THE

ARCHITECTURE

OF

ANCIENT EGYPT;

IN WHICH THE COLUMNS ARE ARRANGED IN ORDERS, AND THE TEMPLES CLASSIFIED;

WITH REMARKS

ON THE EARLY PROGRESS OF ARCHITECTURE,

ETC.

WITH

A LARGE VOLUME OF PLATES

ILLUSTRATIVE OF THE SUBJECT,

AND CONTAINING THE VARIOUS COLUMNS AND DETAILS, FROM ACTUAL MEASUREMENT.

BY

SIR GARDNER WILKINSON,

F.R.S., M.R.S.L., F.R.G.S.,

HON. MEMBER OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS,

ETC., ETC.

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PREFACE.

THE want of some arrangement of Egyptian columns, and temples, has long been felt; and now that so many monuments have been destroyed, while others are occasionally taken down to build palaces, manufactories, and other private or public edifices, it is of importance that the information obtained from them should be put together, before we lose the opportunity of referring to examples of particular plans, or styles of architecture, prevalent at various periods. A remarkable instance, of the almost entire disappearance of one kind of monument, may be mentioned, in the peripteral temples of early time; which being small, and unfortunately in places where government buildings happened to be wanted, have been entirely destroyed; and this vicinity to a new establishment, or to a growing city, was of old the cause of the total destruc-

tion of Memphis, and of so many edifices, which would have thrown great light on Egyptian architecture, and the history of the country.

It is well known how small a monument may clear up a doubt, on the most important subject; and how the want of it may prevent our ascertaining some particular fact, and may lead us to the most erroneous conclusion. The occasional occurrence of some rare peculiarity suffices to show, how we may be dependent on a single monument, for our knowledge of it; and without multiplying examples of this, it will suffice to cite the whimsical columns of Thothmes III, which occur only in one part of the temple of Karnak, the cow-headed pilasters at the tomb of Remeses III at Thebes, and the sculptures on a throne of King Horus and his Queen, in the Turin Museum; which last contain the singular representation of an Egyptian winged female Sphinx.*

In the present work, I have arranged Egyptian columns in the number of orders,

* This kind of Sphinx occurs also as an ornamental lid of a vase, among the spoil of the Rot-n-no (an Asiatic people), at Karnak.

which their variety, and difference of character, suggest; and have classified the temples under several heads, according as they require to be distinct, or united, on account of their differences, or resemblances in plan, and general arrangement. The columns evidently began with the *square pillar*, derived from the mass left to support the roof of a stone quarry ;* and this I therefore consider the *first order*. That which is directly taken from it, by removing the angles, and forming it into a polygonal shaft, and thence into the round fluted column, I consider the *second order;* and the *remaining* orders (which are also derived from the square pillar, with its ornamental details), follow, according as they *gradually* succeeded to, or were *derived* from, each other: the third, fourth, and fifth, having been invented before the sixth, and seventh, orders.

It is with a view to follow up this *gradation*, that I have put off the Osiride pillar to the eighth order, though of earlier date than the sixth and seventh; as its introduction immediately after the fourth would have in-

* *Vide* pages 5, 6, 91.

terfered with the evident connexion between those of the fourth, and other round-shafted columns. On the other hand, the sixth has its place before the composite columns, because of the early use of the Isis-head, which is found on pilasters of an old Pharaonic age;* and it is also entitled to the position I have given it, among the round-shafted columns.

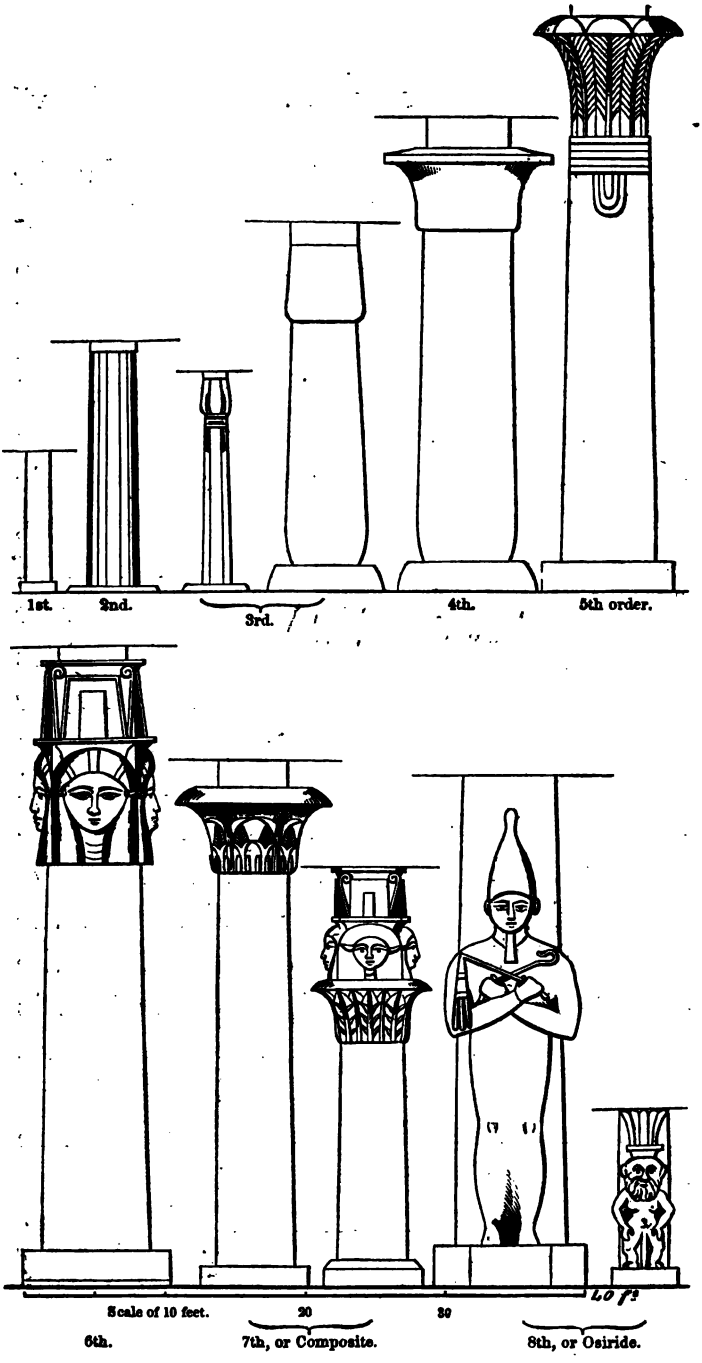
It always appears singular that the Egyptians, who in early times used the polygonal and round fluted, column, should have devised others of so very different a character, as the round unfluted ones, of the third, and other orders; but the manner in which they were led to their invention is sufficiently obvious. Egyptian, like all other ancient, architecture, was always coloured; and the columns, as well as walls, were ornamented with devices *painted* upon them. These, in process of time, were *sculptured* in relievo; and the lotus, and papyrus plants, in bud, or in full blossom, the palm-tree, and the figure of Osiris, were represented in high, or low, relief, on the four sides of the square pillar.

* The remains of the original ornamented square pillars.

This continued, for some time, to be the mode of decorating the pillar; while its companion, (which had also grown out of it), the polygonal, or fluted, column, having now no room for the painted devices, was satisfied with a line of hieroglyphics down its central facette. But the love of variety, and progress of taste, were not long before they made another change; and the superfluous corners, *beyond the devices*, that projected in relief from the flat surface of the square pillar, were cut away, and the plants on the four sides were either represented *bound* together, or were made into a *single* stem (as in the case of the papyrus plant, and the palm-tree, and in some of the later varieties of the bud-column).* Hence arose the notion of *binding* the four† plants together; and though the bands were afterwards continued, when the shaft was single, the *origin* of the idea is evident; and there is reason to believe, that the Greeks borrowed the annuli of the Doric column from this Egyptian ornament, there being *nothing* to *bind* in a Doric shaft.

The general character of the eight *orders*

* *Vide* Plate iv, fig. 10. † Often increased to eight. *Vide* Plate vi.


1st.
2nd.
3rd.
4th.
5th order.
Scale of 10 feet.
20
30
6th.
7th, or Composite.
8th, or Osiride.

will be seen in the accompanying wood-cut: where they are drawn (according to their respective sizes) to the same scale; which is one fourth of that adopted in my large plates. For though Egyptian columns vary very much in different buildings, and are scarcely ever exactly similar, in all their details and proportions, even in the same hall, or portico, I have endeavoured to show their usual, or average, dimensions; referring however to the large plates, and to the text, for their various measurements; from which it will be seen (as in Plates vi, viii, and xi, figs. 1, 2) that columns of the same form, and order, are frequently more than twice as large, in some, as in other, monuments.

I have explained my reasons for occasionally placing columns of different orders in the same plate;* which are either in consequence of their being related to each other, or from their height being better suited to the size of the plate, or of those introduced with them; and the union of two plates, in the same sheet, is owing to my having found great size to be necessary for that volume,

* In the description of Plates xiii, x, xv.

in order to avoid the inconvenience of a double fold in Plate x, and to keep the price of the work within proper limits. I have thus been enabled to make it quite as convenient, as it would have been if of half the size, and less costly to subscribers. To have confined it to the dimensions of the letter-press would have required the columns to be too small for my purpose; and I should have been forced to abandon my method of drawing all the columns to the *same scale* (which alone can give any idea of their *relative* dimensions); or to make many of the plates fold, which is most inconvenient to the reader, and destructive to the plates themselves.

And now, in noticing the plates, it is my very agreeable duty to acknowledge the kind assistance of the Cavaliere Canina, of Rome; for though his name is too well known in Europe to render it necessary to speak of his talents, or his valuable architectural works, I cannot deny myself the pleasure of mentioning the disinterested manner, in which he offered, and gave me, his assistance. He was himself engaged, at

the time, in publishing one of his large works; but the moment he found I wished my plates to be engraved at Rome, he at once gave me up the copper-plates, prepared to receive his own designs, (regardless of the time he would lose, before those I supplied in their stead could be put into the same state of preparation) and allowed me to engage the services of the engravers in his employ; which were the more valuable, as they were persons long accustomed to similar subjects, and experienced in all the minutiæ of architecture.

Nor was this the only assistance I received from the Cavaliere Canina; his extensive library was always at my service; and I was much indebted to him for the trouble he took, to obtain for me that permission to draw in the Museums of Rome, in the way of which so many impediments are thrown by the Papal Government. For the Gregorian Museum, indeed, it is always refused; and under the pretended excuse of the late disorders, there is (or at least was, in the winter of 1849-50), a difficulty in obtaining an order to draw in the other Galleries; though it is a well-known fact, that nothing was injured in them;

even during the republic; and the only person guilty of robbing the public Museums, was a certain Diamella, an employé of the Papal Government; who stole the medals, and was condemned to the galleys, while I was in Rome. For however willingly we may censure the anarchy, that ensued after the flight of the Pope, it is only justice to say, that the Museums were as much respected then, as at any period; and the tales of plunder, like the destruction of pictures and monuments by the French artillery, are gratuitous fabrications. But I gladly turn, from the illiberal custom, which has always existed, of prohibiting strangers from copying anything in the Gregorian Museum, and the difficulties thrown in their way, at the library of the Vatican, and the Christian Museum, to the liberal assistance afforded at the galleries of Florence, Turin, and other places in Italy; though I regret I cannot include among them the Studii at Naples, from which Sir William Gell and myself were turned out, for having copied some hieroglyphics from a fragment, which no one then thought of any importance.

With regard to the letter-press of this work, I need scarcely say that I have endeavoured to confine my remarks, on the architecture of ancient Egypt, within the most limited space the subject will allow; and have permitted myself very few observations, on the construction of the monuments, and on the comparative styles of other people; for fear of its exceeding the limits I proposed. It is indeed a subject, which it would be easy to enlarge upon; but this would have required plans, elevations, and many plates of details, and have added far too much to the size, and expense. The many deficiencies, therefore, which will occur to the reader, and which I regret to leave unsupplied, will, I trust, be excused; when he considers the extent of the subject, and the reasons that have compelled me to offer so small a work on Egyptian architecture. I would willingly have introduced a whole Egyptian temple coloured throughout, in order to convey an idea of the effect of one of those remarkable monuments; I would have presented to the reader every portion of the largest temples, by means of eleva-

tions and sections, as well as the varied character given to an Egyptian portico, by the juxtaposition of numerous, and different, columns; and would have represented the singular aspect of the mysterious, and richly-coloured, interiors of the tombs of the kings; but such an undertaking would have entailed an immense expense; and I must be satisfied (at least for the present), to invite attention to the subject; and to explain how the columns and temples may be classified; and to give a general notion of the character, and claims, of an architecture, that existed ages before those styles were devised, with which we are so well acquainted, and which probably derived many of their first designs from Egyptian models.

DESCRIPTION OF PLATES.

Plate I

Gives the ordinary plans, and the general external appearance of Temples of different classes; and various explanatory details.

Fig.

1, *a*. Pyramidal towers, one on each side of the pylon, or gateway; on which are represented the usual sculptures (mentioned in pages 76, 101); and attached to them are lofty flag-staffs. With a *scale*.

1, *b*. Gives the torus, and curve of the cornice of the towers.

1, *c*. The base of the torus, at the external angles of the towers. (*Vide* pp. 66, 106.)

2, 3. The globe and asps, placed over the doorways. (*Vide* figs. 1 *a*, and 18.)

4. A quarry, with the square pillars, left to support the roof. The steps, on the left side, show whence the square blocks were cut, and removed. (*Vide* p. 33.)

5, *a*. The square pillar. *b*, the same with the angles cut off; *c*, the same formed into a polygonal column; *d*, its facettes grooved, shewing how the fluted column gradually proceeded from the square pillar. (*Vide* p. 37.)

6, *a*. The bud capital of the third order of Egyptian columns, which explains how the Doric capital (fig. 6, *b*) might be derived from it; the upper portion of the bud being cut off, and the abacus brought down to its lower curved end. The bands round the neck also appear to be the origin of the Doric annuli. (*Vide* pp. 45, 46, and Preface, p. vii.)

7, *a*, *b*. Egyptian mode of representing the papyrus blossom; showing that the columns of the fourth order (fig. 7, *c*) are intended to imitate that plant. (*Vide* p. 47.)

Fig.

8, *a*, *b*, *c*. The volute ornament, which is taken from the other water-plant, emblematic of *Upper* Egypt, as the papyrus was of the *Lower* country. (*Vide* p. 59.)

8, *c*. Is one of those stelæ-like pillars, before the sanctuary of Karnak. (*Vide* p. 34.)

9. From a canopy, over a king's throne, explaining the origin of the ornament, on the capitals of the columns in Plate XII, fig. 3.

10. Mode of constructing arches of crude brick (placed lengthways), in the 16th century B.C.

11. Crude brick pointed arch of the early Christians, in Egypt, about the 6th or 7th century of our era.

12. Crude brick arches of the time of Psamaticus, in the 7th century B.C.

13. Pointed stone arch, at the pyramids of Gebel Berkel, or Napata, the ancient capital of Ethiopia. (*Vide* p. 71.)

14. False arch of stone, at Thebes, of the time of the 18th dynasty, showing that false and true arches were built at the same time. (*Vide* p. 17.)

15, 16. Ground plan, and elevation, of the original small Egyptian temple, or mere sanctuary, which is the *first class* of temple. (*Vide* pp. 72, 82.)

17. The same within a temenos, or court, planted with trees, and surrounded by a crude brick wall, with a stone pylon, or gateway. (*Vide* p. 72.)

18. The stone pylon, or gateway. (*Vide* pp. 73, 90.)

19. Plan of a small temple, with a portico *in antis*, being the *third class* of temple. (*Vide* p. 83.)

20. Another, with an additional chamber, or corridor, between the portico and adytum.

21. The Sphinx, called the Andro-Sphinx, with a human head, of a double row of which the dromos, or approach to the larger temples, was formed, with a *scale*. (*Vide* p. 73.)

21, *a*. A singular instance of a female winged sphinx, in the Turin Museum, representing the Queen of King Horus. (*Vide* p. 74, and Preface, p. iv, note.)

22. The Crio-sphinx, or sphinx with the head of a ram. (*Ibid.*)

23. The Hieraco-sphinx, with the head of a hawk. (*Ibid.*)

24. Plan of the naos, of one kind of temple, with an isolated sanctuary. (*Vide* pp. 75, 88, 89.)

Fig.

25. Plan of another kind of temple; with an isolated sanctuary, originally peripteral, as at Medeenet Haboo. (*Vide* p. 80.)

26. Another plan, showing the central and two side adyta, and the transverse corridor before them. (*Vide* p. 88.)

27. Elevation of the naos, the loftier portico, and areas, the pyramidal towers, the statues before them, the obelisks, and avenue of sphinxes,* showing the external appearance of a temple of the *fifth class*. (*Vide* pp. 76, 77, 87.)

27, *a*. The lion-headed spout (or gurgoyle), beneath the cornice, for carrying off the water from the roof; as on the cymatium of Greek temples. Some were also placed on the level of the upper floor, over the adyta, and other low chambers of the naos; which may be seen, in fig. 27, projecting from the string course, at that part of the building. (*Vide* p. 95.)

27, *b*. The curve of the cornice, with a sort of triglyph in it; the torus, bound like the Roman fasces; and the sloping direction of the face of the regula. (*Vide* pp. 66, 67, 68.)

28. An area, showing the position of the intercolumniations between the Osiride pillars, to form a shallow portico. (There is *an error* in this figure; the towers ought to have been omitted.) *Vide* plans in figs. 33, 34. (*Vide* p. 83.)

29. Plan of a Mammeisi temple. (*Vide* pp. 56, 79.)

30, 31, *a*. *b*. Plans and elevation of *peripteral* temples, of the *second class*. (*Vide* pp. 73, 79, 80, 82.)

32. Canopy, placed at the end of a dromos, as in fig. 34; or sometimes (as at Philæ, and apparently also at Gertasseh, in Nubia), at a distance, and in another direction, from the temple. It was from this canopy that I suppose the processions marched to the temple, bearing the banners and sacred emblems. As it had a doorway at each end,

* I take the liberty of writing "sphinxes", rather than "sphinges", as I consider it better, in adopting words from other languages, to make them conform to our own; except where, for euphony sake, we avoid the addition of our plural *s*, as to those ending in *m* and *s*. For if we decline words, according to their language, we must do this in all cases, and must speak of "hippopotamorum", or "a couple of obeliscorum, with pointed apicibus, at the end of a dromou with sphingibus", and the like.

Fig.

the processions probably went through the town, and back again to the outer entrance, before they finally returned to the temple. (*Vide* p. 81.)

33, 34. Plans of large temples of the *fifth class*. (*Vide* pp. 87, 89.)

35, *a*. Temple at Samneh, on the West bank. (*Vide* p. 80.)

35, *b*. That on the East bank, at Samneh. (*Vide* pp. 83, 86.)

36. Temple at Amada. (*Vide* pp. 33, 83, 86.)

37. Portico of a temple of the *fourth class*, with screens between the foremost columns. (*Vide* p. 84.)

38. Plan of the same.

39. Plan of a rock tomb at Beni Hassan. The *scale* is above that of figs. 47, 50. (*Vide* pp. 84, 92.)

40. Plan of an excavated temple of the time of Osirei I (Sethos) in a valley opposite Edfoo, with a constructed portico *in antis*. (*Vide* p. 84.)

41. Portico of the temple of Esné. (*Vide* 84.)

42. Plan of the temple of Dendera, one of the *fourth class* of temples. (*Vide* p. 84.)

43. Another plan of a temple of the *fourth class*, consisting of a portico, and of a naos composed of a hall of columns, a transverse corridor, and a central and two side adyta. *Vide* p. 84.)

44, 45, 46. Plans of *rock* tombs and temples. Fig. 46 is the plan of the smaller temple of Bayt el Wellee ("the Saint's house") at Kalabshee. (*Vide* p. 92.)

47. Plan of the rock temple of Ferayg, converted into a church by the early Christians. (*Vide* p. 92.)

48. Entrance passage, or porch, of tombs in the rock, as at Osioot. (*Vide* p. 41, 67, 68, 109.)

49. Windows in the roof and side walls, of a small temple. This shows also how the roofing stones reached from one wall to the other. (*Vide* pp. 93, 94.)

49, *a*. A window in the roof, seen from below.

50. Plan of the great temple of Aboosimbel. (*Vide* pp. 63, 92.) The *scale*, which is the same as of fig. 47, is attached to it.

51. Doorways, showing how the double valves closed, and fitted into a recess in the wall. (*Vide* pp, 93, 94.)

52. Door with a single valve.

Fig.

53. Portico of a small temple, with windows in the roof. (*Vide* pp. 93, 94.)

54. Mode of securing the joints of the roofing-stones from rain. (*Vide* p. 94.)

Plate II.

1. The fluted columns, and the curve of the ceiling in imitation of a segmental arch; in a rock tomb at Beni Hassan. The *scale*, of about 10 feet to 3 inches, or rather of 34 feet to 10 inches, is the same for all the columns in this work, so that their relative dimensions may at once be perceived.

2. One of the flutes, or grooves, of the same columns, 8⅛ inches wide; on an increased *scale*. (*Vide* p. 34.)

Plate III.

1. Portico before a rock tomb, at Beni Hassan, with octagonal unfluted columns, and a remarkable row of dentils under the cornice. (*Vide* pp. 36, 39.)

2, *a*. Heads of captives at window sills, Medeenet Haboo, *with a scale*. (*Vide* p. 64, and Plate XVIII.)

2, *b*. Side of the same.

3. The same, larger, *with a scale*.

4. Battlements, and square cordon, of an ancient Egyptian stone wall, at Medeenet Haboo. (*Vide* p. 33.)

Plate IV.

1. Square pillar, in the rock temple, at Derr, of Remeses II; to the *same scale* of English feet, as all the other columns. (*Vide* p. 33.)

2. Square pillar, of Amunoph II, at Karnak, with a cornice-shaped capital. (*Ibid.*)

3. Square pillar, and fluted column, in the peristyle of the Western temple at Samneh, of Thothmes III. (*Vide* p. 34.) *a*, *b*. Ground-plan of the same. In figs. 1, 2, 3, the breadth of the intercolumniation is given, as in many other plates.

Fig.

4. Square pillar, in the smaller temple, at Aboosimbel, with its ground plan. *t.* Remeses II. (*Vide* p. 34.)
5. Polygonal unfluted column, with Isis-head on the front; and plan of the same; from a temple built by Amunoph III, in the Valley of El Hegs, near Eilethyas-polis, the old "city of Lucina". (*Vide* p. 35.)
6. Fluted column, at the small temple, of Bayt el Wellee, at Kalabshee. *t.* Remeses II. (*Vide* pp. 35, 36.)
7. Fluted column, in the smaller temple, at Medeenet Haboo. (*Vide* p. 36.)
8. Column at Sedinga, in Ethiopia, with a head of Isis, as its capital. *t.* Amunoph III. The shaft alone is according to scale; the head and shrine I was unable to measure. (*Vide* p. 35.)
9. Side of the same capital.
10. Shows how different columns proceeded, gradually, from the square pillar.

10, *b*. The polygonal, or circular fluted, column. (*Vide* p. 37.)

10, *c*, *d*, *e*. The square pillar, with a water-plant, a palm-tree, or some other device, painted upon it. The next step was to sculpture those devices in relief; and this led them, in course of time, to cut off the four angles, and to form the pillar into the actual shape of the plant, at first only painted, or sculptured, on its flat sides; and thus originated the round columns, *f*, *g*, *h*, and other varieties. (*Vide* pp. 7, 8, 57, and the Preface, p. vii.)

11. The mode of placing the two inclined stones, to form a pent-roof; as over the entrance passage of the Great Pyramid. (*Vide* p. 16.)
12. Another mode of covering a space. (*Ibid.*)
13. False arch, cut into the flat roofing stones of a temple, at Abydus. (*Vide* p. 17.)
14. Mode of placing stones, as half drums, to form an Egyptian column. (*Vide* p. 44.)
15. Shape of the capitals of columns, of the *fourth order*, of early and later times. (*Vide* p. 48.)
16. Shows how the curve was extended into the under part of the regula, or listel. (*Vide* p. 51, and Plate IX, fig. 1.)

Fig.

17. Ancient mode of ornamenting the false doorway, on a sarcophagus. (*Vide* p. 67.)
18. Ancient form of a doorway. (*Vide* p. 67.)
19. Tomb represented in Egyptian paintings, at Thebes; as though it was the custom in Egypt, as in some other ancient countries, to place a sort of stela, or cippus, in the form of a constructed tomb, over the entrance of those hewn in the rock. (*Vide* p. 111.)
20, *a*. Shows how much the Etruscan tombs hewn in the rock, with a small pyramid of masonry above, resembled those represented in the Egyptian sculptures. (*Vide* p. 112.)
20, *b*. Section of the façade of an Etruscan tomb, at Castel d'Asso; (with a *scale* at the side.)
21. Supposed form of the tomb of Halyattes (from the work of Cav. Canina). (*Vide* p. 4, note, and p. 112.)
22. Tomb near Sipylum, in Mæonia. (*Ibid.*)
23. Form of the Etruscan constructed tombs, at Tarquinii, Cære, etc. (*Vide* p. 112.)
24. Mode of constructing walls of stone, and of brick, in Egypt. (*Vide* p. 97.)
25. *Emplecton* style of masonry, and brickwork. (*Vide* p. 97.)
26. Stone walls of Roman time, at Taphis, in Nubia. (*Vide* p. 97, note.)

Plate V.

The *first variety* of columns of the *third order*; standing (in two rows, one behind the other), across the interior of a rock tomb, at Beni Hassan. The column is composed of four water-plants, bound together; and the shaft goes straight down to the plinth. The form of the architrave is singular, being like a depressed pediment, a little rounded at the apex. (*Vide* pp. 41-69.)

There is an *error* in the scale here, which should have been numbered "10, and 20", instead of "5, and 10", being the same as of all the other columns, in this work.

Plate VI.

The *third variety* of columns of the *third order*; with a single circular shaft, curved at the lower end. (*Vide*

Fig.

p. 42.) These two plates, v and vii, are arranged in the same sheet, for convenience sake, there being no room with Plate vi.

1. Is in the central hall of the temple at Old Koornak, of the time of Osirei I.
2. Another, from the lateral colonnades of the Memnonium, of the time of Remeses II.
3. Another, from the inner area of Medeenet Haboo, of the time of Remeses III. The lower end of the shaft, in this variety, is curved inwards. In figs. 1 and 2, the breadth of the intercolumniations is given.

Plate VI.

The *second* variety of the *third order*, composed of four, or more, water-plants; also with the shaft curved at the lower end. (*Vide* p. 41.)

1. From the temple of Karnak, of Thothmes III.
2. From the portico of the temple, at Old Koorneh, of Remeses II. Both these give the breadth of the intercolumniations. (*Vide* p. 65.)
3. From a rock tomb, at Tel el Amárna, of the "Stranger kings".
4. *a*, *b*. Is hewn in the face of the rock at Silsilis, *t*. Remeses II. Above the cornice is a row of asps, with the solar disk on their heads. *c*. Is a plan of the same.

The columns of the portico of Hermopolis Magna (Oshmoonayn), destroyed in 1821, were a singular variety of this order. They were composed of several water-plants, with a capital like that of fig. 3; but, besides the bands round the neck, were two other sets (each of five bands); one beneath the ends, that fell perpendicularly below the bands of the neck, the other set just above the pointed sheath-ornaments on the curving end of the shaft; and between these two lower sets were sculptures (arranged as in fig. 2), representing the king offering to the Gods. The plinth was round, with a chamfered edge, as in figs. 1, 2, Plate xi. Having only a drawing of them, I cannot give their exact dimensions.

Fig.

Plate VIII.

The largest specimens of the *third variety* of this *third order*; from the lateral colonnades of the great hall of Karnak. The different heights of the shafts are shown, and the breadth of the different intercolumniations. Above the entablature are the windows, that light the centre of the hall. (*Vide* also plate xvii.) Below is the plan of a part of the colonnades, to a different measure, —one quarter of the usual scale of these, and other columns. (*Vide* p. 43-65.)

Plate X.

The *fourth order* of columns; which, being introduced in the same sheet, with those of Plate VIII, show how they stand in relation to the lateral colonnades of the temple. These, which are the largest specimen of the *fourth order*, are in the great hall of Karnak, of the time of Osirei I, and his son, Remeses II. Some idea may be formed of their immense height, from the man introduced between them, and from those in the other plates being all drawn to the same scale. Their dimensions are— from the ground to the top of capital, 65 feet 5 inches; from the ground to the architrave, 69 feet 5 inches; from the ground to the roof, 79 feet 3 inches; greatest diameter of the shaft, 11 feet 8½ inches. (*Vide* p. 49.) This order of column was probably invented about the same time as the third; having originated in like manner from the plant, painted or sculptured, upon the square pillar; though it appears to have been less commonly used at an early period, than that with the bud capital. I have said (in p. 67) that the curving cornice was derived from it, and that this was not so generally employed over doorways, and other parts of buildings, as in after times; but there is evidence of its having been placed at the summit of *stelæ* of the 12th Dynasty; and it appears even to have been introduced in small objects of that kind, in the age of King Papi; and shrines, and tables for offerings, were made with a very similar sum-

Fig.

mit, as early as the 6th and 4th dynasties. The *device*, then, must have been used at that time, even if the pillar had not yet been cut into the isolated form of the papyrus column itself; and it may have been employed for stelæ, and other ornamental purposes, *before* it became the established cornice of an Egyptian temple.

Plate IX.

Other columns of the *fourth order*. The shaft, as usual, curved at the lower end.

1. From the central colonnade of the hall of assembly, in the Memnonium. The difference of the effect of columns, to the eye in a building, and when laid down to measurement on paper, is here seen in figs. 1 and 3. The upper part of the shaft below the capital, owing to its height, necessarily looks much smaller than it really is, as the lines recede from the eye; and the capital, from presenting the under portion of its curving rim, has a totally different appearance from an elevation; for it is never so presented to the spectator, who is always much below it. (*Vide* p. 50.)
2. The columns of the lateral colonnade of the same hall, of the *third order*, with one of the windows above the entablatures.

Plate X.

Composite columns of the *seventh order*.

1, 2, 3. From the portico of Philæ, of Ptolemaic time. As they are evidently derived from those of the *fourth order*, they may very properly follow them, though the palm-tree column precedes them in antiquity.

2. *b*. Shews the difference in the effect of the capital, as seen by the spectator, and laid down to a scale. (*Vide* p. 57.)

3. The details of this capital are not measured, but only laid down according to the proportions of the other columns.

4. Pilasters at the entrance to the tomb of Remeses III, at Thebes, which may properly be included in the *sixth order*. (*Vide* p. 57.)

Fig.

Plate XII.

1, 2. The palm-tree column, or the *fifth order*. These two show how different the size may be of columns of the same order. They are both of the Ptolemaic time, from Edfoo, and Philæ. The shaft comes straight down to the plinth, which, in fig. 2, has its upper edge chamfered, or bevelled off.

b, *b*. Are horizontal sections of the top of the capitals.

3, 4. Varieties of the *composite* columns, of the *seventh order*, also of Ptolemaic time, from Edfoo. (*Vide* p. 58.)

5. Shows the state in which the capitals of some composite columns were first put up, being afterwards cut into the form required.

Plate XIII.

1. The *Isis*, or *Athor-headed* column, of the *sixth order;* from the portico of Dendera. The base consists of a round plinth, upon a low square one; and the shaft runs down straight to the plinth, as in other columns of the Ptolemaic time; though instances occur of the same in early columns, as in Plate v. (*Vide* p. 53.)

2. In the inner hall of Dendera, combines the composite capital, of the *seventh order*, with that of the Isis-headed column. I was unable to measure the part above the composite capital. The rest of this, and all the other columns in this work, are drawn from actual measurements, taken by me, except part of fig. 8 in Plate IV; fig. 3 in Plate XI; part of fig. 2 in Plate XVI; and the lower part of fig. 3 in this plate, which is buried. This last, fig. 3, is in the peristyle of the Mammeisi, at Dendera. (*Vide* p. 56.) At the side is a horizontal section of the capital, and its dado, which is instead of an abacus. Fig. 4, also unites the capitals of the sixth, and seventh orders. It is of Ptolemaic time, from Philæ; and fig. 5 gives the lotus capital, with the Isis-head, on a larger scale. (*Vide* pp. 55-60.) These *transitions*, or *combinations*, of various orders, have obliged me to introduce several different

Fig.

columns in the plates XI, XII, XIII, without attending strictly to their consecutive arrangement; and the palm-tree column, of the fifth order, has been placed in Plate XII, because it accords in *size* with its companions of the seventh order, from the same temple of Edfoo.

Plate XIV.

1, 2, 3. Other columns of the *composite* or *seventh order*, from the portico of Esné, of Roman time. There are many other columns, of the same order, in that and other buildings; of which I have selected those that give the best general notion of their character. It will be seen that the capitals in Plate XIV, appear very large, and heavy, for the size of the shaft; but this was not the effect conveyed to the spectator; and their height, (which remedied the apparent defect), required that the capital should be large, in order to have a proper appearance when seen from below. (*Vide* p. 57.)

Plate XV.

Other columns of the *seventh order*, with fanciful capitals, of the early time of Thothmes III, at Karnak. As they are the result of a mere caprice, and belong to none of the early orders, I have placed them in the *composite*. (*Vide* p. 61.)

1. Shows their two varieties, and the breadth of the inter-columniations.
2. A column, and the section of an outer pillar, with the whimsical cornice, and the window above.
3. Elevation of the outer circuit of pillars, the entablature, and windows above.

Plate XVI.

1, 2. The *eighth* order, or the *Osiride* pillar.

1. Is from the area of the Memnonium, at Thebes, of Remeses II. These figures represent the king, in the form of Osiris, signifying "good," or the divine "goodness". In his hand he holds the crook and flail, the

Fig.

two sceptres of the god; and his square beard is indicative of the divine character of the figure, that of the king in his human character having the point curved upwards.

2. Is from the area of the temple of Saboon, in Nubia. The lower part is not measured, being buried in the sand.
3. Shows the shape of the capital of the fourth order, in the time of Remeses III, when it was deprived of its regula. (*Vide* also Plate IV, figs. 15, 16, and text, pp. 46, 48, 67.) The lowness of the cornice, compared to that of Ptolemaic time in fig. 5, and the triglyph ornament upon the cornice, may also be seen. (*Vide* p. 68.) On the right side is the Egyptian pilaster, with its capital; and the slope of the pyramidal tower, against which it stands, at the end of the outer area of Medeenet Haboo. (*Vide* p. 64.)
4. Also shows the lowness of the ancient Egyptian cornice, and the form which the corner of an entablature would have over a colonnade.
5. Exemplifies the greater height of the cornice in Ptolemaic buildings; and the custom of making the capital of the fourth order without a regula, continued from the time of Remeses III. (*Vide* supra, on fig. 3.)

Plate XVII.

1. A section of the window, and architrave, over the great colonnade at Karnak. (*Vide* Plate X.)
2, *a*, *b*. An elevation, and section, of a window, at the smaller temple of Medeenet Haboo, drawn to four times the usual scale. (*Vide* p. 93.)
3. A window of Ptolemaic time, at Thebes. (*Vide* p. 93.)
4. The same, increased to four times that scale.

Plate XVIII.

1. The pavilion of King Remeses III, at Medeenet Haboo; through which the road led to the dromos of the temple, from the usual canopy, that stood a short distance before it. Parts of the upper portion, of the sides of this

Fig.

building, are restored; but the front, with the stories over the gateway, is as it now appears; and its present condition may be seen in fig. 2. At six of the window sills are heads, which call to mind some of the figures in our old churches. They are of captive chiefs: and are the same two races, represented in the sculptures of the temple to have been defeated by Remeses III, the founder of the building. (*Vide* p. 64, and Plate III, figs. 2, 3.) The scale is for the centre part, over the gateway; the rest is increased in size, from the perspective.

3. Is the plan of the upper story of the pavilion. Some of the outer chambers are gone, but traces of them may be seen at the side. This pavilion stood at the outer end of the dromos, before the temple.

4. The sculptures on the walls of the chambers, in the centre part, above the gateway, drawn to an increased scale. The roofs were flat, and of stone.

For *plans* of all the temples in the ancient capital of Egypt, I must refer to my large survey of Thebes.

ERRATA.

For those in the Plates, *see* the Description of Plates: Plate i, fig. 28, and Plate ii.

Page 4, line 13, for "Ethopians", read "Ethiopians". Note †, for "Mœonia", read "Mæonia."

Page 11, line 16, for "Cere", read "Cære".

Page 39, line 8, for "tryglyphs", read "triglyphs".

Page 112, line 15, for "Mœonia", read "Mæonia".

ARCHITECTURE OF ANCIENT EGYPT.

PART I.

The Architecture of other people influenced by that of Egypt. —Polygonal Columns of Egypt the prototype of the Doric. —No Round Buildings in Egypt.—Columns not from Wooden Pillars in Egypt.—Early Houses.—Columns derived from Square Stone Pillars of Quarries.—Painting preceded Sculpture.—Origin of the Water-plant Column. —Squared Stone older than polygonal masonry.—Origin of the Arch.—Use of Bricks.—Size and Decoration of Houses.—Egyptian Taste in Architecture and Sculpture. Human Figure.—Drawing.—Decline of Art.—Temporary Revival.—A Change under the Ptolemies, but not an Improvement.—Buildings still Grand and Imposing.— Variety of Capitals consistent with Egyptian Taste.

THOUGH the Architecture of ancient Egypt appears, at first sight, to possess little resemblance to that of the Greeks, and other people of antiquity, there is no doubt that it exercised a very great influence on their earliest style, and gave it a direction, which was only altered, and modified, by accidental circumstances, resulting from a difference of habits, of climate, or of taste; and this consideration, and the fact of Egyptian architecture having long preceded that of any other country, render the study of it both interesting, and instructive.

That the various nations of antiquity in Asia, Egypt, and Greece, had constant communication with each other, at a very remote period, is well known; and colonization, the conquests of Egypt in Asia, and the commerce of Phœnicia, led to a direct intercourse between all the countries, bordering on the Eastern end of the Mediterranean.

From the various conventional devices, and the fabulous animals, portrayed in the most ancient paintings, and sculptures, of the Greeks, the influence, and frequently the parentage, of Egyptian art are sufficiently obvious; and seeing how imitative all mankind are, no one will reject the conclusion, that they had the same habit in ancient, as in modern, times. It was, and still is, the custom of people to borrow from those, who have attained to a greater degree of refinement, and civilization, than themselves; the nation most advanced in art led the taste; and though some had sufficient invention, to alter what they adopted, and to render it their own, this does not disprove the fact of their having borrowed the original idea; nor lessen the importance of ascertaining the source, from whence it was derived.

While Greece was still in its infancy, Egypt had long been the leading nation of the world; her conquests, extending into the heart of Asia, and Africa, had rendered her name illustrious; she was noted for her magnificence, her wealth, and her power; and all acknowledged her pre-eminence in wisdom, and civilisation. She influenced the early efforts in art, among contemporary people; many

ornamental devices, and even the form of some vases, were taken by the Greeks from Egypt; and though the wonderful taste, with which that people were gifted, speedily raised them to a point of excellence, never attained by the Egyptians, nor by any others, the rise, and first specimens, of art, and architecture, must be sought in the Valley of the Nile. In the oldest monuments of Greece, the sloping, or pyramidal, line, constantly predominates; the columns of the earliest Greek order are almost purely Egyptian, in the proportions of the shaft, and in the form of its shallow flutes without fillets; and a remarkable fact is, that the oldest Egyptian columns are those, which bear the closest resemblance to the Greek Doric. I have already had occasion to notice this fact, in a previous work;* but lest I should appear to claim for Egyptian architecture an undue influence upon that of the early Greeks, I shall quote the opinion of an unbiassed authority, whose name cannot fail to carry weight, in all matters, relating to the origin of art, and the history of architecture.

Canina observes† that the primitive buildings of Greece are shewn to have been derived from Egypt, by their simple quadrangular form, especially in those with a portico in front, by the low proportions of their columns, and, above all, by the decorations of the earliest Greek monuments that remain; and the same means of communication, which introduced a knowledge of art into Greece, propagated

* Manners and Customs of the Ancient Egyptians, vol. iii, p. 310.
† Canina, Archit. antica. Sezione, 1, c. 1, p. 86, fol.

it in the regions of Italy, inhabited by the Tyrrheni; as well as in Sicily, which boasted some of the oldest edifices. And a remarkable confirmation of the resemblance, between Greek and Egyptian sculpture, is derived from Strabo;* who says that "on the walls of the oldest temples of Egypt were large figures, similar to those of the Tyrrheni, and to the most archaic works of Greece."

Round buildings, common in some other countries, were never used in the Valley of the Nile; and the rectangular oblong shape of their temples was that adopted by all who copied the Egyptians, as the Phœnicians, Jews, Ethiopians, and other neighbouring people; and if the Greeks sometimes followed a custom prevalent in parts of Asia Minor,† of building circular tombs, the form given to their temples was that derived from Egypt; which, though a distant country, exercised great influence on their taste.

Egyptian architecture evidently derived much, from the imitation of different natural productions, as palm trees, and various plants of the country; but it may be doubted, if Egyptian columns were borrowed from the wooden supports of the earliest buildings. Columns were, certainly, not introduced into the interior of Egyptian houses, until architecture had made great progress; the small original

* Strabo, lib. xvii.

† The tomb of Halyattes (B. C. 562) described by Herodotus, and that still existing at Sipylum, in Mœonia, were round, like the built sepulchres of Etruria, and the tomb of Menecrates, at Corfu. The summit of the so-called Treasury of Atreus, at Mycenæ, was probably covered with a circular wall of masonry, and a conical tumulus. *Vide* infrà, part ii, on the tombs.

temple, and the primitive house, consisted merely of four walls; and it is only in countries, where timber is extensively used, that architecture derives its members from wooden framework. This was not the case in Egypt; and though the architrave was borrowed, there, as elsewhere, from constructed buildings, that member doubtless originated in the *stone* beam, reaching from pillar to pillar, in the temples; and though the square stone pillar was used in the quarry, the stone architrave was unknown to the Egyptians, until they thought it necessary to increase the size of, or add a portico to, their temples. And that this last was neither a necessary, nor an original, part of their temples, is plainly shown by the smaller sanctuaries being built, even at the latest times, without it.

The early houses of Egypt were of mud; and the masses of that material, used in constructing their walls, soon led to the simple invention of sun-baked bricks,* at once more durable, and convenient. The flat roof was of palm-beams, covered with the branches of the same tree; and a thick coating of mud laid upon them, completed the whole; as in the houses of the poor class of Egyptians, to the present day.

But it was not till luxury had been introduced,

* In most countries, the use of stone preceded the invention of bricks; and that they might not be injured by rain, these last were burnt, except in Egypt, where burnt bricks were rarely, if ever, employed, before the Roman conquest. Pliny supposes that "bricks and houses were invented by Euryalus and Hyperbius, at Athens, caverns having till then served for houses;" and that "mud huts were derived from the nests of swallows"! Pliny's dates of inventions are generally very late; but he justly considers Diospolis (or Egyptian Thebes) far older than Athens, Argos, or Sicyon. Plin. vii, p. 57.

that the column performed a part in an Egyptian mansion; and the temple of early Egypt was a simple quadrangular cella. Egyptian columns, therefore, originated neither in a temple, nor in a house.

Square pillars were the first used in Egypt: and their presence in the old temples is a proof of their having been the first kind adopted there; being a remnant of the primitive style of building. They are found in some of the earliest constructed porticoes, and in the peristyles of the old peripteral temples.

This square pillar originated in the stone quarries, where, too, it appears without any architrave, —a mere square mass, often rather irregular, left to support the roof;*—and when, in after times, large tombs, and temples, were excavated in the rock, they, in their turn, borrowed from constructed monuments; and the pillar was no longer permitted to support the roof, without the intervening architrave. Thus, then, constructed buildings were indebted to the quarry for the pillar; and rock-hewn monuments derived from the former the architrave, and plinth. The same spirit of imitation also led to the introduction of square dentils over an architrave, as in the façade of a tomb at Beni Hassan;† and the ceiling of one of the rock tombs, near the great pyramid, cut to represent the palm beams of a house,‡ is

* *Vide* Plate 1, fig. 4.
† *Vide* Plate 3, and infrà Part ii, on the 2nd order of columns.
‡ *Vide* Ancient Egyptians, vol. ii, p. 115.

another proof that the two borrowed from each other. In these, the rock monuments imitated timber roofs; but this was long after columns, and architraves, had been used in temples; and architecture was then only dependent, for new features, on caprice, or taste.

It is universally admitted, that painting long preceded sculpture,* and before ornaments were sculptured in stone, they were represented in color; nor is there any difficulty in perceiving, that the first mouldings in Egyptian monuments were merely painted, on the flat surface of the walls, and pillars; and that the next process in decorative art, that of chiselling them in relief, was a later introduction. The lotus blossom, the papyrus head, water-plants, the palm tree, and the head of a goddess, were among the usual ornaments of a cornice, or a pillar; and these favorite devices of ancient days continued still, in after times, to be repeated in high relief;† when an improved style of art had substituted sculpture, for the mere painted representation. But when the square pillar had been gradually converted into a polygonal shape,‡ the ornamental devices, not having room enough upon its narrow *facettes*, led to the want, and invention, of another form of column; and *from that time*, a round shaft was *surmounted* by the palm-tree capital, or by the

* Of Egyptian painting and sculpture, see Ancient Egyptians, vol. iii, p. 264, 303.

† *Vide* Plate 1, fig. 8, c.

‡ Of the progress of the round and polygonal column, from the square pillar, *vide* infrà Part ii, on the second order of columns.

blossom, or the bud, of the papyrus; which had hitherto *only been painted*, or *represented in relief*, upon the *flat faces of a square pillar*.* *Hence* the origin of *new orders*, differing so widely from the polygonal column. But the old and new orders continued, for some time, to divide the taste of the early Egyptian architects; until, at length, when the size, and height, of Egyptian buildings had increased, *beyond the scale adapted to the old polygonal shaft*, the more elongated style of the new columns superseded the use of their rival; and, in the later periods of the native dynasties, these, with the varieties that grew out of them, were employed to the entire exclusion of the old order.

For the palm-tree, and water-plant, columns were not, as often supposed, in imitation of the wooden support of the early roof, but owed their origin to the devices, painted, or sculptured, on the *face* of the *square pillar*, having been formed into a *capital* and a *round shaft;* and the binding together of a number of water-plants, to form a column, was evidently not taken from a similar frail support, but was a fanciful caprice, *borrowed* from the *relievo ornaments* of the old *pillar*.†

At what period the art of painting began is altogether uncertain; the Egyptians claimed the invention 6000 years, before it was known in Greece; and though Pliny, with reason, calls that a vain boast,‡ it argues that its origin was beyond

* *Vide* Plate 4, fig. 10, *a* to *h*.

† I use the term "*column*" for a round, and "*pillar*" for a square, column.

‡ Plin. xxxv, 3.

all record. And since the high antiquity of their sculptured monuments is well known, some opinion may be formed of the early age, when they began the practice of painting.*

The oldest existing monuments in the world are the pyramids, and the tombs about them; which date as far back as the fourth dynasty; and their importance in the history of architecture is worthy of consideration, as they show at what a remote period sculpture, and the employment of squared stone in horizontal courses, were practised in Egypt. At that time, none of the oldest remaining walls of Greece, Italy, or Sicily, had been erected; sculpture was totally unknown there, and none of the historical communities of Greece had yet been formed.

The early use of squared stone in Egypt is, indeed, as Canina observes, a very remarkable fact, and proves the fallacy of ascribing the highest antiquity to edifices, in Greece, and Italy, in consequence of a peculiar mode of construction; which has been thought to be the first attempt of man, in architecture. For not only does the use of squared stone, in Egypt, precede that of the unhewn, or of the polygonal, blocks, in the so-called Cyclopean walls,† but the employment of granite, in the pyramids, at once shows to what a point the skill of the Egyptians had reached, in cutting, and squaring, stone, at a time long anterior to the

* Canina, sect. i, c. i.

† Polygonal work has been latterly distinguished from the style used at Tiryns, but the ancients included both under one name.

building of the walls of Tiryns, and, consequently, long before the foundation of any monument in Italy, or Greece. That polygonal masonry was not owing to want of knowledge, in the art of squaring stone, is now universally admitted; and the reason of its adoption, as well as its late continuance, is attributed to the quality of the stone employed; which, from its peculiar fracture, more readily assumed that shape.

Manetho says that squared stone was first employed in Egypt, for building, by Tosorthrus, or Sesorthus, the second king of the third dynasty;* but the limited period of nine reigns, to the time of Suphis, would scarcely have enabled the Egyptians to acquire the skill, and experience, necessary for squaring so hard a stone as granite; nor could they have attained to the perfection, in the art of fitting blocks of that quality, which to this day excites our admiration in the pyramids; unsurpassed at any subsequent period by their own masons, and unequalled at any time by other people.

Those who have ascribed the use of polygonal masonry, to an ignorance of the art of squaring stone, seem to have overlooked the fact, that it requires more skill, and labour, to cut, and fit, blocks of numerous and varied shapes, than those of simple rectangular form; and instances of both

* He seems to ascribe nearly the same knowledge to Athothis, the second king of the first dynasty, who erected a palace at Memphis. Vennephes, the fourth king of the first dynasty, built the *pyramids* near Kochôme; and mention is made of a pyramid, in the hieroglyphics, before the time of Suphis.

have been found, of equal antiquity, in the same buildings.

In those parts of Greece and Italy, where the hard kind of limestone abounds, which readily breaks into a polygonal shape, that style of masonry is general; but in the Campagna of Rome, where tufo, and other volcanic rocks, are more conveniently cut into rectangular blocks, squared stone in horizontal courses is used; and, in Sicily, no instance occurs of polygonal work, except at Cefalù, and on Mount Eryx; at the former of which are doorways with mouldings, indicating no very remote, or rude, style of art. At Pyrgi, on the coast between Civita Vecchia and Ostia, the walls are polygonal, while in the neighbouring town of Cere all is of squared work; but this was likewise owing to the different qualities of stone, at those two places; and, for the same reason, polygonal masonry occurs in the ancient towns of the Apennines, though the Etruscan cities of the plain present horizontal masonry. And if the polygonal walls of Cosa, and Saturnia, are exceptions, the same reason may be assigned for their construction, as for those of Pyrgi, the nature of the stone employed. That this kind of masonry does not argue greater antiquity is sufficiently proved, by its occurring in the same walls with rectangular work, in Greece,* Italy, and Asia Minor; and it was even adopted by the Romans, where solidity was

* A remarkable instance of this is in the Gate of Lyons at Mycenæ. Horizontal squared masonry is also found, in the same buildings with irregular polygonal work, in Mexico.

required, as in some of their villas at Tivoli, and in the substructions of the Via Appia, and other roads; and though the so-called Pelasgi,* from early habit acquired in their first settlements, may have preferred the polygonal style, they soon ceased to use it, in places, where the stone was better suited for the rectangular form.

Materials, indeed, had often an influence on a local style of building; and without seeking a distant proof of this, it is sufficient to say, that the round towers, of our Norfolk and Suffolk churches, would not have had that unusual form, had their builders been able to obtain materials, suited to the ordinary style of construction. Many a modern Italian wall, indeed, when built of the same kind of stone, as that used in old Pelasgic, and Etruscan, towns, would, if represented on paper, without any scale to guide the eye, be easily mistaken for the same kind of building; which shows how completely the style of masonry was owing to the nature of the stone employed; and it often happens that the only difference between the walls of some modern vineyards, and of the older cities, consists in the size of the blocks.

Canina thinks that rectangular masonry was coeval, in Greece, with the oldest polygonal work; the former being employed, wherever the stone was adapted to that purpose; and it is probable, that the latter grew out of the irregular mode of con-

* A conventional name for the migratory tribes, who settled in Greece, and Italy, as "Opisci", or "Oscan", was for the aborigines of Central Italy. *Vide* Note A, in the Appendix.

struction with unhewn blocks, which had their interstices filled up with small stones. The first step was to cleave them, so as to fit more closely, and rest more firmly, on those below; the next was to cut them into regular polygons; which, when the art of building improved, were accurately fitted, by means of the leaden ruler, mentioned by Aristotle.* Hewn polygonal masonry wastherefore the perfection of that style; but only adopted, when a particular quality of stone was found.† Its origin, and continuance, may be ascribed to two circumstances; first, to the nature of the materials, and secondly, to custom; and since the same kind of stone was squared for the angles of walls, and for other purposes, whenever found necessary, there is sufficient evidence that their builders were not ignorant of the horizontal style.

It may also be doubted, whether those, who put up the huge blocks of the walls of Tiryns, were unacquainted with horizontal masonry; their success in raising, and fitting, those ponderous masses, must be attributed to skill, not to ignorance ;‡ and the mechanism required to move, and build up,

* Ethic. 8, 10. In speaking of legislation, Aristotle says, "The rule of the undefined is indefinite, like the leaden ruler used in the building of Lesbos, which alters according to the form of the stones."

† The singular instance of polygonal tufo, at Empulum, does not argue against this.

‡ It may be observed that in the Etruscan walls of horizontal work, small stones were frequently used to fill up vacant spaces, when the angles of the stones happened to be broken off; or when, owing to an irregularity, not unusual, in the courses, the blocks did not exactly fit; and we find the same introduction of small stones, at the corners of the large blocks of lava, in the paved roads of the Romans, as in that on the Alban hill, or Monte Cavi.

blocks of similar dimensions, argues greater knowledge, than is usually attributed to the architects of those times.* Strength was the object; and the walls of Tiryns continued to excite admiration for their solidity, in the days of civilized Greece, as they do to the present day. Had they been erected by rude, and unskilful, masons, the blocks might have been rough, and shapeless; but their size, as in walls made by the peasantry of modern times, would have been limited to the limited knowledge of their builders; and an argument of their great antiquity might have been derived from the apparent primitiveness of the age. But the walls of Tiryns are very different from the rude attempts of an untaught people; and though old for so "young" a people as the inhabitants of Greece, Tiryns was not old in the history of the world; nor, if its founders came from Asia Minor,† is there any difficulty in accounting for the mechanical skill, necessary for the erection of its walls.‡

It was the acknowledged opinion of antiquity, that the Egyptians preceded all other people, by many ages, in civilization, and an acquaintance with art. The Greeks did not conceal the fact, of their having borrowed largely from Egypt, in reli-

* To suppose such works to have been made, before mankind had any mechanical knowledge, is like the assertion of Diodorus Siculus, that machines were not yet invented, when the pyramids were built. Inclined planes (of earth or sandbags) for building the pyramids, or for raising roofing stones of Egyptian temples, would certainly not facilitate the work, but remove one difficulty by supplying a greater.

† Greece was indebted to that country, for the knowledge of the first steps towards civilization, and for much of its early colonization; the current of which, at a later period, flowed back again from it to Asia Minor.

‡ They were said to have been from Lycia. Strabo, lib. 6.

gion, and various branches of knowledge; their most celebrated lawgivers, philosophers, and mathematicians, repaired thither, as to the fountain-head of learning; and the Ælians, who consulted the Egyptians as the wisest of mankind, only followed the long-established belief in the wisdom of that people. The first notions of a mythological system, the names of the Gods, the mode of approaching the Deity, and the ceremonies of religion, were derived by the Greeks from Egypt;* and the visits made to that country by Solon, Plato, Eudoxus, Archimedes, Pythagoras, and so many other philosophers, and mathematicians, for the purpose of studying there, show the reputation it enjoyed. It was universally allowed to be the cradle of civilization, during the earliest periods, and if Plato's statement respecting the thousands of years, that painting, and sculpture, had been practised there, is exaggerated, it shows at least the unquestioned opinion of the priority of Egyptian art.

The architecture, painting, and sculpture of Egypt are also, in every respect, original, and of native growth; and whatever real, or fancied, resemblance may exist, in the works of other countries, it is certain that the Egyptians were not the imitators; since all known monuments of art are modern, compared to the oldest in Egypt,† and

* Herodotus, ii, 50.

† The old temple of Apollo at Delphi, of Neptune near Mantinea, and others, were of wood, which continued to be employed for columns to a much later period. *Vide* Canina, sect. 2, part ii, c. 3.

date, for the most part, after the decline of Egyptian sculpture, in the twelfth century before our era.*

Among the proofs of a communication of architectural taste, and knowledge, in early times, are the pent-shaped roof, formed by the application of two sets of stones, inclined towards each other, at an angle of about 100°; and the mode of covering a large space, with slabs of much smaller dimensions than its breadth; in which last, the walls being of horizontal masonry, each course projects beyond the one below, until the uppermost ones approach each other, near enough for the remaining space to be covered by a single stone.† These two methods, used contemporaneously in Egypt, were both employed by the early Greeks;‡ and they may be considered as the first steps towards the want, and the invention, of the arch. The largest, and most remarkable, instance of the first is found over the entrance passage§, the queen's chamber, and the uppermost room, of the great pyramid; and from its being there employed to bear so great a superincumbent weight, it is evident that it was already well known, and had been adopted by the

* The *commencement* of the decline, indeed, dates from the reign of Remeses III, a century earlier. The taking of Troy happened, according to the Arundelian marbles, in 1184, and scarcely any Greek sculpture pretends to be prior to that event, except the Lions over the gate of Mycenæ.

† *Vide* Plate 4, fig. 12.

‡ As in a ruin on Mount Ocha, near Carystus, in Eubœa. The so-called tunnel of Pythagoras, at Cortona, is built in the same manner, of horizontal courses of stones, approaching each other; and almost seems as if it had been made by people who had seen, but were ignorant of the principle of, a true arch.

§ *Vide* Plate 4, fig. 11.

Egyptian architects, long before the erection of that building.

A third method was that of cutting an arch in horizontal blocks, so placed as to overlap each other, until the upper courses met in the centre,* the oldest instance of which dates in the reign of Thothmes III, or rather of his sister, B. C. 1520; and a similar caprice, of cutting an arch in solid blocks, was adopted in the time of Sethos, or Osirei, the father of Remeses II.† This last method, therefore, was employed long after the true principle of the arch was known in Egypt, and after vaulting with crude brick had become a common mode of roofing tombs; and it is a singular fact that, in a very ancient chamber, near the fountain at Tusculum,‡ the inner passage is constructed on the real principle of a *pointed* arch,§ while in the outer chamber the lower part of the arch is cut in horizontal courses of stone, and is crowned by long blocks inclined towards each other, and meeting at a little more than a right angle, to form the apex. Both the true, and false, arch were therefore used at the same period, by people well acquainted with the principle of forming *voussoirs*, with stones radiating to a common centre; and the argument against

* Plate 1, fig. 14.

† At Abydus. Plate 4, fig. 13.

‡ It is supposed to have been built at the time when the kings ruled at Rome. Some ascribe it to the Pelasgi.

§ The date of the earliest pointed arches is not (as generally supposed) confined to Saracenic, or to Church, architecture; they are found at Ephesus; at Zindan; at Pompeii; and in Egypt, of early Christian time, before the Arab invasion in A.D. 640.

this knowledge, derived from the existence of false arches at Thebes, falls to the ground.* And the numerous instances of crude brick arches, in the tombs at Thebes, of the early times of Amunoph I, of Thothmes III, and the Remeses, suffice to show that the principle was known at least as early as the commencement of the 18th dynasty, or the end of the 16th century before our era. But the regularly constructed arch was never admitted into Egyptian temples; the flat roof had been established, as a necessary feature of their sacred architecture; and if a royal caprice† occasionally chose to have a vaulted ceiling, it was only cut into the inner surface of the horizontal courses, that formed the flat roof; the true arch being confined to houses, and tombs. Even in Roman times, when conquered Egypt had completely fallen, and her taste had passed away, the universal preference for the arch was not allowed to intrude it into her sacred edifices; and prejudice forbad it even in the small out-of-the-way temples of the Oases, except in a position which did not interfere with the character of the building. It may have required some time, before the Egyptians were induced to build arches of stone; as their quarries afforded them blocks of sufficient length for roofing large spaces;‡ at all events, there

* None of the false arches cut in horizontal stones are as old as some true arches of crude brick, at Thebes; the age of which I have ascertained from the name of Amunoph I, on their stuccoed lining. *Vide* Ancient Egyptians, vol. iii. p. 318.

† Of Thothmes the Third's sister, at Dayr el Báhree, Thebes (Plate 1, fig. 14); and of Osirei the First, or Sethos, at Abydus. (Plate 4, fig. 13.)

‡ Some roofing stones in their large temples measure upwards of twenty-four feet in length.

are none of the same early date, as the crude brick arches of Thebes; and the oldest built of stone, that now remain, are of the 26th dynasty, in the reign of Psamaticus II, about 600 B. C.* These are in the tombs about the Pyramids; and it is singular that there are few monuments there, of the period which intervened between the 4th, and 26th, dynasty.†

In a country like Egypt, where wood was rare, and bricks were used for houses and tombs, the necessity of such a mode of roofing would not be long in suggesting itself;‡ wood was not a suitable material for covering tombs, that were intended to vie in durability with stone monuments; and the want of it naturally led to the invention of the arch. Here, again, the fact of inventions having spread, as they became known, into other countries, is sufficiently obvious; and as the Greeks began by using the two modes of construction, before mentioned in the pyramids, so they subsequently arrived at the knowledge of the arch, when its invention became known to those who had intercourse with Egypt. For even if some arches were really built by the Greeks, and Etruscans, before the age of Psamaticus, their being of stone would not in any way afford their builders a claim to that invention; and no one would be silly

* In the tomb at Sakkára, the stones may be considered a "mere lining to the rock," but this objection cannot apply to Campbell's tomb, and others, near the Great Pyramid.

† The sphinx has the name of Thothmes IV, of the 18th dynasty.

‡ Canina seems to be of the same opinion, that the use of brick led to the invention of the arch.

enough to maintain, that the principle of the arch was unknown, until it had been made of some particular material.

The use of bricks also exercised an influence on the domestic architecture of the Egyptians; and their houses, which in early times rarely exceeded one story, afterwards (if we may believe Diodorus) rose to the height of four or five.* For this, and for the marked difference in their style from the massive Temple, they were doubtless indebted to the materials, of which they were built; and elongated proportions had already become the established character of an Egyptian house, in the early part of the eighteenth dynasty. Even the pyramidal towers, copied, with their flag-staffs, from the temples, were increased to a disproportionate height; and the vertical line seems to have predominated in the large villa, in preference to the horizontal character of the original architecture of Egypt. This style of building originated in the use of brick, and wood; and the introduction of lengthy columns, to ornament the exterior and interior of houses, was probably borrowed from Egypt by the Persians, (as well as by the Hebrews, and others, as Canina has shown), from whom, according to Strabo,† it was adopted by the Romans, even before the reign of Augustus; and it was this fashion, with the introduction of

* Diodorus (i. 48) says the houses of Thebes were "ας μεν τετρωροφους, ας δε πεντωροφους." He probably reckoned the ground floor as one. The highest represented in the sculptures are of four stories, above the ground floor.

† Strabo, lib. v. 2.

arabesque scrolls, and masses of red paint covering the walls, that so greatly excited the displeasure of Vitruvius.*

If a motive of defence led to the addition of the lofty towers, to the simple early Egyptian temple, its peculiar aspect was still preserved in the rest of the building; but the private mansion assumed a form both novel and arbitrary. Rows of columns rose one over the other, in each successive story; the upper ones supporting a platform, or canopy, which covered the open space they enclosed; and the slender style of column, introduced into domestic architecture, affected the unprecedented anomaly of extending from the ground nearly to the top of the house.

These tiers of columns probably gave Vitruvius his idea of an Egyptian *œcus;* unless he refers to the upper pillars, and windows, of the great halls of assembly, in which he may have fancied some "resemblance to a basilica."†

Both the interior, and exterior, of Egyptian houses were stuccoed and painted; the doorways of the larger mansions being frequently of stone, as in the large crude brick enclosures of the temples;

* Vitruvius says formerly real objects were represented, or stories from the Trojan war, or the wanderings of Ulysses; but now monsters, or reeds for columns, and candelabra supporting roofs and buildings, and stalks of flowers in whirls, with figures coming out of them; impossibilities, devised by a depraved taste; whole walls too are covered with minium, which the ancients only employed very sparingly, like physic.

† Vitruv. lib. vi. v. p. 265. "In Ægyptiis autem supra columnas epistylia..... deinde supra epistylium ad perpendiculum inferiorum columnarum, imponendæ sunt minores quarta parte columnæ.... et inter columnas superiores fenestræ collocantur, ita basilicarum ea similitudo .... videtur esse."

and, indeed, a few instances occur, in small out-of-the way places, of temples built of crude brick, with doorways and columns of masonry.

The borders, mouldings, and other ornaments, in the houses, were composed of favourite patterns, as water plants, or other fancy devices, common in the tombs; at the doorway was the name of the owner, or of the king in whose service he was employed; and a sentence, as "the good house", or the emblems of the good genius, or some motto, was occasionally painted above the lintel. Some were erected around a spacious court, or garden; and large mansions consisted of a succession of courts, separated by pyramidal towers, and handsome gateways, with walks through long corridors, or avenues shaded with trees.*

Having been built of crude brick, few vestiges of them remain; but the paintings of Thebes, and of Tel el Amárna, give a very good idea of the plans, and dimensions, of Egyptian houses, and large villas; and in the ruins of the latter place, walls of houses may be traced, which have plans very similar to some of those in the paintings.

Though it is unnecessary to repeat what I have already mentioned on this subject, I may notice one building at Thebes, which having been made of stone still remains partly entire. This is the pavilion of Remeses III, at Medeenet Haboo; and from its sculptured walls some idea may be had of

* *Vide* Ancient Egyptians, vol. ii. p. 128, and the woodcuts representing the houses and villas of the Egyptians.

the mode of decorating apartments; as the exterior shows the general effect of the battled summits of ancient Egyptian castles,* and the strange mode of ornamenting window sills, with the heads of captives in high relief, projecting from the walls.† Many of the chambers are gone; but the sculptures, in those that remain, show the style of the cornices, and various mouldings, as well as the subjects on the panels of the walls; among which are figures of the King, attended by women, some of whom offer him flowers, while others amuse his leisure hours, with the old, and favourite, Egyptian game of draughts.‡

The stone battlements, that crown this pavilion, were copied from Egyptian shields, and were common on all castles built by them in Egypt, or in countries they conquered; some of which are figured in the sculptures at Karnak; and similar battlements remain on the stone wall, which appears to have surrounded the temenos, that once enclosed the two temples of Medeenet Haboo.

They measure 3ft. 2in. in height from the torus, and the circular summit is 1ft. 10in. high, and 2ft. 9in. in breadth.§

With regard to the taste of the Egyptians, in architecture, and sculpture, it may be observed that, in the oldest monuments, the columns and

* *Vide* Plate 18.

† Plate 3, figs. 2, 3; and Plate 18. *Vide infra* on the Osiride pillar.

‡ They played it in the time of the 12th dynasty; see my Ancient Egyptians, vol. ii, woodcuts, p. 419, 420, 421.

§ *Vide* Plate 3, fig. 4.

figures were much more stunted in their proportions, than in buildings of later times, particularly of the 18th, and 19th dynasties; and, though the reigns of Amunoph III, Sethos,* or Osirei I. and his son, the great Remeses, were the Augustan age of Egypt, when its sculpture had reached the highest point of perfection it was capable of, the figures were marked by a mannerism, and extravagance of proportion, not found in the ancient days of the Osirtasens.

But Egyptian art is not singular in this respect; the earliest specimens of architecture, and the first representations of the human figure, in Europe, were also remarkable for similar proportions, and an absence of elongated forms; and though the very conventional style of Egypt prevents its holding any comparison with European art, it is not the less remarkable, that a predilection for stunted forms should have prevailed also among the early Egyptians; who, in their most flourishing periods, acquired a striking preference for lengthy and slender figures.

It is scarcely necessary to repeat, what I have already had occasion to state,† that, in the sculptures and paintings we now see, the Egyptians never aimed at an actual representation of the human figure: it is well known that their religion forbad them to alter that conventional style, which had been formed during the infancy of art, which

* From the god Seth in his name, he was evidently the Sethos of Manetho, and this accords with the position of Menephthah as 3rd king of the 19th dynasty.

† *Vide* Ancient Egyptians, vol. iii, p. 264, and Materia Hieroglyphica.

they had inherited from their ancestors, and which had been rendered sacred by a superstitious veneration for antique usage; and no one, accustomed to judge of the progress of art, having seen the truth with which they seized the character of all animals, could fail to perceive that something more than want of skill was required, to account for their peculiar mode of representing the human form; even if he had not been directly assured by Plato, and Synesius, that the Egyptian priests prohibited any innovation in these matters,* and that the figures painted in bygone ages continued still the same, through the veto imposed upon their artists by religious prejudice.† Nor were they a solitary instance in their reverence for custom, established by religious feeling; the Turkish Moslem would not venture to translate the Arabic Korán, nor would the Cairene alter it to his own dialect; and we might ourselves object to the use of a Bible, transferred into the language of ordinary life.

The same prohibition did not extend to innovations in architecture, nor to changes in the mechanical mode of treating sculpture; and various styles of bas relief, or relieved and simple intaglio, were in vogue, as the fashion of the day, or royal caprice

* "Contrary to the laws established, regarding the figures of the deities." *Vide* Ancient Egyptians, vol. iii, p. 87.

† Plato says "that the pictures and statues, made ten thousand years ago, are in no one particular better, or worse, than what they now make." 2nd Book of Laws. *Vide* Ancient Egyptians, vol. iii, p. 266. The figures on the walls of tombs and temples were drawn within a fixed number of squares, and all with the same proportion of nineteen parts for the whole height. *Vide* Ancient Egyptians, vol. iii, p. 313; and Materia Hierogl. Plate 4, part ii.

might suggest. The style of relievo, and of intaglio, varied at different periods. In some relievos the surface of the figures was flat, with very little elevation, and with the edges slightly rounded off; in others the centre part was convex, and the figure, standing forth in high relief, rose gradually from the wall; while some projected, either as half, or three-quarter, or whole figures, beyond the surface of the stone. The intaglios, again, were either shallow, and nearly flat within; or (as was most usual) were convex in the centre, where the body of the figure was on the same level as the surface of the wall, having each of its sides cut in to a great depth, with the outer edges at right angles to the face of the wall;* or, according to a method adopted by Remeses III, principally for hieroglyphics and small figures, they were (what may be termed) inclined intaglio; which I shall presently explain. In early times, both relievo and intaglio were employed for hieroglyphics; but for figures the former was usually preferred, until the reign of the great Remeses; who, abandoning the beautiful low relievo of his father's monuments, introduced a more general taste for intaglio; which continued, from that time, to be preferred. Quickness of execution in sculpturing figures in intaglio, compared to those in relief, and the smaller amount of care and skill required for them, may have been one of the principal reasons for this preference; in a reign, when

* The method adopted by Remeses III was peculiar to him, and cannot be considered a distinct style of Egyptian intaglio.

so large a number of public works were constructed; and this habit, once acquired, naturally led the Egyptians to continue it, as art began to decline. And though so much admirable sculpture proceeded from the hands of Egyptian artists, in that reign, and architecture and sculpture then reached their zenith, the cause of the fall of art was secretly working, and it was not long before its effects became apparent.

Yet, grand sculptures continued to be produced, for another century; and though there is an evident inferiority in those of the third Remeses, they still claim a conspicuous place among the works of Egyptian art.* But any one accustomed to study it will detect this inferiority; and the peculiar attempt, to heighten the effect of the sculptures, made in his reign, was far from being an improvement. This consisted in cutting the lower side to a great depth, and sloping the upper one gradually from the surface of the wall, till it reached the innermost part of the intaglio, so that a person standing immediately beneath, and close to, the wall, might see the small figures and hieroglyphics, even on the higher parts of the building. But it was not imitated by his successors; and this peculiarity suffices to fix a date to sculptures, where it occurs.

From that time the decline of Egyptian art became more apparent; and it continued until the accession of the 26th dynasty, when the

* *Vide* supra, p. 16, note.

1st and 2nd Psamaticus, and Amasis, made an attempt to revive the style of the best periods. The elegant low relievos of former times then took the place of the ordinary intaglios, and the greatest care was bestowed on the chiselling, and colouring of sculptures; but taste had gone; character was wanting in the figures; and their excellence consisted, rather, in the minuteness, and mechanical management of detail, than in freedom of design. They were also mostly confined to a small scale; and that excellence of drawing, for which the artists of the best periods were so remarkable, may be looked for in vain among the outlines of that age. For though the Egyptians never understood the true method of art, to which other people of unfettered genius attained, the drawing of large figures, in the time of the eighteenth, and nineteenth, dynasties, is such as to command admiration, for the beauty of their outlines, showing the freedom of the hand that executed them. The best instance of this is in the unfinished chamber of Belzoni's tomb, where the lines, frequently extending down more than half the length of the arm of a colossal figure, are drawn at a single stroke of the pencil; and any one might now profit, by studying the mechanical skill there displayed; and learn to practise his hand, by imitating the decision of those masterly outlines.

The Persian invasion put an end to this effort, to arrest the downfall of art; and the later Egyptian sculptors were satisfied, with merely imitating the productions of former times. But, on the accession

of the Ptolemies, a fresh impulse was given; and numerous grand works were executed, which in size, and profuseness of decoration, strove to vie with those of Pharaonic days. An endeavour was also made to improve the sculptures, by introducing a nearer approach to the real proportion of the parts, in human figures, (without however infringing the sacred rules of attitude, and the old conventional, or, as it may be properly called, the hieroglyphic, style); but it is curious to see how incompatible this was with the peculiar character of Egyptian figures, and how truly they were conventional, and unimitative. For the attempt to apply proportions to them only makes their deformity more glaring; and nothing can appear more disagreeable, and incongruous, than this effort to unite two distinct intentions.

Architecture, less affected than sculpture by the decay of taste, still flourished, whenever it found encouragement; and grand edifices were constructed, even under the Ptolemies, and Cæsars. Their proportions were not always good; their details were frequently faulty; but they possessed a grandeur from their size, and the magnitude of their columns; as many a large building, in modern Europe, is indebted, for the impression produced, to the imposing effect of its dimensions.

A greater variety was, at that time, introduced in the columns; every one having a capital of a different pattern, from that of its neighbour. But this was not a new idea; for no people were more remarkable for diversity, in the corresponding parts

of a building, than the Egyptians; amounting to what has been called a symmetrophobia; and nothing can be more erroneous than the supposition, that this variety of capitals, in an Egyptian portico, was an introduction of the Greeks; who, of all people, were the most noted for uniformity, in their columns, and the decorative parts of architecture. The Egyptians purposely avoided regularity; with a view of not fatiguing the eye; and so careful were they to vary the lines, in the interior of their great halls, that no two neighbouring capitals were of the same height;* and the same principle was attended to, in the position of other details.

The numerous forms of capitals, used in Ptolemaic buildings, grew out of the more simple early orders;† their origin can be clearly traced; and it is evident that no two are so dictinct, as the water-plant, and the polygonal, column, of old time; which are known to have been employed contemporaneously, during the reigns of the Osirtasens.

* Vide Plate 8, fig. b, c.

† *Vide* infrà, on the different orders of columns.

PART II.

Characteristics of Egyptian Architecture.—Eight different orders of Columns.—Origin of Polygonal, and Fluted, Columns.—Origin of the Bud Capital, and others.—Composite Order.—Volutes and Devices.—Osiride Pillar.—Pilasters.—Intercolumniations.—The Entablature.—Peculiarities of the Cornice.—No Pediment.—Arches and Vaults.—Egyptian Temples.—The oldest form.—Sphinxes.—Larger Temples.—Peripteral Temples.—Classification of Constructed Temples, under Five Heads.—Parts of a Complete Temple.—Rock Temples of Three Classes.—Halls of Assembly.—Windows.—Doors.—Roofs.—Materials.—Granite and other Stone.—Crude-brick Temples.—Coloured Sculptures.—Colours.—Avoidance of Uniformity.—Obelisks.—Pyramids, and the Pyramidal line.—Size of Stones, used in Egypt, and Syria.—Tombs of Egypt;—Built and Hewn in the Rock.—Resemblance of Tombs of various People.—Religion of Egypt.—The Deity.—Division of his attributes.—Origin of many Gods.—Moses, and Doctrine of a Future State.—Erasure of Amun's Name.—Atin-ré.—Stranger Kings.—Seth, or Evil, expelled from the Pantheon.—Gods of different parts of Egypt.—Chronology.

THE principal *characteristics* of Egyptian Architecture are—

1. *The pyramidal*, or inclining, *line;* which is particularly observable in the towers of the propylæa, the sides of the temple walls, and the gateways, where it terminates in the curve of the cornice.*

* *Vide* Plate i, figs. 1, 18, 27, 28.

2. The *towers* themselves, which are of immense height and size, and are placed at the front of the larger temples.*
3. The *flat stone roofs* of the temples, without any pediment.†
4. The *hieroglyphics*, that cover the whole walls, within and without; explaining the subjects of the sculptures; the whole of the latter, as well as the mouldings, and hieroglyphics, being coloured, throughout the building.
5. The *globe with wings and asps*, over the doors, signifying the "good genius", or protecting Deity.‡
6. The use of *pyramids*, *obelisks*, and *sphinxes*.

Egyptian columns are of several kinds. All, with the exception of those of the two first orders, consist of an abacus, capital, shaft, and plinth; and it is remarkable that the oldest Egyptian, like the primitive Greek, order, wants one of those members; the former having no capital, and the Doric being without a plinth. Their forms are very varied; but as some were exclusively used, during the earliest and the best periods, and may be considered the origin of those of late times, Egyptian columns may be confined to *eight* principal orders.

1. The *square pillar;* plain, and simply painted, or ornamented with devices in relief, or intaglio.
2. The *polygonal* column; plain, or fluted.

* Plate i, figs. 1, 27. † Plate i, figs. 16, 27, 31, 37.
‡ Plate i, figs. 1, 18.

3. The *bud-capital* column; with a simple round shaft, in imitation of four stalks of water-plants, bound together.
4. The *full-blown papyrus* column; with a capital in the form of an inverted bell, representing the head, or flower of the papyrus, with a simple round shaft.
5. The *palm-tree* column.
6. The *Isis-headed* column.
7. The *Composite* column.
8. The *Osiride* pillar.

1. The *square pillar* was evidently derived from the simple mass of stone, left to support the roof of quarries;* and which, from the blocks having been hewn of a rectangular shape, was square. The oldest columns, used by the Egyptians, were of this form; which continued to be adopted, in the porticoes, or covered courts, and peristyles, of early temples, even after the invention of the round column; as at Samneh, Amada, Wadee Halfeh, and other places;† and in tombs and temples, cut in the rock, to the latest periods. These pillars had frequently a base, or plinth, but rarely a capital, and abacus. Their proportions varied; some measured $2\frac{5}{8}$ diameters (as in a temple of Remeses II, at Derr‡); others $4\frac{1}{4}$ (of Thothmes III, at Karnak§); others 5 (of Amunoph II, at Karnak);|| which last have an abacus, and a capital

* *Vide* Plate i, fig. 4.
† *Vide* Plate i, figs. 25, 30, 31, 35, 36, 40; and plates iv, figs. 2, 3, and xv, fig. 2.
‡ *Vide* Plate iv, fig. 1.
§ *Vide* Plate xv, fig. 3.
|| *Vide* Plate iv, fig. 2.

imitating the usual Egyptian cornice; and some of those at Samneh are of 7 diameters.*

Some square pillars, used also to a late time, had the heads of Isis, or Athor, in high relief, at the upper part of their front;—the remains of the early decorations of the pillar, before the invention of the round shaft;†—and the same mode of ornamenting it led to the Osiride pillar, and to those with the Typhonian monsters attached to them.‡ Square pillars are also met with, standing alone before the entrance of temples, which are ornamented with water plants, sculptured in high relief upon their faces; similar to those erected before the sanctuary of Karnak, in the reign of the third Thothmes;§ but they are not really parts of the building, being mere accessories, like the narrow stelæ at one end of the dromos (or avenue of sphinxes), before some temples.

2. The *polygonal* column consisted of an abacus, shaft, and plinth, without any capital. Its shaft, when of more than eight faces, was slightly fluted; the central face of the front being left flat, to receive a line of hieroglyphics; and some had as many as sixteen, twenty,‖ and thirty-two grooves, without fillets. In those of sixteen faces, each groove was $8\frac{1}{8}$ inches wide, and so slight and elegant that the depth did not exceed three-eighths of an inch; as in the interior of the northern tombs

* Plate iv, fig. 3*a*.
† *Vide* Plate iv, fig. 4.
‡ *Vide* infrà, on the 6th and 8th orders.
§ *Vide* Plate i, fig. 8*c*.
‖ The number given by Vitruvius for the Doric shaft: 4. c. 3.

of Beni Hassan;* where the grooves extend the whole length of the shaft, from the abacus to the plinth; while in others, of twenty and thirty-two grooves, a circular ungrooved space sometimes ran round the lower (and even the upper) part of the shaft, forming a band between the grooves and the plinth.† This occurs at the upper and lower part of the shaft, in the small temple of Kalabshee, of the time of Remeses II; and the columns of Amunoph III at Sedinga, in Ethiopia, have a similar band round their lower end.‡ They have also a row of bosses, in relief, upon this band; an instance of which occurs again at the base of the jambs of a doorway, in the small temple of Aboo-simbel;§ and some of the columns at Sedinga present another peculiarity, in the form of the flutes; which, instead of being, as they usually are, concave, are flat, like facettes; and are separated from each other by a fillet. The flutes are one-fourth of an inch deep; and the shaft, besides its thirty flutes, has two flat facettes, one at the front, the other at the back, of the column, each containing its line of hieroglyphics. These columns have also the curious anomaly of a polygonal, or a fluted, shaft, surmounted by an Isis-head capital.

A similar combination of an Isis head, with an (unfluted) twelve-sided shaft, occurs also in a temple of Amunoph III, at Eilethyas,‖ which is singular in having *no abacus;* and here the

* *Vide* Plate ii.
† *Vide* Plate iv, fig. 6.
‡ *Vide* infrà on the 6th order.
§ Of the time of Remeses II.
‖ *Vide* Plate iv, fig. 5.

central facette, containing the line of hieroglyphics, *projects* from the front of the shaft.

The octagonal column was rarely, if ever, fluted. Its shaft was generally of 5 diameters,* or with the abacus about $5\frac{1}{4}$; as in a portico of one of the rock-tombs at Beni Hassan,† where the shaft measures 18 feet, $4\frac{1}{2}$ inches, or with the abacus 19 feet $1\frac{3}{4}$ inches, in height, and 3 feet 8 inches in diameter; the whole column, with plinth and abacus, being 19 feet 6 inches high.

In columns of more than eight faces, the shafts measure rather above $4\frac{2}{3}$ diameters, as at Beni Hassan; but those at Samneh,‡ are nearly $3\frac{1}{5}$ diameters; in the smaller temple of Medeenet Haboo of $5\frac{1}{7}$;§ and at Kalabshee of $2\frac{1}{7}$; showing that, as in the other orders, no two different columns were alike, and that no exact proportions can be laid down for any of them. The largest polygonal, or round fluted, columns are at Beni Hassan, of the early time of the Osirtasens, of the 12th dynasty. They measure 16 feet $8\frac{1}{4}$ inches in height (or with the plinth and abacus 17 feet 9 inches); and their largest diameter is 3 feet $7\frac{1}{3}$ inches; those of Thothmes, at Samneh, are 8 feet $9\frac{1}{2}$ inches high; and the stunted ones of the small rock-temple of Remeses II, at Kalabshee, measure only 7 feet 8 inches in height, with a diameter of 3 feet 7 inches; their total height, with base and abacus, being 9 feet.‖

In the measurements I have given of Egyptian

* I take the diameters at the thickest part of the columns. *Vide* Vitruv. iv, c. 1.

† *Vide* Plate iii. ‡ Plate iv, fig. 3*b*. § Plate iv, fig. 7.

‖ *Vide* Plates ii and iv, figs. 3*b* and 6.

columns, the abacus and base (or plinth) are not included; the latter, from its projecting so far beyond the shaft, has no claim to be comprehended within the height of the column;* and the abacus is kept distinct by the flutes; while in some of the other orders, as the 4th, 5th, 6th, and 7th, it is entirely concealed by the projection of the capital.

The invention of polygonal, and circular, fluted columns, appears to have been owing to the four corners of the square pillar having been cut off, for convenience; and the transition may be thus explained. The four angles having been removed, the pillar was converted into an octagonal column; and in course of time the number of sides was increased to twelve, sixteen, twenty, and thirty-two. The *facettes* were then hollowed into grooves; and the only trace of the original unfluted column was the central *facette* of the front, which remained ungrooved, to receive the usual line of hieroglyphics of the square, and eight-sided, columns. This was the origin, and the gradual formation, of the fluted column.†

It is evident, that the round column owed its form to the necessity of removing the obstacle of the corners, in the square pillar; which in crowded spaces were inconvenient, as they prevented per-

* At Beni Hassan, the diameter of the shaft, in this order, is 3 feet 7 1½ inches, and that of the plinth 6 feet 5 inches. *Vide* Plate ii.

† *Vide* Plate i, fig. 5, *a*, *b*, *c*, *d*. The notion of the flutes, in the Doric column, having been devised for supporting spears is as extravagant as Vitruvius' origin of the Ionic, in the folds of woman's drapery.—Vit. lib. iv, c 1. In his views of Greek architecture he was principally guided by the works of Ionian architects, and he was far better acquainted with the Ionic, than the Doric, order.

sons passing freely round them; and for this reason, the Egyptians made the plinths of their columns circular also, though the abacus was square. The Greeks had both the plinth and abacus rectangular; but in the Doric order, the round shaft, reposing at once on the stylobate, presented still less impediment to a free passage, even than the circular Egyptian plinth; and though in the Ionic (as well as in the Corinthian) it was a Greek custom to have square plinths, they were frequently omitted.

The Egyptian fluted column was evidently the prototype of the Doric shaft. It is found in monuments of the time of Osirtasen I, in the oldest part of the temple of Karnak, and in the rock-tombs of Beni Hassan; of Thothmes III at Samneh, and Amada; and of Remeses II* at Kalabshee; the first dating upwards of two thousand years before our æra, and the last about one thousand three hundred; and the proportions, and form of the flutes, of the columns at Thebes, which have been allowed by architects to accord, in a striking manner, with those of the early Doric columns of Greece,† are the more remarkable, from their having been made long before any kind of architecture flourished in that country.‡

* Remeses the Great. It is now universally admitted that the name, called by some Remeses III, is only a *variety* of that of Remeses II. *Vide* my "Materia Hieroglyphica."

† Canina (Sect. i, c. 2, p. 50) says: "è da credere che sino a questa epoca remota si sia cominciato a trasportare dall'Egitto nella Grecia le prime cognizioni sull' arte dell' edificare; ove, prendendosi ad adattare ai mezzi ed al clima di questa regione, si riprodussero sotto un carattere proprio e distinto."

‡ *Vide* Vitruvius, lib. iv, c. 1, of the date of the Doric order. Dorus,

Besides the Doric shaft, another member of Greek architecture appears to have had its rise in Egypt; at all events, it was there first used, in the façade of the same early tombs of Beni Hassan; this is the line of *dentils* beneath the cornice, at the upper part of the architrave; in imitation of the ends of the rafters of a *flat-roofed house*;* for though the tryglyphs covered the extremities of the cross beams, and the sloping mutules the ends of the sloping rafters of a *pointed* roof, the Ionic dentils could only originate in a wooden house, with a *flat-roof*. Canina supposes these square "brackets" gave the idea of the guttæ of Greek monuments; though the only instance of the latter, placed uninterruptedly, at equal distances, beneath the upper member of the architrave throughout its whole length, occurs in the choragic monument of Thrasyllus at Athens.†

3. The *third* order of Egyptian column, with a capital formed of the bud of the papyrus, originated, as already shewn‡ (like those of the fourth, fifth, sixth, and eighth orders), in the devices first painted, and afterwards sculptured in relief, upon the faces of the square pillar; and which, when the pillar had been converted into a polygonal column, no longer found room on its narrow *facettes*.

It has several *varieties*. It sometimes consists

the first who built a temple of that style at Argos, lived more than five centuries after the Osirtasens.

* *Vide* Plate iii, fig. 1. † Sec. i, c. 2, p. 50.

‡ *Vide* supra, p. 6; and Plate iv, fig. 10.

of four water plants, bound together; sometimes of a simple round shaft, and a capital in the form of a single bud; and from the shaft being cut to resemble a triangular stalk, it evidently represents the papyrus. That composed of four plants, bound together, is the *oldest variety* of this column;* it is found in the rock tombs of Beni Hassan, and is also represented in the paintings of the very tombs which have polygonal columns, showing them both to have been used at the same periods; and it continued to be preferred to the other varieties, until the end of the reign of Amunoph III,† when the simple round shaft came into more general use. It sometimes consisted of eight, or more, water plants; instances of which occur in the monuments of Amunoph III, of Sethos or Osirei I, of Remeses II, and other kings.‡

In the first,§ which is the most graceful, variety (that of Beni Hassan), the shafts come down straight to the large projecting plinth, without the curve inwards at their lower end, usual in the other columns of this order; though the paintings shew, that those with the shaft curving inwards at the bottom were also used at the same period. This variety measures nearly $6\frac{2}{3}$ diameters, the height of the shaft and capital being 15 feet.

At Beni Hassan is a singular architectural feature, bearing a near resemblance to a pediment,

* *Vide* Plate v.

† That in the British Museum is of 6 diameters. Its height is 13 feet $2\frac{1}{2}$ inches.

‡ *Vide* Plate vi, figs. 1, 2, 3, 4.

§ *Vide* Plate v.

which is not found in any other Egyptian monument; and which is more remarkable from being of the early date of the Osirtasens.* It is much more depressed than any Greek pediment; but being cut in the rock it may be merely a capricious variation of the segmental roof, so common in Egyptian excavated tombs of all times; the earliest instances of which are found in those of Osioot, and others that date before the 12th dynasty; as well as in some at Beni Hassan.†

The *next variety*, composed of four, or eight, water plants bound together, with the same number of buds forming the capital, has the lower end of its shaft curving inwards. Like the first, it has five bands round the neck; but the lower part of its capital is also bound round with the same number of bands; and, in addition, it has three others, placed vertically beneath them.‡ Some differ from others, in the absence, or presence, of, the sheaths at the bottom of the capital; but they are rarely omitted at the lower end of the shaft.§ Columns of this second variety are of about $5\frac{1}{4}$,‖ of 6,¶ of $3\frac{7}{8}$,** and of $3\frac{1}{6}$ diameters;†† and those of Remeses II at Silsilis, which stand three quarters detached from the rock, are of about $3\frac{7}{8}$ diameters.‡‡

* *Vide* Plate v. † *Vide* Plate ii.

‡ The first variety (at Beni Hassan) has *one* of these mouldings between each water-plant. *Vide* Plate v.

§ Probably when wanting they had only been painted.

‖ Plate vi, fig. 1.

¶ At the British Museum, of the time of Amunoph III.

** *Vide* Plate vi, fig. 2, at old Koorneh.

†† Plate vi, fig. 3 in the rock tombs of Tel el Amarna.

‡‡ Plate vi, fig. 4. As usual, I include only the shaft and capital.

The largest of this variety are at Luxor, of the time of Amunoph III; which, I believe, measure about 21 feet in height.

The *third variety*, of this order, has a single circular shaft, without any indication of the united water-plants, though still with the usual bands, round the neck and capital. This is generally a larger, and higher, column than the preceding; and is used in the side colonnade of the great halls of assembly; while the central avenue has the loftier columns of the fourth order. As in the second variety, the lower end of the column is covered with pointed ornaments, in imitation of the sheaths, that grow above the roots of the papyrus, and envelop the base of its stalks; and the inward curve of that part of the shaft was thought to resemble the growth of the same plant. It can therefore scarcely be considered analogous to the *entasis* of a Roman column,* which is nothing more than a mistaken, and extravagant, imitation of the slight convexity of the Greek shaft.

It is well known that the sides of a column, if perfectly straight lines, have to the eye the appearance of being concave; and the Greeks, to avoid this, gave them a slight degree of convexity; but the Romans, misunderstanding it, made the swell too apparent, and produced a complete deformity; which has been imitated to the present day.

The largest diameter of this (as of the preced-

* The half columns of the amphitheatrum castrense, at Rome, imitate the curving end of the Egyptian column; but this is only a caprice. They probably date about the time of Diocletian, and are of brick.

ing) variety, in consequence of the curve in the lower part, was at about one-sixth, or one-seventh, of the height of the shaft above the base; and the same was the case in the columns of the fourth order. The dimensions of the columns, in this variety of the third order, differ more than in any of the preceding; some were of 2·9001, or about $2\frac{9}{10}$ diameters;* others of 3·627,† of 4·0014,‡ or of 4·105§ diameters; and their ordinary height, of 17 feet 9 inches to 28 feet $9\frac{1}{2}$ inches (or with abacus and plinth from 21 feet $10\frac{1}{2}$ inches to 26 feet $3\frac{3}{4}$ inches), is extended to 39 feet (or with the abacus and plinth 45 feet 8 inches), having a diameter of 9 feet 6 inches.‖ These last, which are the largest remaining of this order, are in the lateral colonnades of the great Hall at Karnak; where 122 of them are disposed in fourteen rows, with a central avenue of twelve, of still larger dimensions, of the fourth order; and here is the most remarkable instance of that peculiar habit, adopted by the Egyptians, of varying the size of the capitals, and other details, in the same colonnade. No two neighbouring columns are alike, and, when on a level with the bottom of the capitals, you perceive how much one is higher, or lower, than the next;¶ nor are the measurements of any two columns, in other buildings, exactly alike.

* At the great temple of Remeses III at Medeenet Haboo. Plate vii, fig. 3.

† At Old Koorneh, of Sethos or Osirei I. Plate vii, fig. 1.

‡ At the Memnonium, of Remeses II. Plate vii, fig. 2.

§ In the great hall of Karnak of Osirei I. Plate viii, fig. 1.

‖ For the measurements of the columns see Plates vii, viii.

¶ *Vide* Plate viii, fig. 1, *a*, *b*, *c*.

The most graceful, and best proportioned, columns are certainly those in the Memnonium,* of Remeses II. They are of 4·0014 (or little more than 4) diameters; the shaft and capital are 22 feet 9½ inches high (or with plinth and abacus 26 feet 3¾ inches), and their largest diameter is 5 feet 8⅓ inches.

In these two last varieties, the plinth was of smaller diameter, than in the earliest of this order; but it was much higher; and, as usual, it was circular; with a considerable convexity towards the lower part.

Like all other constructed Egyptian columns, they were generally formed, not, as in Greece, of whole circular drums, but of two semicircular blocks, applied to each other to form a drum;† their joints crossing those immediately above, and below, them, at a right angle.‡ They had no pins, and rarely any cramps; but were kept together by their own weight, rather than by the small quantity of mortar laid between them.

It was not customary for the Egyptians to erect columns of a single piece; and granite shafts are rarely found, in the temples of a Pharaonic time; though, in the Delta, granite was employed for columns; and some shafts were of a single piece, in the porticoes, and vestibules, of the small temples, in that part of Egypt. But they were not

* I use this conventional name, in preference to "Remesseum", as it is well known, and serves to distinguish the two temples of Remeses II and Remeses III. *Vide* Plate vii, fig. 2.

† At Soleb, of Amunoph III, the columns are of whole drums.

‡ *Vide* Plate iv, fig. 14.

used in the temples of Upper Egypt, even under the rule of the Romans; and though that people preferred shafts of single pieces of granite, or of porphyry, in their own towns, the columns of Egyptian temples, in the Thebaid, continued to be composed of the usual semicircular blocks of sandstone.*

All the varieties of this order are of early date; and like the others, and indeed like every part of an Egyptian building, they were ornamented with various coloured devices, figures, or hieroglyphics.

There is every reason to believe that the five bands,† round the neck of Egyptian columns, were the origin of the annuli, and channels, round that of the Doric shaft: there was certainly nothing to *bind* in a Greek column; and the astragal round the neck of the Roman Doric, and that of the Ionic and Corinthian shafts, were also indirectly derived from the same idea of a band; though this is not so clearly shown as in the early Greek Doric. The Doric capital may also be traced to that of the third Egyptian order; where, by removing the upper part, and bringing down the abacus to the curve of

* Winckelmann is wrong in supposing (in opposition to the assertion of Pliny, and others), that porphyry was not found in Egypt, lib. ii, c. 4, § 11. The extensive quarries are at Gebel Dokhan, in the Eastern Desert; which being called the "*Arabian*" side of the Nile, by writers of antiquity, led him to the conclusion that Aristides considered it a production of Arabia. The stone, however, was not used, in early times, by the Egyptians, either for columns, or statues. Some think it was not employed for statues by the Romans before the reign of Claudius. The quarries were principally worked under Trajan and Adrian. Pyropœkilon of Pliny is not porphyry, but syenite.

† There are instances of columns with four bands; but they are very rare. *Vide* Plate vi, fig. 3.

the bud, the form of the Doric may be clearly made out.* That the Greeks, with their wonderful taste, improved upon whatever they borrowed is very certain; but there can be little doubt that the flutes, the annuli, and probably the capital, were derived from the second and third orders of Egyptian columns; for if, as generally supposed, the Doric shaft owed its origin to a tree, or a wooden pillar, it would have had neither flutes, nor bands; nor can their invention be ascribed to any early domestic want, or architectural caprice suggested by the Greeks.

With regard to the period, when this order was first composed, from the original painted, or sculptured, square pillar, it was doubtless long before the Osirtasens of the 12th dynasty; and the full-blown papyrus capital, of the fourth order, was perhaps known, though little used, at that period; as it was the origin of the curving cornice, which soon became one of the most marked features of Egyptian architecture.†

4. The *fourth* order is distinguished by its capital, which has been erroneously supposed to represent the lotus. The shape is like a bell, with the mouth upwards.

In sculptures where the papyrus is figured, we find the Egyptians gave to its flower the exact form of this capital;‡ and there is no doubt that their intention was to represent the papyrus in this column. And if further proof were

* *Vide* Plate i, fig. 6, *a*, *b*.

† *Vide* infrà on the cornice.

‡ *Vide* Plate i, fig. 7, *a*, *b*.

wanting, it may be found in the palace-temple of Remeses the Great at Thebes (usually called the Memnonium), and, other monuments; where these columns have an indication of the triangular form of the papyrus stalk, upon their shafts. An additional proof of the impropriety of designating this as the lotus (or "full-blown lotus") capital, is shown by the fact of columns having been found in a rock-tomb near Metáhara, as well as at Philæ, and Edfoo,* with capitals actually representing the full-blown lotus; and the accuracy with which the Egyptians always delineated that plant, suffices to prove that the capitals of the fourth order could not be intended for it.

Singular as it may appear, the papyrus is no longer found in Egypt, though many other species of cyperus are common, and indigenous, there; and the only locality where it now grows wild is on the river Anapus, near Syracuse. There is one stream in Syria, where it is said to be found; but the report that it grows near the Lake Menzaleh, in lower Egypt, I believe to be unfounded.

This papyrus column is not composed of several plants, bound together, but is single, like the last variety of the third order; and at the bottom of the capital, and of the shaft, are the usual pointed ornaments, in imitation of the sheaths that grow on the stalk of the papyrus. The origin of this column, from the square pillar ornamented with the papyrus plant in relief, has been already explained;† which suffices to show that it first began

* *Vide* Plate xiii, fig. 3. † Page 7.

to be adopted about the same time as the third order; and its early use is also consistent with the period when the cornice began to be copied from it.†

Jomard and Canina† think, with great reason, that this capital gave rise to the basket of the Corinthian order, which was only varied by acanthus leaves, instead of the Egyptian ornamental devices; and its form is still more easily traced in the columns of the tower of Andronicus at Athens,‡ where even the leaves that encircle the upper part of the capitals bear the stamp of Egyptian taste.

The period when the Corinthian order was first used is not known; and few examples of it are found of Greek time: it is, however, certain that it was long after the reign of Remeses III, or B.C. 1200, when the change was made in the Egyptian capital, which brought it nearer to the basket shape, than in older times. Before that reign it had a regula, or listel, forming the brim, and separating the upper convex, from the lower concave, curve of the capital; but in the monuments of Remeses III, that capital no longer had the intervening listel, and the two curves met at a sharp edge;‖ which continued to be its form, from that period to the time of the Ptolemies and Cæsars.

* *Vide* infrà on the cornice.

† L'accenata forma di capitelli egizi servì certamente di modello ai Greci per stabilire il capitello del genere detto poscia corintia."—Archit. Ant. sec. i, c. 3, p. 95; and sec. ii, part 2, c. 3. The origin of it given by Vitruvius is as fanciful as that of the Ionic order. Callimachus merely adapted the acanthus foliage to the Egyptian form.

‡ Supposed to date a little after the time of Alexander.

‖ *Vide* Plate xi, figs. 1, 2, and 3; and Plate iv, fig. 15.

The height of these columns was greater than that of the other orders; they consisted of about five diameters; and they were employed in the central avenues of the great halls of assembly, while the side columns were of the third order, with the bud-shaped capitals. Those in the great hall of Karnak* are 5·164 diameters; the height of the shaft and capital, to the top of the rim, 60 feet 3 inches; and the capital from $\frac{3}{4}$ to $\frac{4}{5}$ diameters high; but those of the Memnonium† are only 4·081 diameters; their height 29 ft. 3$\frac{1}{4}$ in., and the capital little more than $\frac{2}{3}$ diameters high. Others, again, in the portico at Philæ, of Ptolemaic time,‡ are of 5, or 4·982, diameters, their height 23 ft. 3 in., and the capital about $\frac{3}{4}$ diameter; though these last should properly be considered as belonging to the seventh order.§ From this it will be seen that the columns of the fourth are, generally, about one diameter higher than those of the third order; when introduced into the central avenues, their diameter was also larger, whereby they were allowed to be of a greater height; and more room was thus given for the attic they supported, as well as for its side windows, which admitted the principal light into the hall.‖

This custom of introducing loftier columns, of a different order, into the same building, is not without a parallel in Greek architecture: the Doric propylæa of Athens have Ionic columns in the

* *Vide* Plate x.
† *Vide* Plate ix, fig. 1.
‡ Plate xi, fig. 1.
§ *Vide* infrà p. 57.
‖ *Vide* Plates viii, ix, fig. 2, and Plate xvii, fig. 1.

inner avenues, where greater height was required; and a similar arrangement was followed in other buildings. The Egyptians, however, did not appropriate any particular order to certain deities, as Vitruvius says it was right to do in Greek architecture; the slender and florid Corinthian being thought suitable to Venus, Flora, Proserpine, and the Nymphs.*

It is well known that no columns, when laid down to a scale on paper, have the same character they present in a building; where the upper part, receding from the eye, seems much smaller than it really is, and gives it a more slender appearance; but the difference, in Egyptian columns (especially of this order, owing chiefly to their height), is far greater than in those of Greece; and the under part of their overhanging rim being seen, and forming part of the general effect, gives them an aspect still more different from that conveyed by an elevation.† In proportion as the column was lofty, the effect was increased; and the diminution of the diameter at the top of the shaft was consequently less; and this, which was also taken into consideration, and allowed for, by the Greeks, shows how inconsistent it is to lay down fixed rules for the dimensions of columns, without making any *allowance* for their height.

Nor were those of any order limited to *fixed* proportions. The Egyptian architects consulted position, the size of a building, and other condi-

* Vitruv. i, ii, p. 17.

† *Vide* Plate ix, figs. 1 and 3.

tions, in giving height, or thickness, to columns; and, consequently, those of the same order have neither the same dimensions, nor the same number of diameters, in different edifices. Greek columns varied also, as did the buildings, to which they belonged; partly from the change that took place at different periods, partly from the monuments not being confined to any precise rules, in their proportions; which depended on locality, and the effect required in a particular position. The Greeks, like the Egyptians, consulted their eye, rather than their compasses, as the eye was to be the judge of the building; and a monument in a low position required a different character from that upon a height.

With regard to appearance, I may mention a singular method, adopted by the Egyptians, to increase the effect of the curve of the capital, by cutting it into the rim itself, to about one-third, or one-tenth, of its thickness;* and the mouldings on that part of the capital are not visible to any one, unless he is near enough to see the under portion of the curve.

5. The *fifth order* is the Palm-tree column.

The capital represents the head of the tree, in its cultivated state; when the drooping branches having been cut off, those of the centre are alone left, and take an upright direction. Beneath the capital are the five bands, as in most of the other orders; but with this difference, that below them, on one,

* Plate i, fig. 16; Plate ix, figs. 1, 3; and Plate xi, fig. 2*b*.

sometimes on two sides, the *ends* of the knotted bands project; the reason of which peculiarity is to be explained, by their representing the ropes, that tie up the branches and fruit stalks; those of other columns being intended as bands of rushes, or the rind of some plant, simply wound round the united stems.

Some columns of this order are of 5·258 diameters, the height of the shaft and capital, to the lower part of the rim, being 37 ft. 3 in.,* and the capital $1\frac{1}{86}$ diameter in height.† Others are of 5·125 diameters, the shaft and capital 13 ft. 8 in., and the height of the capital about $1\frac{1}{91}$ diameter.‡ Their proportions are similar to those of the seventh order; with which, when required, they are made to agree, being in the same porticoes, and areas, of Ptolemaic time. In size, they vary much; those of Edfoo being nearly three times as large as the smaller ones at Philæ; and in ancient times they appear to have been mostly of limited dimensions. In the Delta, they are found in buildings of the early date of Remeses II (in the fourteenth century before our era); and, like other columns in that part of the country, they sometimes present the peculiarity of being of a single piece of granite. Those of Tanis are elegant, but very small, having a mean diameter of 2 ft. 8 in., or little more than the lesser columns at Philæ; and another of the same Remeses, lying on the bank, near Bubastis, measured

* Those of Gow, Antæopolis, now entirely destroyed, were about 31 feet, 9 inches.

† At Edfoo, of Ptolemaic time. Plate xii, fig. 1.

‡ At Philæ, of Ptolemaic time. Plate xii, fig. 2.

(when entire) about 22 ft. in length, with the same diameter of 2 ft. 8 in. The tomb of Amasis, at Sais, according to Herodotus, had also columns with palm-tree capitals; and this order seems to have been preferred in Lower Egypt, during the reigns of the Pharaohs, while the bud-capital was more in vogue throughout the Thebaid.

But palm-tree columns are found in the temple at Soleb, of the time of Amunoph III; and they are of large dimensions, like those of the third, and fourth, orders, in the same temple.

In Ptolemaic times, the shafts of this order followed the custom of the day, in coming straight down to the plinth; and though this was an innovation, it was not without a parallel in ancient times, and the columns at Beni Hassan, of the third order, have the shaft of the same form, without any curve inwards at its base.

6. The *sixth* may be called the *Isis-headed order;* from the capital being formed of the head of that goddess, surmounted by a shrine. In many instances, the head of Athor holds the same place; especially in temples dedicated to her; and the Egyptian Venus, and the wife of Osiris, very frequently assume each other's attributes, and are sometimes not to be distinguished, without the aid of the hieroglyphic legends.

The largest specimens of this order are in the portico of the great temple at Dendera; where the heads surmount a plain round shaft; and the head-dress projects considerably beyond it. All the columns in that portico are of the same order; and

though, as Strabo says, of the halls with many columns, at Memphis and Heliopolis, they have a barbarous character, their size gives them an imposing effect; and the temple of Dendera (like those of Esne, and Edfoo) shows that architecture still flourished in Egypt, in the reigns of the first Cæsars.*

And here I must notice an erroneous, but not uncommon, opinion, respecting Egyptian monuments, erected under the Ptolemies, and Roman emperors, which pronounces them to be no longer Egyptian, and only "imitations"; as though they had been built by Greeks, or Romans. Even those, where the character of the columns has undergone an alteration, are equally Egyptian; and though they may be of a debased style, their details profuse, and their capitals complicated, they belong to the same native architecture, and are, in no way, indebted to foreigners for their origin, or their execution. Changes of style had frequently taken place, in the earliest times; and whether those changes continued under the Romans, or the buildings were then erected in the old manner, Egyptians were still the architects of their own temples; and no one could suppose that the priesthood ceased to be Egyptian, on the Roman conquest of the country.†

The columns in the portico, at Dendera, are of 5·393 diameters, the shaft and capital being 43 ft. 2 in. high; the capital measures 15 ft. 6 inches in

* This portico was added in the time of Tiberius.

† A mosk erected in Algeria, under French rule, would still be a Moslem building.

height,* being 1·937, or nearly 2 diameters, and the total, including the plinth and abacus, is 46 ft. 9 in. The shaft runs straight to the base, which is round, and stands upon another low square plinth, 5 inches in height; the round base, or upper plinth, being 2 ft. 1 in. high. Sometimes the Isis head is found on a polygonal column, as at Sedinga, of the time of Amunoph III;† and at Eilethyas, in a temple of the same king, is a polygonal column, with a head affixed to one side; rather in the manner of the old square pillar than the column.‡ Square pillars, indeed, with the head of Isis, or of Athor, are not uncommon in ancient Pharaonic monuments; and they are the remnant of the early devices painted, and afterwards sculptured in relief, on the original pillar; which, as I have already explained, was the parent of the polygonal, and of the round, column.§

In the inner hall of the temple of Dendera, are other columns, of smaller dimensions than those of the portico,‖ which are surmounted by similar heads; but these, instead of rising directly from the shaft, and serving as its capital, are placed upon the capital of a composite column of the seventh order.¶ This mode of placing Isis heads, over the *composite capitals*, is very usual in tem-

* *Vide* Plate xiii, fig. 1. † *Vide* supra, p. 35, and Plate iv, fig. 8.
‡ *Vide* supra, p. 35, and Plate iv, fig. 5.
§ *Vide* Plate iv, fig. 4, and supra, pp. 7, 8, 34, 37.
‖ Conf. Vitruv. v, ix, p. 230. "Aliam enim in Deorum templis debent habere gravitatem, aliam in porticibus, et cæteris operibus subtilitatem."
¶ *Vide* Plate xiii, fig. 2.

ples of Ptolemaic, and Roman, time; and at Philæ whole corridors are composed of *various* columns, of the seventh order, surmounted by them. Sometimes an Isis-head column is introduced at each side of the doorways, of the hypæthral buildings* of the dromos, (whence the grand processions took place, to the temples to which they belonged);† the rest of the columns being of the seventh order. They are also found on each side of the doorways, of porticoes in antis; as at Philæ, Contra-Latopolis, and other places. Among the columns, of the corridors, at Philæ, are some with the full-blown lotus capital, (which sufficiently show the impropriety of applying the name to those of the fourth order)‡; they are of small dimensions, 13 ft. 3 in. being the height of the shaft and capital; and their total height, with the plinth, is 17 ft. 5¾ in.§ Their diameter is 2 ft. 8 in. But these dimensions, as in other cases, might be increased; according to the size of the edifice, to which they belonged.

Another kind of column, which has a composite capital, supporting a square dado, with a Typhonian monster on each side of it in relief, may also be classed in this order. It is chiefly found in the peristyles of the *Mammeisi*, attached to the great temples;—small buildings, in which the second person of the local triad was represented to have given birth to the third;—as at Dendera, Edfoo, and other places.‖ This dado, at Dendera, is 3 ft. 5¼ in. high,

* As at Gertasseh in Nubia.
† *Vide* infrà, on the hypæthral buildings.
‡ *Vide* supra, p. 47. § They have no abacus.
‖ *Vide* Ancient Egyptians, vol. iv, pp. 431, 432.

and with the capital, 7 ft. 4½ in.; the whole column, with the plinth, being about 22 ft.* In this order may also be included certain pilasters of fanciful shape, found on monuments of early date; which, however, do not belong to temples, but are only ornamental appendages to the façades, or the passages of tombs; as on each side of the entrance to the tomb of Remeses III, at Thebes; where two pilasters, or half columns, projecting about four inches from the wall, have a cow's head for a capital, with the usual five bands beneath it.†

They are of ten diameters, or to the top of the horns eleven; and their total height, with the base, is 16 ft. 5 in. Those heads were chosen, in honour of Athor, the Egyptian Venus, who was "president of the west", the abode of the dead.

7. The *seventh order* consists of columns of very varied shape, and far more ornamented than those of earlier date. They mostly came into use in the reigns of the Ptolemies; which was the florid period of Egyptian architecture; and though evidently derived from the older columns of the fourth, and fifth, orders, their peculiarities require that they should be considered distinct. They may be properly called the *Egyptian composite* order. Their proportions are similar to those of many other orders; and indeed all Egyptian columns, except those of the first, second, and the earliest varieties of the third, order, might be made of the same size, and be used to support the roof of the same por-

* *Vide* Plate xiii, fig. 3. The lower part is buried. † *Vide* Plate xi, fig. 4.

tico. The shafts are also similar to those of the three preceding orders; being simply round; and each variety depends on the shape of its capital.* These columns are generally rather more than five diameters in height.

Those in the portico of Edfoo† are of 5·271 diameters; shaft and capital 37 ft. 4 in. high;‡ the capital being of 0·753 diameter.

Others in the same portico are of 5·282 diameters; shaft and capital 37 ft. 5½ in.; the capital of 0·788 diameter.

In the portico of Esne§ (mostly) of 5·058 diameters; shaft and capital 29 ft. 11 in.; and the capital of 0·840 diameter.

In the portico of Philæ,‖ they are of 5·178 diameters; shaft and capital 24 ft. 2 in.; and the capital, of 0·714 diameter.

The capitals frequently project from the shaft, rather more than in those of the sixth order, from which their bell shape has been borrowed. The shaft comes straight down to the plinth, without any curve inwards at the bottom; and the circular plinth has perpendicular sides, as in the Isis-headed columns at Dendera, without the convexity of the old plinths in the third and fourth orders.

The forms of this composite capital are very varied; some more graceful than others;¶ and one, which is not uncommon, is remarkable for the number of volute-like ornaments, which project at the corners of a succession of cusps, that form the capital. These cusps increase in size, and decrease in

* To them this remark of Vitruvius may be applied: "Sunt autem, quæ iisdem columnis imponuntur, capitulorum genera, variis vocabulis nominata." lib. iv, c. 1, p. 164.

† As usual, measured to the rim only.

‡ Of Ptolemaic times. Plate xiii, figs. 3, 4.

§ Of Roman times. Plate xiv, figs. 1, 2, 3.

‖ Of Ptolemaic time. Plate xi, figs. 2, 3.

¶ As fig. 4, Plate xii; and fig. 2, Plate xi.

number, at each of the tiers, till they reach the fifth, or uppermost one; which last consists of four, and the lowest of thirty-two cusps. It is whimsical, and totally devoid of beauty, but its numerous volute-ornaments give it a singular effect.* The volutes, however, are not, as has been supposed, a Greek innovation; nor are they borrowed from the Ionic column; they were a very early invention in Egypt, and were used there for ornament, in some of the oldest monuments. Their origin is evidently the water-plant, symbolical of the upper country;† which often forms the capitals of columns, supporting the canopy over a king's throne.‡ And there, too, the very same round appendage to the volute of this column may be traced, in the pendant device, that seems to issue from it.§ In vain, therefore, has that moulding, in Ionic columns, been derived from rams' horns, and other things,‖ to which it bears little resemblance; the water-plant of Southern Egypt is the parent of the *volute;* and it was not only adopted by the Greeks, but was introduced, even at the latest periods of the Roman empire, upon monuments in the neighbourhood of Carthage; where I have seen pilasters, with volutes very similar to those on the canopies of the Pharaohs. The volute, or scroll, was also a favourite device of the Phœnicians, and appended to the figures of deities, particularly at the feet of Astarte;

* Plate xii, fig. 3.

† Opposed to fig. 7, c. Plate i, the symbol of Lower Egypt, and the origin of the capital of the 4th order.

‡ *Vide* Plate i, fig. 8, *a*, *b*, *c*, fig. 9. § Plate i, fig. 9.

‖ Curls of hair; rolls, or folds, of drapery; dress of the *goddess Isis*, etc.

and it is found in the islands of the Mediterranean frequented by that people, on monuments, or figures, attributable to them, or to the influence of their religion; as in Sardinia, Malta, Gozo, and Cyprus. It might be supposed that the Phœnicians had borrowed the volute from the whirls of sea-shells; but the fact of the device with two volutes, and a central projection, at the feet of Astarte, being exactly the Egyptian water-plant reversed, indicates its real origin, and shows it to have been derived from Egypt. There, too, the *scroll* pattern, and what is called the *Greek border*, were first used; and the very ancient tombs of Osioot, as well as those of Thebes, suffice to show that they (with many other devices) were invented in Egypt, long before decorative art flourished in Greece.

The full-blown lotus column is among the many varieties of this order, which is then without the addition of the Isis-head. The largest example of it is in the area of Edfoo;* and though the temples where it is found are of Ptolemaic date, it was not a late invention, being also in a rock tomb, at Metáhara, of Pharaonic time; and the lotus, as well as the papyrus, was doubtless one of the original ornaments of the old square pillar.

It has been supposed that columns of various kinds, in the same area, or the same portico, was an innovation, consequent upon the accession of the Ptolemaic dynasty; but it is well known that

* With the plinth and abacus 25 feet 7 inches high.

neither the Greeks, nor even the Romans, ever obtained any influence in Egypt over sacred matters; and of all people, those two were the least likely to introduce a deviation from symmetry, unequalled anywhere except in Gothic churches. But it was perfectly compatible with Egyptian taste; the outer area of Medeenet Haboo has columns with capitals of the full-blown papyrus on one side, and on the other Osiride pillars; and if carried to a greater length in late buildings, it was only the *extension* of an early Egyptian caprice. As the love of variety increased, they were not satisfied to make opposite columns of a different order; at length no one was permitted to be like its neighbour; and this led them to add so many new varities to the composite column.*

Like the other parts of an Egyptian building, the columns were not finished, till after they were put up; and the unfinished capitals were frequently seen, with no nearer approach to their intended form than in three sets of stones, projecting one beyond the other; which differed slightly, according to the variety to which they were to belong.†

In this same order may be classed some fanciful columns at Karnak, of the early time of Thothmes III; which present the singular novelty of capitals placed upside down, and a shaft thicker at the upper than the lower end;‡ the cornice projecting beneath the windows, in the same build-

* I have given the most common varieties; they amounted, in Roman times, to more than twenty. *Vide* supra, p. 29.

† *Vide* Plate xii, fig. 5. ‡ *Vide* Plate xv, figs. 1, 2.

ing, is no less strange and unsightly, being bevelled downwards from the window-sill, and having also the appearance of being placed upside down.* But these fungus-shaped columns were not imitated by the successors of that capricious royal architect; who, not satisfied with erecting a greater number of buildings than any of his predecessors, committed the injustice of erasing the name of his sister, and copartner in the throne, from the monuments she built, and claiming them as his own.

8. The *eighth order* is the Osiride pillar, answering to the Caryatide of Greece.† It consists of a square pillar, with the statue of a king, in the form of Osiris (the abstract idea of goodness) attached to the front of it; from which I have given it the name of Osiride pillar. It evidently derived its origin from the square pillar, with the figure of the god painted, and afterwards sculptured in relief, upon it; and the same remark applies to those, which have figures of a Typhonian monster attached to them.‡ The statue itself does not support any member of the building; and the architrave rests solely on the square pillar behind it; in which respect it differs from the Caryatide, that bore on its head the entablature of the edifice. It is, nevertheless, reasonable to suppose that the Greeks borrowed the idea from Egypt; and though they placed their figures of Persians, Caryans, or others, to support the entablature, without

* Plate xv, figs. 2, 3. † Plate xvi, figs. 1, 2.

‡ As at Gebel Berkel in Ethiopia, where the temples are copies of those in Egypt, and partly built by Egyptians.

the addition of a pillar, this change does not affect the question of the original notion.

The height of the Osiride pillars depends on the size of the building; those at the Memnonium are 31 feet 7 inches high, while others of the same king, Remeses II, at Sabooa, measure only about 15 feet 6 inches, or less than half that height.* They are generally placed round the areas, or open courts, leading to the porticoes of large temples;† and sometimes within the great halls of rock temples.‡ In all cases, the pillar behind the figure supports the architrave; and they are not found standing alone, as statues, unconnected with the building. Statues of colossal size, indeed, form part of the ornamental requisites for all large Egyptian buildings; they either stand, with one leg advanced, or are seated on a throne, before the towers of the propylæa; and at their back is a stela, or a square pillar, containing lines of hieroglyphics, relating to the monarch they represent. Some seated colossi have their hands placed on their knees,§ and others hold one or both sceptres of Osiris, like the Osiride figures. But most standing statues have only the crook of Osiris, the emblem of dominion, in one hand; while the other, extended downwards to the thigh, holds the sign of life, or some other symbol.

One of the most singular architectural caprices of the Egyptians was the introduction of crouched

* Plate xvi, figs. 1, 2.
† Memnonium, Medeenet Haboo, and others.
‡ As at Aboosimbel, and at Gerf Hossayn, both in Nubia, of Remeses II.
§ As the vocal Memnon, and its companion.

figures of foreign captives, upon the projecting sills of windows, which supported some ornament (perhaps an awning) on their heads; as in the pavilion of Remeses III, at Medeenet Haboo. Their heads and shoulders, protruding from the wall, have much the appearance of the grotesque figures in some of our Gothic churches;* and the fact of their being only found in one monument, at Thebes, shews, that the Egyptian architects were not prevented, either by habit, or by fixed rules, from indulging a love of variety; as their date proves that the caprice is not to be ascribed to any foreign influence.

Osiride pillars are of early time, and are found, as I have shown, in the buildings of Remeses II, and other kings of the 18th dynasty.

Pilasters were employed in the oldest monuments. They were rectangular, and sometimes projected considerably from the walls, with capitals not corresponding to the columns they accompanied; being merely crowned by the usual Egyptian cornice and torus, of whatever order the colonnade consisted.† In this respect, they agreed with the custom of Greek, not of Roman, architecture. Sometimes the pilasters of a temple in antis (which had a single row of columns in the portico), were surmounted by heads of Isis; the intermediate columns being of the composite order; as in the Ptolemaic temple of Dayr el Medeeneh, at Thebes.‡

Intercolumniations were as independent of fixed

* Plate iii, figs. 2, 3. † Plate xvi, fig. 3. ‡ As in Plate i, fig. 20.

rules, as columns, and other members of Egyptian architecture. In Greek and Roman buildings, the width of the intercolumniations was in proportion to the size of the columns; the latter being thicker in an araeostyle, and of smaller diameter in a pycnostyle, building;* but in Egyptian monuments it was very arbitrary; and though guided, in certain positions, by the thickness, or by the height, of the columns, it cannot be reduced to any determined ratio; as may be seen by these measurements.

Diameter of Column.		Height.		Intercolumniation.			Plate.	Fig.
Ft.	In.	Ft.	In.	Ft.	In.			
5	9⅓	29	11	8	9	in Portico at Esné - - -	XIV	
8	0	43	2	8	5	— Portico—Dendera - -	XIII	1
7	1⅔	37	4	10	3	— Portico—Edfoo - -	XII	3, 4
11	8	60	3	18	9	to opposite columns } Central avenue, Karnak	X	
				12	5½	to adjacent columns }		
				16	3	to small columns of side colonnade }		
7	2	29	3¼	7	3¼	Central avenue } Memnonium	IX	1, 2
5	8⅓	22	9½	8	7¼	Side colonnades }		
9	6	39	0	7	6	to opposite cols. } Side colonnades Karnak	VIII	
				9	4	to adjacent cols. }		
5	0	17	9	8	11	Hall of Temple, at Old Koorneh	VII	1
4	9¼	18	5¾	10	5	Portico, *ib.* - - - -	VI	2
7	7	22	0	8	6	Portico Medeenet Haboo -	VII	3
3	8	18	11	6	5¾	Hall of Thothmes III, Karnak	VI	1
2	8¾	15	0	7	2¼	in Rock-tomb, Beni Hassan -	V	
3	8	18	4½	6	1	in Portico, *ib.* - - -	III	1
3	7⅓	16	8¼	10	5½	in Rock-tomb, *ib.*, polygonal cols.	II	

In the porticoes of villas, the intercolumniations were sometimes of great width, approaching to that of Etruscan monuments;† and the centre of each

* Vitruvius, iii. c. 2, p. 117.

† Not that the architecture of the Etruscans offers any originality, copied as it is, from that of Greece; and this caprice was owing to so many of their monuments being hewn in the rock.

space was occupied by a statue; the columns themselves being decked, on festive occasions, with coloured bands, or flags, tied beneath the capital.*

The Egyptian *Entablature* (unlike that of the Greeks) does not vary in the different orders. It consists of two parts, the *cornice*, and the architrave; which are separated by a *torus*. This last, from being only added when there is a cornice, and from its not crowning the architrave when the roof rests thereon, might be considered as belonging to the cornice; but, on the other hand, it extends down the sides of a doorway, and the external angles of a building, where no cornice could be applied; and it evidently answers to the *Cymatium* of a Greek architrave. The *torus* is represented bound with two, or more, bands; in the same manner as the Roman fasces;† and it frequently terminates in a double square ornament, at the base of the towers of the Propylæa.‡ No *frieze* intervenes, between the architrave and cornice; and this last may be said to unite the office of cornice and frieze.

The *cornice* consists of a regula, or rectangular moulding, crowning the whole entablature; below which is a large cavetto, gradually running into a vertical surface, as it approaches the torus. It is on

* *Vide* Ancient Egyptians, vol. ii, p. 102, woodcuts 95, 96.

† In the Roman fasces (of early times, at least), the axe did not project from the summit; but was bound at the side, and lower part, of the bundle of rods; which appear to have been themselves arranged round a pole, whose ends project at the top and bottom. *See* also an Egyptian axe, in Ancient Egyptians vol. i, page 323, woodcut, No. 41.

‡ Plate i, figs. 1*b*, 1*c*, 37.

this part of the cornice that the globe and asps, or winged globe, of Agathodæmon are placed, above the doorways, and entrances to the temples; and it is this curve of the cornice, projecting far beyond the line of the wall, that gives a peculiar character to Egyptian buildings.* It may even be traced in the curve of the Greek cornice; where too the feather-like mouldings of the Egyptian cornice find a counterpart, in the *canaliculi* of the Doric cymatium;† and in the façades of the tombs at Jerusalem the Egyptian cornice and torus are both found, over a Doric frieze, and architrave‡ resting on Ionic columns.§ The regula of the cornice sometimes follows the direction of the sloping line of the wall below, as in the great temple of Remeses III, at Medeenet Haboo;‖ a caprice which is also adopted, in the abacus of some columns of the third order.

The *form* of the cornice evidently originated in the papyrus capital, which in old times was always surmounted by the rectangular regula;¶ a conjecture confirmed by the absence of this great Egyptian characteristic in the oldest monuments, erected before the columns of the fourth order were invented, or at least before they came into general use. The doorways at the pyramids, and at the very ancient tombs** about them, as well as at

* Plate i, figs. 1, 2, 3 and 1*b*.

† As at the temple of Jupiter at Agrigentum, and other buildings.

‡ At the so-called tomb of Absalom.

§ There are even some *Greek* monuments, in which Ionic columns have a frieze over them, containing Doric triglyphs.

‖ Plate i, fig. 27*b*.

¶ *Vide* supra, p. 46, 48.

** *See* the front of a tomb in the British Museum, and the old style of sepulchral doorway in Plate iv, figs. 17, 18. There is however reason

Osioot,* and even at Beni Hassan, have simple square mouldings, without the curving cornice, so universal in the 18th, and subsequent dynasties; and this is another of the many convincing proofs, already cited, of the progressive steps made in Egyptian architecture, and of the changes it underwent at different periods.†

In early times, the cornice was much lower, in proportion to the architrave, than in monuments of later times, particularly under the Ptolemies, and Romans;‡ it did not, however, undergo the same change as the papyrus capital, in the conversion of the regula into a sharp rim; which was introduced in the time of the 19th dynasty.§

The cornice is ornamented with a series of stripes, or feather-like mouldings in intaglio, separated by a fillet, and arranged in threes, as a sort of triglyph; every fourth being of a darker, or a brighter, colour, than the three others on each side of it; and some are still more marked by an intervening space, resembling a metope; every three stripes having this space between them and the next set. This metope bears upon it two royal ovals, or other devices, connected with the King, or some deity. It occurs on the monuments of early Pharaonic time; and though more distinctly marked at Dendera, and other Ptolemaic, or Roman, temples, it was used in the time of the 18th dynasty,‖

to believe that the curving cornice was used for small shrines as early as King Papi of the 6th dynasty.

* *Vide* Plate i, fig. 48.
† *Vide* supra, p. 29, 37, 45, 54, 61, 64.
‡ *Vide* Plate xvi, figs. 3, 4, 5.
§ *Vide* supra, p. 46, 48.
‖ *Vide* Plate i, fig. 27, *a*, *b*.

and was consequently not a Greek innovation. The architrave, as in the Greek Doric, is a simple beam, without any division into fasciæ; having merely a line of hieroglyphics, extending along its whole length; with the name, and titles of the King, who dedicated the building; whose name occurs again on the soffits.

The entablature is never surmounted by a triangular pediment, like the ends of a Greek temple; nor has it any attic. There is, indeed, one instance of an architrave in the form of a depressed pediment, with a very obtuse angle in the centre, over three columns in a tomb at Beni Hassan, already mentioned;* but this being only an architrave, cut in the rock, and consequently independent of all ordinary rules of building, is a caprice, and cannot be considered a *feature* of Egyptian architecture. The same may be said of the arch, which is often imitated in the ceilings of the rock tombs, but which cannot be mentioned in connexion with the *architecture of Egyptian temples;* though it is well known that the arch did enter into that of the crude brick tombs, and private houses, at the earliest times. It was also employed in the brick gateways of the enclosures, that surrounded the tombs; as well as in the crude brick pyramids at Thebes, built in the sixteenth, and fourteenth, centuries before our era.

I have already mentioned an arch† at Thebes, bearing the name of Amunoph I, who reigned in the sixteenth century, B. C.; others have been

* *Vide* p. 41, and Plate v.

† *Vide* supra, p. 18.

found there with those of Thothmes III, (his fourth successor,) and of Remeses IV; and it seems to have been known in the time of Osirtasen I, of the 12th dynasty, judging from the representation of what appear to be vaulted granaries at Beni Hassan. That it should have originated in a country, where wood was rare, is consistent with probability; and it has been conjectured that the chambers in the large brick pyramids, near Memphis, were arched. Those at Thebes, of a rather later period, were so roofed; nor is it unreasonable to suppose the other larger ones to have been the same; and the superiority over the stone pyramids, boasted in the inscription upon that of Asychis, has been supposed by Dr. Richardson, with great probability, to have consisted in its vaulted chambers. It is also evident that, in the early time of Osirtasen, the vaulted roofs of rock-tombs were made in *imitation* of arches; and the arch seems to have been particularly used in sepulchral monuments. Indeed, the side rooms of the pavilion of Remeses III, at Thebes,* seem to have had arched roofs of stone; but there is no evidence to show how they were constructed; and the earliest known stone arches, as I have already stated, are of the time of Psamaticus, in the seventh century before our era. Still, these are not more certain proofs of the invention, than the brick arches at Thebes, which are on the same principle,† the bricks (or

* *Vide* Plate xviii, fig. 2.

† *Vide* Ancient Egyptians, vol. iii, p. 316, 318, 321.

stones) radiating to a common centre.* It is true that the roofs of the small chapels, attached to the pyramids of Dunkalah (Meroe), and to those of Gebel Berkel (Napata), in Ethiopia, are arched in stone; and are both round and *pointed*,† some with, others without, the keystone; but their date is uncertain; and they are long posterior to the crude brick arches of the early Theban tombs. They are, however, built in the Egyptian manner, by the Ethiopians, who imitated their northern neighbours; and the position of the stones, lengthways, is precisely that adopted in most of the crude brick vaults of Thebes;‡—a mode of construction, which argues that the earliest arches were of brick. The same arrangement of the bricks is found in arches, built by the early Christians in Egypt; and it is a remarkable fact that they used *pointed* arches for covering passages, and other small spaces, previous to the Arab invasion of Egypt in the seventh century, and consequently long before the pointed style was adopted in Saracenic buildings.§ In other arches, of Pharaonic time, which cover doorways, the bricks are placed edgeways, as in our modern buildings; and many, which consist of a double semicircle of bricks, resemble both in the arrangement of the materials, and in their general construction, the perfect arches of the Romans.‖

* On this, and not on the presence of a key-stone, does the principle of the arch depend; and arches, both round and pointed, are frequently found, in modern Europe, without a key-stone.

† *Vide* Plate i, fig. 13. ‡ *Vide* Plate i, figs. 10, 11.

§ I have had occasion to notice this more fully, in a paper sent by me in 1849 to the Royal Institute of British architects, *vide* Plate i, fig. 11.

‖ *Vide* Plate i, fig. 12.

Egyptian Temples. The oldest Egyptian temples were very limited in size, and simple in character; consisting merely of a single chamber, or sanctuary, with one entrance in front.*

In it was the statue of the God, with an altar for sacrifice, or for libation; which last was one of the earliest modes of propitiating the Gods.

To this sanctuary, the priests alone had access; the people being only permitted to participate in the ceremonies, from without. It stood within a spacious court, or *temenos*, surrounded by a wall of crude brick; the sanctuary itself being of stone.† The gateway (or, as it was called, Pylon)‡ of the temenos was generally of stone also, and built (as usual in Egyptian monuments) with sloping sides; and the court being planted with trees, received, like the Greek "*temenos*", the name of "grove". These are the "groves" mentioned in the Bible, as an abomination to the God of Israel.

At first, the sanctuary constituted the whole temple;§ but in process of time, other chambers, and a portico, were added;‖ and the name of sanctuary (sêkos, or *adytum*) was only applied to the inner room, containing the altar.¶

There was no fixed rule, for placing Egyptian temples; nor was it considered right, "if possible, that the statue in the cella should look towards the west, so that a person approaching the altar, to

* *Vide* Plate i, figs. 15, 16.
‡ And *Pylône*, or propylon.
‖ *Vide* Plate i, figs. 19, 20.
† Plate i, fig. 17.
§ Plate i, figs. 15, 17.
¶ Plate i, fig. 26.

perform a sacrifice, should bow to the East", as Vitruvius directs, in regulating the position of a Greek, or Roman, temple; and notwithstanding all their superstition, the Egyptians did not confine the presence of the Deity to any particular point of the compass; the various sacred buildings, in the same city, being found to face in whatever direction the locality, or convenience, might suggest. This indeed was permitted in Greek, and Roman, temples; the front being towards the road, or in any other situation, when the prescribed westerly position could not be managed; and Vitruvius is wrong, when he states that the Egyptians "thought it right to make their temples face towards the Nile".* They were not placed on a basement, nor approached by steps, except those of the old peripteral class; and I am not certain whether the number of steps was unequal; in order (as Vitruvius recommends) that the right foot, being first placed on the lowest one, might be the first also to enter the temple.† The entrance to the adytum was by the portico; which was supported on columns, and was frequently connected with the gateway of the court, by a dromos, or avenue of Sphinxes, through which the processions advanced to the Temple.

The Egyptian *Sphinx* had the body of a lion, and a human head. Being a symbolical representation of the King, it had a man's face, with a beard; and was unlike the Greek Sphinx, which

* Vitruvius, lib. iv, c. 5, p. 186. † Vitruvius, lib. iii, c. 3, p. 139.

was composed of a woman,* and a winged lion. It signified the union of physical force and intellect; and was styled an Andro-Sphinx. One instance however occurs of an Egyptian *female* sphinx, *with wings*, sculptured at the side of the throne of King Horus, of the 18th dynasty; but the name placed before it shows that it represents his Queen, and accounts for this singular deviation from the established mode of characterising the Egyptian Sphinx.† There were also‡ a Sphinx with the head of a hawk, called the Hieraco-sphinx; and another with a ram's head, known as the Crio-sphinx; which were so made out of compliment to the Gods, Re (the sun), and Amun (Jupiter); the latter of whom was represented with the head of a ram, and the former with that of a hawk.

Rams were also occasionally substituted for sphinxes, both in the sculptures, and in the dromos of the temples; before, and attached to, them stood a small figure of the king; and they wore the horns, and headdress, of the God, to whom they were sacred. Sphinxes, lions, and rams were frequently represented in the *sculptures*, standing, walking, crouched, or even sitting; and rams had sometimes two, or four, heads. The sphinxes, and rams of a dromos were always crouched, or *couchant;* but those placed at the side of a doorway, or in other places, might be standing, or in other attitudes; and some crouched sphinxes had human *hands*, in which they held forth a vase, or other

* But not always.

† Plate i, fig. 21, *a*.

‡ *Vide* figs. 21, 22, 23.

offering, to the Gods. One of these, of a large size, bearing the name of Amunoph III, was found at Spalato, in Dalmatia; and representations of them, on a very small scale, of pottery, or soft stone, seem to have been used as ornaments, or kept as a mark of respect to the King; one of which was found in Egypt, of the early time of Maranre, or Remaran,* of the 6th dynasty; showing at what a remote period this fabulous animal was invented.† It was not usual for the Egyptians to give wings to sphinxes; but griffins, and other fabulous animals were painted with them; and it is probable that the Greeks derived their winged sphinxes from those fanciful animals, rather than from the rare instances of the former in Egyptian sculpture. But the apron, and head dress, given to them, on Greek, and Etruscan, vases, were evidently copied from the ordinary Sphinx of Egypt.

As the Temple increased in size, the arrangement of the chambers varied considerably. In some, the sanctuary was isolated, and was surrounded by columns; with other chambers before, and behind, it;‡ but, in general, it was at the extreme end of the building, with a subordinate one at each side.§

The front of the large temples was composed of a portico; generally, with one or more successive

* In the prenomens of the *early* Egyptian kings, the Sun, "Re", though placed at the beginning, reads at the end of the name; as in Mai-re, (Mœris) instead of Remai—the prenomen of King Papi (Phiops, or Apappus).

† In the possession of Mr. Larking, at Alexandria.

‡ Plate i, fig. 25. § Plate i, figs. 26, 33, 43.

propylæa, courts, or areas, before it; which were separated from each other, and from the portico, by large pyramidal towers; and the approach to the whole building was by an avenue of sphinxes. Before the entrance stood two large granite *obelisks*; and attached to the towers were two, or more, flag staffs.*

On the outer *towers* were sculptured battle scenes, commemorating the victories of the monarch who raised the building; the inner ones having a colossal figure of the king, slaying several captive chiefs,† (or emblematic figures of wickedness, under the form of "men bound, and kneeling"‡ before him); and in the upper compartment were the offerings, and religious ceremonies, performed by him to the principal Gods of the temple.

This was the arrangement of the large temples, in the time of the 18th dynasty, when grandeur of scale had succeeded to the limited dimensions of the earlier buildings. Another object was also attained, by the addition of the lofty towers, which was defence; and each temple being a detached fort, within the city, was thought to be as efficient for its own protection, and for that of the town, as a continuous wall of circuit, which required a larger garrison to defend it.

In former times, the Egyptians had regular *for-*

* Plate i, figs. 1, 27, 33, 34.

† As with the Romans, and many other people of antiquity, captives were either put to death, or made slaves.

‡ This group, with outstretched arms, gave rise to the figure of Briareus; for which some persons still mistake it, *vide* Plate i, fig. 1.

tresses,* strengthened with square towers; and their cities were surrounded with walls; but, though some were kept up, after the accession of the 18th dynasty, the practice of fortifying towns seems then to have been discontinued; either from their having been found inefficient, during the invasion of the Shepherds, or in their own wars against foreign countries; and fortresses, or walled towns, were not used, except on the edge of the desert, and on the frontiers where large garrisons were required.

The general external appearance of the temples presented a massive wall, with no other mouldings than the cornice, and the torus that ran up the angles of the building from the ground, and then, taking a horizontal direction, separated the cornice from the flat face of the wall below it; but the whole was covered with coloured sculptures, of figures and hieroglyphics; and the variety of the subjects, their bright colours, and the harmonious disposition of the different hues, had a pleasing effect, and counteracted the monotony of so large a surface.†

It may be said that the exterior wanted the relief of colonnades, and broad shadows; and, though the lofty towers compensated for the continuous

* I have had occasion to mention this subject more at length, in a memoir sent to the Royal Society of Literature in 1849.

† A good instance, in later times, of the mode of decorating a large flat surface, unrelieved by mouldings, may be found in the beautiful painted walls of Giotto's chapel, at the Arena of Padua. Like the Italians, the Egyptians purposely left large spaces, to receive coloured decoration, on which they depended for the effect of their architecture.

horizontal line of the roofs, and, projecting beyond the lower part of the walls, afforded some contrasts of light and shade to the long sides of the temple, that still there was great sameness, in the extent of its massive wall; and many will feel disposed to doubt whether the bright colours, and the brilliant light, even of Egypt's climate, could have been as pleasing to the eye, as the relief of deep shadows; but it is, at the same time, evident, that the fall of partial shadows upon a painted wall is injurious to its effect; to have sought them would have caused a total change in the architecture itself; and it is reasonable to suppose, that those most accustomed to the effect of colour* (with which they were, like all Eastern people, thoroughly acquainted) adopted a style of building, best suited to that mode of decoration in their climate. The impression given by it was of exclusiveness, and mystery; and a person, who saw a temple from without, would form no idea of the interior. There, the arrangements were made with a view to accommodate, and render imposing, the grand processions, in which the Egyptians delighted; and the pomp of priestly ceremony had its full effect, as they passed down the long avenue of sphinxes, into the areas and halls, that succeeded each other, and led to the sanctuary; into which the high

* It is singular that the knowledge of colour, which is universal in the East, should be possessed by so few in Europe. The Italians have it more than any other Europeans; and it is to be regretted that the English prefer copying from copyists (who are sometimes right, sometimes wrong) to studying it at the fountain head, in Italy, or the East.

priest, or the King, alone had access. The heat of the climate also required that protection should be afforded to those who attended on the occasion; and the cool shade of the colonnades, in the courts, or areas, was peculiarly suited for the purpose. This was probably one of the reasons for their not continuing the peripteral style,* and for not applying it to their large temples; though a stronger one is found in its incapacity for defence, when the sacred edifices had assumed the character of fortresses, and the ancient custom of surrounding a city with walls had been abandoned. Peripteral buildings were therefore seldom employed, after the middle of the 18th dynasty; except within a temenos, or court, belonging to a larger edifice; they were no longer the principal sanctuaries of a city; and that style was confined to the *Mammeisi*, attached to the great temples; as at Dendera, Philæ, and other places.†

The old *peripteral* sanctuary consisted of a simple cella, surrounded by a colonnade of square pillars, with two round columns before the door; and at the back also, when the cella had two entrances; it stood on a raised stone basement, having a flight of steps in front; and the approach to it was through the usual pylon, and the dromos.‡ And here, I wish again to draw attention to the fact, that, in this style of building, as well as in the

* It has been supposed that the back part of the Temple at Esné was peripteral; the portico having been added afterwards. The original part, I believe, was of Thothmes III.

† Plate i, fig. 29. ‡ Plate i, figs. 30, 31 *a*, 31 *b*.

use of polygonal fluted columns, Egyptian architecture bore a much closer resemblance, in the earliest times, to that of Greece, than at any subsequent period; and a more frequent affinity may be observed in patterns, and other arbitrary devices, in the old monuments of the Egyptians and Greeks, than in those of a Ptolemaic age.

It might almost be supposed, that the Egyptian peripteral temple was formed from the one chamber of the original simple naos, and its portico *in antis;* the walls being cut into square pillars, and a new sanctuary being introduced within; and it is sufficiently evident, that the temple in antis, which was used in the earliest periods, may be traced in the various plans of later times, however complicated, or increased in size.

Peripteral edifices are now rare in Egypt; and the two most perfect specimens, I have seen, were destroyed by the Turks in 1822; one at Elephantine, of Amunoph III; the other at Eilethyas, also of early time. The western temple of Samneh still remains, with part of its colonnade;* but it has been altered, and is neither so complete, nor so satisfactory an instance, as the two former; and the sanctuary of the smaller temple at Medeenet Haboo may be cited, as another ancient peripteral building, subsequently half enclosed by Remeses III, within other chambers.†

There was another peripteral building, generally square, formed of columns, supporting an entabla-

* Plate i, fig. 35 *a*.

† Plate i, fig. 25.

ture; without any chamber within it; and *hypæthral*, or roofless;* but this was only an appendage to a temple. It had two entrances, one at each end; and the remaining intercolumniations were filled up by stone screens, to the height of about two-fifths of the columns; as was usual also in the intercolumniations of Egyptian porticoes of temples in antis.† The columns, on either side of the door, had sometimes Isis-headed capitals, the others being of the seventh, or composite, order; and similar edifices, in the large villas of the grandees, of the 18th Dynasty, were supported on columns with papyrus capitals. These hypæthral buildings were frequently placed on a raised basement, and stood at the beginning of the avenue of sphinxes, in front of the great temples;‡ probably for the purpose of receiving the sacred emblems, previous to the march of the processions towards the temple. They may be called *canopies*. In them the columns were all circular; but in the peripteral temples, those at the sides were generally square, and the only round columns were at the front and back, before the doorways.

Though peristyles were uncommon in the exterior of Egyptian buildings, they were not so in the interior; where they surrounded the courts, or areas, the centre of which was hypæthral, or open to the air. Of these areas, the two sides had each covered corridors, supported on round columns; while the two ends were frequently without any colonnade;§ but

* Plate i, fig. 32.
† Plate i, figs. 19, 20, 37.
‡ Plate i, fig. 34.
§ Plate i, figs. 33, 34.

when the temple contained two areas, one behind the other, the inner one had a peristyle of columns at the sides, and Osiride pillars at the two ends.* The upper end of the inner area was then divided off from the rest, by screens in the intercolumniations; and that part had also one row of columns behind the Osiride pillars. On either side of the entrance of these courts, was usually placed a sitting statue of the King, and the two areas were separated by large pyramidal towers.

So varied were the plans of Egyptian temples, that it is difficult to arrange them under distinct classes. The same edifice, which, at the commencement, consisted merely of a sanctuary, often received numerous additions, till it became a large, and complicated, building; and this accounts for the disproportionate scale of the parts, as in the Great Temple of Karnak, at Thebes; where additions were made by successive kings, each on the increased scale that resulted from the progress of art and wealth. Some general distinctions may however be made; and constructed Egyptian Temples may be classified under the following five heads.

a. CONSTRUCTED TEMPLES.

1st. *Sanctuary Temples*, consisting of a single chamber.† This was the oldest style, and it afterwards held the rank only of a *Delubrum*, or chapel.

2nd. *Peripteral Temples*, already mentioned.‡

* Plate i, figs. 28, 33, 34. † Plate i, figs. 15, 16, 17.
‡ Page 79. *Vide* plate i, figs. 30, 31, *a*, *b*.

3rd. *Temples in Antis*, with a portico of two, or four, columns in front; and one or two rows in depth.* It must however be observed, that an Egyptian temple had rarely open sides to its portico; these were of solid masonry, whatever may have been the number of columns within ;† and the only porticoes, that had not solid sides, consisted of a row of round or polygonal columns, with two or more rows of square pillars in front; the external set of which (on either side) served instead of an outer wall; but even these were frequently united by intercolumnar screens, or by a thin wall, as at the eastern temple of Samneh,‡ at Amada,§ and at Sukkot in Wadee Halfeh; all which temples are, at least, as early as the first kings of the 18th dynasty.‖ In the porticoes of temples *in antis*, the intercolumniations of the first row were closed by stone screens, reaching about two-fifths of the way up the columns; except at the centre, where a stone doorway was attached to them.¶ And though these were principally of Ptolemaic, and Roman, time, intercolumnar screens are known to have been used in ancient Pharaonic monuments, where they formed the separation from the inner part of the area, and the body of the temple.**

There are not a sufficient number of temples, of early time, now remaining, to enable us to decide

* Plate i, figs. 19, 20. † Plate i, figs. 19, 20, 37, 38, 41, 42, 43.
‡ Plate i, fig. 35, *b*. § Plate i, fig. 36.
‖ That of Wadee Halfeh appears to have been founded by Osirtasen I, of the 12th dynasty.
¶ Plate i, figs. 37, 38.
** Plate i, figs. 28, 33, 34; in the time of Remeses II, and III.

whether those *in antis* were much used then; but it is certain that, though that form of portico was more particularly in vogue, during the reigns of the Ptolemies, it was not a novel introduction; since rock-temples, and tombs, are found with a similar portico, in the early times of Osirtasen, Amunoph III, and other kings; as at Beni Hassan, El Masarah, the desert,* and other places.†

4th. *Temples* with porticoes of *many* columns in depth, as at Esné,‡ Dendera,§ etc.; and *many* inner chambers at the back, with screens in the intercolumniations of the façade.

In this class, the principal parts of the temples were, 1st, the *Naos*, containing a central, and two side adyta‖ (sometimes with an isolated sanctuary, as at Dendera,¶ Medeenet Haboo, and other places);** the hall of columns, and other adjacent chambers; and 2nd, the *Portico*, or *pronaos*, which was generally broader, and higher than the naos.†† Before the portico was the paved dromos, leading to the pylon in front, against which the crude brick wall of the temenos abutted; as in the smaller temples, of early times.‡‡

In temples of this class, the portico was a more marked feature, than in those of a simpler, and older, plan; and as it is frequently found in those of Ptolemaic, and Roman, date, some have supposed, that the accession of the Ptolemies led to a change

* Plate i, fig. 40, of Osirei I. (Sethos), in a Valley opposite Edfoo.
† Plate i, figs. 39, 45.
‡ Plate i, fig. 41.
§ Plate i, figs. 37, 38, 42.
‖ Plate i, fig. 43.
¶ Plate i, fig. 42.
** *Vide* supra, p. 79, note 1.
†† Plate i, figs. 37, 42, 43.
‡‡ Plate i, fig. 17.

in the Egyptian portico; and that from that time it obtained an importance, which is attributable to Greek influence. But even if this change did then take place, in Egyptian architecture, it does not follow that it was a foreign innovation; novelties had been introduced before, at various periods; and it is sufficiently evident that architecture underwent changes, at different times, in Egypt, as in other countries. Besides, it is not in Greek architecture that the portico is the dominant *feature* of a temple; this derives a far more striking character from the peristyle, and the pediment; and it is rather in Roman, than in Greek, temples of large dimensions, that the portico is a conspicuous part of the edifice. It was also incompatible with the prejudices of the Egyptians, to alter their sacred architecture at the suggestion of foreigners; and however great a stimulus was given to architecture, by the accession of the Ptolemies, and the consequent increase of wealth and prosperity, it may be confidently asserted, that they made no arbitrary alterations in Egyptian monuments, and that the size of the Portico was not a Greek innovation.*

This, like all previous changes, was purely Egyptian; as was the greater variety, in the juxtaposition of columns of different orders; and it is by no means certain that large porticoes, of the same kind, were not attached to earlier temples, which now no longer exist. The oldest, of which any vestiges remained, when I first visited Egypt,

* *Vide* supra, p. 18, 29, 30, 54, 60, 68, 69.

was that of the temple of Hermopolis, at Oshmoonáyn; which had the royal ovals of Philip (Aridæus) and Alexander (the son of Alexander the Great), in whose names Ptolemy Lagus was Governor of Egypt; and it is highly improbable that so great an innovation should have been suddenly introduced, before the power of the Ptolemies was established in the country. But what is still more decisive, respecting the real Egyptian origin of the large portico, is that instances of it, or its prototype, are actually found in the oldest monuments; and no one can examine those of Amada and Sukkot,* or even the narrow open portico before the Eastern temple of Samneh, without being convinced that to similar ancient plans is to be ascribed the origin of the large porticoes of later times.

So far were the Egyptians from admitting any innovation, suggested by foreigners, that even the most ordinary compliment, of permitting their great benefactors, the Ptolemies, to appear in a Greek dress on the monuments, was denied them; and we only find one instance of a Ptolemy in his own costume, in a subordinate position, on a gateway at Karnak; and another, wearing a helmet, at the entrance of the great Hall of the same building. Even when Egypt was prostrate before the power of the Romans, and was a conquered province, the temples were not allowed to undergo any capricious change; and the arch, the favourite feature

* *Vide* supra, p. 83, and Plate i, fig. 36.

of Roman taste, was not admitted into the temples of Egypt.*

5th. *Temples* with *many* chambers behind the portico, and with *areas*, *pyramidal towers*, etc., in front.† This was the usual mode of building them, in the age of the Pharaohs, and was the same that Strabo describes as the old Egyptian plan. For in speaking of the ancient temples, he evidently draws a comparison between those with pyramidal towers, and the others erected under the Ptolemies, or in his own time; when the fourth class was more generally adopted. It was then that, similar fortified buildings being no longer thought necessary, the towers were dispensed with; and the temples returned to the simple form, adopted during the early dynasties; when they consisted merely of a naos, and a portico in antis; which last was increased, in the Ptolemaic and Roman times, to the vast size of those of Esné, and Dendera. Like all other Egyptian temples, those of the fifth class were surrounded by a temenos, enclosed within a crude brick wall, (similar to that in fig. 17, but of far greater extent); the centre of its front coming up to the foremost towers,‡ or to a stone pylon, standing some distance before them. The same kind of enclosure surrounded the temples of the fourth class,§ and the entrance to the temenos was by the usual pylon.‖

Temples with halls of assembly,¶ as at Karnak,

* *Vide* supra, pp. 18, 69.
† Plate i, figs. 33, 34.
‡ Plate i, fig. 33.
§ *Vide* supra, p. 84.
‖ As in Plate i, fig. 17.
¶ Plate i, fig. 34, *vide* p. 92.

the Memnonium, etc., may be considered a subdivision of the fifth, rather than a separate and distinct, class of temples; being only found in capital cities, where those assemblies were held, which were presided over by the king.

The principal parts of a complete Egyptian temple of the fifth class were:—1. the *naos;* 2. *portico;* 3. *area;* 4. *towers;* 5. *dromos:* and 6. *the hypæthral canopy.*

1. The *Naos*, or body of the temple, including the *sêkos, adytum, penetrale*, or *sanctuary*,* and other chambers, which varied much in their number and distribution, according to the size of the building. Of these the chief were the two *side adyta;*† the *prosêkos*, or transverse *corridor* before them;‡ and the *hall* of columns (or the *hall* of assembly§). These side adyta were like the side chapels of the later basilicas; and the transverse corridor might answer to the space, crossing before the apse, or tribune; (which in after times was pushed out into transepts, extending beyond the line of the originally straight outer wall, in order to form a more complete cross;) and the Christians, who occupied the Egyptian temples, after the Pagan religion had been proscribed by Theodosius, found in them convenient churches; which the most orthodox of other countries might not have found wanting, even after the cross had been pronounced to be the necessary form of a church.

* Plate i, fig. 33, 43.
† Plate i, figs. 33, 43.
‡ Plate i, fig. 33.
§ Plate i, figs. 33, 34.

Nor would they have been offended by the sight of ancient deities, in the sculptures on the walls; these were carefully concealed, by a coating of plaster; and their place was amply supplied by an array of saints, painted on its surface. Sometimes the sanctuary was isolated, in temples of this class; as at Karnak, Luxor, and others of early time, to which indeed these may all be ascribed, except where additions have been made by the Ptolemies, or the Romans.

2. The *Pronaos* or *Portico;* which was frequently only a transverse corridor, of two columns in depth, at the inner end of the area; from which it was separated by intercolumnar screens.* As in temples of the last class, this part of the building projected beyond the body of the naos; and also exceeded it in height.

3. The *Area, Vestibulum*, or *Propylæum,*† was a large open court; and one, or two, of these stood before the naos;‡ separated from each other by large Pyramidal Towers. The inner area had a colonnade all round it,§ sometimes with two sets of columns at the sides; and at each end was a row of Osiride Pillars.‖

4. The large *Pyramidal Towers* were from forty to fifty feet, in height; the outer ones being about double the average height of the Temple, and

* Plate i, figs. 33, 34.

† The name propylæum, Προπυλαίον, of Herodotus, is evidently applied to the pyramidal towers themselves; and Diodorus even gives them the name of propylon, which really belongs to the stone gateway.

‡ Plate i, figs. 33, 34.

§ Plate i, figs. 33, 34.

‖ Plate i, fig. 33.

forming the façade of the building; and both were decorated with two, or more, lofty flag staffs, bearing coloured banners, that floated high above the cornice.* Between them was the *Pylon*, *Pylônê*, or *Propylon*, the gateway, or entrance to the Temple; and the brick wall of the temenos, which in the smaller temples abutted against the pylon, in these generally corresponded with the ends of the two front towers.† At each side of the gateway a statue of the King stood, or was seated on a throne;‡ and just beyond, before the front towers, were two Obelisks, which terminated the inner end of the dromos. These were sometimes replaced by two large Stelæ, or Tablets of Hieroglyphics.

5. The *Dromos*, or paved causeway, was the approach to the temple, by which the processions marched, through the avenue of sphinxes ranged on either side: and this avenue commenced with two standing statues, or with the square hypæthral canopy.§

6. The *Canopy*, usually supported on twelve columns, and standing at the beginning, or outer end, of the dromos, has been already described as the place, from which the grand processions went to the temple.‖

b. ROCK TEMPLES.

It has been often supposed that these gave rise to constructed Egyptian Temples; from the idea,

* Plate i, figs. 1, 27, 33, 34.
† Plate i, fig. 33, *vide* supra, p. 87. ‡ Plate i, fig. 33.
§ Plate i, figs. 27, 33, 34. ‖ Supra, p. 81, Plate i, figs. 32, 34.

that the Egyptians first began to make their places of worship in the rock; but I have already explained, that the presence of architraves, over the columns within them, shows that they, on the contrary, were taken from built monuments; those members being evident imitations of the beam, from column to column, required to support the roof, and quite unnecessary in an excavation.* Besides, it may be doubted whether their first sanctuaries were in the rock; and it is probable that they never cut stone, nor made use of any, till it was wanted for *building* a sanctuary. The Pillar, or Column, however, did probably originate in the Quarry; as it was wanted to support the roof, long before columns were used in Temples; which is shown by the early sanctuaries having no Portico, and consequently no columns; but the quarry pillar has not the architrave, given to columns in the Rock-temples. I may also observe that though some of the quarries are very old, no rock temple dates as early as built monuments in Egypt; and in excavated Temples, and Tombs, the imitation of the architrave is always found. The opinion therefore, that the Temples of Egypt were derived from excavated monuments, is totally unfounded; and though the temple borrowed the column from the quarry, as the excavated derived the architrave, plinth, abacus, and many other accessories, from the constructed temple,† there is abundant evidence to show that the Egyptian sacred edifices

* *Vide* suprà, pp. 5, 6.

† *Vide* Ancient Egyptians, lib. iv, p. 22; and supra, pp. 5, 6.

did not owe their plans, or mode of building, to rock temples.

Rock Temples may be classed under three heads. 1. *Simple Sanctuaries.** 2. In *Antis*, or with a Portico in front,† of two columns. 3. *Hall Temples*, with a Hall supported on Pillars, Columns, or Osiride figures;‡ with or without a portico; one of which, at Ferayg in Nubia, without a portico, consists of a hall with two columns, opening on a chamber at each side; and an adytum at the end opposite the entrance.§ The two temples at Aboosimbel are also without porticoes; and the large one consists of a spacious hall, with eight Osiride pillars; an inner one, of smaller dimensions, with four square pillars; a transverse corridor; and one large central, and two small side, adyta; besides eight other chambers.|| Attached to the façade are colossal statues of the King. Some have areas with masonry, in front; as at Girsheh (or Jerf Hossayn), and other places; and there is an instance, at Sabooa, of a sanctuary, and the adjoining chambers, excavated in the rock; with a portico, and area, of masonry. This, and the temples of Aboosimbel, Girsheh, and Derr, are of the time of Remeses II, in the fourteenth century before our era.

I have mentioned the Halls of Assembly, in the Temples of the fifth order. They consisted of

* Plate i, fig. 44. † Plate i, fig. 45, and 39 of Beni Hassan.

‡ Plate i, fig. 39, at Beni Hassan; fig. 40, at Osirei I; fig. 46, at Kalabshee of Remeses II; fig. 47, at Ferayg of King Horus; fig 50, at Aboosimbel of Remeses II; and Plates ii and iii at Beni Hassan.

§ Plate i, fig. 47. || Plate i, fig. 50.

many rows of columns with bud capitals, and a centre avenue, or nave, of larger ones (with full-blown papyrus capitals,) much higher than those of the lateral colonnades; and in the upper part, over the centre avenue, were windows, or gratings of stone, answering to the clerestory in church architecture.*

Windows were not common features, in Egyptian temples; but in the roofs were small apertures, splaying inwards;† and as rain was rare in Egypt, their position offered no great inconvenience. Sometimes the side walls were pierced with windows; but they were little larger than, and very similar to, the apertures in the ceiling; and few really deserve the name of windows.‡ There is one, in the small temple of Dayr el Medeeneh, at Thebes, opening on the portico; which has more the character of a window, and is not inelegant.§ It consists of three lights, divided by stone mullions, the centre one in the shape of a small column. It is of Ptolemaic time; but those, of the halls of assembly at Thebes, are of the Pharaonic age of the 18th dynasty; and at the small temple of Medeenet Haboo is another window, of simple stone bars, in the side wall of a chamber; which has the Egyptian cornice and other mouldings, on its outer face, probably of the time of Hakôris, B.C. 400.‖

Doorways in Egyptian temples were closed by a single, or a double, valve, furnished with metal

* Plates viii, ix, x, xvii, fig. 1.
‡ Plate i, fig. 49.
‖ Plate xvii, figs. 2, *a*, 2, *b*.
† Plate i, figs. 49, 49, *a*, 53.
§ Plate xvii, figs. 3, 4.

pins, turning in grooves, in the lintel, and threshold; and secured by bolts, and by a bar which crossed from one side to the other. The doors were of wood, sometimes covered with metal, and occasionally ornamented with gold, or gilding. The doorways had two projecting jambs, against which the doors shut; and, when open, the valves fitted into a recess, flush with the wall.* A remarkable arrangement of the doorways, and their proportions, may be observed in the large temples; the object of which was to increase the apparent length of the building, by an artificial effect of perspective. For this purpose, each successive doorway was smaller than the one before it, the smallest being the farthest from the entrance, which was that of the adytum. Over each doorway was the globe (generally winged) and asps, the emblem of Agathodæmon, or the Good Genius.

The *roofs* were always flat, and composed of long blocks of stone, resting upon the entablature, or upon the architrave, over the columns;† or reaching from wall to wall, in the smaller chambers.‡ Though rain was rare, they took every precaution to prevent the water penetrating through the roof, lest the colours on the ceiling should be injured, by the water finding its way between the seams; and for this purpose long strips of stone were let into a groove, so as to overlay the well-adjusted sides of the blocks;§ the ends of which

* *Vide* Plate i, figs. 51, 52.
† Plate i, fig. 53.
‡ Plate i, fig. 49.
§ Plate i, fig. 54.

were concealed from view, on the outside of the building, by the cornice, that terminated them, and sometimes rose (as a low parapet) above the level of the roof. It may appear strange that they made this provision against the effects of rain, in the dry climate of Thebes, where showers only fall five or six times in the year; but heavy rain lasts occasionally for some hours; and every twenty, or thirty, years violent storms occur, which account for the deep ravines, cut by the water, in the mountains of Thebes.

The *materials*, used in building the temples, were generally sandstone; but limestone was employed in the earliest times, except in Nubia, and the sandstone districts; and the interior of the sanctuary of the famous temple of Osiris, at Abydus, was lined with slabs of oriental alabaster. Granite was principally confined to obelisks, statues, and sarcophagi; and though the third pyramid was coated with it, and though doorways, some few columns, and even the sanctuary of Karnak, were of that hard stone, it was rarely used for buildings; and the only *temple* of granite is at Bebayt (Iseum) in the Delta.

But it is remarkable that the obelisks were placed on limestone substructions; from its having been discovered, that granite did not resist the salts of the earth, as well as limestone; and as this is the case in the oldest monuments, it affords room for curious speculation, on the antiquity of the Egyptians, and of their civilization; since a long period is required to give experience on the duration of stone.

The granite was from Syene (now Asouan) at the first cataract, from which place the name of syenite

has been borrowed; though this name is, very improperly, confined to one particular species; while, in reality, the stone of Syene used by the Egyptians is granite, containing all the compound parts of that primitive substance. The granite employed for obelisks, and other monuments, was generally red; though grey, and black, granite were sometimes employed for statues, and sarcophagi; but obelisks were occasionally of limestone, or even sandstone; and alabaster was mostly reserved for small ornamental objects, or occasionally for a royal sarcophagus,* for the facing of some very remarkable adytum, or even, though rarely, for a statue. A coarse grès, or gritstone, was also used for large colossi; of which stone were made the vocal statues of Memnon, and its companion; basalt was principally adopted for sarcophagi, statues, sphinxes, and doorways; but more by the later, than the earlier, Pharaohs; and the *breccia verde*, of the Kossayr road, was only occasionally employed for ornamental purposes, one sarcophagus alone having been found of that stone, belonging to a late Pharaoh.† The hieroglyphics carved on granite, and other hard stones, were in intaglio; and rarely in relief, except on the walls of the temple at Bebayt.

A few small temples of early time were of crude brick, with columns and doorways of stone; but these were in out-of-the-way places; and the only walls of that material, belonging to the temples, were those of the *temenos*, or outer court, sur-

* As that of Osirei, or Sethos, now in the Soane collection.
† Of Amyrtæus, in the British Museum.

rounding them, the gateways of which were of stone. In some of these walls, the bricks were placed in waving layers, alternately convex, and concave, strengthened at intervals with logs of wood, that served as binders; or with layers of reeds, or matting, between some of the courses of bricks, for the same purpose.* Brick walls were also, occasionally, built in what Vitruvius (speaking of masonry) calls *Greek* εμπλεκτον; the bricks, in every other course, being arranged lengthways, in the direction of the wall, and in the others placed at right angles with those above and below them;† a style of building, which was very commonly adopted by the early Christians in Egypt. In walls of great extent, the monotonous appearance of a long blank surface was occasionally relieved by panels, and grooved lines, placed alternately throughout its whole extent; the summit being crowned by a projecting cornice, or a row of spikes in imitation of spear heads, or some fancy ornament;‡ the whole stuccoed and painted; but this mode of decorating brick walls was mostly confined to villas, and the enclosures of tombs; and the wall of the temenos had usually only a cornice, a simple coping, or a row of round-headed battlements.

All the walls, and other parts, of the temples,

* *Vide* Plate iv, fig. 24. Similar buildings are also found of stone; as at Wadee Tayfee (Taphis) in Nubia, where, in a length of 50 feet, the depression of a concave course is 1 foot 3 inches. The latter are of Roman time, and the doors have Greek mouldings. *Vide* Plate iv, fig. 26.

† Vitruv. lib. ii, c. 8, p. 77. Like the warp and woof in weaving, whence the name. *Vide* Plate iv, fig. 25.

‡ *Vide* Ancient Egyptians, vol. ii, pp. 130, 131.

were covered with sculptures, and hieroglyphics, carefully coloured. Limestone received the colour at once, but the porous nature of sandstone required an intermediate substance, to prevent its absorbing the paint, and to give it a smooth surface; for which purpose a thin coat of stucco was placed over it, whereon the subjects were drawn, and painted. And so fond were the Egyptians of colour, that even the beautiful red granite was not exempt; and this was often covered in like manner with white stucco, as a ground to the painted hieroglyphics. Sometimes, however, the granite was allowed to retain its own red hue, the sculptures being painted green; and at Beni Hassan the walls of the tombs were stained to imitate red granite, with green hieroglyphics on that artificial ground.

The *colours* were principally blue, red, green, black, yellow, and white. The red was an earthy bole,* the yellow an iron ochre; the green was "a mixture of a little ochre, with a pulverulent glass, made by vitrifying the oxides of copper and iron with sand and soda"; the blue was "a pulverulent glass of like composition, without the ochreous admixture; the black was bone black; and the white "a very pure chalk".† They were mixed with water;‡ and apparently with a little gum, to render them more tenacious, and adhesive.

* The red of Egypt is mentioned by Vitruvius, as one of the best kinds. Lib. vii, c. 7, p. 317.

† According to the analysis kindly made for me by Dr. Ure. *Vide* Ancient Egyptians, vol. iii, p. 301.

‡ Sometimes they appear to have used oil, especially for outlines, in the early tombs of Thebes.

With the Egyptians, the favourite combination of colour was red, blue, and green; when black was introduced, yellow was added, to harmonize with it; and, in like manner, they sought for every hue its congenial companion. They had very few mixed colours; though purple, orange, and brown, are occasionally met with. The blue, which is very brilliant, consists of fine particles of blue glass, and may be considered equivalent to our smalt; it seems to be the same that Vitruvius describes, which he supposes to have been first made at Alexandria; and it also agrees with the artificial *cyanus* (κυανος σχεναστος) of Theophrastus, invented in Egypt; which, he says, was laid on thicker than the native (or lapis lazzuli).* The green is also blue glass in powder, mixed with particles of colourless glass, to which it owes its bright hue.

Gilding was employed, in the decoration of some of the ornamental details of the buildings; and was laid on a purple ground, to give it greater richness; an instance of which may be seen in the larger temple of Kalabshee. It was sparingly employed, and not allowed to interfere, by an undue quantity, with the effect of the other colours; which they knew well how to introduce in their proper proportions; and discords were carefully avoided.

In many temples, especially in the inner chambers, the colours still remain; and those that have been covered with mud, or plaster, by the early Christians, retain much of their original bright-

* *Vide* Ancient Egyptians, vol. iii, p. 302, note. Vitruvius, lib. vii, c. 11, p. 327, mentions the mode of preparing this smalt.

ness; but they are never seen quite as vivid as when put on; nor has the exclusion of light and air been sufficient to prevent those in the tombs of the kings, well preserved as they are, from being in some degree deteriorated. They are far more brilliant than in any of the temples; but still, even there, the surfaces of the colours have become duller, than when first laid on; and though the coloured details I have given may appear far brighter than on the monuments, I have thought it right to represent what I suppose to have been their original effect, rather than imitate their now faded hues. The surface, especially of the reds, and greens, has been much changed by the action of the atmosphere, and often has a dark crust over the brighter paint beneath it; and of this I have a convincing proof, in the colours obtained from the fallen fragments in Belzoni's tomb, and other places, at Thebes; which show their original brilliancy to have been far greater than it appears at the present day.

Colour was an essential part of Egyptian architecture; and some of the mouldings, and other details, were made out solely by it, without any sculptured indication of them; as was often done on the monuments of Greece. The *ceilings* of Egyptian Temples were painted blue, and studded with stars, to represent the firmament;* and on that part over the central passage, through which the king, or the religious processions, passed, were vultures, or other winged emblems. Here and

* As in the early Italian churches.

there, small square holes are still seen, which were probably intended for the insertion of pieces of wood, in which chains were fixed for holding lamps.

The sculptures mostly represented the king making offerings to the triad of the place, and to the principal deities, worshipped in the Temple; the king's name, who erected, or enlarged, the building, was frequently repeated in the dedications upon the architraves, as well as on the ornamental cornices, and other parts of the building; and as it was "the prince's part" to make the offerings in the temple, he alone was represented presenting libations, and various offerings before the Gods. On the outer walls, similar subjects were repeated; but in the large temples, especially of the capital, the chief places, both on the outer and inner walls, were occupied by battle scenes, representing the victories obtained by the monarch over the enemies of Egypt; and upon the great towers of the façade he was pourtrayed routing them in battle, or in the act of smiting the captive "chiefs of the Gentiles", in the presence of the Great God of the place.*

Among the peculiarities of Egyptian architecture, one of the most important is the studied avoidance of uniformity, in the arrangement of the columns, and many of the details. Of the latter, some are evident to the eye, others are only intended to have an influence on the general effect, and are not perceptible without careful examination. An example of these imperceptible arrangements has already been noticed, in the great hall

* *Vide* supra, p. 76.

at Karnak; where the capitals of the columns are at different heights, some being lower down the shafts than others; evidently with a view to obviate the sameness of too much regularity.*

But the Egyptians were not always satisfied with avoiding strict uniformity; they frequently ran into the other extreme of great irregularity, and we find columns with full-blown papyrus capitals on one side of a court, and those with the bud capitals, or even Osiride pillars, on the other. Where columns of various orders have been introduced, as in the portico of Esné, Philæ, and other places, the variety has certainly a pleasing and excellent effect; and there is a relief in this diversity of form, as in the ensemble of our northern churches. Indeed, one of the principal objects of the Egyptians seems to have been to avoid exact symmetry, and repetition, for fear of fatiguing the eye; and they are the first people, whose monuments offer instances of that variety, which forms so essential a characteristic of Saracenic, and Gothic, architecture. This feeling too appears to have increased, rather than to have diminished, after the accession of the Ptolemies; and intercourse with the Greeks had not the effect of teaching the Egyptians to adopt any of the notions of symmetry, which prevailed in Greek monuments. Those, therefore, who suppose that the great variety, then in vogue, from the juxtaposition of columns of different orders, was introduced by the Ptolemies, attribute it to a very improbable cause; for if any change had been

* *Vide* supra, p. 43.

introduced by the Greeks, it would have been that of greater uniformity; and the arrangements of columns, each with a different capital in the same portico, is evidently the result of Egyptian taste. It shows the same progress, which our decorated and perpendicular styles made, from the more simple, but still varied, character of the early pointed. The decorated, and perpendicular, each grew out of its predecessor; but no one looks for their origin in a *different style* of architecture, introduced by foreigners; much less in one of a totally distinct character; and, in like manner, the more ornamented column, and the more *varied* arrangements of the details, in later Egyptian monuments, arose out of the old Egyptian style, and did not certainly proceed from the *uniformity* of Greek taste.*

Sometimes, indeed, the studied avoidance of uniformity, with the Egyptians, amounted to a symmetrophobia; and in an avenue of statues, at Thebes, a group of two figures, about ten feet high, was placed as a pendant to a Colossus of sixty feet; and we constantly find one side of a front wall with a doorway, while the other presents an unbroken surface.

I have said that *Obelisks* were among the peculiarities of Egyptian architecture. One of the purposes, for which they were used, was to break, or counteract, the long horizontal line of the pyramidal towers of the propylæum; and to mark the direction, and termination, of the dromos, or avenue of

* *Vide* supra, pp. 30, 54, 61.

Sphinxes. They also served as memorials of the dedication, made by the king, whose name they bore; and they proclaimed the Deity, in whose honour the temple was built.

Though the Egyptians were far behind the Greeks, in the appreciation of form, it is certain that in the obelisk they showed less want of it, than in any other feature of their architecture; as is sufficiently shewn by the graceful shape, and proportion, of the apex. It is therefore surprising that the Italians at Rome, the French, and others in modern Europe, should so completely misunderstand the very beauty of an obelisk, as to depress the apex of those they make, and load the points of old Egyptian obelisks with crosses, rays, and other monstrosities; thus spoiling the very part, in which the beauty of an obelisk consists. Besides this, they have inflicted another blow upon their beauty, by mounting them on pedestals, with projecting mouldings; which disturb the continuous line of the sides, and are totally inconsistent with their character.

And while on the subject of the apex of obelisks, I may observe, that we are equally remarkable, in England, for a want of appreciation of the beauty of a point; and so accustomed are we to surcharge our spires with weather-cocks, that we look with horror on their most beautiful part, the point; and disfigure them by that incongruous addition.

The same misapprehension of the form, and intention, of the lines in a pyramid, is also commonly evinced by Europeans, whenever they adopt, or imitate it; as in some tombs in our churches; where,

after thoroughly mistaking the proper angle required for beauty, we attach a narrow slice of a black pyramid to a white wall, sometimes even with a truncated point; and beneath it place a large projecting pedestal, with other inconsistent accessories; entirely destroying the harmony of lines, in which its beauty consists; and which alone, if preserved, could excuse the adoption of a monument of unusual character.

With regard to the *pyramidal*, or sloping, line in Egyptian architecture, it is scarcely necessary to observe, that the object of it was the greater solidity obtained, by that position of the blocks, in the exterior of a building; and its use is one of the many arguments against the opinion of those, who fancy that Egyptian temples had their origin in excavated monuments. For it is evident that the pyramidal line can neither be required, nor be consistently introduced, in the walls of a rock temple; and wherever the sloping line does occur there, it is merely in the ornamental mouldings, and is another evident imitation of a constructed monument.

The general slope of the pyramidal towers was from 81°; 81° 10′; 83°; 83° 45′; 85° 30′; to 87°; varying, like everything in Egyptian architecture, according to position; or, sometimes, according to the date of the monuments. The four first angles are taken from Pharaonic temples, of the time of Remeses III, the others from Ptolemaic buildings; which last, being more slender, or taller in proportion to their breadth, required the talus to be less than that of the older towers.

The slope of the pyramids was, of course, very different, as it was carried to a point; but in these the angle also varied, that of the three Pyramids of Geezeh being, respectively, 51° 50′; 52° 20′; and 51°. At Gebel Berkel, in Ethiopia, the pyramids are much more pointed; some having an angle of 75°; but, though copied from them, these cannot properly be considered Egyptian monuments.

The four corners of the pyramidal *towers* were terminated by a torus, extending up their whole height, to the base of the cornice, beneath which it continued to the opposite angle; and their general outline, topped by the cornice, that curved over to the opposite tower on the other side of the gateway, explains the meaning of the καταπινουσας γραμμας of Strabo.* It is at the bottom of the towers, that the torus terminates in the double square moulding, already mentioned.†

I have been particular in calling attention to certain misconceptions, respecting the architecture of the Egyptians; and must not omit to mention another,—that they *began* with *large* buildings, *because* the mountains gave them the power of excavating to any depth, and extending the front to any length;—which is disproved by the fact, that the oldest sanctuaries were of very *small* dimensions; *large* monuments were erected before *large* rock temples were made; and the mere quarry (opened solely to supply materials), did not bear any resemblance to the plan, or general character, of a temple.

* *Vide* Plate i, figs. 1, 27, and 28.

† Supra, p. 66.

The attempt, too, to account for the use of large blocks, from the "facility of transport" in a level country; and the preference given by the Greeks to smaller, or shorter, architraves, from the difficulty of conveying them from the quarries, in a hilly country, is equally unsatisfactory; and is far from being consistent with the positions of many early Greek temples, and with what may be observed in other countries; since we find that, in the mountainous districts of Syria, heavier blocks were used than in the temples of Egypt. If the employment of large blocks were thus to be accounted for, it would be difficult to explain how the Syrians acquired the habit, or obtained that experience, which enabled them to move the enormous stones of Baalbek, far heavier than any in Egypt, being upwards of 60 feet long, by 9 broad, and 12 feet thick; again, some stones in the walls of Jerusalem are more than 20 feet in length; and massive columns, of a single piece, were raised in temples, on the mountain summits of Syria.* It was therefore as common a practice in the mountainous Syria, as in the level Egypt; so that neither the great breadth of Egyptian, nor the narrowness of Greek, or any other, intercolumniations, can be accounted for by the facility, or difficulty, of transporting long blocks of stone, to serve as architraves. Nor was size, originally, a condition, in the edifices of the Egyptians. They began, as did the Greeks, with small monuments; which increased in scale, with the

* As at Dayr el Kála, on a mountain, three hours from Beiroot.

increase of wealth, and the advancement of art; and though, as their taste was developed, the Egyptians preferred monuments of large size, the origin of this preference must not too hastily be attributed to the facility of transporting the blocks; nor even to the convenience of obtaining materials *near at hand*, since the granite quarries of Syene were upwards of 120 miles from Thebes; and the monoliths of that material, erected in the Delta, were conveyed more than 600 miles.

The *tombs* of the Egyptians, at Thebes, were either of crude brick, and vaulted, or were hewn in the rock; at the pyramids, they were either of stone, with flat roofs, or cut in the rock; those of the poorer class being simple pits, which contained the bodies, embalmed in the least expensive manner. In most parts of Egypt, constructed tombs were of crude brick; but those excavated in the rock were preferred by all who could afford them.* The plans of the rock-tombs varied very much, according to their size, and the quality of their possessors. Those of the kings, at Thebes, were of great length, the large ones from 300 to 400 feet, laid out in a succession of passages, and chambers; the large inner hall containing the sarcophagus. Some, however, belonging to wealthy individuals of the priestly caste, were not inferior in extent to the royal tombs; and one of those at Thebes is far larger than any of them; the area of

* On the tombs of Egypt, and the funeral rites, see my Ancient Egyptians, vol. v, p. 392, et seq.

the actual excavation being 22,217 square feet, and with the chambers in the pits 23,309; while, from the nature of its plan, the ground it occupies is nearly an acre and a quarter.*

In their plans, many of the tombs resembled rock temples. Those of early time had a portico before the entrance; the ceiling of which was cut into the shape of an arch; and when the inner chamber had two sets of columns, dividing it into a nave and two aisles, the three compartments of the roof were frequently cut into slight segments; as at Beni Hassan; where one has a radius of 10 feet 4 inches, and a span of 10 feet 7 inches; and another a radius of 9 feet, on a breadth of 10 feet 5 inches.† Some had a long porch in front, with a ceiling of the same form; but the arch, instead of being at right angles to, was in the direction of, the entrance;‡ while, in the inner chambers, it spanned them, whichever way best accorded with their position, or their size.

The rock tombs, at Thebes, belonging to private individuals, consist frequently of a corridor, without any external porch, and an inner chamber at right angles with it; the ceilings being generally hewn in the form of an arch, and covered with various devices painted on the stucco. Their plans vary, as usual; some consist of a long colonnade of square pillars in front, (instead of the transverse corridor within the door,) and of one or more inner cham-

* *Vide* Handbook of Egypt, p. 366 to 377.
† *Vide* Plate ii. ‡ *Vide* Plate i, fig. 48.

bers; and some few have a hall ornamented with columns, or square pillars. At the end of the innermost chamber, a figure of the man of the tomb is frequently seated, with his wife; illustrative of the domestic habits of the Egyptians; and in the floor of the inner, or outer, rooms, are large pits, from twenty to forty feet deep, where the coffins were deposited in chambers leading off from them;* the upper painted apartments being used for performing the liturgies, or services, for the deceased; and intended rather to do honor to his memory, than to be the receptacle of his remains.

I would willingly enter fully into the subject of Egyptian tombs, and explain them by the aid of plans and elevations; but the limited scope of this work prevents my doing so; and this also obliges me to confine my remarks, on the architecture generally, within a very narrow compass. I will not, however, omit some general observations on the character of Egyptian tombs; and the resemblance they bear to some early monuments in other countries. The received opinion is that they were excavated in the rock; and where the mountains were conveniently at hand, those of the great people, as kings, and sacerdotal, and military, chiefs, were so made; but constructed tombs were also used, and that too at the earliest times, for persons of rank; as the pyramids, and the tombs about them, fully attest. These last may, however, have been adopted, partly because the rocks there

* "Whose graves are set in the sides of the pit."—Ezek. xxxii, 23.

were of small extent, and soon fully occupied; while at Thebes, where the mountains afforded space for any number of tombs, of any size, few were of masonry; and the crude brick sepulchres seem only to have been made, when the rock, in that part, had been occupied; or for persons of inferior rank. It must, however, be remembered, that though so many tombs are seen, hewn in the rocks, their number is trifling, compared to the number of inhabitants, of one single generation; and even allowing for their having had many inmates, and having been resold, and reoccupied, in after times, they are few for the population of Egypt; and though many persons were buried in pits, in the plain, it is probable that numerous crude brick tombs once existed, of which no traces are now to be found.

It is a remarkable fact, that in the representations of funeral processions, the tomb is often figured as a built monument; and this too on the walls of excavated tombs at Thebes;* and its position, on the side of the mountain, seems to imply that the site of the rock tomb was sometimes marked by a sort of stela, or emblematic monument, raised above the entrance; or at least that the custom of introducing it there had originally existed in Egypt.† This monument consisted of a square base, surmounted by a cornice, supporting a pyramidal apex; and it may have been taken

* *Vide* Ancient Egyptians, Plate lxxxiv.
† *Vide* Plate i, fig. 19, and Ancient Egyptians, Plates lxxxv, lxxxvi.

from the pyramid, as the great tomb *par excellence*; or have been, like this last, an improvement on the original tumulus. Its intention seems very like the stela; and recalls the observation of Servius,* "apud majores nobiles, aut sub montibus altis, aut in ipsis montibus sepeliebantur; unde natum est, ut super cadavera aut pyramides fierent, aut ingentes collocarentur columnæ"; though it agrees, in a still more remarkable manner, with the pyramid that crowned the façades of Etruscan tombs, which was also rectangular, and not conical, as the summits of their constructed sepulchres.† These last resembled many built mausoleums of Asia Minor; as of Halyattes, described by Herodotus, and that now remaining near Sipylum, in Mœonia; the counterparts of the conical tombs of Tarquinii and Cære.‡ Nor were instances wanting of Greek sepulchres of similar form; and the ancient round one of Menecrates, at Corfu, is very like those of Etruria, and of Asia Minor. It may be said of the Etruscans, as of the Egyptians, that their tombs were mostly excavated in the rock, yet many were constructed monuments; and if those of Porsena at Clusium, and of Aruns (which still remains at Albano) differ, in their form, from the general circular tombs of the Etruscans, they were only another variety of the burial places of that people. The tumulus, with its various modifications, or improvements, as the pyramid, and cone, was common

* In Virgil, Æn. xi, v. 849. † *Vide* Plate iv, fig. 20.

‡ *Vide* Plate i, figs. 21, 22, 23. The tombs of Augustus, Cæcilia Metella, and others at Rome, were derived from those of Etruria.

to many countries; the conical chambers, in the Nuraghe* of Sardinia, bear a resemblance to the Treasury of Atreus, and to other similar structures, at Mycenæ, as well as to the *(pointed)* interior of the tomb near Sipylum; which last is remarkable for the stones being placed in alternate long and short courses;† and it is certainly interesting to observe the analogy of funereal monuments among early nations.‡

In mentioning the pyramids of Egypt, I must not omit noticing the manner in which those monuments were constructed; which, was first remarked by Mr. Wild. Every pyramid consisted, at first, of several lofty solid square tiers, standing one on the other, and decreasing in size; so that each projected considerably beyond the one above it. The uppermost one having then been capped by a triangular apex, the builders (as Herodotus says) proceeded downwards, and filled up the space, between the (nearly) perpendicular wall of each upper tier, and the projecting platform below it, with a triangular piece of masonry (which made out the slope of the face of the pyramid); and this they repeated, at each stage, till they reached the ground.

The expression "εκποιειν" of Herodotus is thus explained; as well as the appearance of the successive stages of several pyramids; as of the large

* There are the remains of two of them, in the Isle of Malta.

† I have found instances of this "long and short work" in Greek, and Roman, monuments, and whole villages so built, in the Regency of Tunis, of the time of Justinian, and Justin II.

‡ The pyramid is even in America; and the pyramidal, and conical form are still more general. *Vide* supra, p. 4.

one at Sakkára, and some of the smaller ones of Geezeh; where the triangular part, that once filled up the space on the projecting platform of each tier, has been taken away.*

For the *religion* of the Egyptians, I must refer to my "Manners and Customs of the Ancient Egyptians"; and I shall only notice the general principle, on which it was constructed, and those singular changes that took place at different periods.

The fundamental doctrine of the Egyptians was the unity of the Deity; but this unity was not represented; and they abstained from figuring, or giving personality to a Being, who, when made of any form, changed his nature, and ceased to be God. They had the same awe for the ruler, and great originator of all, as the Jews; he was ineffable; and he was known by a sentence, or an idea, not by a name.† But the attributes of this Being were represented; and hence arose a multiplicity of gods; that engendered idolatry, and caused a total misconception of the real nature of the Deity, in the minds of all, who were not admitted to a knowledge of the truth, through the mysteries. These were confined to the priesthood; and they were only imparted to such, even of the sacerdotal order, as were deemed worthy of the privilege.

Nor were the Egyptians singular in their belief;

* It is unnecessary to give a detailed account of the pyramids, as Colonel Howard Vyse's work is entirely devoted to the subject.

† Iamblichus says, "He was worshipped in silence." *Vide* Ancient Egyptians, vol. iv, p. 216.

the unity of the Deity was evidently, in early times, a very general notion, among other nations of antiquity; and the Greek Zeus was originally all in all; The Deity, containing all others within himself.*

The division of God into his attributes was in this manner. As soon as he was thought to have any reference to his works, or to man, he ceased to be quiescent; he became an agent; and he was no longer the One, but distinguishable, and divisible, according to his various attributes, his actions, and his influence on the world. He was then the creator, the divine goodness (or rather, the abstract idea of *good*), wisdom, power, and the like; and as we design Him as the Almighty, the merciful, the omniscient, or the everlasting, so the Egyptians gave to each of his various characters a distinct name. But they did more; they separated them; and to the uninitiated they became distinct Gods.

As the head of these, the Deity was *Amun;* who was likened to Re, the physical sun, in his name *Amun-re;* because as the sun was the chief of visible heavenly bodies, Amun was the chief of the invisible heavenly beings; in the same manner as the Egyptian kings took the title of Phra,† (Pharaoh), and were likened to the sun, from being the chiefs of human beings. Amun was pro-

* *Conf.* this in Xenophanes:

"Εἷς θεὸς, ἔν τε θεοῖσι καὶ ἀνθρώποισι μέγιστος,
οὔτε δεμας θνητοῖσιν ὁμοῖος, ουτε νοήμα."

also the "Intelligence" of Anaxagoras, and the "One" of other philosophers.

† *Vide* Ancient Egyptians, vol. iv, 287.

bably the divine mind in operation; the bringer to *light* of the secrets of its *hidden* will;* as well as the vivifying principle; and he had a human form, because man was the principal result, and design, of the divine will, in the creation.

As "the Spirit of GOD", that moved on the face of the waters,† the Deity was Nef, Kneph, or Nu; as the Creator he was Pthah; and in this character he was accompanied by the figure of Truth (the daughter of Re,† and very consistently derived from a deity whose office was connected with the world);—a combination of the creative power, and Truth, which recalls this sentence, in the Epistle of St. James, "of his own will begat he us with the word of truth;‡ and the announcement of St. John, that "all things were made by 'the word'".

As the principle of generation, he was *Khem* (with whose attributes Amun was invested at Thebes; the vivifying, and the generative, principles being thought to approach near to each other); and to shew how inseparable he was from all living things, they thought fit to assume the impossibility of his existing without a mother, and ascribed to him the singular office of being his own father.§

* *Vide* Ancient Egyptians, p. 247. *Vide* Iamblichus, viii, 3, and Plut. de Is. et Osir.

† *Vide* Ancient Egyptians, p. 235.

‡ *Vide* Ancient Egyptians, vol. iv, p. 250. She had also the character of Justice, the great cardinal virtue, and answered to the Thummim of the Jews, in her double capacity.

§ Ep. Gen. James i, 18. *Vide* Ancient Egyptians, vol. iv, p. 188.

|| A similar idea is found in Neith's saying, "I came from myself",—the abstract notion of "parent". *Vide* Ancient Egyptians, Plate xxvi, 1,.3, 5. Khem is called "Husband of his mother".

As the mother of all, the Deity was *Maut ;** and other attributes, and characters, held a rank according to their closer, or more distant, relation to his essence, or operations.

In order to specify, and convey an impression of these abstract notions to the eyes of men, it was thought necessary to distinguish them, by some fixed representation; and the figures of Pthah, Osiris, Amun, Maut, Neith, and other gods, or goddesses, were invented as the signs of the various attributes of the Deity. But it did not stop there; and as the subtlety of philosophical speculation entered into the originally simple theory, numerous subdivisions of the divine nature were made; and at length, everything which appeared to partake of, or to bear analogy to, it, was admitted to a share of worship. Hence arose the various grades of deities; and they were known as the gods of the first, second, or third orders, in proportion as they were real *attributes* of the primary Being, or *emanations*, or *partaking* only in a minor degree of the divine essence.† But Herodotus is perfectly right, in saying that the Egyptians gave no divine honours to heroes.

The Egyptian figures of gods were only vicarious

* Mau, "mother", with the feminine article "t" affixed, not prefixed, as in Coptic. Maut was probably primæval darkness, and the same as Buto.

† It was the difference between *power* (which belonged to the Deity), and *physical strength*, that led the Greeks to place Hercules only among demigods. He related to a *gift* to man, while *power* was an *attribute* of the Deity. The Egyptian Hercules was *power*, and was therefore, as Herodotus says, one of the twelve old gods, of the second order. *Vide* Ancient Egyptians, vol. iv, p. 316, and vol. v, p. 111.

forms, not intended to be looked upon as real personages; and no one was expected to believe that a being could exist, with the head of an animal, joined to a human body; but abuses soon crept in, and the uneducated failed to take the same view of them, as the initiated portion of the community; and mere emblems soon assumed the importance of the divine personage, to which they belonged. These abuses were the natural consequences of such representations; and experience shews how readily the mind may be drawn away, from a really spiritual worship, to the superstitious veneration for images; whether intended merely to fix the attention, or to represent some legendary tale, or abstract idea.

It was the glory, and the office, of the Hebrew legislator to make that most important, and beneficial, change in the religious condition of the world, which recalled mankind to the true knowledge of his Maker. By him men were taught to understand the real, and indivisible, nature of God; they were permitted to enjoy the right of offering their prayers directly to Him; and the veil of superstition, and mystery, being once torn away, all were privileged to partake equally in the knowledge, hitherto confined, by priestly exclusiveness, to a particular class. It has often been matter of surprise, that Moses should not have set forth the future state, as an essential doctrine; but the reason is obvious;* the future condition of man, the

* As well as for the very obscure notice of the Trinity in the Old Testament. *Vide* Ancient Egyptians, vol. iv, p. 187.

last judgment, and the rewards and punishments, hereafter, were the most marked tenets of the Egyptians; and the judgment-scenes, before Osiris, were the never-failing representations in the tombs, and funereal rituals. Any pointed allusion to them would, therefore, have recalled the well-known Judge of the dead, and all the funeral ceremonies of Egypt; and have brought back the thoughts of "the mixed multitude", and of all, whose minds were not entirely uncontaminated by Egyptian habits, to the very superstitions, from which it was his object to purify them.

The religion of the Egyptians was a pantheism, rather than a polytheism; and their admitting the sun and moon to divine worship, may rather be ascribed to this, than to any admixture of Sabæism. The sun was thought to possess much of the divine influence, in its vivifying power, and in various other effects; and it was not only one of the grandest works, but was one of the most direct *agents* of the Deity. The moon was in another similar capacity; and as the regulator of *time*, and the messenger of heaven, was figured as the Ibis-headed Thoth, the god of letters, and the deity, who at the end registered man's actions, and the events of his life.* There seems to have been no compromise, or fusing of their pantheism, with a Sabæan worship;† and when the sun is united to

* Chevalier Kestner (the Hanoverian minister at Rome) has a small figure of a *female* Thoth, or a goddess with the head of an Ibis. I believe it to be the only instance yet met with.

† *Vide* Ancient Egyptians, vol. iv, p. 292.

any of the divine attributes, it appears to intimate their relation to man.

They not only attributed to the sun and moon, and to other supposed agents, a participation in the divine essence, but even stones and plants were thought to share some portion of it,* and certain peculiarities were often discovered in the habits, or appearance, of animals, which were supposed to bear a resemblance to the divine nature. When the king is represented making offerings to himself in the temples, it is his *human* doing homage to his *divine* nature; a priest in the grand ceremonies is often figured offering incense to him, in the same spirit; and after death, every individual who had been judged, and pronounced "good", received religious honours, in his character of Osiris. This was accorded to all "just men", in a future state; but it was totally distinct from individual, or hero, worship.

Among other remarkable theories of the Egyptians was the union of certain attributes into triads; the third member of which proceeded from the other two;* and in every city, one of these combinations was the triad of the place. The first members were not always of the first order of gods, nor was it necessary that they should be;

* *Vide* Ancient Egyptians, vol. v, pp. 110, 111, and vol. iv, p. 318.

† *Vide* Ancient Egyptians, vol iv, p. 233, et alib. It is not to be supposed that a triad is the same as a Trinity; and no one need feel, or affect, any alarm on this head; though, if it were so, it ought to cause an opposite feeling; for the fact of a variety of religions possessing the knowledge of a truth does not diminish it; nor is the Mexican notion of a deluge looked upon with displeasure by the most orthodox.

and an attribute of the Deity might be combined with some abstract idea, to form a result. This notion had been held by them at the earliest periods of the Egyptian monarchy, as is proved by a monument of King Papi, of the 6th dynasty;* which mentions the triads of Osiris, Isis, and Nepthys; of Moui, Tafne, and Anubis; and many others; and it is impossible that, possessing the authority of this, and other well-known monuments, any one can doubt the antiquity of the worship of Osiris.†

Certain innovations were introduced, in early times, into the religion of Egypt, but these were only accessories, and such as might be expected from the progress of superstition; and if some remarkable instances occur, of sudden and positive changes, there is reason to believe that they were brought about by the influence of strangers. One of these, it is certain, was caused by the arbitrary will of a foreign king; which, from being so often seen in early monuments, is singularly interesting; especially since it affected one of the greatest of the gods of the country; for, from the reign of Amunoph III to that of Horus, kings of the 18th dynasty, Amun was banished from the Pantheon, and his name was erased throughout Egypt. I may, however, observe that his *figure* was frequently unaltered, and the word "*Re*" of his name Amun-re, was often left. From the earliest times, Amun had always been looked upon with the greatest reverence; at

* In the Turin Museum.

† His name occurs even before, in the time of the 3rd and 4th dynasty.

Thebes he was the first member of the triad, composed of Amun, Maut, and Khons; and he continued to enjoy those honours, until the end of the reign of Amunoph III. At that time, some Stranger kings obtained possession of the throne of Egypt, as the Shepherds had before, either by conquest, or by right of inheritance; and one of them forbade the worship of Amun, and caused his name to be erased from all the monuments of Upper and Lower Egypt. This was Atinre-Bakhan; and the period of his rule was evidently between the reigns of Amunoph III and Horus,* as I have found him offering to the 3rd Amunoph at Soleb;† and Horus destroyed the temples erected by him at Thebes, and used the stones for his own buildings. Thus then, the period of his rule is fixed, between the reigns of Amunoph III and his nominal successor Horus; and the monuments shew that the word "Amun", which was erased from the name of *Amunoph III*, was restored when Horus ascended the throne; who also admitted it into his own nomen. The reason of Bakhan's anger against Amun is uncertain; but it seems that another deity was substituted for "the king of the Gods"; and a new worship was introduced into the country. This favourite deity of the Stranger kings was Atin-re; and he was perhaps selected by them out of the Egyptian Pantheon, from his name being most like that of a

* In the list of kings, Horus is made the immediate successor of Amunoph III, and these Stranger kings are unnoticed.

† Atin-re-Bakhan (or Bashan) mentions Thothmes IV also, in an inscription at Tel el Amarna.

god of their own country. For, as these strangers were Asiatics, they may have traced in *Atin* their own *Adonai;** and the additional title of Re, "the Sun", was well suited to their worship.† "Re" had been appended by the Egyptians to the name of Atin, as to that of Amun; and in the sculptures where Atin-re was substituted, by the Strangers, for Amun-re, the adjunct "Re" was found to suit equally well the names of both deities. This accounts for its being frequently left, when they erased the name of Amun.

Atin, or Atin-re, was an ancient Egyptian title,‡ often given to Kneph, who is called Kneph Nou-re, Nou-atin, and Noum-atinre; and that too in the time of Thothmes III, and even at the later period of Remeses IX; but he was not represented as a distinct god, nor with rays terminating in human hands,§ except in monuments of Bakhan, and the other Stranger kings. The erasure, then, of Amun, and the temporary abolition of his worship, were not an Egyptian caprice; they were owing to the tyranny of foreigners, who obtained a footing in Egypt; and the abject manner, in which the soldiers and others are represented, crouching before those kings, in the tombs of Amarna, shews the despotism then exercised; as the erasure of their royal

* "Our Lord", whence the name of Adonis.

† They were probably from some country, farther east than Syria; and a god of a similar name seems to have been worshipped by other people of Asia; as Attin, or Atys, by the Phrygians, etc. *Vide* Ancient Egyptians, vol. iv, p. 297.

‡ *Vide* Ancient Egyptians, vol. iv, p. 298.

§ I have once found the sun so figured, in a tablet, apparently of the time of Remeses II.

ovals, and the total destruction of their temples, prove the hatred the Egyptians bore them, and their desire to efface every record of their having possessed the throne of the Pharaohs.

A change however did take place in the religion of the Egyptians, some time after this, which, even if forced upon them by foreigners, is remarkable, from its having been allowed to continue in after times; when they might have been expected to return to an old, and favourite, tenet of their philosophy. The children of Seb and Netpe (Saturn and Rhea), were Osiris, Seth, Aroeris, Isis, and Nepthys. Osiris, and Seth (or Typhon), were brothers; the former represented "good", the latter "evil". In early times, they were both adored as gods, in Upper and Lower Egypt; and were considered part of the same divine system; evil not having been yet confounded with sin, or wickedness; and this last being figured as Apôp (Aphophis), "the giant"; who, in the form of a "great serpent", the enemy of mankind, was pierced by the spear of Horus, Atmoo, and other gods.* Osiris and Seth† were even placed, synonymously, in the names of some kings; the latter was figured instructing the monarch in the use of the bow; and the introduction of these two gods on various occasions,—like Seth's pouring from a vase, in conjunction with Horus, the emblems of life and power

* Analogous to the story of the wars of the gods and giants; the antagonism of goodness and sin. Aphophis was sometimes pierced by the king, as the enemy of sin; but generally by a god.

† I had supposed his name to be Obtaut, or Ombte; but find that he was called "Seth", in the earliest times.

(or of purity), over the newly-crowned king,—was intended to shew that good, and evil, affected the world equally, as a necessary condition of human existence.

As soon as the change was introduced, the square-eared Seth was banished from the Pantheon; his name and figure were everywhere hammered out; he was branded as the enemy of Osiris; and he was opposed to him, as Ariman to Ormusd, or the Manichæan Satan to God.* And the fact of this expulsion, ascertained from the sculptures, is curiously confirmed by a Greek papyrus, published by Professor Reuvens; in which the writer invokes him, as an evil being, in these words: "I invoke thee, who livest in empty space, wind, or terrible, invisible, all-powerful god of gods, maker of destruction, and maker of desolation, thou who hatest a flourishing family, since thou hast been *expelled from* Egypt, and out of foreign countries. Thou hast been named all-destroyer, and the invincible,—I invoke thee, Typhon Seth; I perform thy magical rites, because I invoke thee by thy genuine name, by virtue of which thou canst not refuse to hear. . . . . Come to me entire, and walk, and throw down (such a man, or woman) by cold and heat. He has wronged me. . . . For this reason I perform profane ceremonies."†

It is not certain that this was a foreign innova-

* Socrates says: "that God is not the cause of all things, but of the good only."

† Libr. Ent. Knowl. Egypt, vol. ii, p. 283. The last sentence, "*δια τουτο ταυτα ποιω κοινα*", does certainly appear rather to "signify, 'wherefore I make these *public*,'" or "I divulge" them.

tion; but it is highly probable; from the notion respecting evil among eastern nations.* The exact period when the change took place in Egypt is uncertain; it may have been about the time of the 22nd dynasty;† and if Sheshonk (Shishak), and the other kings of that dynasty, were Assyrians,‡ the reason of it may be readily explained.

It is worthy of remark, that Satan is mentioned in the book of Job as opposed to God, though it was written about the same time as the Pentateuch of Moses,§ who only speaks of sin as the serpent; under which form it was figured by the Egyptians;‖ but the Book of Job was not of Hebrew origin; and even there Satan is not represented as an independent agent, but is obliged to obtain *permission* to act as the tempter.

The antagonism of *wickedness* and *goodness* was not, however, a novel theory with the Egyptians; as is shewn by the most ancient representations of the snake-giant Apôp, the symbol of human

* In one part of the East, votaries of Satan are found, in the Yezidis; but Layard thinks not as the antagonists of good.

† Perhaps later; otherwise the figure of Seth would have been more carefully erased, on the column near Bubastis, when Osorkon there substituted his own name for that of Remeses II; the latter having treated Seth thereon with great honour.

‡ As Mr. Birch supposes. It has been thought that the names of the two first "captives", in the list of Sheshonk's "conquered countries" at Karnak, being "Upper and Lower Egypt", confirm this; but the *same* two names occur in the lists put up by Thothmes IV, Remeses II, and III, and other kings; and they, like all the others, represented the *dominions* of the king, not necessarily *conquered* by him. *Vide* Mr. Birch's paper in vol. iii of the Royal Society of Literature.

§ Some suppose it was written before; but that it dates after the Exodus is proved from c. xxvi, 12, "He divideth the sea with his power." Conf. Isaiah li, 10.

‖ *Vide* supra, p. 124. In the old sculptures, the head of the serpent, Aphôphis, is represented to be "bruised"; and, in Ptolemaic times, he has a human head, with the body of a snake.

wickedness; nor was the peculiar office of Osiris a late introduction, after Seth, or Typhon, had been expelled from the Pantheon. The unphilosophical innovation was, in Seth being converted from *evil* into *sin*, and made the enemy of *good*.*

The singular character of Osiris; his coming upon earth, with the titles of "manifester of good and truth", his being put to death by the malice of the evil one; his burial and resurrection; and his becoming judge of the dead, I have already had occasion to mention.†

This myth, and his worship, were of the earliest times; and universal in Egypt; and the oldest monuments present the name of Osiris, as well as of the whole family of Seb and Netpe. He was, to every Egyptian, the great judge of the dead; and though Amun, Kneph, Khem, Maut, and others, were the favourite Gods of the Thebaid; and Pthah, Neith, Re, Atmoo, and some more, enjoyed great honours in the lower country, Osiris was equally the God of both divisions of Egypt. The reason was obvious;—all looked to the same end; and as death was the common fate of all men, they regarded the Great Judge of Amenti as the Deity, into whose presence all must be ushered,

* As early as the close of the 18th dynasty, Seth was opposed to Horus, the *son* of Osiris (which is intelligible); but he was, long after that time, worshipped as an Egyptian God. He is also united with Horus, as a sort of Egyptian Janus, and called "two faces", or deceit. He is even called "Baal-Seth", and also "Lord of Ombos", in monuments of the 19th dynasty; and "God of the Canaanites", and "lord of foreign countries." Seth is sometimes made, as Typhon, the adversary of Osiris, in late sculptures, and he is even called Apôp, or Aphophis.

† Ancient Egyptians, vol. iv, pp. 189, 199, 320, 326.

to receive their condemnation, or their admission to future happiness. It is not therefore surprising that his temples were of equal importance, in the most distant parts of Egypt; his reputed burial-places were numerous; and whether at Busiris, Abydus, or Philæ, he was the object of special adoration. He was greater than any other God, even of the first order; and he was therefore called "King of all the Gods", "God of Gods"; and had other titles, given to Amun himself.

But though Amun was the great God of Thebes, as Pthah was of Memphis, it is not to be supposed that their separate worship originated in those two parts of Egypt; or that the religions of the upper and lower country were once distinct, and afterwards united into one.* Certain cities, and districts, were appropriated to certain Gods; who were the chief deities of the place; and while Amun had his principal temple at Thebes, Memphis was the great city of Pthah, as Heliopolis of Re, and other cities of other Deities; no two neighbouring portions of the country, or chief cities, being given to the same God; and "a balance of power", as of honour, was established for the great members of the Pantheon; minor deities being satisfied with towns of minor importance. Other divinities shared the honours of the sanctuary; and different triads, or single gods, were admitted to a post in the various temples of Egypt; thus Pthah had a

* Minerva having a principal temple at Athens, and Apollo one at Delphi, and other Gods in other parts of Greece, do not argue an amalgamation of different religions there.

suitable position in a Theban adytum; Amun, and Kneph, or the triads of Thebes, and of the Cataracts, were figured on the temple at Memphis; and a fair division was made of the nomes and towns, among the principal Gods of the country. And though those of a neighbouring town were more readily admitted to a place among the contemplar gods, none were necessarily excluded, except positively local deities. There were many minor beings, whose worship was ordained, for some particular object; and some emblems, or sacred animals, were admitted in one, and excluded from another, place. Thus, the reverence for the crocodile, encouraged in some inland town, in order that the canals might be properly kept up, was found unnecessary in places by the river side; and the same animal, which was highly regarded in one district, was a symbol of evil in another.

Still, all was part of the same system; and however changed, and perverted, in later times, the original composition of the Pantheon dates from the most remote periods of Egyptian history;* and the few innovations, introduced in early times, occasioned no real change in the religion itself. Thus, the decree which Manetho says enrolled Apis, Mnevis, and the Mendesian goat, among the Gods, in the reign of the second king of the 2nd dynasty, did not alter the philosophy of the Egyptians, nor the views they took of the operations of the Deity; and it was even possible, for one of the eight great gods to take the attributes of those of an inferior

* *Vide* Appendix, note B.

order, without changing his nature, or lowering his rank. For these were also part of the Deity; and numerous instances occur of the attributes of one God being adopted by another.*

It is not however my intention to enter into this extensive subject, in the present work; I have already had occasion to mention the characters, and principal attributes, of the Gods, in the Pantheon of the "Ancient Egyptians"; and though I have had reason to make some alterations in the mythology, as well as in the chronology, of Egypt, I shall reserve my remarks on these subjects for a future occasion.

I may, however, observe, that considerable uncertainty exists, respecting the dynasties of Manetho; and, as the names of the kings, in the 18th dynasty, only partially agree with those in his list, it is too much to expect any degree of certainty, in the other dynasties. There is, no doubt, a general approximation to the truth; and we see that Eratosthenes also derived his list of Theban kings from an authentic source; but it is far from agreeing accurately with those of Manetho; and neither the number of years the kings reigned, nor the names in Manetho's dynasties, can be wholly depended upon. We have not his original work; the inaccuracies of some copyists, and the changes purposely made by others, to suit their own views,

* This will explain the apparent anomaly of Kneph being also Atinre; of Khem, one of the eight great Gods, being called "Son of Isis"; of Maut being "the offspring of the Sun"; of Anubis having a ram's head, and being called son of Isis; which cease to be perplexing, when the Egyptian system is examined.

have deprived his authority of its due weight; and, except so far as they are confirmed by the monuments, the names and arrangement of Manetho's kings are very uncertain. Africanus, for instance, gives to the 5th dynasty 8 or 9 kings; Eusebius 31, introducing Othoês and Phiôps of Africanus' 6th dynasty; one assigns 19, the other 4, Heracleopolites* to the 9th; the shepherds of the 15th are repeated in the 17th; the sum of years in each dynasty is equally undetermined; and it would be easy to show, how much his 18th dynasty requires to be corrected, from the authority of the monuments: the only authentic documents we can trust.

There is no deficiency of king's names in the sculptures; and their consecutive succession would throw back the commencement of the Egyptian monarchy, to an unreasonably remote period; but it is obvious that some of the Pharaohs reigned contemporaneously; and the monuments distinctly state that Mandoftep (who ruled at the close of the 9th dynasty), was a cotemporary of Amun-m̀-he I (the last of the 11th); that Osirtasen I (the head of the 12th) was king of Egypt, during the last years of the reign of Amun-m̀-he I;† and that the second Shepherd (of the 15th) was a cotemporary

* It is worthy of remark, that the ovals of the Ntentefs (Enentefs), of the *Heracleopolite* dynasty, begin with the hieroglyphical name of the Egyptian *Hercules*, which is found at Sebennytus. *Vide* Handbook of Egypt, p. 226; and Egypt and Thebes, vol. i, p. 432, on Sebennytus.

† This partly explains Manetho's saying that "Ammenemes came *after*" the kings of the 11th dynasty. Osirtasen I followed the last of the Ntentefs of the 9th dynasty of Heracleopolites; but Mandoftep, the last king of that dynasty, seems to have come to the throne after Osirtasen's death; and, in his second year, to have appointed Amun-m̀-he to rule over "Upper Egypt."

of Amun-m̃-he II; whose second year corresponds also with the 44th of Osirtasen I; while his 35th agrees with the 3rd of Osirtasen II. The accession of Menes is not, therefore, thrown back as far as the number of kings would seem to require.

With regard to the two great Theban dynasties, it will suffice to observe, that I am inclined to place Remeses II (or the Great), and his father, Osirei (or Sethi), in the 19th, instead of the 18th, dynasty; not only because there is sufficient reason to consider the latter the Sethos* of Manetho, but because the period of his reign accords with chronological data derived from the monuments; and the apparent disagreement, in the number of the kings' names given by Manetho, may be explained, when we see how strangely some of them have been allowed to creep into that list,† through the negligence of his copyists.

It is indeed less necessary to enter into a detailed examination of the chronology, and the succession of the Pharaohs, as Mr. Stuart Poole's work on the subject will soon be published; and I have much pleasure in stating how fully I agree with him in the contemporaneousness of certain kings; and in the order of succession he gives to the early Pharaohs.

I will however add a few remarks on the foreign kings, who obtained possession of the throne of

* If Seth and Osiris read synonymously in the name of this king, and stand for the letter S, we ought to call the latter God Siri (instead of Osiris).

† As the Armais of Eusebius, who never was king, but merely governor of the country; and was expelled, on the return of his brother.

Egypt, during the early periods of Egyptian history. The most noted of these were the Shepherds; but several Ethiopian princes also ruled in Egypt; and those "Stranger Kings", already mentioned, intervened towards the latter end of the 18th dynasty.

It is generally supposed that the Shepherd Kings, who obtained possession of Egypt, invaded the country from the same motives, that induced the Persians to attack it,—the mere desire of conquest; but there seems reason to suppose, that they possessed a claim to the throne, by right of inheritance; and it was not unusual for the Egyptian kings to intermarry with the princes of Asia; proofs of which occur even in later times, when Solomon reigned in Judæa. This may serve to explain the alliances that, for a time, appear to have subsisted between some of the Egyptian princes, and the Shepherds; who ruled part of Egypt, on their first arrival. Egypt was then divided into several states, each governed by a separate king; and the Shepherds at first only obtained possession of a part of the country, ruling contemporaneously with the Pharaohs of the 9th, 11th, and 12th dynasties.

The same was the case with the Ethiopians, who sat on the throne of Egypt; they obtained it by right of inheritance; and there are numerous instances, in the sculptures, of "royal sons of Cush (Ethiopia)" coming to the presence of the kings of the 18th dynasty, either to do homage for some district they governed, or to pay a visit to their

Egyptian relative; nor would the Egyptians have given the title "royal son" to any one not directly, and nearly, related to their own monarch.

It was, then, to establish their rights, that these foreign kings invaded Egypt, and the conquest was only the maintenance of their claims. But the tyranny they exercised excited all classes against them; and the hitherto divided kingdom having come into the hands of one single prince, of the Egyptian line, the united strength and voice of Egypt rose against the invaders; who, after having possessed it for a long period, were gradually dislodged from different parts of the country; and the Theban kings of the 18th dynasty succeeded, at length, in ridding Egypt entirely of their presence.

This alone can account for the power of Egypt being so great, immediately after their expulsion; which would not have been the case, had Egypt been conquered, and possessed, by a totally distinct race of conquerors; as it afterwards was by the Persians. The Shepherds, and Ethiopians, on obtaining the throne of Egypt, were interested in maintaining the power of the country; it was their own by the same rights, as those by which it was held by the Egyptian line of kings; they therefore waged wars, in like manner, with the enemies of Egypt; and their victories over them are recorded on the monuments, as in the reigns of other Pharaohs. The glory of Egypt was extended by Sabaco, Tirhaka, and other Ethiopians, as by the Pharaonic monarchs; the same was done by the

Sheshonks, and Osorkons, who are supposed to have been an Assyrian family; and the "Stranger Kings" were equally anxious to extend the conquests, of the country they ruled. Nor did these foreigners generally make much change in the religion, or customs, of the Egyptians; the "Stranger Kings" (as I have shewn) erased the name of Amun, and brought in a new sun worship into Egypt; and some deities *may* have been introduced by the Shepherds; but they generally adopted the customs of the people, whom they claimed the right to govern; and if the Shepherds were really the first to make them acquainted with the use of the horse, hitherto unknown in the valley of the Nile,* the Egyptians had reason to be indebted to them, for one of the most efficient means of extending their conquests in after times.

With regard to the Ethiopians, or Cushites, they were not only a people of Africa, but of Asia also; and it is not impossible that the "Stranger Kings" may have been of that Asiatic race. And if Amunoph III (who from being worshipped by Atin-re-Bakhan, as well as from his features being so like those of the "Strangers", was doubtless related to them) derived his origin from the same country, as the Memnon of after times (mentioned by Homer), the Thebans may not have deviated very far from the truth, when they pointed out Amunoph III as the Ethiopian King (Memnon), asked for by the Greeks.

* It is not seen at Beni Hassan, nor in any of the early sculptures before the 18th dynasty.

The union, and relationship, of the royal family of Southern Ethiopia, with the kings of Egypt, will account for the readiness, with which the Ethiopians imitated the architecture, and the religious customs, of Egypt; and we are thus less surprised to find, that they adopted the very names of the Egyptian gods, the title of the "Lord of the upper and lower country", and all the ordinary legends of their northern neighbours. Even the language of the hieroglyphics was Egyptian; and it is unnecessary to point out how erroneous are the opinions of those, who fancy that Egypt borrowed its religion, and its civilization, from Ethiopia; for no one can take the most rapid glance at Ethiopian monuments, without perceiving their origin; and deciding at once that the Ethiopians derived nearly every thing, in architecture and religion, from Egypt.*

* *Vide* Appendix, Note C.

APPENDIX.

NOTE A, TO PAGE 12.

THERE is reason to believe that the name "Pelasgi" was given to certain migratory tribes, who inhabited various parts of Asia, as well as Europe, and who changed their places of abode according to circumstances; sometimes being driven out by more powerful people, sometimes going voluntarily in quest of new lands. According to the usually received accounts, they were settled, at an early time, in Argolis; and others migrated into Arcadia, after which they passed into Thessaly, where they remained about one hundred and fifty-six years, till expelled by another tribe of Pelasgi from Argolis. They then went to Dodona, in Thesprotia; and those who had dislodged them, being afterwards driven from Thessaly, by Deucalion (B. C. 1541), migrated into different countries; some joining the old Pelasgi in Thesprotia; some going to Crete, and into Asia; and others passing into Italy, and settling in Umbria, where they remained about three centuries; till, having been conquered by the Etruscans, they fled to Attica. They there assisted the Athenians in fortifying the Acropolis, and being again expelled thence, they retired (about 1162 B.C.)

to the Isle of Lemnos, and other places. In Lemnos they remained, until forced by Miltiades to evacuate it (B. C. 510); after which they were dispersed over various countries, and at length became fused into the races with whom they lived.

Strabo says the Pelasgi once inhabited all the coast, known, in his days, as Ionia, beginning at Micale, with all the adjacent islands (Str. l. xiii, 3), and they were at an early time the inhabitants of Lesbos; but rapidly disappeared when the Ionians settled there. Herodotus again, (ii, 51) states that they first lived in Samothrace, and after that became fellow-dwellers with the Athenians, who received from them the mysteries of the Cabiri; and Homer mentions them as inhabitants of Larissa,* (in Thessaly) at the time of the Trojan war, when they were allies of Priam (Il. b. 840). Their possession of Dodona gave rise to the epithet "Pelasgic", applied to Jove, (Il. ii, 233) and some having been settled, at the same period, near Caria, led the poet to mention the "Λελεγες, και Καυκωνες και διοι Πελασγοι", as the inhabitants of neighbouring districts.

From the number of countries they are represented to have settled in, the name "Pelasgi" seems rather to have been applied to many wandering tribes, than to have signified a particular people; and the mention of two tribes of old, and new, Pelasgi, strongly confirms this conjecture; though

* Larissa was also the acropolis of Argos, and this seems to have been a common name of Pelasgic fortresses.

it is probable they were cognate races, and that the language was similar to that of the early Greeks, to whom the term "Pelasgic" was often applied.

NOTE B, ON PAGE 129.

Not only the religion, but the social habits of the Egyptians, date at the same early epoch; and it is a remarkable fact, that we find the custom of going unarmed, and various other proofs of long-established civilization, on the old monuments of the 3rd and 4th dynasties: a period so remote, that we generally suppose mankind to have been then in a state of utter barbarism.

NOTE C, ON THE LAST PAGE, 136.

Neither the size, nor the object, of this work will allow me to enter fully into the subject of the monuments of Ethiopia; nor can I here describe the early condition of that country, before the remarkable change took place in the bed of the Nile; which left its once fertile, and then annually inundated, plains a desert. This last is certainly a most interesting fact; as the change is one of the most extraordinary phenomena, which has occurred within the known history of the world; but I must necessarily defer any detailed account of it to a future occasion; when I hope also to have an opportunity of entering fully into the nature of the ancient Egyptian fortifications, and of showing the regular system they had invented at a very early period.

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