

WRITINGS AND DRAWINGS ON ANCIENT ARCHITECTURE
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Chapter One: Ancient Egypt and Mesopotamia

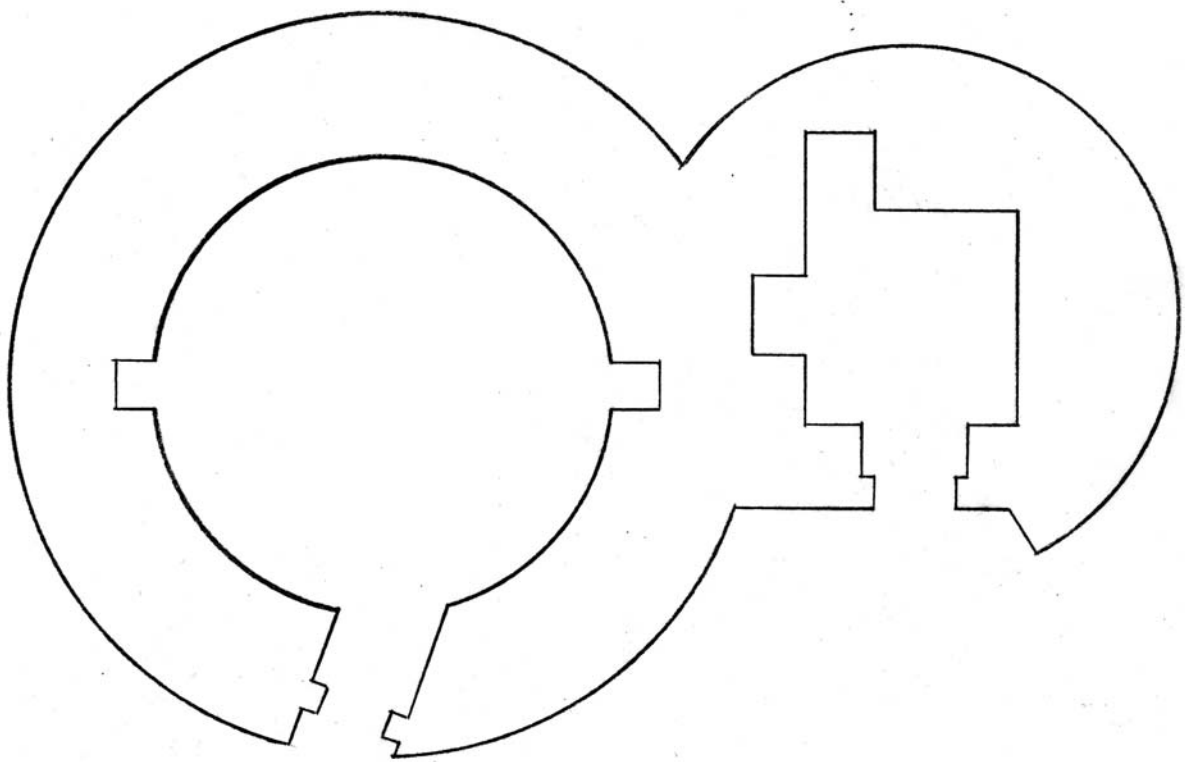
Trullo Field Shelter
Neolithic Age, c. 3000-2000 BCE
Apulia, Italy

The drawing is a plan for a trullo field shelter composed of two adjoined circular structures of different sizes and interior spaces. The larger unit has a circular interior and the smaller unit has a square space accessed via separate openings through proportionally thick exterior stone walls.

The plan reveals a development in the human's utilization of built form. The square-shaped interior implies a layering of desire in an attempt to more efficiently organize an inhabitable area within a given exterior structure and interiorize heat through housing fireplaces which are placed in niches in the wall.

“Soon, ceasing to fall asleep under the first tree or to withdraw into caves, they discovered a kind of hatchet made of hard sharp stones, which served for cutting wood, digging the earth, and making huts from branches, which they afterwards thought of coating with clay and mud. This was the epoch of a first revolution, which about the establishment of the family and the distinction between families, and which introduced a sort of property, which was perhaps the origin of many quarrels and fights. Nevertheless, since the stronger were probably the first to build themselves lodgings they felt capable of defending, it is to be presumed that the weak found it quicker and safer to imitate them than to attempt to dislodge them, and, as for those who already had huts, each must rarely have sought to appropriate that of his neighbor, less because it did not belong to him than because it was useless to him, and because he could not seize it without exposing himself to a very lively fight with the family who was occupying it.”

- Jean-Jacques Rousseau, “Discourse on inequality.”



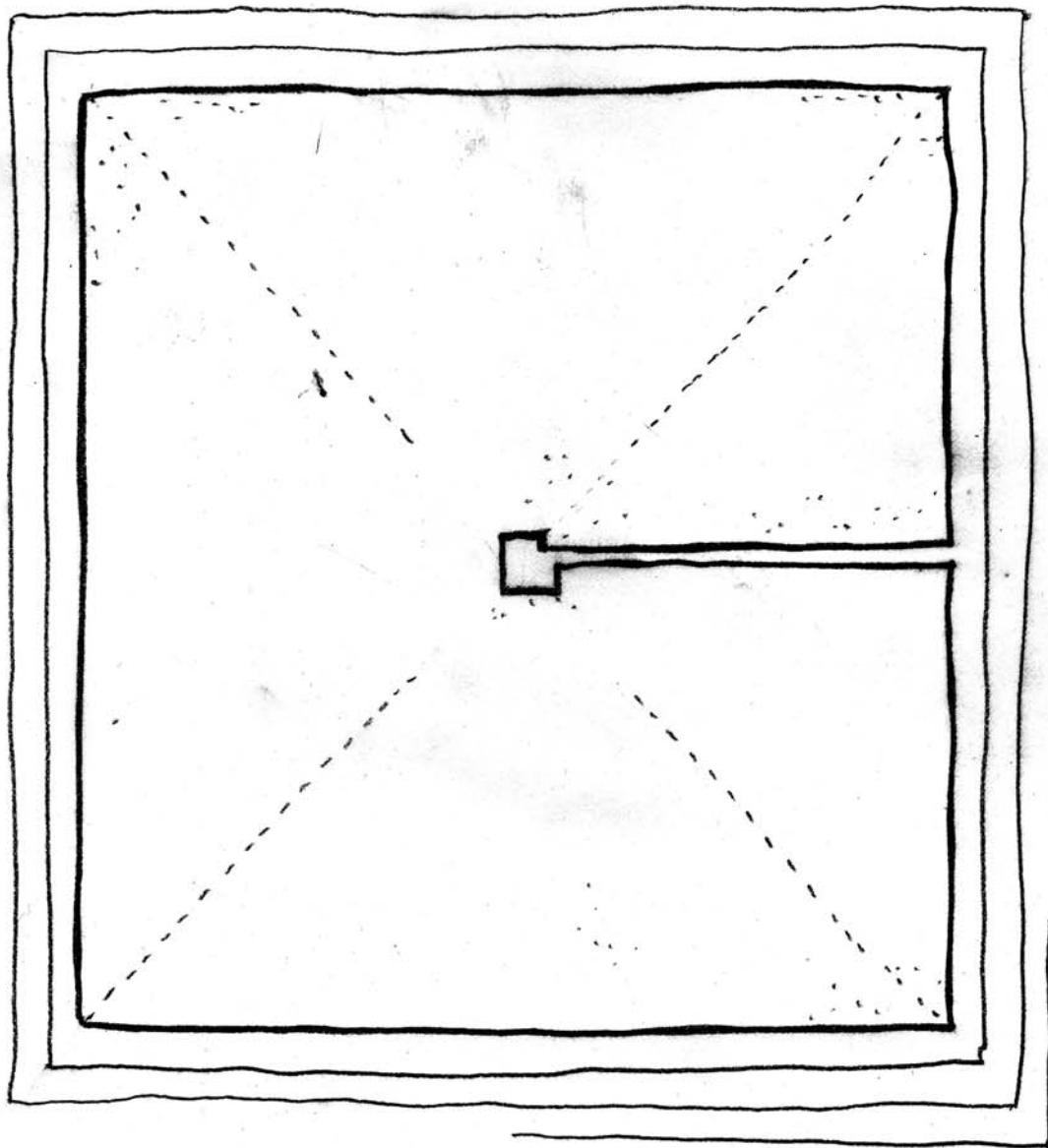
Step Pyramid of Pharaoh Djoser
c. 2630–2611 BCE
Saqqara necropolis, Egypt

The drawing articulates the geometry of the Layer pyramid's square plan and shows how the larger stepped structure was built-up vertically in fourteen layers.

The basic construction logic of the step pyramid--that of terraced square forms--is directly related to the larger process by which ancient Egyptians first began alter the landscape on a regional scale. The flooding of the Nile River was brought under control through terraced earthworks located on both sides of the river bed. The stepped form in the case of the pyramid, thus, can be read as the co-mingling of structure conventions and cosmologically-based desire to build upwards towards the heaven.

“My heart was in sore distress, for the Nile had not risen for seven years. The grain was not abundant, the seeds were dried up, everything that one had to eat was in pathetic quantities, each person was denied his harvest. Nobody could walk any more; the old people's hearts were sad and their legs were bent when they sat on the ground, and their hands were hidden away. Even the courtiers were going without, the temples were closed and the sanctuaries were covered in dust. In short, everything in existence was afflicted.”

-Translation from an inscription found near modern Aswan on the Island of Sehel



Heb-sed Courtyard Chapel
King Djoser Funerary Grounds
2650 BCE
Saqqara necropolis, Egypt

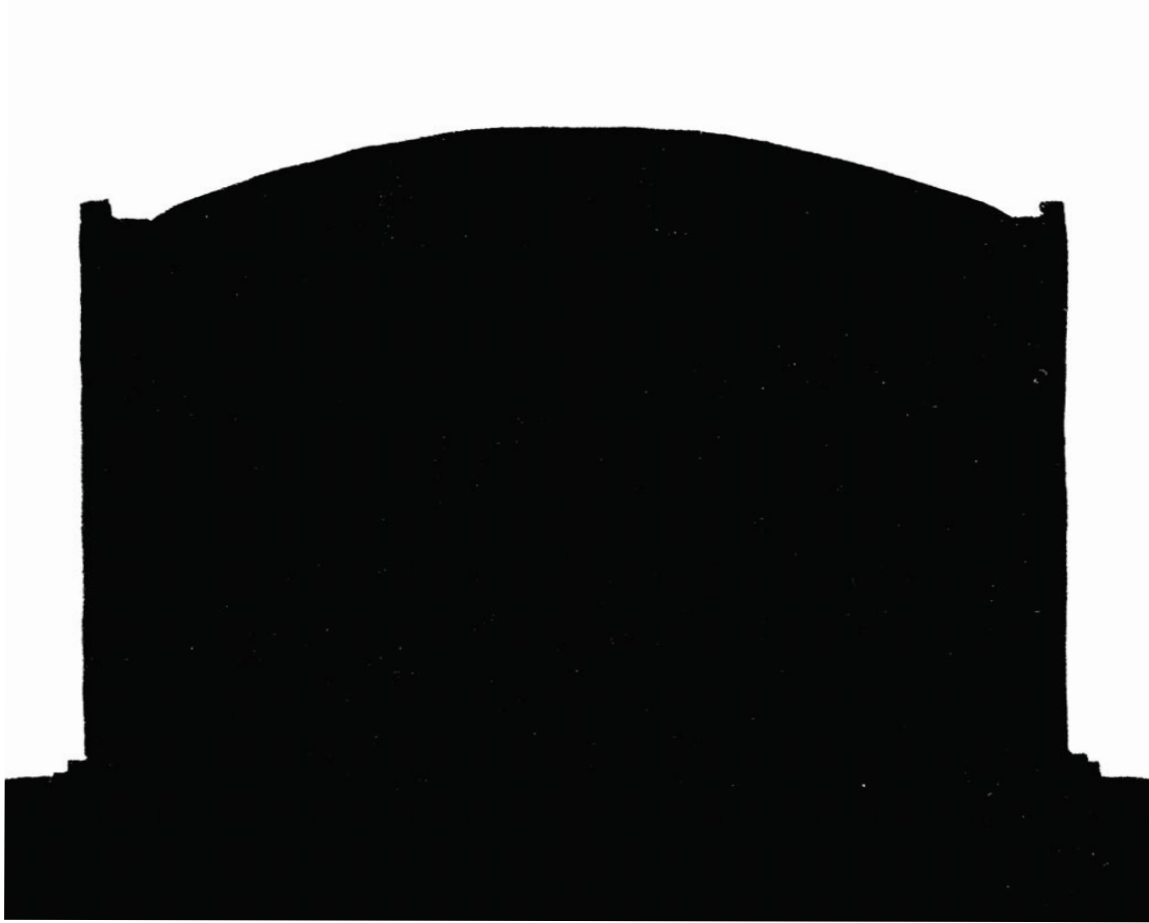
The drawing is a vertical section of a solid structure with no interior void. The figure structurally references a building with an arched roof and vertical walls; however, these references are illusory in that the space confined by the shape is entirely composed of solid stone.

The structure, dated to 2650 BC and found in King Djoser's funerary grounds, fully intended to represent pre-existing inhabitable brick structures that functioned as ritualistic sites in the renewal of kingship.

The British artist Rachel Whiteread has made similar use of this absence versus presence/solid versus void dialectic and its possible relevance to death and memorial. See, for instance, her Holocaust Memorial in Vienna.



-Rachel Whiteread, Judenplatz Holocaust Memorial, 2000. Photograph by Hans Peter Schaefer.



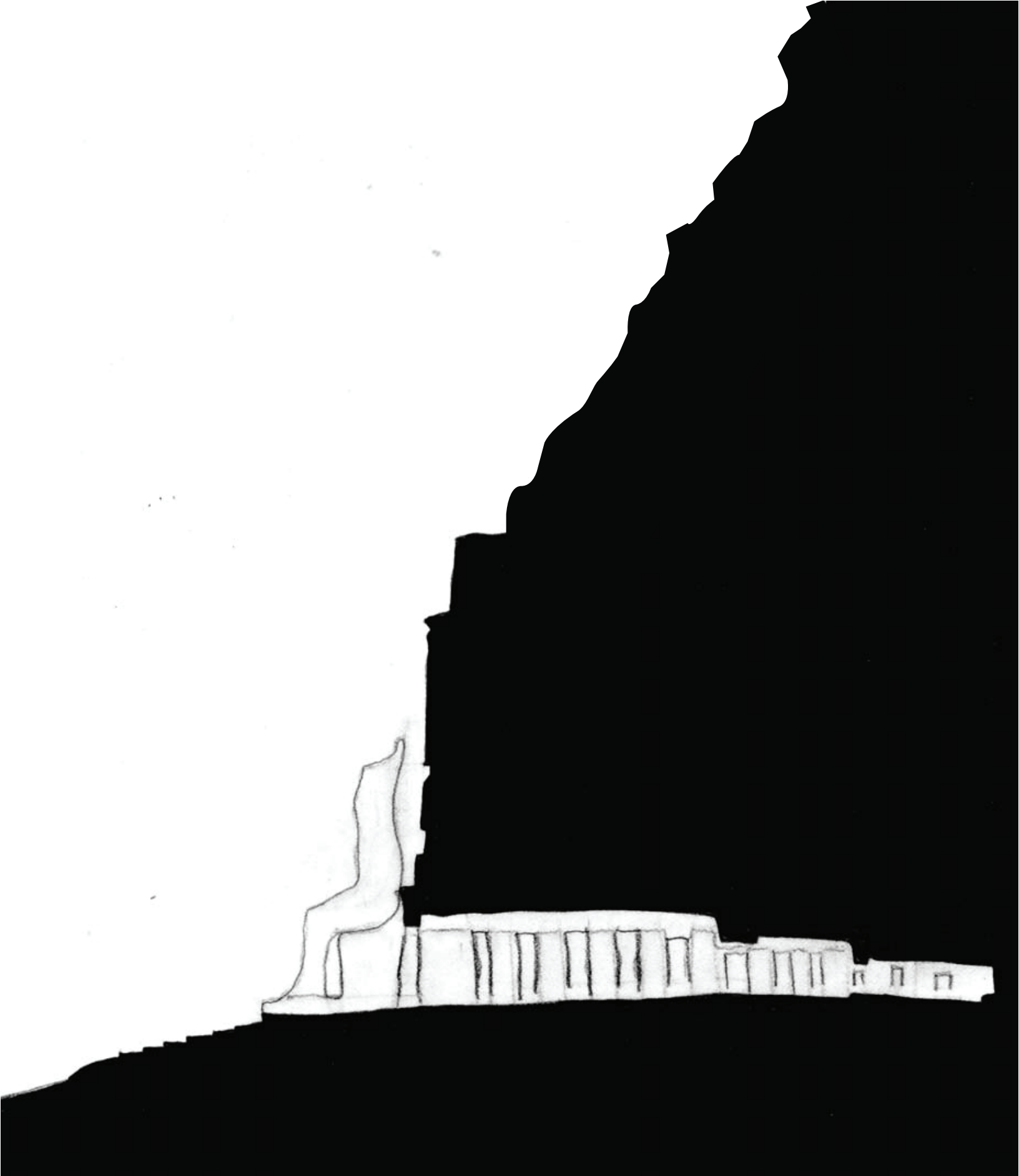
The Great Temple of Abu Simbel
New Kingdom, Dynasty XIX, c. 1250 BCE
Nubia. Egypt

The drawing is a section of a rock-cut Egyptian temple. The sole entrance, found at the south end of the structure, is marked by four 22-meter-high sculptures of Ramesses II. Hewn directly from the rock, these gigantic sculptures form a pylon tower built directly into the landscape of the sloping hillside. Further to the north, one processes through the hillside and into the structure, deeper into the rock, to a hall with rooms of decreasing height lined by statue pillars.

The architectural experience of the Great Temple of Abu Simbel is one of inversion. There is a literal passage from above to underground wherein the presence of the secular world (as it is immediately evident within the political function of the oversized sculptures as territorial markers) is inverted to become the sacred space of the gods. Moreover, because statue pillars line the interior hall, the hall functions as a court, i.e. an outside space. Thus, the architecturalization of the landscape takes place through the processional inversion of the secular into the spiritual and, likewise, through the inside underworld into the outside politicized world.

“Praise be unto thee, O Osiris, the Lord of Eternity, Un-Nefer, Heru- Khuti (Harmakhis), whose forms are manifold, whose attributes are majestic [Praise be unto thee], O thou who art Ptah-Seker-Tem in Anu, thou Lord of the hidden shrine, thou Creator of the House of the KA of Ptah (Het-ka-Ptah) and of the gods [therein], thou Guide of the Tuat, who art glorified when thou settest in Nu (the Sky). Isis embraceth thee in peace, and she driveth away the fends from the entrances of thy paths. Thou turnest thy face towards Amentet, and thou makest the earth to shine as with refined copper. Those who have lain down in death rise up to see thee, they breathe the air, and they look upon thy face when the disk riseth on the horizon. Their hearts are at peace since they behold thee, o thou who art Eternity and Everlastingness.”

-A Hymn of Praise to Ra When He Riseth upon the Horizon, and When He Settest in the Land of Life



The South Palace

Begun by Nabopolassar, enlarged by his successors, 629-539 B.C.

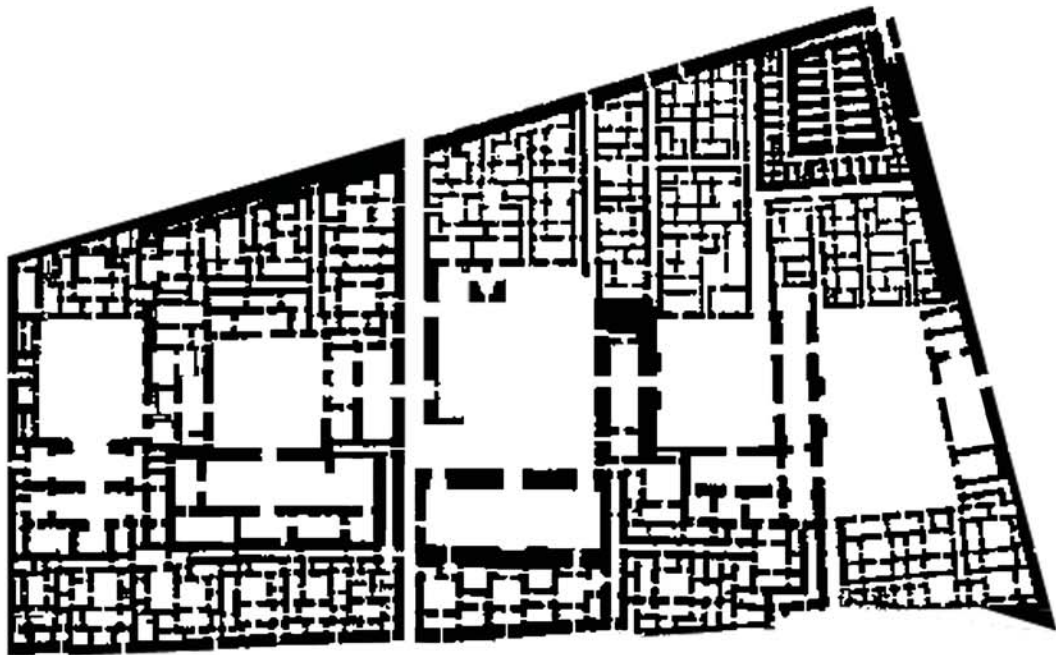
Babylon

The drawing is a plan of the South Palace as it adjoined a main processional axis running north to south through the city. The space within the trapezoidal-shaped perimeter walls of the palace was organized in bands on the north and south sides of five main courtyard spaces.

The patchwork nature of the South Palace's lay-out makes the language of its procession and organization difficult to read. Yet, this very fact documents the palace's construction in the context of Babylon's relatively quick rebuilding through an approximately ninety-year lineage of emperors—from Nabopolassar in 629 B.C., to Nabonidus who yielded power to the Persians in 539 B.C. Moreover, the evident information permits a reading of the largest central courtyard as the most meaningful space of the South Palace because of its direct relationship with Babylon's great ceremonial street.

"Babylon's great fortification wall; the original boundary-marker from antiquity...had weakened and collapsed because of age; [its] walls had been taken away because of rain and deluge; [its] foundations had heaped up and accumulated into a mound of ruins. I mustered Enlil's, Shamash, and Marduk's troops. I had them use the hoe and imposed the corvée basket on them. From the bank of the Arhtu canal, on the lower side near the Urash gate, I removed its accumulated debris, surveyed and examined its old foundations, and laid its brickwork in the original place. I established its base on the edge of the underworld. I surrounded the east bank with a mighty mountainous belt."

-Translation from an inscription on a Nabopolassar Cylinder



Chapter Two: Ancient Greece

Temple of Hera
Olympia, Greece

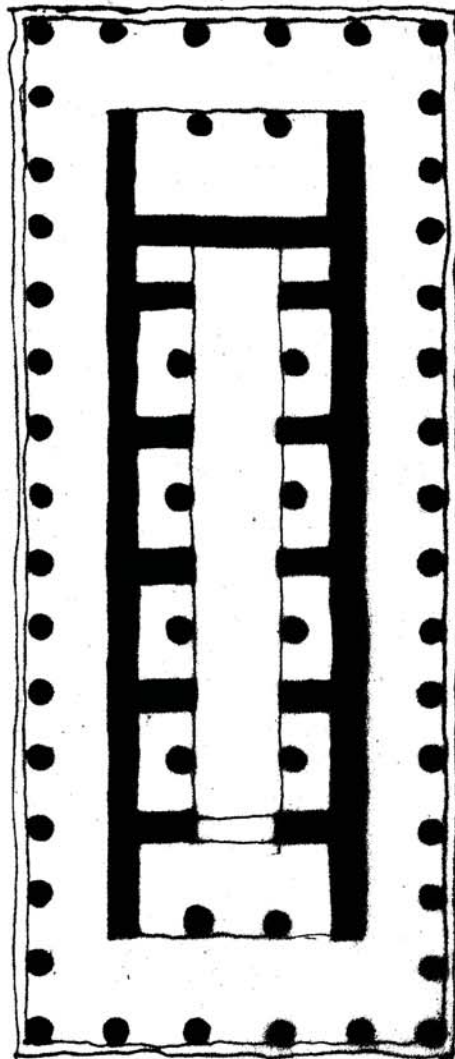
Original wooden temple rebuilt in stone in early sixth century B.C.

The drawing is a plan of an ancient Greek temple. Circular columns that stand on a rectangular base line the perimeter of the structure and create a sense of enclosure between the exterior landscape and an interiorized processional space. At the center of the plan is a more defined enclosure created by solid walls and penetrated by a central axis passing through a system of columnar bays.

The plan is reflective of greater relationships found in Greek temple architecture between the inside and outside and between sacred and mortal space. The processional intermediary space, though possessing a perimeter and being suggestive of an interior space, is ultimately defined by its openness to the surrounding landscape. As such, it can be read a space that visitors pass through but do not inhabit. In contrast, the explicit division between the natural world and the interior cult structure implies its function as a space reserved for a being of a greater power.

“Then, in distress at this state of affairs, while the seer slew victim after victim, Pausanias turned his face, all tears, toward the Heraeum, and with hands uplifted prayed Cithaeronian Hera and the other gods of the Plataean land that, if it was not the lot of the Hellenes to be victorious, they might at least do great deeds before they fell, and show to a certainty that their enemies had marched out against men who were brave and who knew how to fight.”

-Plutarch, Life of Aristides 18, section 1

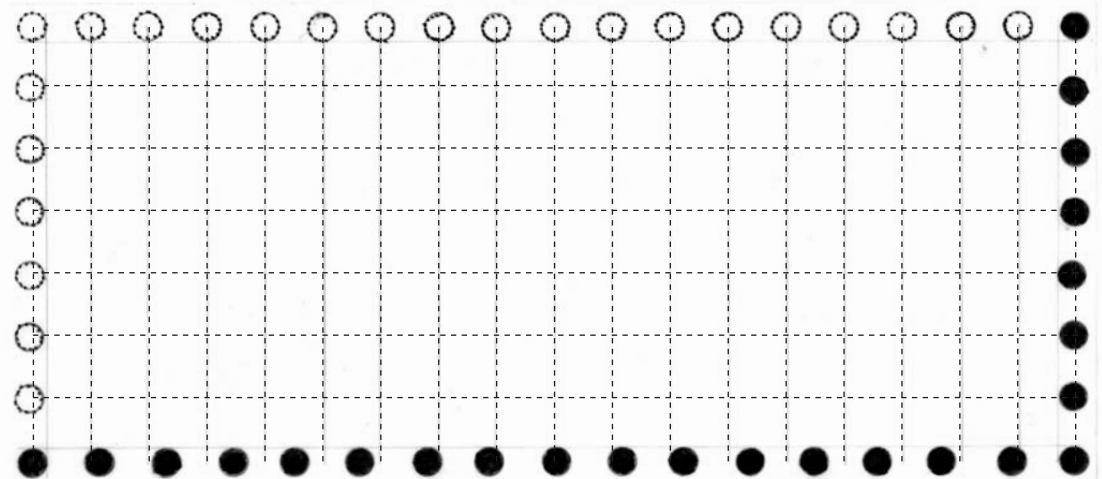


Parthenon
Athens, Greece
After 450 B.C.E.

The drawing is an examination of the Parthenon's intercolumniation as it was built after 450 B.C.E. The top and left sides of the drawing show the columns as they were situated in the built structure's plan. The bottom and right sides show a hypothetical peristasis, wherein a row of evenly spaced columns is compared with the changing intercolumniation found in the temple as it was constructed. Though the space between each column changed along the longer elevation of the structure, two columns were removed to permit a bilateral symmetry with respect to the center column on each elevation.

The avoidance of the consistent intercolumniation in the Parthenon was employed as an aesthetic device that was mindful of the viewer's perception of the building within the surrounding landscape. Similar to the slight rotation of the temple from its previous site at the Acropolis, and the minor bulge or curvature of the stylobate, the subtle shifts in the space between columns are suggestive of the Greek's pursuit of beauty as it was derived from observation of the natural world and expressed through a heightened attention to proportionality.

...Of the Parthenon, for instance, with its cella of a hundred feet in length, Callicrates and Ictinus were the architects; it was Coroebus who began to build the sanctuary of the mysteries at Eleusis, and he planted the columns on the floor and yoked their capitals together with architraves; but on his death Metagenes, of the deme Xypete, carried up the frieze and the upper tier of columns; while Xenocles, of the deme Cholargus, set on high the lantern over the shrine. For the long wall, concerning which Socrates says he himself heard Pericles introduce a measure, Callicrates was the contractor. Cratinus pokes fun at this work for its slow progress, and in these words: — "Since ever so long now. In word has Pericles pushed the thing; in fact he does not budge it."
-Plutarch, Life of Pericles 13, sections 4-5



Acropolis and Athens City Plan
Athens, Greece
c. 460 BCE

The top drawing is a plan by Dioxiadis showing his geometric mapping of the Acropolis site after 450 BCE. The bottom drawing is a diagrammatic collage of the same polar coordinates established by Dioxiadis as they are extended on to a plan of Athens, Greece circa 460 BCE. The radius of the largest circle in the diagram is derived from the curvature of the east and west sides of the Parthenon's stylobate (and K. Karatheodori's hypothesis that these curves are arcs in a circle with a radius of 1850 meters).

Dioxiades's diagrams can be understood not only in relation to Thales's or Anaximander's belief that an universal order could be defined through geometry, but also that the physical principles of the nature could be revealed through the organization of space around geometric applications. Moreover, the circular logic identified by Dioxiades could have been used to articulate both the nature of the universe through the lay-out of the Acropolis and the site's relation to the larger physical space of the city of Athens. As such, we might read the Acropolis's rebuilding under Pericles as the architecturalization of a naturally occurring circular logic which was understood to govern the natural organization of the city of Athens and the universe.

"In old days the hill of the Acropolis extended to the Eridianus and Ilissus, and included the Pnyx on one side and Lycabettus as a boundary on the opposite of the hill."

-Plato, *Kritias* 112

Chapter Three: Ancient Rome

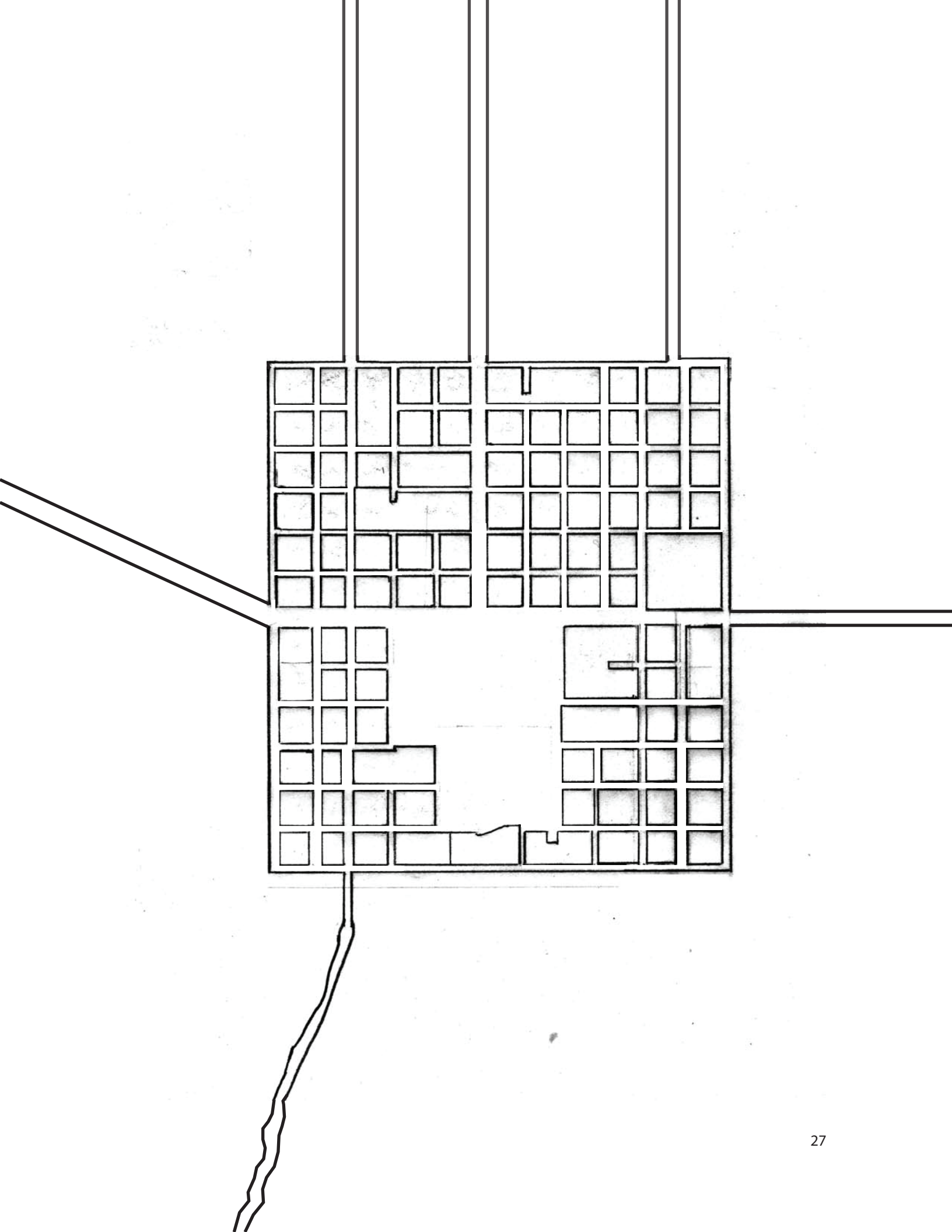
City Plan
Tingad, Alegeria
100-117 A.D.

The drawing is an early city plan of Timgad, Algeria. The public space of the town forum and associated structures were situated at the center of a twelve by twelve rectangular grid formed by the intersection of two main thoroughfares and several minor streets. The blocks or insulae within the grid were allocated to the private domain.

Timgad was an extreme example of the castrum type of Roman city planning and, more generally, the urban application of the Roman land use method known as centuriation. Derived from their original implementation in temporary military camps (and in the allocation of agricultural land), these planning types were rooted in an engineering-based urbanisitic logic that explicitly defined the public domain as an infrastructure within which privatization could occur. Moreover, in Timgad, the geometric order of the grid further articulated the presence of a Roman political order in the frontier region.

“I entered this province on the 17th of September, and found it in those sentiments of obedience and loyalty, which you justly merit from all mankind. You will consider, Sir, whether it would not be proper to send hither a surveyor; for I am inclined to think, much might be deducted from what is charged by those who have the conduct of the public works, if a faithful admeasurement were to be taken; at least I am of that opinion from what I have already seen of the accounts of this city, which I am now examining, with all possible care.”

-Pliny to the Emperor Trajan, The Letters of Pliny the Consul



House of the Faun
City of Pompeii, Roman Empire
200-80 B.C.

The drawing is a plan of an ancient Roman house whose extents are defined by thick walls that conform to the parallelogram shape of the surrounding city block. The house's interior is divided into several rectangular spaces and organized around two peristyle courts towards the top of the plan and two smaller atria, which are connected to the city sidewalk at the bottom of the plan.

Similar to the interior of the House of the Faun, the city plan of Pompeii was defined by its rectangular grid and the divisions between public and private space found within. As such, the affinities between the house and city plans are indicative of what was categorically a "Roman" approach to the organization of space. However, it is only when these methods are interiorized architecturally and combined with the passage between certain spatial moments (such as between the hall and the peristyle of the House of the Faun) that their dialogue with natural landscape is heard.

The world, and whatever that be which we otherwise call the heavens, by the vault of which all things are enclosed, we must conceive to be a Deity, to be eternal, without bounds, neither created, nor subject, at any time, to destruction. To inquire what is beyond it is no concern of man, nor can the human mind form any conjecture respecting it. It is sacred, eternal, and without bounds, all in all; indeed including everything in itself; finite, yet like what is infinite; the most certain of all things, yet like what is uncertain, externally and internally embracing all things in itself; it is the work of nature, and itself constitutes nature.

- Pliny the Elder, *The Natural History*, 2:1

