

of Phidias is well known. The honor of the nation and the respect for the divinity were involved.

The original question of what made the Greeks paint the white temples has been reversed by the information supplied on why white marble was selected for painting. It was done quite intentionally, not to flout logical consistency. This is the correct understanding of the problem, as will become more apparent later.

Just as the good and beautiful, wherever it is found, asserts itself in every conceivable way, so it happened here that as white marble by its noble grain, its crystalline transparency, and its color formed the most beautiful base material for the development of Attic sculpture and painting, the fragrant enamel* coloring made an important contribution to the preservation and durability of the marble. If the barbarians had not mutilated them, these works of art would still exist today in their original beauty. One can look up what the chemist Sir Humphry Davy said in his fifth dialogue of *Consolations in Travel*.

I conclude this polemic, whose purpose is not to scrutinize from an aesthetic point of view Mr. Kugler's opinions on art based on his system of ancient polychromy† or to assail his temple genealogy, by quoting a passage from his essay where he, having conceded that the interior and even the front and rear porticoes of the temples were colored, then says:

But again the question is whether it was intended to produce this kind of effect on the longer sides of the peripteral temple. On the contrary, it seems more probable that the color was confined to the narrower and principal fronts, in order to let them thereby appear more important; *here the depth of the front and rear porticoes must have provided by themselves that more important background.*‡ This view seems to be confirmed by a remark

The passage is of interest to our problem in several respects. He seems to say that the gold tubes glistened through something that concealed them and that they envelope the statues with a delicate hue. What could this be other than the coloring or the polish of colored wax?

* By this expression I want to suggest that with the Greeks, as with the Indians, the fragrance was a coefficient of the total art product.

† Still I ask Mr. Kugler, cross his heart, if he likes the model of the Aeginean temple in the Glyptothek that corresponds to his system? Of all the modern, Greek-Doric temples, the one I like best is the small red-granite chapel in Charlottenburg. [The model of an Aeginean temple is a reference to Leo von Klenze's painted relief of a temple (now destroyed) that he constructed for the Glyptothek in 1836. He placed it in a tympanum above the pedimental sculptures from Aegina restored by Bertel Thorvaldsen. The chapel at Charlottenburg is the Doric Mausoleum for Königin Luise in the Schlosspark, built by Schinkel in 1810–12. In 1828 Schinkel replaced the original sandstone portico with red granite. – HFM]

‡ It is not clear to me what the author means or wishes to deduce from this.

of Vitruvius, where he maintains that intercolumnation was devised so as to give by wider intercolumnation a magnificent appearance to the building; at the same time he praises the diaphanous introduced by Hermogenes, where with the greater depth of the peristyle the depth of the intercolumnation, as everyone knows, has a greater shadow effect. This characteristic effect, however, could not really have been aimed at if that effect had already been generally achieved by dark colors.³⁴

However, if the columns were comparatively dark as well, what then? I need not review these somewhat boring sentences any further and quote them simply for the reason that I must refer to them once more.³⁵

V

The Four Elements

Hellenic culture could only have arisen on the humus of many past traditions long since dead and decayed and from alien motives brought over from without and no longer intelligible in their original meaning.

Mythology, which in an orderly form we first meet with Homer and Hesiod, was the independent poetic creation of Hellenism, one that flourished* within a philosophical system of a natural symbolism no longer intelligible and once again becoming myth, which in its turn had been planted on a dead tradition of facts, on alien and indigenous articles of faith and poetry. Such was the bountiful soil from which the free Hellenic poetry about the gods arose. Like mythology and almost as an illustration of it, the fine arts burst forth from the remnants of older, indigenous, and imported motives divested of their roots.

However this came about – whether the splendid lands of Asia Minor and Greece still had to grapple with those terrestrial forces (whose powerful traces there give evidence of their activity continuing well into later times) while the Assyrians and the Egyptians in the plains had already organized dense populations into states, or whether the layer of humus composed of the remains of so many cultural conditions unknown to us will provide the evidence to prove that this area was one of the earliest seats of mankind† and the successive prize coveted by invaders – one fact stands firm: that the most varied constituent parts of older civilizations were deposited here and intermingled and in a great metamorphosis of people shot together (like Parian marble) from sedimentary conditions into a crystal clear independence.

* [Gottfried] Hermann, *Mythologia Graecorum antiquissima opusc.*, vol. II.

† According to Herodotus, this was believed even by the Egyptians, proud of their antiquity.

Yet the original constituent parts can still be distinguished, and it is essential to trace them in order to understand certain manifestations of Greek art that seem, unfortunately, inexplicable and contradictory when viewed out of context.

In ancient and modern times the store of architectural forms has often been portrayed as mainly conditioned by and arising from the material, yet by regarding construction as the essence of architecture we, while believing to liberate it from false accessories, have thus placed it in fetters. Architecture, like its great teacher, nature, should choose and apply its material according to the laws conditioned by nature, yet should it not also make the form and character of its creations dependent on the ideas embodied in them, and not on the material?

If the most suitable material is selected for their embodiment, the ideal expression of a building will of course gain in beauty and meaning by the material's appearance as a natural symbol. Yet when allied with antiquarianism, this materialistic way of thinking has led to strange and fruitless speculations and overlooked the most important influences on the development of art.*

At the risk of falling into the same error that I criticize, I see myself forced to go back to the primitive conditions (*Urzustände*) of human society in order to come to that which I actually propose to set forth. I shall do it as succinctly as possible.

The first sign of human settlement and rest after the hunt, the battle, and wandering in the desert is today, as when the first men lost paradise, the setting up of the fireplace and the lighting of the reviving, warming, and food-preparing flame. Around the hearth the first groups assembled; around it the first alliances formed; around it the first rude religious concepts were put into the customs of a cult. Throughout all phases of society the hearth formed that sacred focus around which the whole took order and shape.

It is the first and most important, the *moral* element of architecture. Around it were grouped the three other elements: the *roof*, the *enclosure*, and the *mound*,† the protecting negations or defenders of the hearth's flame against the three hostile elements of nature.

* One might only remember the tomes that have been written since Vitruvius on how the Greek temple descended from a wood structure, or the shrewd hypotheses on the tent roofs of the Chinese. *Vide* [Thomas] Hope's history of architecture.

† At first glance the mound or the terrace appears as secondary and as necessary only in the lowlands, where solid dwellings had already been erected; yet the mound joined at once with the hearth and was soon needed to raise it off the ground. Allied with the building of a pit, it may have also served as support for the earliest roofs. Moreover, it is probable that man, not as an individual but certainly as a social being, arose from the plains as the last mud-creation, so to speak. The legends from times immemorial of all nations, which often conceal an idea of natural philosophy, agree on this point.

According to how different human societies developed under the varied influences of climate, natural surroundings, social relations, and different racial dispositions, the combinations in which the four elements of architecture were arranged also had to change, with some elements becoming more developed while others receded into the background. At the same time the different technical skills of man became organized according to these elements: *ceramics* and afterwards metal works around the *hearth*, *water* and *masonry works* around the *mound*, *carpentry* around the *roof* and its accessories.

But what primitive technique evolved from the *enclosure*? None other than the art of the *wall fitter* (*Wandbereiter*), that is, the weaver of mats and carpets. This statement may appear strange and requires an explanation.

It was mentioned previously that there are writers who devote much time to searching for the origin of art and who believe they can deduce from it all the different ways of building. The nomadic tent plays a rather important role in their arguments. Yet while with great acumen they detect in the catenary curve of the tent the norm of the Tartar-Chinese way of building (although the same shapes occur in the caps and shoes of these people), they overlook the more general and less dubious influence that the carpet in its capacity as a *wall*, as a vertical means of protection, had on the evolution of certain architectural forms. Thus I seem to stand without the support of a single authority when I assert that the carpet wall plays a most important role in the general history of art.

It is well known that even now tribes in an early stage of their development apply their budding artistic instinct to the braiding and weaving of mats and covers (even when they still go around completely naked). The wildest tribes are familiar with the hedge-fence – the crudest wickerwork and the most primitive pen or spatial enclosure made from tree branches. Only the potter's art can with some justification *perhaps* claim to be as ancient as the craft of carpet weaving.

The weaving of branches led easily to weaving bast into mats and covers and then to weaving with plant fiber and so forth. The oldest ornaments either derived from entwining or knotting materials or were easily produced on the potter's wheel with the finger on the soft clay. The use of wickerwork for setting apart one's property, the use of mats and carpets for floor coverings and protection against heat and cold and for subdividing the spaces within a dwelling in most cases preceded by far the masonry wall, and particularly in areas favored by climate. The masonry wall was an intrusion into the domain of the wall fitter by the mason's art, which had evolved from building terraces according to very different conditions of style.

Wickerwork, the original space divider, retained the full importance of its earlier meaning, actually or ideally, when later the light mat walls

were transformed into clay tile, brick, or stone walls. Wickerwork was the *essence of the wall*.*

Hanging carpets remained the true walls, the visible boundaries of space. The often solid walls behind them were necessary for reasons that had nothing to do with the creation of space; they were needed for security, for supporting a load, for their permanence, and so on. Whenever the need for these secondary functions did not arise, the carpets remained the original means of separating space. Even where building solid walls became necessary, the latter were only the inner, invisible structure hidden behind the true and legitimate representatives of the wall, the colorful woven carpets.

The wall retained this meaning when materials other than the original were used, either for reason of greater durability, better preservation of the inner wall, economy, the display of greater magnificence, or for any other reason. The inventive mind of man produced many such substitutes, and all branches of the technical arts were successively enlisted.

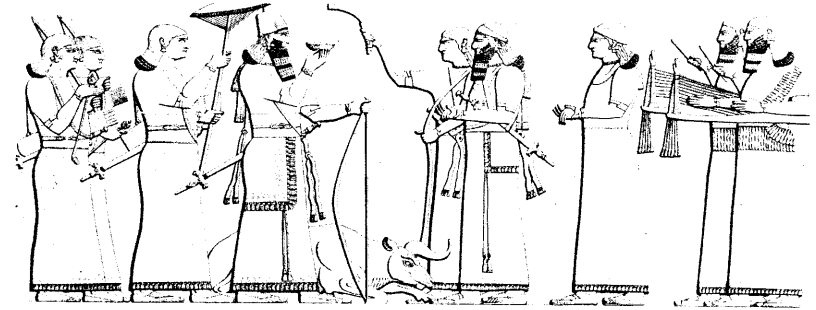
The most widely used and perhaps the oldest substitute was offered by the mason's art, the stucco covering or bitumen plaster in other countries. The woodworkers made panels (πίνακες) with which to fit the walls, especially the lower parts. Workers handling fire supplied glazed terra cotta[†] and metal plates. As the last substitute perhaps can be counted the panels of standstone, granite, alabaster, and marble that we find in widespread use in Assyria, Persia, Egypt, and even in Greece.

For a long time the character of the copy followed that of the prototype. The artists who created the painted and sculptured decorations on wood, stucco, fired clay, metal, or stone traditionally though not consciously imitated the colorful embroideries and trellis works of the age-old carpet walls.

The whole system of Oriental polychromy – closely connected and to a certain extent one with the ancient arts of paneling and dressing – and therefore also the art of painting and bas-relief arose from the

* The German word *Wand* [wall], *paries*, acknowledges its origin. The terms *Wand* and *Gewand* [dress] derive from a single root. They indicate the woven material that formed the wall.

† It is highly probable that the wish to give tiles a colored glazing first led to the discovery of burnt bricks. The glazed tiles from Nineveh that I had the opportunity to examine closely in Paris are in an almost unburnt state. Their glaze must have been extraordinarily fusible. Terra cotta dressings are the forerunners to brick walls, and stone plaques the forerunners to ashlar. See further below. [In August 1849 Semper examined the Khorsabad findings in the Louvre, including some not put on public display, after having befriended the museum curator, Charles Blanc. See W. Herrmann, *Gottfried Semper*, 24 and 268n.91. – HFM]



Assyrian bas-relief, the king standing over the prostrate bull. From Austen Henry Layard, *The Monuments of Nineveh* (1849). Courtesy The Getty Center for the History of Art and the Humanities.

looms and vats of the industrious Assyrians,* or from the inventions of prehistoric people who preceded them. In any case, the Assyrians should be considered the most faithful guardians of this primordial motive.

In the oldest annals of mankind Assyrian carpets were famed for their splendid colors and the skill with which fantastic pictures were woven into them. Written descriptions of mystical animals, dragons, lions, tigers, and so forth agree fully with the images we see today on the walls of Nineveh. If such a comparison were still possible, we would recognize a perfect accord not only in the objects depicted but also in the manner of treatment.

Assyrian sculpture clearly kept within limits imposed by its origin, even though the new material permitted a new means of raising the figures from the background. A struggle toward naturalism is evident, whose limits were set not by hierarchical power, but (apart from the despotic rules of a ceremonial court) by the accidental features of a technique foreign to sculpture yet still responsive to the echoes from the past. The postures of the figures are stiff but not so rigid as to have become mere characters; they only look as though they were chained. Within a composition they are already, or rather, are *still* pictorial adaptations of a celebrated historical act or a court ceremony, not like the

* It is remarkable that most of the colors on the Assyrian alabaster panels of Khorsabad and Nimrud have disappeared, while it is evident that they must have existed to complete the remnants still surviving. In contrast to Egyptian and Greek paintings, the surviving traces are not thickly applied but appear as if stained into the surface; it is probable that the colors were composed mainly of vegetable matter.

Egyptian images, which are simply a means to record a fact and are really a painted chronicle. Even in their arrangement, for instance, in their adherence to equal head heights, the Assyrian figures are more distinguished than Egyptian images. Sharp, threadlike contours, the hard shapes of the muscles, a predilection for ornamental accessories and embroidery are indicative of their origin; there is exaggeration, but not a lifeless style. The faces do not show the slightest trace of an artistic effort to render the inner state of the soul; they are, even with their constant smiles, without any individual expression. In this respect they are less advanced than Egyptian sculpture and resemble more the early works of the Greeks.

In actual wall murals the same technique is evident. According to Layard, the wall paintings at Nimrud are surrounded and interwoven with strong black contours; the ground is blue or yellow. The freizelike borders of the pictures that contain inscriptions also indicate their technical affinity with carpets. The character of the cuneiform corresponds fully with this technique. Would it be possible to invent for needlework a more convenient way of writing?

Alongside these substitutes for the earlier carpets, the latter were still widely used as door curtains, window curtains, and so forth, as can be seen by the richly decorated rings with which they were secured. The simple inlaying of the wooden floors is a sign that they, too, were covered with carpets. Carpets were also the models for the art of mosaic, which remained for the longest time true to its origin.

The interior walls above the gypsum panels were lined with a lightly burned, glazed, or, as one might say, lacquered brick. They were glazed only on one side and covered with painted ornaments that were totally inconsistent with the shape of the stone, but that crossed over it in every direction. Other evidence shows that the stones were in a horizontal position when they were glazed. They were, therefore, first arranged horizontally, then ornamented and glazed, and finally attached to the sun-dried brick wall in proper order as a dressing (*Bekleidung*). This also proves that the glaze was a general covering and its idea was independent of the material to which it was applied. A late-Roman or Medieval use of colored stones for patterning a wall had not been conceived in these earliest periods of art.

If the presence of sculptured stone panels in the lower parts of the Assyrian palaces can rightly be taken as the first step to later stone construction, then the evident progress made in this direction by the well-known Persian monuments at Murghab and Istakhr is very instructive.³⁶ Of the original masonry walls that had been constructed in large part from crude brick, there remains only the marble corner shafts, together with the door and window frames. These frames are made of one piece, yet are hollowed out in such a way that the idea of paneling is

still clearly evident. The brick wall was anchored into these cavities and connected to the marble shafts by its dressing, possibly wood panels or carpets.

With Egyptian monuments, the original meaning of the wall had already become more blurred; the hierarchical system (perhaps primordial, but in any case founded on the ruins of very old and more nature-bound cultural conditions) gave the carpet motive the fixed meaning of a stone hieroglyph. Nevertheless, the original motive is frequently rather conspicuous. Nowhere does the stone wall appear as such, but is covered both outside and inside as if with a painted carpet. This explains the exact but nevertheless irregular joints of the stone; the wall was covered with a general coating even when dressed with granite. These ancient granite dressings, at Karnak for example, and on the interior and formerly on the exterior of the pyramids, are counterparts to the Assyrian panels.

Strangely enough, one of the few architectural members that was at the disposal of the Egyptian architect also reflected the ancient principle of paneling walls. I am thinking of the molding that rounded and edged the corners of the massive walls. It originally served to conceal the joints of the thin dressing panels, which otherwise would have easily read through the paint in an unpleasant way at the edges of the massive surfaces.*

The columns of Egyptian temples at times have the appearance of reed bundles, surrounded and bound together with a carpet.

Carpet imitation is again very clear and distinct on the wall paintings of the rock-tombs; among the ornaments found there the colored wickerwork and *Latz* predominate. The paintings recall their original character in the threadlike outlines of the parts, the wealth of color, and embroiderylike details.

In China, where architecture has stood still since primitive times and where the four architectural elements most clearly have remained separate from one another, the partition wall, which is for the most part movable, retains its original meaning independent of the roof and the masonry wall. The interior of the house is divided up by such partition walls, which relate as little to the actual structure as do the outside walls, built of bricks yet hollow and dressed with braided reeds and carpets.

How these features prevailed in China, together with the ancient use of stucco and a rich general polychromy, is well known. In addition to the wealth of information on ancient conditions, they provide us with many lessons useful to our time.

* This molding is even today a very common way of concealing the joint in cabinetworks.



Imperial Audience Hall in Peking. From M.G. Pauthier and M. Bazin, *Chine moderne; ou, description historique, géographique et littéraire* (1853).

In India too we find similar things, and still today, as in Agrippa's time, stucco and color predominate. We even meet the same phenomenon in early American architecture.

While no trace of Phoenician and Jewish antiquity survives, the reports of famous buildings contained in the sacred and profane writings of these two racially related nations (even though vague and open to diverse interpretation) provide unambiguous and interesting illustrations of our theme. Who is not familiar with the famed Tabernacle of Moses, with the door posts clad with gold plates, the richly colored carpet-walls, and the pyramidal roof made of textiles, leather, and animal skins? This tentlike, holy shrine was imitated in stone and cedar by Solomon on Mount Moriah atop a colossal substructure, and the fact that nothing had been left undressed was celebrated in particular. Inside, the holy rooms were clad throughout with gold plates.

These reports contain the most complete history of wall fitting, and a simple reference to them would be sufficient were it not also necessary to prove that dressing walls had been a custom widely practiced among all prehistoric peoples.

With such a general diffusion of paneling, dressings, and colorful

carpetlike adornments for the wall, it would be astonishing if the Greeks, who based their art on the traditions of other people, had not adhered in large part to these customs. It would be even more so, since these customs were most favorable to the cultivation of those arts in which the Greeks, as we know, had achieved what was truly sublime: the relief and painting. In favoring these two arts, they neglected what had been the pride of their Pelasgian ancestors, the terrace and stone construction, neither of which was given a prominent place in their monumental architecture.

This is evident by the custom that had long been familiar to them of paneling temple cellas and halls, as can be inferred from many passages in ancient writings and even from indications found on monuments still surviving. These were the *πίνακες tabulae* of which Pliny speaks, only those on which the great artists used to paint. They are so named because the oldest wood panels were made from spruce, although at the time of encaustic painting they certainly were not made of wood but of marble or ivory. Plates made of terra cotta were also called *πίνακες*. Cicero speaks of them in his oration against Verres, who robbed the Temple of Minerva at Syracuse of its panels covered with the most magnificent paintings (*His autem tabulis interiores templi parietes vestiebantur*).³⁷

In a similar way, all the exterior surfaces of temples that were meant to display painted sculpture were constructed for paneling. The pediment, the metopes, the frieze, the *ἐρύματα*, or balustrades between the columns, and the corresponding lower panels of the cella were thus prepared.

At the same time, or rather earlier, the principle of applying a stucco dressing to the constructive parts became generally accepted. We find it applied to all stone temples,³⁸ except those of marble, on which the stucco dressing was superfluous because the marble itself was a natural stucco. The probability that the use of marble went hand in hand with the adoption of a new technique in painting was noted above. The evidence that all areas were painted and that no parts of the bare stone were left undone was given in the previous chapters of this work.

I repeat once again my assertion that polychromy arose from that ancient supremacy of the wall fitter's technique over the mason's in domestic furnishings, and that only on the massive terrace walls could the mason let his own work appear independent of other work. Even the outlying rampart walls of the Assyrians, Medes, and Bactrians were, with the exception of the terrace base, richly decorated with bas-reliefs and paintings, as we know from the well-known descriptions of Herodotus, Diodor, Strabo, and so on. In the British Museum we find an Assyrian relief panel that clearly depicts a strong fortress with only the lowest part of the exterior wall showing squared stone. The ruins of Nimrud and Khorsabad confirm this fact, as do those of Pasargadae and

Persepolis, and the temples of Egypt. Even in Greece we find the same. Thus the Parthenon, for example, stands on a terrace of beautiful Eleusian squared stone; it was the only part uncolored.

Only at a later time, and scarcely earlier than the Roman period, did the construction of the wall (the so-called square-cut) and the nature of its material become treated as a decorative element in the main parts of the building, chiefly on the exterior walls. Before then, even the most noble materials – the granite chambers at Karnak, the alabaster panels of Nineveh, the ivory panels and paintings, even the golden joints of the temple walls no less than the columns and splendid sculpture of the Parthenon chiseled from snow-white pentelic marble – were given a coat of paint.

Yet it is possible that with simple cella-temples the walls here and there were constructed in cyclopean masonry without stucco. This phenomenon can be explained as an archaic reminiscence or allegory on the earth huts of ancestors, where the terrace might have been joined directly with the roof. One such example could be the temple at Anticyra that Kugler cites from Pausanias. Yet all of this is very uncertain, and there is no need to search for similar examples in Pausanias, who shortly afterwards mentions another building executed in irregular masonry; perhaps he meant to contrast the interior stucco of the temple with a panel or something similar he may have found in another temple. We are already acquainted with his peculiar habit of stressing the characteristics of the building's material.

Antique art completed its cycle, having run the full circle back to its origins, and became extinct with Byzantine embroideries. Its swaddling clothes became its burial shroud.*

* * *

After this digression into the field of wall-fitting we must return once more to the four elements of architecture in order to reach the starting point of this essay, the polychromy of the Greeks in their best period.

As noted above, the combinations of these four elements had to vary with human societies, developing differently under the most varied influences of climate, natural surroundings, and so on.

Yet it can be assumed from the outset that where man appeared in small isolated groups and had to protect his hearth only from the weather, where the right of property did not yet exist or at least was not disputed, where the state was formed as a federation of separate groups that inhabited a land poorly endowed (be it as nomadic herdsmen or as forest-cultivating backwoodsmen) – that in these circum-

* To pursue how the phoenix of art again raised itself anew in the Christian era would lead us too far astray.

stances the roof, among the three defensive elements of architecture, must have been predominant, whether it appeared in its most primitive mode, as a movable tent, or stood over a hollow in the ground and was only gradually lifted over the soil. Domestic life evolved in these huts, in contrast to the free life in nature full of toil and struggle. They became small worlds in themselves. Only the friendly daylight had free entry through holes left in the walls. The family shared the roof's protection with the cattle. The huts stood isolated or formed irregular groups in nature's unspoiled scenery, often along the enticing banks of a river.*

Yet here, too, conditions changed; the hut's full characteristics emerged in the way the law of expansion and consolidation became defined for this type of building. Roofs developed as free and asymmetrical groupings, with a roof over each main part of the structure, or as multistory buildings, or both types came to exist side by side.

Where the settlers were attacked by people they had dislodged, the blockhouse developed; where there were feuds among tribal members or where possession began to become the prize of the stronger, the tower arose, the multistory house set up on a high and solid substructure. Around the owner of the tower weaker inhabitants settled; not trusting their own power they sought protection, and suzerainty began. Characteristics of this type of building were always its irregularity, a sloping roof, multistory construction, and interior illumination by windows set in the outer walls. In their purest form they are best preserved today in the Saxon settlements of North Germany, Holland, Belgium, England, and North America. The two predominant elements are the terrace and the roof, although the terrace in the multistory building is closely related to wall fitting.

In warm climates and in countries whose abundant yields could only be reaped by collective action, we see settlements no longer passive and defensive but active in their approach to nature. The wealth of the land had to be wrenched from the earth and water; hence there arose the need to unite for large communal works. Great national enterprises became the band that kept the people together, at least outwardly.†

* In areas of Germany inhabited by a mixture of Slavic and Germanic tribes, for instance, in Mecklenburg and Holstein, the tribal origin of the inhabited places is immediately recognizable by the form of the settlement. All German villages and towns are built without walls in rows along rivers and brooks. The Slavic settlements, on the contrary, are distinguishable by their concentric forms with a market place regularly shaped in their centers and by ring-walls.

† *Isaiah 23:13*: Behold the land of the Chaldeans; this people who till recently were not. Assyrians dammed the land and gave it to the dwellers of the wilderness; they changed the wandering hordes of the people and set them up in dwellings and built the palaces of the land.

A method of building developed as an antithesis to the hut, which for brevity's sake we might call the court building.

Yet human relations could seldom or never evolve peacefully under these conditions. Hardly was nature conquered by the communal efforts of society when its blessings became the coveted object of ruder and poorer tribes, against which defense became necessary. The means required for the defense of the settlement must have modified their buildings, yet it did not prevent the house from undergoing its own independent development, as long as the people defended themselves successfully. When, however, the buildings became the prize of conquerors, things turned out differently.

In the fortified camp a third principle evolved. The conquering armies were sons of hut-dwelling tribes who flocked around their leader in camps laid out according to the principle of subordination and the art of fortification; they joined their huts into building forms in which regularity, clarity, convenient planning, and strength were the decisive features.

Although related and similar in exterior form, these two building types were very different in their basic principles. It is the same distinction that existed between a native, absolute monarchy based on landed property or priestly hierarchy and a military despotism of satraps based on conquest – a distinction that was especially evident in their works (as always) in the principle of expansion.

The greatness of the native sovereign increased slowly, and his house enlarged with the increasing needs of the household, partly by the addition of rooms, partly and chiefly by the organic development of the interior.

The greatness of the satrap and vassal, on the contrary, was a gift of favor arising suddenly. From the start his house was made for his high standing and was a repetition of the royal palace on a smaller scale. Enlargement was only possible by externally combining similar units.

In the first case greatness was a development and improvement of the simple and the small; in the second the small was a stunted imitation of the great. Yet where no early ossification took place in this unfavorable period, as it did in China, the unbending military principle was done away with after it had time to establish types for new building motives, similar to the way the feudal system lost its original (socialistic-communistic) meaning and became outmoded.

The victories of such hut-dwelling tribes in early times make it understandable why the cult of most Mediterranean people was linked to a form going back to the pitched roof of the hut,* whereas in other regions the court-type prevailed.

* Even to this day the holy Kaaba.

Ethnology, in considering pre-Hellenic social man, offers four noteworthy and singular developments of the building instinct: the *Chinese*, the *Egyptian*, the *Assyrian*, and the *Phoenician*.

Chinese architecture, although still practiced at present, is in its motives the most elementary that we know, with the exception of the huts of savages. As already noted, the three exterior elements of architecture appear there strictly isolated from each other. The spiritual or moral element, the hearth (which I take here and in the following pages in its higher meaning as altar), forms no animating focus.

Derived from the Tartar camp at a time when the conquered country-side was inhabited only by savage tribes, this style could not be enriched with native elements; in its seclusion from outside influences it has remained fixed where it has stood for five or six thousand years.

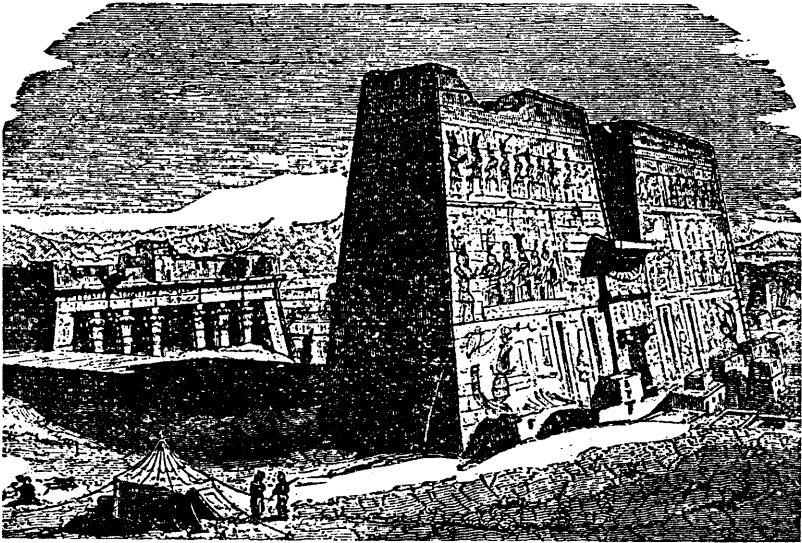
Only by the addition of new courts, new terraces and pavilions, only by increasing the number of intercolumnations and their dimensions was it possible to enhance the meaning of a building. With regard to polychromy, China provides an interesting example of the old-Asian system, which I oppose to the Egyptian system of color.

Egyptian architecture grew organically and undisturbed out of itself and the soil in which it took root before it became fixed by the hierarchy. The cage of the holy animal representing the local divinity with the community altar was surrounded by a simple enclosure and initially stood on an embankment raised above the Nile. The pilgrims congregated there, where the processions began and ended. When the frame of the sanctuary caused a crowding, a second court was either attached to the first or encircled it. At the same time the demands of the divine service inside increased. The court, at first covered only on special occasions with carpets and draperies, later received a more solid covering and became subdivided into compartments and treasuries. Moreover, the entrance with its monumental emphasis, representing as it were the image of the holy cage,* powerfully signified the meaning of the hidden sanctuary inside and summoned the pilgrims from afar. The routes the procession had to take were indicated well beyond the limits of the sanctuary.

New courtyard walls were added as its importance increased still more; their size and height grew in proportion to the fame of the sanctuary. Internally the building also developed; externally the new parts crystallized into an even richer organization.

The room containing the *sekos*, or sacred cage, formerly open and later covered, had become venerable and sacred through its age alone. It became the temple-house (ἡ νεώς), and the area in front of its portal,

* The oldest pylons were not bisected but formed one mass whose shape imitated the *sekos*, or holy ark.



Egyptian Temple of Edfu (237–57 B.C.). From J. Gardner Wilkinson, The Manners and Customs of the Ancient Egyptians, vol. (1837).

used by the community council (the elders of the *nomos* in which the famed place of pilgrimage was located and from whom the priesthood had descended), became the next forecourt to be covered. The ceilings, consisting in the beginning of linen fabrics, needed columns for support with the larger courts.

Around the same time protective roofs were placed in the forecourts along the inner walls on columns and piers, in order to protect the pilgrims assembled there awaiting impatiently the appearance of the festive procession from the inner gates (initially provisional); for the protection of the procession itself, fabrics were stretched across taller columns down the middle of the courtyard.*

Depending on which of these versions were developed monumentally – whether it was the covering of this or that part of the court or

* Not that I believe the old temples had really developed so gradually from the provisional, yet the organizers of the artificially formed, hierarchical Egypt had learned the motives for their creations from nature. These are certainly not hypotheses, but definite facts! Can anyone who knows the Bible and the origin of Solomon's Temple still have doubts?

both, the extension over the whole width of the court, or the increase in height given to the central passage to accommodate the images carried high on the shoulders of the priests – from any of these versions all the richly articulated spatial enclosures evolved to which later times did not add a single new one. Their study for the understanding of art is at least as important as the articulations, proportions, and decorations of those supporting, bearing, and enclosing elements that came into use with them. Yet the majority of scholars have preferred to study the latter and have neglected the spatial aspects.

A glance at the natural terrain of Egypt makes it readily apparent that the largest and oldest building undertakings of this country must have been linked to the damming, irrigation, and draining of those stretches of land that were cultivated for crops. Yet the engineered earthworks of these highly endowed people had an effect on high art only insofar as they made up the substructure of the temple and for other buildings provided the material that, however, did not act in a controlling way. Fortifications also had little or no effect on the development of the massive walls and yielded at most a few symbolic or decorative forms. The Egyptian cities were never fortified.

Thus, Egyptian architecture arose chiefly from that element we have called the enclosure, which was, as already shown, the main field of activity for the guild of wall fitters and their successors, the painters and sculptors. The other element, the roof, manifested itself in a twofold way: at times symbolically in the *sekos* as a pyramidal headpiece (and I am tempted to look upon the mysterious Egyptian pyramids as misshapen representatives of the roof of the *sekos*), and second, as the flat cover over the courtyard. There it ceased to appear from the outside, but inside, as an unfurled sail, it fell into the province of the wall fitter, the motive to which it originally belonged. This circumstance also prevented Egyptian columns from combining into an exterior Order. Only when paired as the inner supports did they work together toward one purpose. At times they were arranged next to one another in avenues without any connecting beams, for instance in the peristyle at Karnak; instead, a light, probably very elaborate vellum fluttered high in the air.

Just as the forms of Egyptian art were arrested as hieroglyphic characters, so the musical colors of their polychromy were not allowed to become more than a color language, and had to assume a measured and distinct color prosody in contrast to the melodic, Oriental play of colors.

The third example of a characteristic configuration of spatial relations that only recently has become known to some extent is no less interesting than the Egyptian.

Mesopotamia, the seat of human culture and on which I would like to make a few succinct comments, is a land very similar to Egypt. In the

beginning the architecture in Mesopotamia might have taken almost the same course as it took in Egypt, had it been given time to unfold. Yet while Egypt with its undisturbed beginning ossified into a hierarchical form under the system of a native aristocracy, this country from time immemorial was the prize of foreign conquerors, who took possession of the land and divided it among their comrades-in-arms as feudal tenure.

The conquerors adopted the customs and luxury of the conquered without relinquishing entirely their tribal characteristics, and scarcely had a new organization emerged from this mixture when a new invasion ensued, a process that showed almost the regularity of routine natural phenomena.

Trade and active commerce with other nations from early times might have given the customs of this land a more practical-sensual and mobile orientation, to which perhaps the Semitic people were naturally more disposed than the agricultural Egyptian tribe.

Whereas in Egypt the basic idea of architectural form evolved from the place of pilgrimage and its gradual expansion, in Assyria it became connected with the royal palace, which (not growing up from a seed, but being arranged in an orderly fashion like the camp of the leader) at a large scale served as a model for the colossal cities created around it, and at a small scale for the castles of vassals and subvassals, down to the smallest units. A peculiar principle of progressive enclosures manifested itself here, whereby these units, different in size but similar in shape, enclosed one another and formed larger units of the same kind.

If we ask what elements of the Assyrian architectural style can be considered indigenous, they were chiefly the terrace, which in the first settlements must have been an essential part of canals, dams, and substructures, and which in fortifications were combined with the second element, the enclosure. From time immemorial these people undoubtedly excelled in wall fitting, which became the focus of their trade and the principal source of their wealth.

The roof, on the contrary, probably played only a subordinate role because of the climate and the country's scarcity of wood, although the latter was frequently used in paneling, coverings, and in making columns.

In what relation these elements originally stood to the altar is no longer apparent. Foreign rule, particularly in this respect, radically changed established practices in early times, no less than it did later under the fire-worshipping Persians.

The Assyrian terraced pyramid can probably be seen as a foreign introduction of this kind, although the oldest records describe it as a national monument and as an extreme evolution of the terrace, erected for protection against the feared recurrence of a natural event.

According to the description of Herodotus and other older writers, however, the pyramids were nothing more than colossal substructures for the object actually intended – a tomb or a temple. Since the discoveries made at Khorsabad and Nimrud and the depictions of similar buildings found there, this conjecture is more than well founded; they also confirm Herodotus's description of these temples or tombs as having gabled roofs and columns along the front side. Once more we see this form representing what is most holy and sublime.

A colossal pyramid on a square substructure with a small temple on its top would have been incomprehensible because of its lack of direction and the disproportion between the load and support;* it would not have deserved to be called a monument in an artistic sense had it not been encircled by an extensive and richly articulated system of terraces, of which the temple formed not the center but the fulcrum point.

The whole complex stood on an immense, oblong, and raised platform surrounded by walls, with doors, battlements, gates, and outside staircases. Within the outer wall camped the serfs and tribute-bringing tenants in tents, and on an inner plateau arose a second peribolus. High vaulted gates led into a precinct, again protected by towers and battlements, whose walls glittered like the first with metal, sculptures, and color. Here the daily exercises of the aristocratic youth took place, and within the high hypostyle hall, supported with cedar columns, the men assembled for state ceremonies and for the instruction of their sons.

The effect of repeated circumvallations, each of which contained subunits complete in themselves, intensified in the direction of the actual residence of the dynast, up to those meaningful gates† watched over by mysterious colossal beasts at which we gaze in wonder in the Louvre and British Museum, even though they may be poor examples. Here was the great *salambek*, or audience hall and law court, often a hypostyle hall with a hundred or more columns with the elevated throne enclosed by entrance halls and side rooms. From it, a terracelike form again ascended upward to the private pavilions of the prince, which stood isolated within the shaded pleasure gardens. Each was a square in plan and enclosed a square hypostyle hall, and each had its own platform made accessible by a richly decorated flight of steps. Yet these complicated terrace buildings were also multistory, as can be seen on reliefs and as confirmed by Herodotus and Diodorus. The long, narrow, pipelike passages between the thick walls that supported the terraces were designed for domestic comfort no less than the upper rooms; they

* The German language has no word for the idea of the French word *sens*: a form that makes no sense is one for which we do not know what is front or back.

† *αζ πύλαι*, the gates, had the same meaning as it does today with the Turks. They understand by the term the residence and the seat of government of the ruler.

were suited to this end by virtue of their rich furnishings (described by Diodorus and most recently brought vividly to life again) and their coolness on hot summer days.* Crowning it all was the high pyramid with its tree-planted terraces and a broad, winding flight of steps. At its top stood the tomb of the tribal ancestor, who was forced upon the subjugated people as a god and who nightly lay in the temple with the ancient native goddess Melicerta *per procuram*.

All of this was again surrounded and interspersed with game parks and gardens, which went up to the highest terraces and whose shaded passages connected the scattered living pavilions of the ruler. Hydraulic works, ponds and canals, baths and fountains enlivened these gardens.

We see from the arrangement how the court building of the south resounded with echoes of the fortress buildings of the north, mixed with recollections of the wooded and mountainous homeland of those who later sustained the culture.

Out of such elements (for the smaller dynasts took the ruler's palace as a model for the layout of their castles) the will of the ruler suddenly created towns that were a repetition of the same basic idea: the royal palace was to the town what the high terrace was to the palace, and the Temple of Ninus towered over the whole. Public buildings, courts of justice, markets, and so forth were not mentioned. All governmental life was concentrated in the royal palace, around which three city walls formed the same number of enclosures. Foreign trade took place between the first and second enclosure. There the caravans camped in tents among their herds. In large bazaars and caravanseries, traders offered their wares and – moral corruption. Streets of enormous width (so that a hundred horsemen could pass through abreast and still leave room for the onlookers) and intersecting each other at right angles connected the palaces in straight lines. It is understandable that Herodotus, in viewing such unheard of magnificence and spaciousness, broke into loud expressions of astonishment.

Although indigenous motives, the demands of climate, the nature of the building materials, and the reminiscences from the homelands of the conquerors all had their effect on these works, the real creative idea was the absolute rule of the despot and the system of ranking that it truly expressed.

Subordination and coordination, that is, *outward order* was the dominant principle. Yet there were, nevertheless, a great variety of motives, an inner flexibility, and a certain agility that did not exist in China, for example.

We have referred before to the temples that stood on the top of pyra-

* Even now in Mosul the summer abode is located in similar subterranean rooms.

mids. They were probably similar to those depicted on the alabaster panels from Khorsabad; accordingly, they were *νάου ἐν παρῳάσαιν*, with a fully developed Order closely related to the Ionic. Tall acroteria were placed on their pitched roofs and votive offerings decorated their walls.

It seems that free-standing columns were still unknown here, for the famous richly decorated marble imitations of Assyrian, cedar columns at Persepolis (although in groupings of six or more) were used externally only as additional supports for the wall on which the architrave actually rested.

There is no trace of a peristylar arrangement of columns – neither in the courtyards nor in conjunction with the pitched roofs. Instead, the hypostyle hall appears to have been very important and to have been used frequently; it serves as an example of the inner flexibility of Assyrian–Persian architecture. Starting as an open courtyard and later being provided with a ceiling on wooded columns by the Assyrians, the hypostyle hall was perfected by the Persians in costly stone.

The ruins of the palaces in Nineveh show several homogenous units in their basic form, similar to those we met in Persepolis, and we are no doubt correct in seeing in them those princely pavilions known to us from Alexander's biography. The general picture of Assyrian architecture, although only faintly discernible, therefore gives rise to interesting comparisons.

In Egypt the natural (as it were still animal) building instinct of social man was observed by clever priests and fixed in works that seem to arise and grow out of the soil, like coral reefs. Everything in the works pointed to an invisible kernel, to a king bee, whose meaning became evident only indirectly in the growing number of the faithful and in the addition of always larger and more sublime spatial enclosures, signifying as much the glorification of the powerful caste of priests as of the gods they had created and nurtured. The idea of hierarchy was embodied in this kernel.

The works of the Euphrates valley demonstrate the opposite in several respects. Instead of an abandonment to nature, we meet the first signs of a struggle to free architecture from its ties to nature. This is already apparent in the objectivity with which the beauties of nature must have been felt by man before he, in a defiant rivalry, dared to imitate them in places where they were not. The pyramid-building kings of Egypt who followed similar aspirations were branded as blasphemers by the victorious party of priests, preventing later repetitions of similar works.

In the Assyrian palace of Belus, as in the Egyptian pilgrimage temple, a spiritual focus governs all relations, but in the former it becomes

dominated by a powerful substructure, while in the latter it is hidden behind endless outworks. In both it loses its meaning and glorifies not the god but the power of those who set him up.

The Semitic Phoenicians and the Jews, whom we should also consider for a few moments, were probably closely related to the Assyrian-Chaldean inhabitants of Mesopotamia. The Jews were still an unsettled nomadic people long after their related tribes had founded solid towns and had set up colonies beyond the pillars of Hercules. They borrowed their building forms from them, so that notwithstanding our almost complete ignorance of what constituted the essence of Phoenician art, the Biblical description of the ancient palaces built by Solomon allows us to draw some fairly reliable conclusions regarding their architecture. We have detailed reports of the old Temple of Solomon and a few unconnected annotations on the palace of this wealthy king. It has already been noted how interesting these buildings were, especially the temples, because of their obvious derivation from the tent. They were Phoenician works entirely, a heathen conception of a Mosaic Tabernacle, a sin against the second commandment. Besides being a wicked sinner, Solomon was a polygamist and an idolator!

The high rock terrace of Mount Moriah was a Phoenician idea, recurring in Tyre, Carthage, and Hades, and was closely related to the Belus tower. Phoenician also was the arrangement of the forecourts of the priests that immediately surrounded the temple and which only the Levites could enter. It was separated from the general courtyard simply by a low wooden balustrade, a symbol of the priestly power surviving in ceremonies but broken in reality. It was the model for the Greek *τέμενος*. The two famed columns, Jachin and Boaz, especially the peristylar arrangements of the courtyards, were Phoenician, as was the enlargement of the simple tabernacle motive by placing galleries around it. In this the Phoenician style showed itself completely independent. Similar courtyard colonnades, related to the later Greek ones, were unknown both to the Assyrians and the Egyptians. Everything here already suggests the transition to Greek forms; the temple appeared out in the open away from priestly secrecy, since royal power in an unstable trading nation was not strong enough to use the faith of the people to its advantage. Phoenician, finally, was the whole manner of decorating the structure, the Orders (probably Assyrian-Ionic), and the richness of the metal dressings and brass vessels. From time immemorial the Phoenicians had trade links with the Greeks, who borrowed their written language and many useful inventions, and it should not be surprising that the idea that received its fullest and clearest expression in the Greek temple can be already discerned in the layout of the Phoenician-Jewish temple, certainly less developed but decidedly enough.

Although the religious conditions in Phoenicia developed differently

than in Assyria and Persia, the tribal relationship of both people is readily apparent in the planning of their buildings. Indeed, we can imagine the description of Persepolis in what Josephus related of the Palace of Solomon!

* * *

Another great, unknown, molelike people, perhaps older than any others referred to earlier, left behind powerful traces of their ancient work, which had almost no connection with the artistic trends just discussed.

The passages and cone-shaped mounds scattered over the earth give evidence of their former presence, while the people themselves have vanished to the last historical trace. They were talented engineers and metal workers, built no temple but buried the dead in funnel-shaped rotundas with vaulted roofs. This preference for the circular form and tall structure or tower (after which they were called Tyrrhenians)³⁹ made their early and mysterious influence on the development of Greek art very significant.*

Perhaps they were the original inhabitants of metal-rich Asia Minor and a mining people (the Curetes and Corybantes of mythology), later a nation of poor emigrants (Pelasgians)⁴⁰; we see their last descendants in the tinkers and gypsies who live in bands dispersed over the old continent. Such ruins, along with many other puzzling remnants of conditions long past, cover the soil of countries that became the seat of Hellenic culture.

Composed of a mixture of tribes, the Greeks were not ready for a free development toward national unity until war, piracy, and trade had deprived them of their traditional, moral, and tellurian bonds. The democratic element emerging from these unruly conditions would have consumed itself early had not the flame of democracy occasionally been fueled with long-lasting logs of wood.

Tradition speaks of older Assyrian and Egyptian influences in the spirit of law and order, and it is significant that the Doric tribe, when it extended its aristocratic authority based on form and order from Macedonia down to Greece, tried to establish a genealogical link with those earliest influences on Greek conditions.

The cult of Apollo, the slayer of Niobe's sons, replaced the Asiatic cult of Bacchus. Everything points to a hostile stand by the new leaders of society against Asiatic cultural elements. They based their system on laws that they borrowed in part from the hierarchic-aristocratic Egyptians and thus instilled into the former, poetic-Asiatic Hellenism an urge to build temples. Had their system been victorious, Hellenism could never have arisen to its true characteristic glory; never could art

* Yet the Greeks for their temples scarcely borrowed one single motive from them.

have freed itself entirely from the chains by which it was bound in Egypt. Only where the free Ionic spirit was in command of the new trend, penetrated and gave it life, was this goal attainable.

* * *

Combinations and the cross-breeding of various architectural elements (some striking and new, others arbitrary and unjustified by strictly interpreted architectural laws) must have preceded the creation of the Greek temple.

This became possible only because all the arts made their sacrifice and endured the limitations within which they would be completely free to develop their means without harming the whole. Yet let us take a look at the Greek temple in its general context.

The entire temple district was called the sanctuary (τὸ ἱερόν) and was, like those Asiatic compositions, a wide, elongated, and rectangular platform raised on a powerful stone substructure more or less high and frequently towering over its surroundings by its choice of position. Flights of steps led up to it, and in some cases it was surrounded by a colonnade; however, in most cases it formed an open terrace without a balustrade and was decorated with statues, votive offerings, and so forth.

Rising above it was a smaller enclosure surrounded by walls, set back on all sides and of a moderate height; the entrance was formed by porticoes (hypostyle) with columns and pediments, called a propylaeum; in later and more lavish structures of this kind a peristyle ran along the inner face of the wall.* Later, a completely open columnar hall replaced this wall. In both cases this enclosure of the temple court was called the stoa.

Only here could one enter into the actual district of the sanctuary. The temple (ἡ νέωσ) stood in the background on a new substructure that often consisted simply of steps on all four sides. In front of it lay a fenced-in area with the altar in the middle; it was called the τέμενος.

The basic form of the temple was a rectilinear house with a pitched roof, originally consisting of a simple temple cella; only its front, between the antae of the porch, was embellished with columns. But in developing its basic idea and in enhancing its importance, the Greek temple, like the walls of the forecourt, was given a peristyle that supported the roof of the temple.

Although the greatest *architectural* impression was achieved in this way, there still was a need for the general artistic effect to be heightened

* It seems it was not customary before the Romans to place the peristyle on the outside of the peribolus wall, or to allude to it by adding to the entablature projecting parts that were supported by columns, as on the Temple of the Olympian Jupiter in Athens.

toward the image of the deity. In contradiction to the exterior form of the temple, they found it necessary to make the interior into a peristylar courtyard, in the background of which stood the *sacrellum** (ἡ σηκός) with the image of the deity.

The walls and intercolumnations of this courtyard, surrounded by colonnades on larger temples, were enlivened by the noblest works of sculpture, toreutics, and painting. The highest expectation aroused by everything that went before was fulfilled by the sight of the majestic image of the deity shimmering in gold.

The wealth of relations and the sublimity of the idea was further intensified by the fact that in many cases the citadel, the market, the theater, the hospital, and so on were brought into the area protected by the deity, where they and their surroundings formed the peribolus of the temple. We see it this way now in Pompeii and on the Acropolis in Athens. It was the same in Rome and everywhere. This practice has probably caused authors of modern art books to treat only the temple, that is, the νέωσ (*partem pro toto*) as a complete whole.

Although this arrangement with its very sharp break at the climax of an intensifying effect left something to be desired (which made the Athenians place their colossal statue of Minerva in the middle of the Acropolis, where her helmet rose above the pediment of the Parthenon), nevertheless, we realize in this respect, even disregarding the quality of the individual works, the vast distance between Hellenism and the barbarians.

In an unsurpassed and never before attained harmony the four elements of architecture worked together as one toward a great goal. The substructure, the enclosing stoa, were only preparatory and supporting, so to speak, the royal household of the god; without them its rectangular gabled house would have had no front or rear, it would have stood unrelated and unintelligible. Now, however, its richly adorned pediment rose above the halls resplendent in their own beauty – the house of god. Clever priests no longer held the deity in a cage hidden away; no longer did he serve despotic arrogance high in the clouds as a powerful and menacing symbol. He served no one, was a purpose unto himself, a representative of his own perfection and of Greek humanity deified in him. Only a free people sustained by a national feeling could understand and create such works.†

* It was often present only in idea, as an embroidered baldachin.

† The fact noted in the text above, that a break occurred in the effect intensifying toward the image of the deity, has probably led to the view (now a widely held aesthetic platitude) that Greek architecture was essentially an architecture of the exterior. This depends on what is understood by it. I believe one can just as correctly or incorrectly classify it essentially as an interior architecture. In this respect, the Asiatic peribolus represented, among other things, a basic idea recurring three or four times, inherent to

Many different influences were active in its creation. The old-Hellenic cult was linked to sacrifice, which was offered on the highest summits of the countryside. One can still find there those ancient platforms constructed on cyclopean substructures, on which stood the gigantic altar built with the ashes of the hecatombs. Next to it was a small chapel, whose pitched roof did not rest on columns but directly on the walls of the cella. Whether the Assyrian tower was based on the same cult of nature originally held on mountain tops, or whether the reverse was true and the cult was passed on to the mountain-dwelling Hellenes, in either case the close relationship between the two is unmistakable. Out of this mud hut, with foreign elements added to it, arose the Greek temple.⁴¹

which was the concept of excluding the exterior world from something sacred, something inward looking. There was even the splendid porch that pointed emphatically toward the interior, as it did on Gothic churches and Egyptian temples. The intensification of artistic effect toward the image of the deity resulted in a continuous emphasis on the interior. Everything was interior (that is, court architecture) except the exterior of the temple, and even this on a peristylar temple was transposed into a kind of interior court architecture by virtue of the colonnades that lined the inner walls of the courtyard. That the wall of the cella was regarded as the *actual* outer termination of the temple was indicated clearly by the complete entablature inside the colonnade along the temple wall, which without this idea linked to it would have appeared meaningless. It is true that the pitched roof of the temple that covered everything seems to contradict this, yet this is just one of the inconsistencies of Greek architecture that was conceded to the *intention* underlying it. Still greater is the other inconsistency, namely, the hypaethral arrangement of the cella. Whatever our opinion in this matter may be – whether we picture the interior as remaining completely open, or like the basilicas and having its own raised roof, or even (according to Fergusson) as being illuminated by an angular skylight – the doubts raised by this strange crossbreeding of two organically incompatible elements (the roof and the enclosure) will never be dispelled. Besides (and I am referring to a passage from Kugler's essay noted above), if the cella wall was transposed into a kind of court architecture by placing a peristyle in front of it, and if (apart from the enlargement of the temple) the wish to harmonize the exterior with the interior and with its surroundings had been the reason for thus positioning the peristyle, then it is reasonable to assume that the exterior of the cella wall, like the walls of the colonnades inside of and surrounding the temple, had been painted. This became necessary as soon as the bare cella was surrounded by a colonnade, even though, as alleged at the temple at Anticyra, the walls of the *templa in antis* originally displayed the rough stonework.

To return once more to the question of whether classical architecture was in essence external, there is actually no significant architectural form that did not arise from the original concept of the court. This has been demonstrated above with Egyptian temples, but even the Gothic cathedral was a vaulted basilica, that is, a court with its central open space interiorized by placing a high roof over it. The Gothic architects were fully conscious of this meaning, as shown by the tracery of the windows of the triforium and the azure background of the high central vault decorated with golden stars.

Even the antique Pantheon and the Byzantine domes are nothing more than vaulted atria, whose frequently circular forms are known from the letters of Pliny. They are the *atria testuninata* and *testudine tecta* of Vitruvius.

The Asiatic enclosed court was also related to the hut and the dominant terrace building. Asiatic, too, was the custom of building hypostylar propylaea, a motive first introduced into Egypt by the Greeks.

Innovations on the other hand, were the Doric column, its peristylar application,* and the striking combination of the gable form outside with the court arrangement inside, the hypaethral type of temple.

Similar motives are found partly in Egypt, partly in Phoenicia, and it is therefore not improbable that Doric legislators, whose contact with these countries has been recorded, adopted the motives from there in order to contrast the hierarchic-aristocratic tendencies for which they had an affinity with the mixed dynastic-democratic principles of old Hellenism.

The god carried down from the mountain top into the realm of human dwellings was in danger of disappearing behind the priestly outworks. Only when the Olympian Jupiter of Ionic art grew to such greatness and majesty that his cella became too narrow, only when the towering Pallas Athena stepped forth from her embroidered tabernacle into the center of the forecourt, only then was the deity released completely from its chains.

When Dorism joined with Hellenism in the more Ionic than Doric province of Attica, the more pliant elements, that is, the more phonetic arts of painting and sculpture had to follow Ionic tonality. It is surely more than mere conjecture that Dorism – as in music, so also in the practice of the two-named arts, and especially in their application to the temple – differed fundamentally from Ionism, and that there was a Doric color key, just as there was a Doric musical key.

It is just as probable that Doric art also in this respect followed Egyptian art, whereas Ionic art was based on or at least developed from a common root with the original carpet works of the Assyrians, not yet hardened into hieroglyphs; just because of their incunabular imperfections, these carpets formed a better starting point for the freer development of the arts.

This explains the contrast between Egyptian–Doric and Oriental–Attic polychromy, which becomes evident when comparing the remains of the monuments in Attica with those in Sicily. Both systems *could* not be consistent with one another, and the fact that the restorations of Sicilian monuments are completely out of harmony with those of Attic temples proves the authenticity of both, rather than the contrary – even more so, since the former indeed recall the bright background and accentuating blue-green of the Egyptian color system, while the latter recall more the rich and solemn Oriental system that

* In Homer there is no mention of peristylar courtyards, even though he clearly describes the multistory Assyrian hypostyle halls.

survived in an unbroken tradition through the Middle Ages and then became the basis of a new harmony of color. The Egyptian system, on the contrary, perished with the hieroglyphic script.

This contrast is still clearly evident in the wall paintings of Pompeii, a city that blossomed at the time when Egyptian influence on Roman art had been revived (although only by superficial imitation).^{*} There the Egyptian-style wall decorations are bright and easily distinguishable from the richer, Oriental principles of decoration found on other walls.[†]

VI Practical Applications

Let me conclude the subject by considering a few practical applications.

Should we once again begin to build Greek temples and this time try to be more successful than before in applying antique polychromy and all the newly discovered refinements of the ancient artistic technique?

That would be a terrible misfortune!

Antique polychromy lost its historical basis once the wall's material and construction received their high artistic value with the Romans. No longer were material and construction subordinate features hidden behind a partition wall (*Scheerwand*), merely serving; they began to create form, or at least to influence it, a right the roof had already long enjoyed from the inception of the arts. Since the wall began to infringe upon the domain of the roof through the artistic use of the arch and the vault, even this ancient symbol of sacredness, the roof, has been robbed of its dominance and meaning or at least has had it disputed.

Where, however, the nature of the material is not pleasing, or precaution should be taken for its *exterior* preservation, or where the never-changing demands of comfort, warmth, cosiness, and so on prescribe an *interior* dressing (*Bekleidung*) for the wall and the visible constructive parts (be it stucco, wood, paint, carpet, or whatever) then the necessity

^{*} Petronius, Chapter I.

[†] In our whole discussion almost nothing has been said of sculpture because in following the way of the ancients I look upon it as a decorative element identical with painting, and I view its greater or lesser relief simply as a result of wisely calculating the effect that a sculpture has to make in this or that location in order to agree with the whole and yet present itself as an individual work.

Incidentally, malice is clearly needed for one not to want to see the clear traces of antique paint that are still visible on the Elgin Marbles, despite the frequent washings.

With respect to antique statues I have yet to point out that the fibrous patches found on most of them, which some have looked upon as the roots of plants that formed a deposit on their surface during the time they lay buried (and which the Italian antiquarians call *vergine*), are places where the nutrition-seeking roots have spared the resinous substance.

arises, today as then, to preserve the wall's original meaning. There the field is open to the painter.

How should it be done? It is difficult to give an answer that is generally valid and at the same time definite. I believe one must consider the following things in particular:

1. The *wall* (*Wand*) should never be permitted to lose its original meaning as a spatial enclosure by what is represented on it; it is always advisable when painting walls to remain mindful of the carpet as the earliest spatial enclosure. Exceptions can be made only in such cases where the spatial enclosure exists materially but not in the idea. Then painting enters the realm of theater decoration, which it often may be able to do with good results.^{*}
2. The climate and even the customs of a country must be considered in the selection of the color key and the subject matter, and nothing new may be sought which is not, in a manner of speaking, already present in the motive.
3. The painting should be suited to and emphasize the character of the building in general and the purpose of its parts in particular.
4. We must not lose sight of the view that adopted painting on its terms as the first of the arts, and the high level of technical perfection that it has achieved. It would be futile to want to make it a slave. We must seek to gain its favor and enter into a free alliance with it.
5. And finally, in the artistic painting of the visible constructive parts, for example, iron columns, iron or wooden roof constructions, the peculiar static nature of these materials should be taken into account. For instance, with ironwork, which looks more perfect the thinner it is, I would never use bright colors, but black, bronze color, and much gilding.

To sculpture applies in part what was said of the emancipation of the material in architecture, in part what was said about painting, depending on whether sculpture appears as exterior material or as interior decoration. In the great period of the Renaissance this art digested the error of seeing antiquity as white so thoroughly that it is difficult, at least right away, to replace the true greatness that came out of the period with something else. Yet frequently a way to overcome this is to lead sculpture over to the realm of the metalworker.

A large and open field of exterior polychrome effects remains open to us in the use of different colored materials, whose artistic development

^{*} An example is the optical elongation of a courtyard by paintings on the boundary walls of the property, a popular motive in northern Italy.

does not encroach upon our traditions, and that, as shown above, corresponds perfectly with the present state of technology. This is true provided that the selection of decorative forms and colors is determined not by an architectural element foreign to the wall (as was the case with the Assyrians), but by the construction itself and the material available.*

Yet everything that cannot infuse youthful vigor into a decrepit state of affairs is only a poor household remedy. It needs not the herbs of Medea but perhaps the rejuvenating kettle!

* * *

One other application if you please:

In the Greek temple we recognized that reconciliation of two opposites – the despotic-monarchic Belus temple and the hierarchic-aristocratic pilgrimage temple of Egypt – into a higher idea, by which the people, becoming monarch and priest, glorified themselves in their god.

An analogous contrast developed in the period of our Christian culture. What is the Western basilica, which received its final expression in the Gothic cathedral, other than an Egyptian sacerdotal temple? Ecclesia has devoured the temple, and the church has become the master of God; it does not even lack the high Egyptian pylons! What is the Western dome other than a Christian Temple of Baal?† Our savior has become the representative of the despot who personifies his kingdom on earth and is the sole master of the spiritual and the worldly! The reconciliation of these opposites is at the same time the

* In many cases brick construction permits an ornamentation that also corresponds to wickerworks and the joint bonding of stone, for which there occur very beautiful and noteworthy examples in the early Italian style of architecture.

† Truly, no Anthemios of Tralles or Isidorus of Miletus will be ingenious enough to create a new primary form of architecture, unless a new concept of universal historical importance, whose expression it would be, has broken the ground. Constantine the Great had in mind one such idea when he, along with the outer appearance of Christianity, did not adopt for his newly founded capital the western Roman basilica, but set up an altar to his Christian God opposite the *Tablinum* of his Roman house, whose high *atrium testudinatum* became the model for every Greek-Catholic “dome.” It is easy to show that in this dome’s oldest and simplest form, which contained in embryo all later domed temples, all the main parts that constituted the Roman house were used: the *aula*, the *prothyron*, the *vestibulum*, the *atrium*, the *ala*, and even the *fauces* that led to the peristylar rear court and the inner parts of the imperial palace. Thus, the imperial idea that led him to adopt the new teachings was architecturally embodied. Christ had moved into his new home as the household god of earthly power.

How unfair it is to reproach our architects for a lack of invention, when there is nowhere a new concept of universal historical importance being pursued with force and vigor. First provide some new ideas; then we architects shall find architectural expressions for them. Until then, one has to be content with the old.

start of a new artistic era, an artistic development even higher than the Hellenic.*

When will this era begin? Which Pythia will respond to it, and how? Hopefully not as follows:

*Siphnus, beware of the day when red is thy Prytaneum,
Red-browed thy mart likewise*

* St. Peter’s dome is only a pairing of opposites, representing the priesthood subjugated by the papacy.