

There was in Ionic Archaic period in Asia Minor from about 550 B.C., the historical importance of which must not be overlooked.

In the Archaic examples of Greek Ionic columns the flutings were shallow and separated by arrises.

The Volutes of the early examples of Ionic capitals did not always appear to spring directly from the shafts (like those at the tomb of Tomassas at Cyprus). The earliest example of an Ionic capital known, from the temple of Apollo at Naucratis, has quite a different appearance, being not unlike in character the well known example from the north portico of the Erechtheion at Athens."

THE PRIZE ESSAY

Affected though their architecture was by that of other and preceding nations, the Greeks evolved a style which is accepted as being beyond criticism. It has been studied and copied and has influenced to a remarkable extent succeeding architecture, having been a source of inspiration even to this day. The excellence to which the architecture of ancient Greece attained is no doubt due to the great care and consideration which they gave to the designing of their buildings even to the most minute detail.

The Greek style is essentially columnar and treated thus giving a system where strict observance of the laws of gravity is all that is required to ensure stability, the weights acting vertically and therefore needing only vertical resistances. A distinct character was given to the buildings by the use of finely polished marble or a fine cement composed of marble dust and lime forming a finished surface, capable of a high polish, to stone or brickwork. In some cases, even marble was coated with this cement, as it was capable of a higher polish.

As stone or marble lintels were difficult to obtain in any great length, the columns had necessarily to be placed comparatively close together and this fact had an important bearing on the design. Mortar was not used in the construction, because it was not required for the purpose of distributing the pressure between the component blocks, as necessary in an arcuated construction. Instead, the beds were rubbed to a very fine and true surface and the stones jointed with iron cramps. Care was also taken that the stones were laid on their natural bed or otherwise, according to the pressure they had to sustain. Thus the architraves, which had to withstand a cross-strain were placed with the planes of their beds vertical, enabling them to carry a load over larger spans and thus tending to a wider intercolumnation. The early Greek work, of the Hellenic period, is heavy and severe, revealing the influence of the Mycenaean period, but there was a gradual evolution towards refinement and beauty. In their buildings there was a combination of the qualities of harmony, simplicity and unity because of their excellent proportions, their truthful and apparent construction and the employment of one constructive principle throughout.

It seems astonishing that the Greeks took such pains to correct optical illusions; one, the most well-known instance, being the giving of an entasis to the shafts of the columns, as illustrated in Figs. 1-3, to counteract the apparent thinning of the column towards the centre.

Remarkably fine sculpture and carving was used to complete the edifices, being used with proper restraint and judgment. The high degree of delicacy and refinement attained was facilitated by the hard finegrained marble employed. Colour and gilding were also used to heighten the effect.

The Greeks developed three of the "Orders of Architecture," the Doric, Ionic, and Corinthian, which were subsequently copied by the Romans who added the Tuscan and Composite and thus completed the "Five Orders of Architecture." An "order" consisted of the support—the column with capital and base, the latter being absent in the Doric Order where the column rests directly on the stylobate, and the part supported—the entablature. The latter is subdivided into the architrave, frieze and the crowning member, the cornice, the proportions, mouldings and decorations varying with the different orders.

The sturdiest, oldest, and plainest—the Doric is traced to a stone Egyptian prototype, by many, while many others, again, trace it to a wooden origin. However, it is a point about which there has been, and is much contention. The supporters of the "wooden origin" theory have certainly good arguments in their favour the chief being the derivation of the guttae from constructive wooden pegs; and this is supported by discoveries made a few years ago. The column, as before mentioned, has no base, standing directly upon the stylobate, or base of the building, usually of three steps. The column including the cap is from 4 to 6½ times the diameter at the base, in height diminishing to ¾ or ⅔ of this diameter at the top. The shaft is divided usually into 20 flutes separated by sharp arrises, though the number varies. Surmounting this order, as illustrated in Fig. 1, is a capital consisting of annulets, echinus and abacus. The abacus is a square slab, with the echinus—a large convex moulding—under. The latter varies, in the earlier examples approaching a parabolic section, and in the latter, a hyperbolic. Beneath the echinus are the annulets, or horizontal fillets varying in number from three to five. Immediately below is the Trachelion or necking having below the hypothachelion consisting of three grooves, in the earlier, and one in the later examples.

The entablature is usually about one quarter the height of the order and is divided into three main divisions. Resting on the abacus is the architrave which is of considerable depth and has only one vertical face. Separating it from the frieze is a flat moulding—the tenia which has beneath it, at intervals corresponding to the triglyphs, a narrow band called the regula, with six guttae. Decorating the frieze are triglyphs, having channels and the square spaces between called the metopes, which are, in some examples, richly sculptured.

The cornice consists of the upper part having cymatium and birdsbeak mouldings with a vertical face below, called the corona. The soffit, inclined upwards parallel with the slope of the roof, has flat projecting blocks called mutules, suggesting the ends of rafters, coming over each triglyph and metope and ornamented with eighteen guttae. This order is illustrated in Fig. 1.