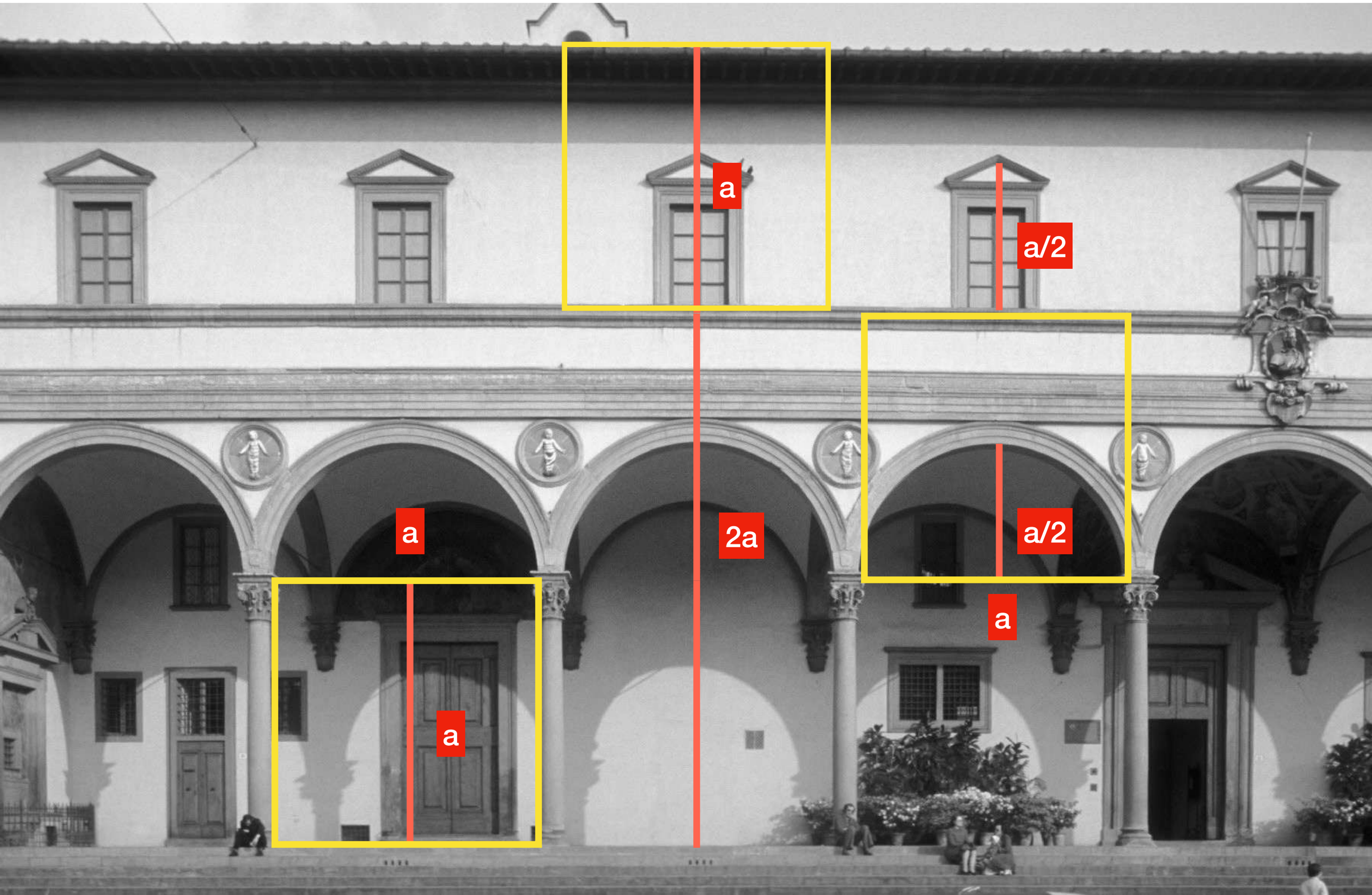
Foundling Hospital, Florence (1419)

- Roman - Classical Elements:
  - Corinthian Columns
  - Triangular pediments at windows, door, window frames
  - Round arches

- Open portico to street - stoa like

- The columns are spaced exactly as far apart as they are tall - squares in elevation

Foundling Hospital, Florence (1419)



Church of Santo Spirito, Florence (1436-1482)

Church of Santo Spirito, Florence (1436-1482)

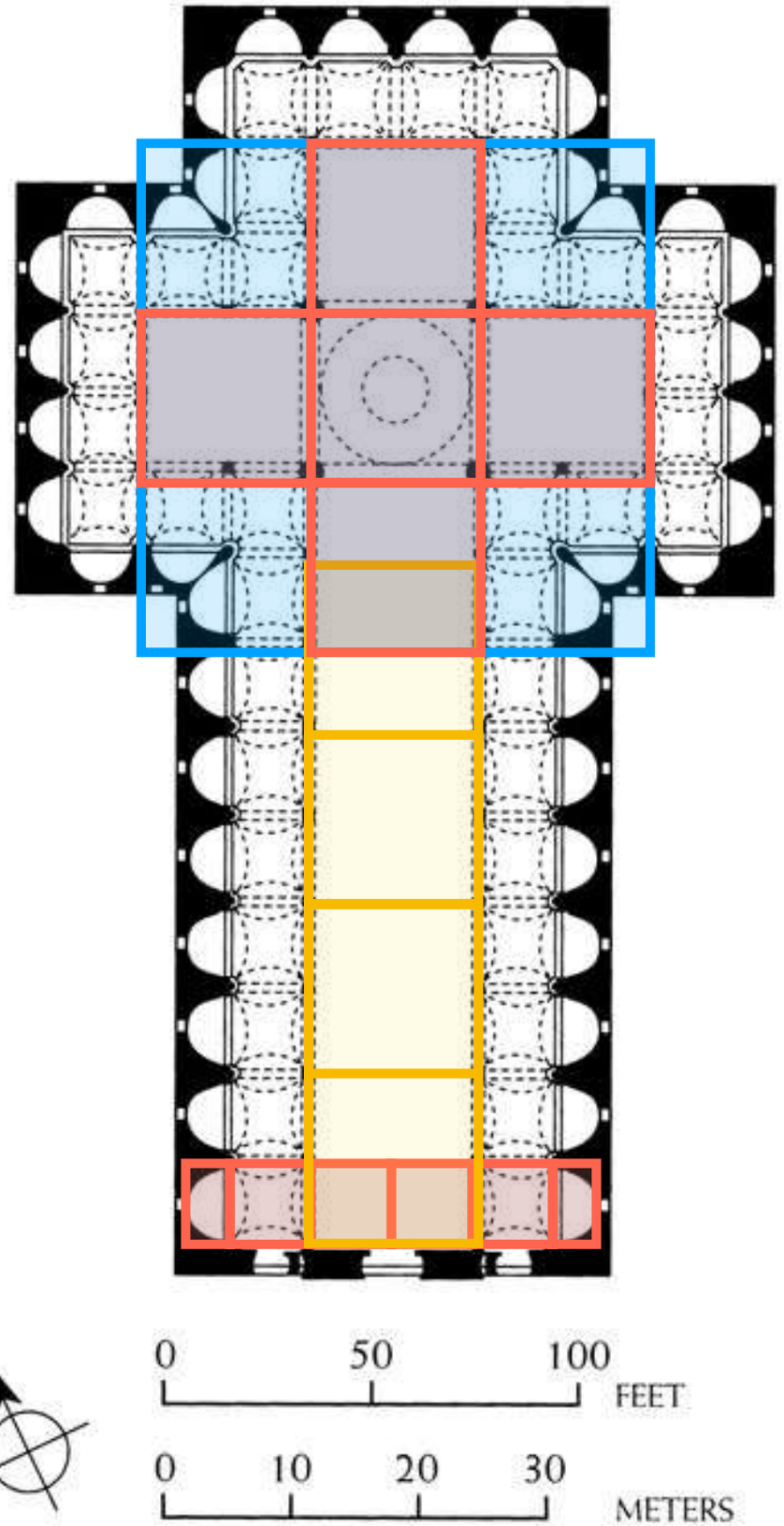
- A space organized by cubes

- A large cube forming the choir and transept

- Four cubes for the nave, each cube defined by Corinthian columns and pilasters

- Each small square is followed by a semicircular apse - width is half the width and height of the side aisles

- Instead of the medieval mystical space, here it was a celebration of the human rational



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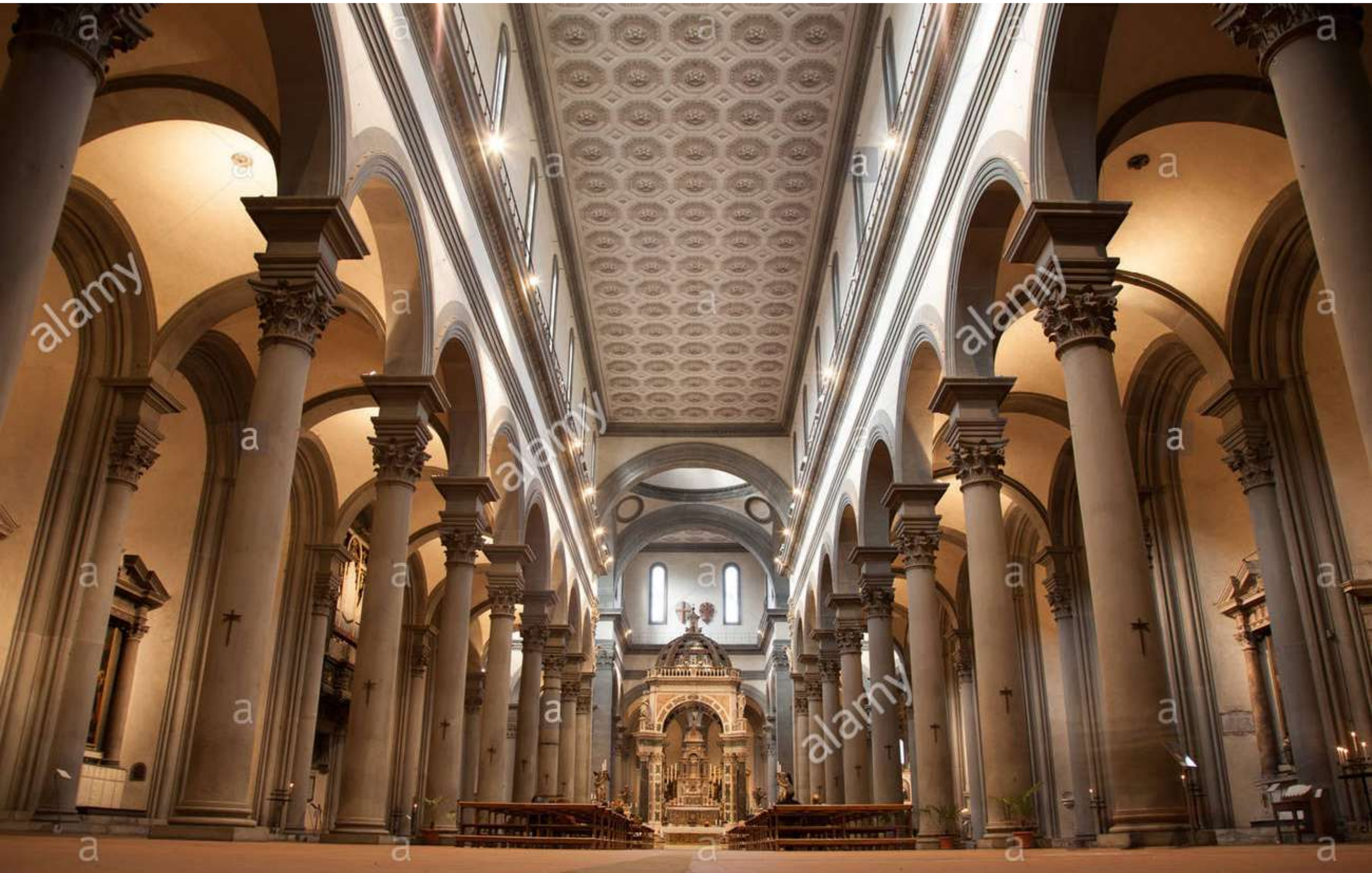
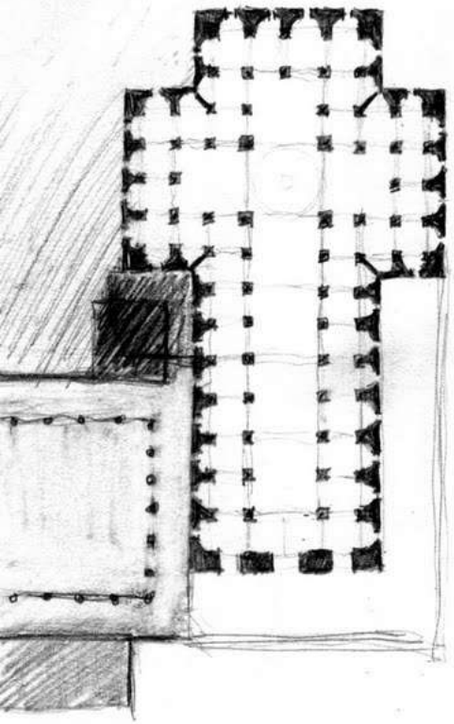
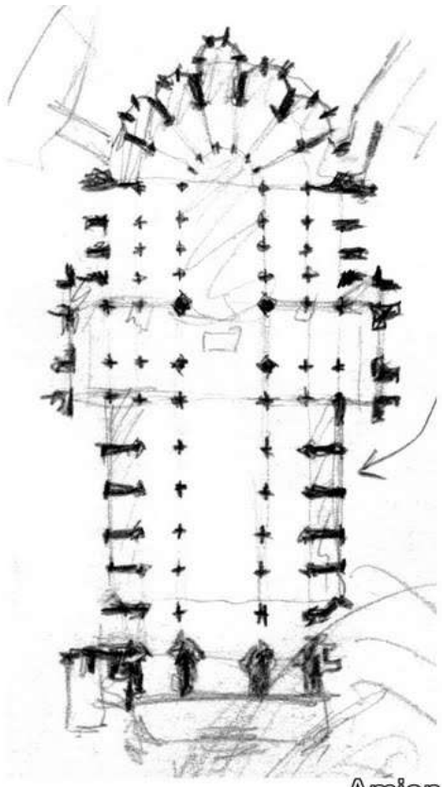


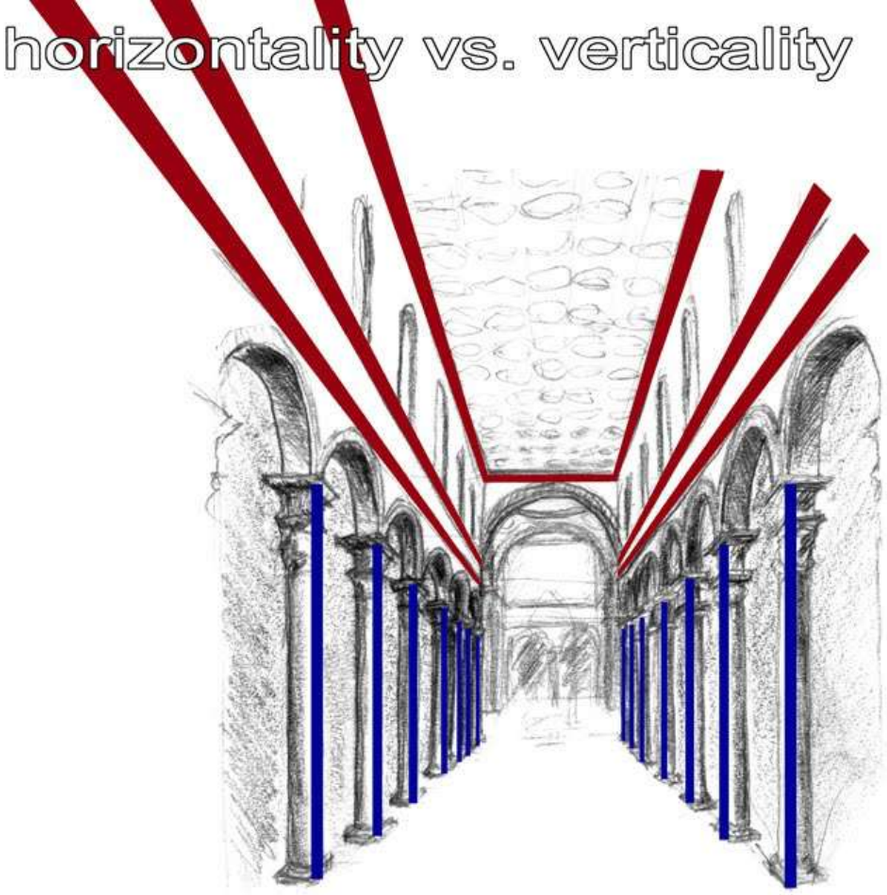
Santo Spirito

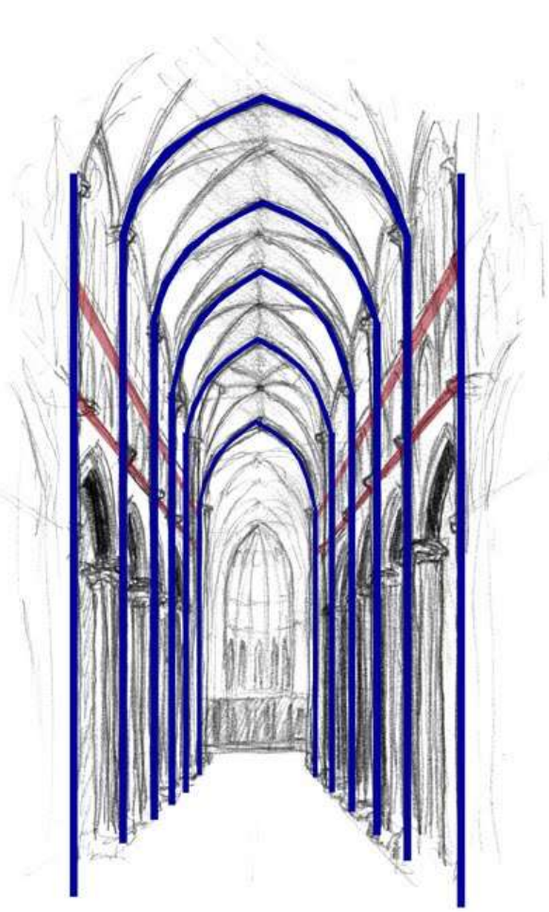


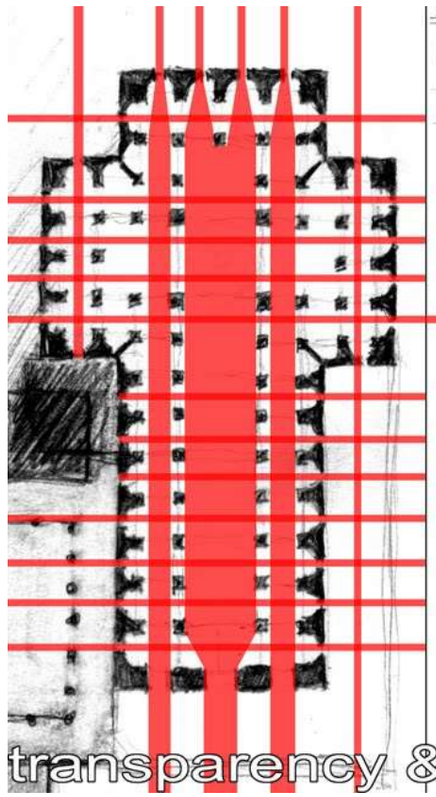


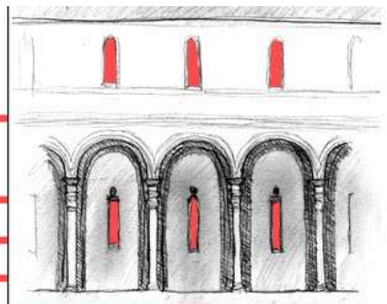
Amiens

horizontality vs. verticality







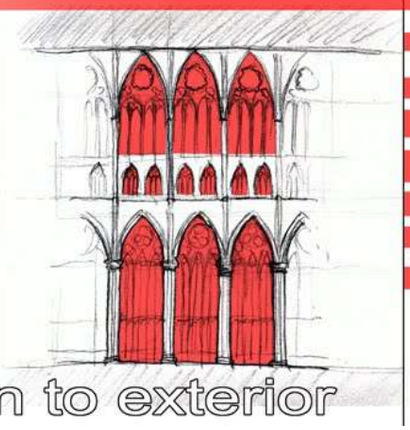


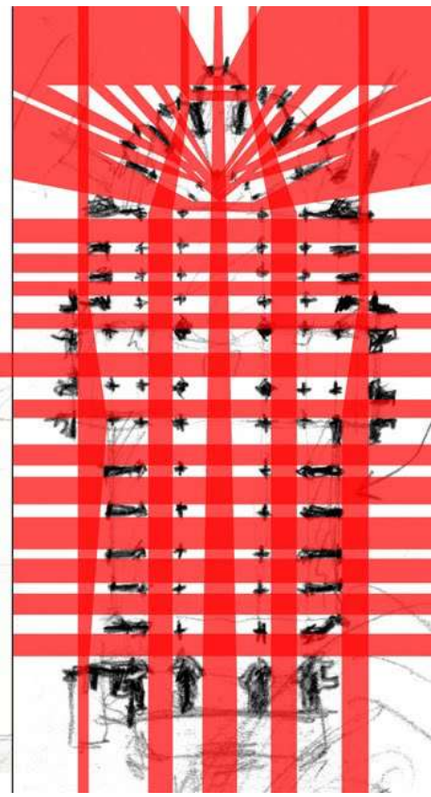
By the time of the Renaissance, building technology had progressed enough that wall surfaces could be freed so that large windows could fill the space between structural members. At Santo Spirito, however, the openings are subordinated to the overall order of the church, and quite carefully located and proportioned. The surface of the wall has been manipulated and the windows organized to orchestrate a deliberate amount and quality of light in the church interior.

Santo Spirito

Amiens

At Amiens, on the other hand, most of the wall surfaces not devoted to structure are constructed in glass, creating a strong relationship between outside and inside, emitting large amounts of sunlight into the interior of the church. In plan, there appears to be a much more fluid passage between inside and out, whereas at Santo Spirito, the openings that pass through the plan imply a more segmented construct of movement between building and environment.





transparency & connection to exterior

Leon Alberti

Early Renaissance Architect
1404- 1472

- Wealthy, aristocratic background

- In 1443 he went to Rome and studied the Roman ruins

- Wrote treatises on painting, sculpture, architecture

- “On the Art of Building” - ten books, began to be compiled in the 1440’s

Palazzo Rucellai, Florence (1446-1451)

- Classical order employed-column flat like pilasters

- **Superposed order**; from Doric at bottom to ionic and Corinthian at top

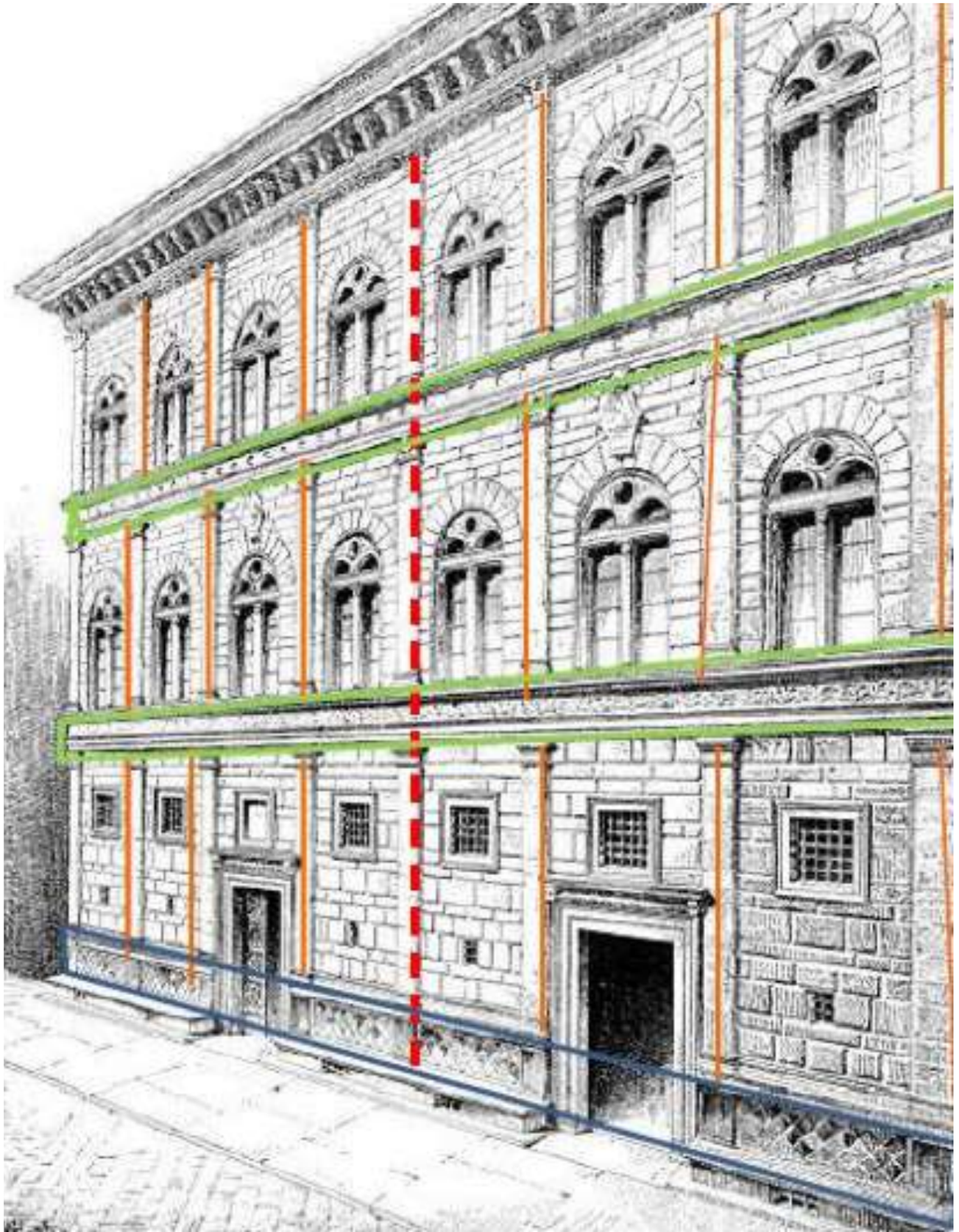
- Use of **pilasters** and **entablature** to reveal proportion and order

- Coherent **grid**

- **Symmetry and balance**

- **Repetition of elements**

Palazzo Rucellai, Florence (1446-1451)



Antonio Averlino (Filarete)

Early Renaissance Architect
1400- 1469

- Architect, sculptor and architectural theorist

- “Filarete” means “a lover of virtue”

- Wrote Libro architettonico ("Architectonic book”)

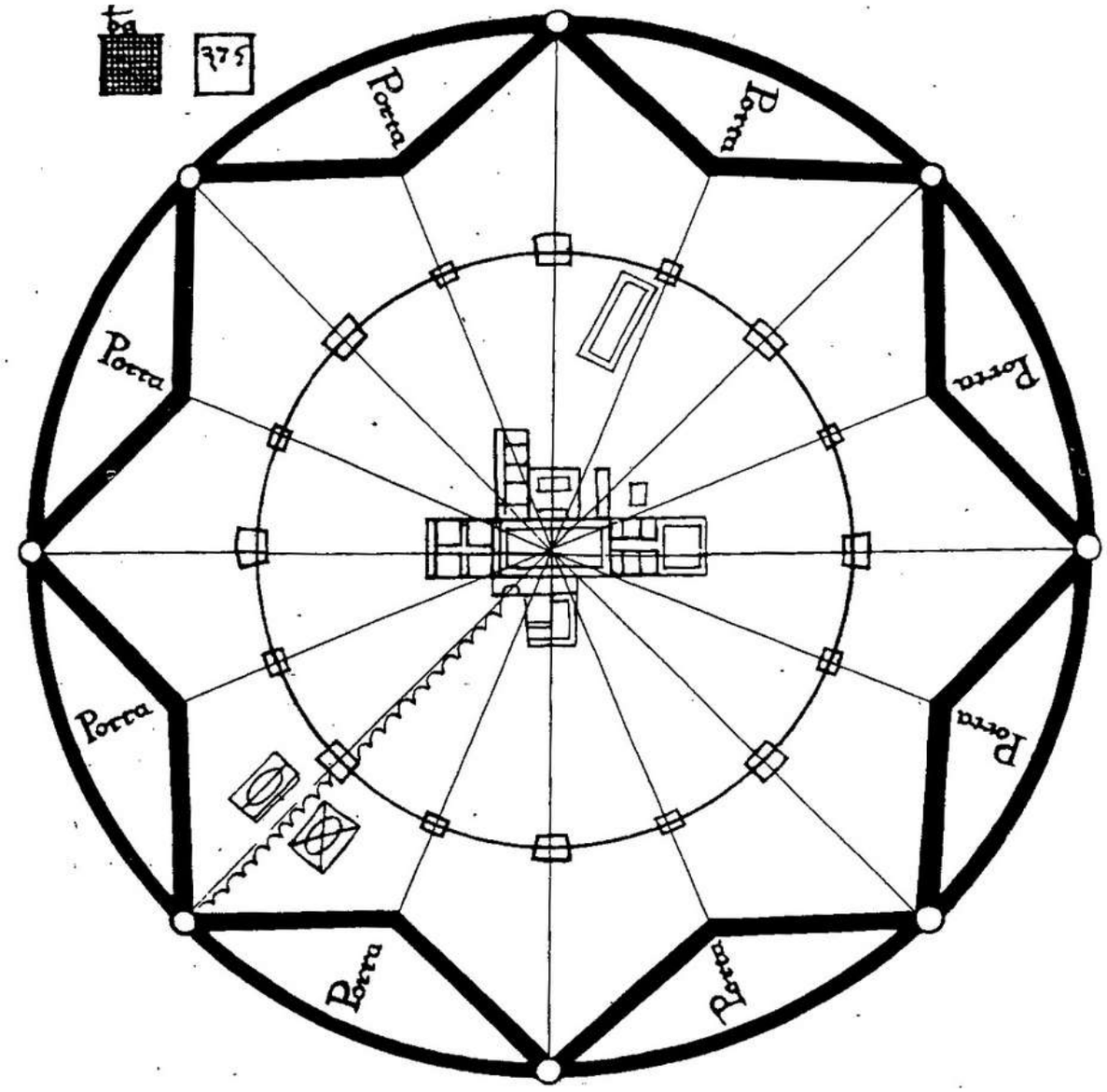
Sforzinda ideal city (1461-1462)

- An attempt to create the **ideal city**

- Perfect geometry; eight point star, created by overlaying **two squares** inscribed within a perfect circle

- Outer points of the star had towers, while the inner angles had gates

- Town contained three squares: the prince's palace, the cathedral, and the market

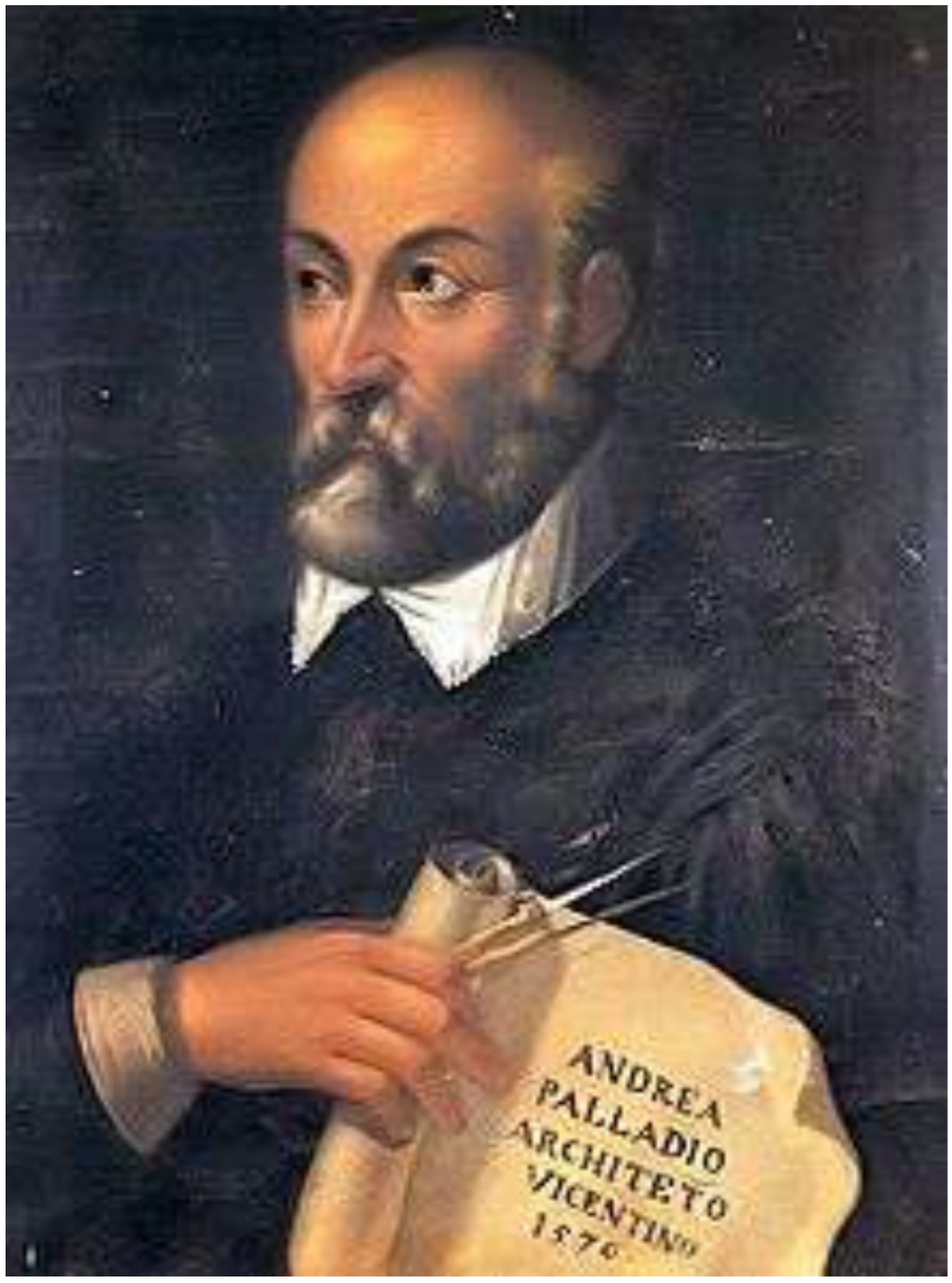


Inspiration for many future city plans including **Palmanova in 1593**

Late Renaissance Architects

Andrea Palladio

Late Renaissance Architect
1508-1580



- Worked as a stone cutter

- Palladio worked on the design of some temples, bridges, and palaces, but he was most known for his work on villas

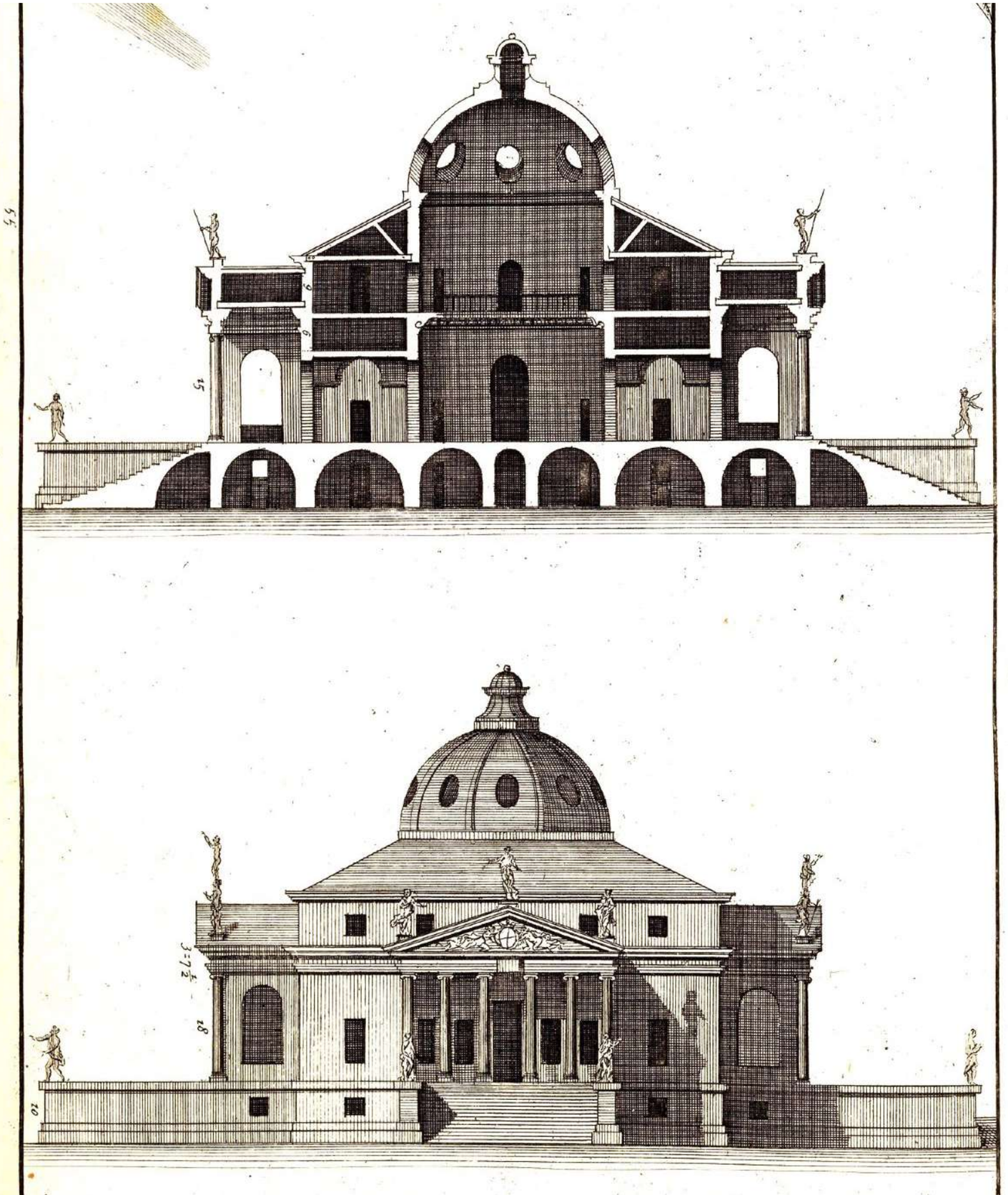
Villa Capra - Villa Rotonda, Vicenza (1550)

Villa Capra - Villa Rotonda, Vicenza (1550)

- Cylindrical rotunda capped with a dome

- **4 identical facades with columnar porticos**

- Palladio emphasizes the importance of the domestic dwelling by using a **heavenly shape like a dome** for a house - usually preserved for churches

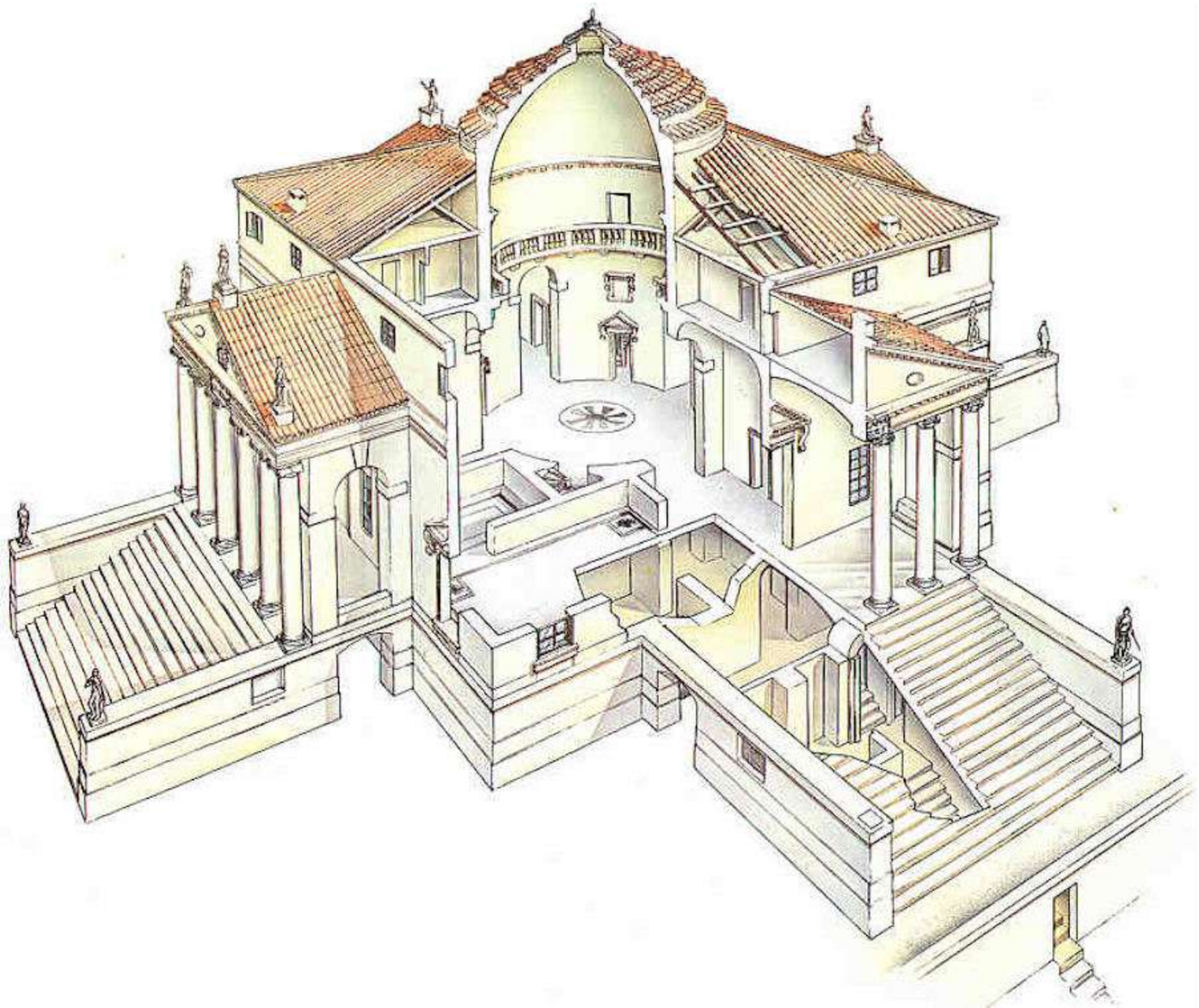


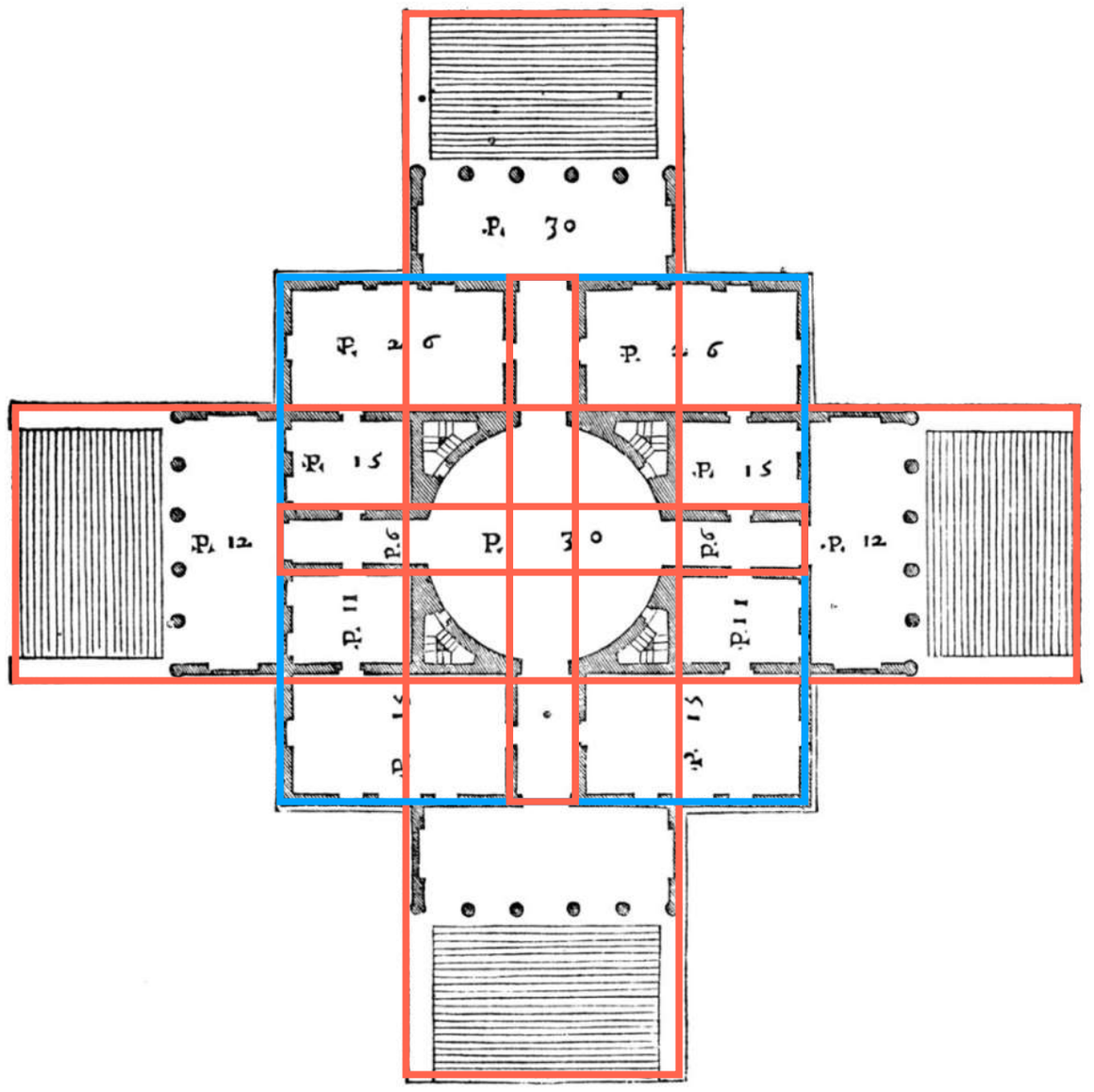
Villa Capra - Villa Rotonda, Vicenza (1550)

- **Symmetrical around a central axis**

- Each room relate to the others in simple mathematical ratios

- In 18th century villa copied at least 4 times





Mannerism

Late Renaissance

- When the architectural proportions were 'perfect', **architects began to try to play with those rules, creating a new style, and deviating from the norm**

- **Mannerism** was seen as almost the opposite of the high Renaissance: Instead of harmony, clarity and repose, extreme sophistication, complexity, and uniqueness

- High Renaissance only lasted about half a century and was soon replaced by whimsical playfulness called mannerism

- Mannerism best exemplified in the works of **Michelangelo**, while Palladio kept using the simple cubic forms and the early Renaissance style

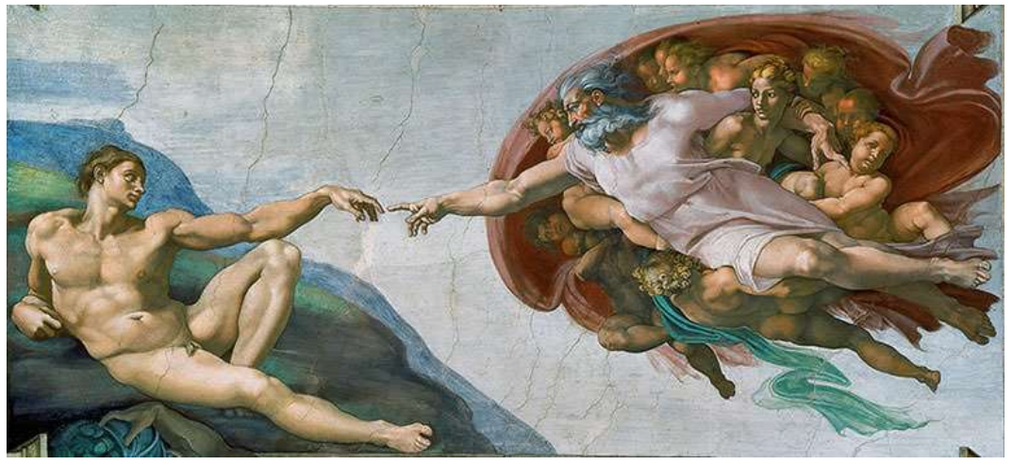
Michelangelo

Late Renaissance Architect
1475-1564

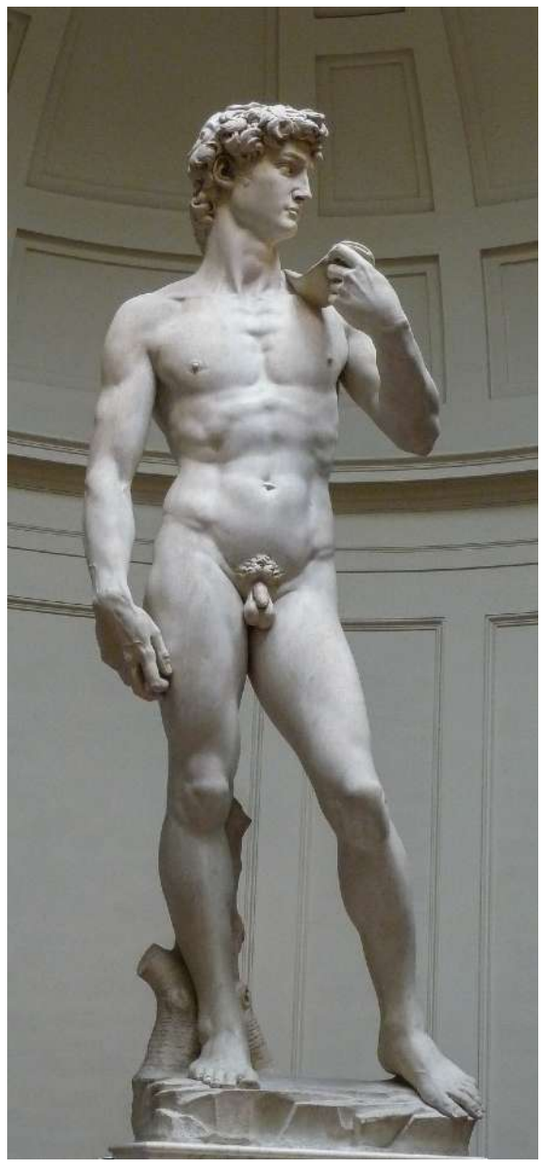
- Worked as a painter at early age

- Like Leonard Da Vinci – considered one of the greatest of Renaissance artists, one of the greatest artists in history

- Considered himself a sculptor, first and foremost, statue of David, the Pieta, etc



Sistine Chapel, The Creation of Adam



Statue of David

The Pieta

Medici Chapel, Florence (1520-1526)

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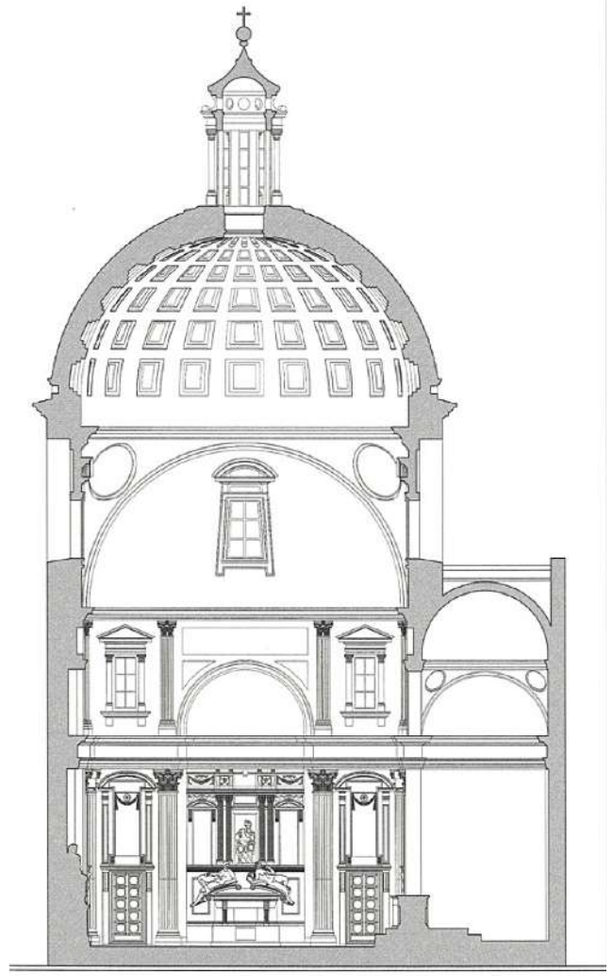
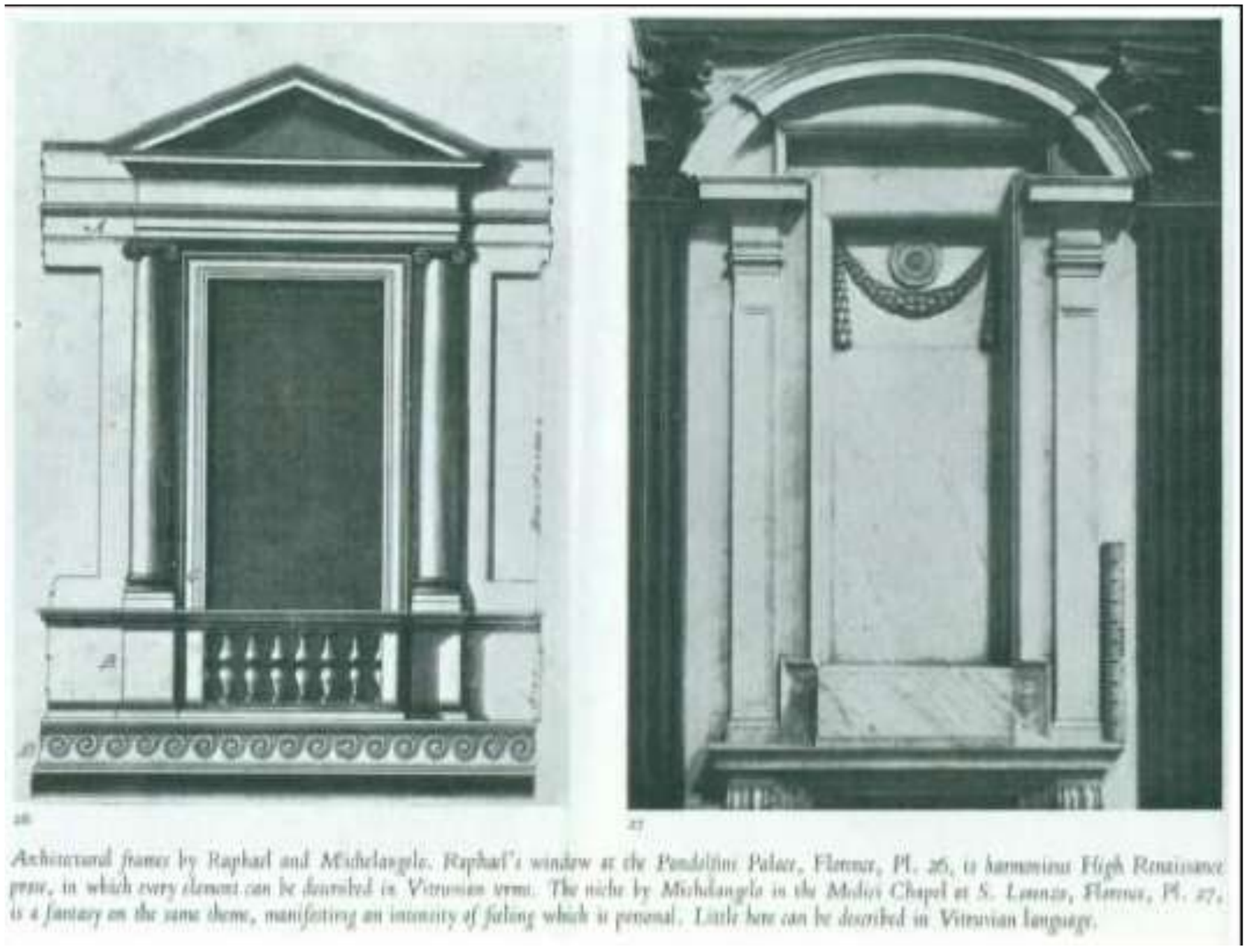


- Classical "feel", but not precise, emphasizes sense of weight, compression above doors

- "Correct" proportion of entablature – but not rendered solidly in darker stone background - white plaster runs through it… (inversion)

- Exaggerated, tapering widows at upper levels

Medici Chapel, Florence (1520-1526)



Architectural frames by Raphael and Michelangelo. Raphael's window at the Pandolfini Palace, Florence, Pl. 26, is harmonious High Renaissance prose, in which every element can be described in Vitruvian terms. The niche by Michelangelo in the Medici Chapel at S. Lorenzo, Florence, Pl. 27, is a fantasy on the same theme, manifesting an intensity of feeling which is personal. Little here can be described in Vitruvian language.

Raphael's more "standard" High Renaissance Production

vs.

Michelangelo's mannered forms

Laurentian Library, Florence (1558-1571)

Laurentian Library, Florence (1558-1571)

- The entrance has three stairs

- Stairs fan outward creating the illusion of perspective

- Inverted relationship between "recessed" columns and wall (columns tucked like statues into niches)

- Muscular Tuscan order resting on light curved scrolls attached to the wall instead of heavy pedestals

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Giulio Romano

Late Renaissance Architect
1499-1546

Palazzo del Te, Mantova (1527-1534)

Palazzo del Te, Mantova (1527-1534)

- A square house built around a courtyard

- Distortion of the classical forms

- The exterior masonry has heavy pilasters that carry no upper load

- Each façade has a different rhythm for the pilaster distribution

Palazzo del Te, Mantova (1527-1534)

- The pilasters change into engaged Tuscan columns

- The windows are capped by a pediment without cornice and without columns

- Inside the pediments are the keystone of a flat arch!

Palazzo del Te, Mantova (1527-1534)

Inside the palazzo are paintings which seem like the building is falling down on the observer

Palazzo del Te, Mantova (1527-1534)

Next lecture

Baroque and Rococo Architecture