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VI ARCHITECTURE

Art's initial task is to prepare a suitable environment for the expression of spirit

fabricate

point of origin of mind

In the sphere of the individual arts, architecture is our point of departure, for it is conceptually the beginning of art, even if it may or may not be its historical beginning. According to its concept, as we have seen, art's first task consists in reshaping the external world as a suitable environment for the artistic expression of spirit; and the individual art to which that task clearly falls, conceptually, is architecture, the art of building, which in fact had its earliest development before sculpture or painting or music.

At first thought, it might seem that the beginnings of this art are to be sought in the hut as a human dwelling and in the temple as an enclosure for the god and his community. But structures of that sort are already means serving ends that lie outside themselves. The true beginning of architecture must be something simpler, in which the difference between the purpose of building and the structure actually built is absent. For the true beginnings we must look to structures that are essentially self-subsistent, that carry their meanings in themselves like works of sculpture. This is a point of great importance which has heretofore been neglected in the study of architecture, even though when properly understood, it provides a guiding thread to lead us through the entire labyrinth of architectural forms. What distinguishes

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such self-subsistent structures from true sculpture is the fact that they do not have a meaning that is inherently spiritual and subjective; what significance they have is rather impressed upon their shapes only externally, in a symbolic fashion.

Architecture can achieve much as a fine art in this *symbolic* or *self-subsistent* first stage of its development. But it cannot remain there. It must advance to a stage where end and means appear in separation, where it builds an enclosure *for* man or for man's gods in human form. But even that is not the end. A third and final stage is reached in which the two preceding stages are united, where end and means are distinguished while the structure nevertheless rises as manifestly self-subsistent.

Thus the three main divisions of our subject, developing it both conceptually and historically, are: first, architecture that is symbolic, or independent, in the strict sense; secondly, classical architecture which sets spiritual individuality before us in independent form while divesting the art of building of independence and reducing it thereby to the task of providing an artistically formed inorganic environment for spiritual meanings that have been independently shaped; and thirdly, romantic architecture-the so-called Moorish and Romanesque, Gothic or Germanic-in which houses, churches, and palaces are indeed dwellings and places of assembly for civic and religious purposes and are yet so built that, without ceasing to be serviceable, they stand before us independently, as manifestly self-subsistent in meaning. Thus, while architecture retains its fundamentally symbolic character throughout, it clearly develops through characteristically classical and romantic stages in providing an environment for the products of the distinctively classical and romantic arts.

Works of independent architecture usually mark a place of assembly, and almost invariably symbolize the highest values that unite a people

Buildings of an explicitly independent character, in architecture's first stage, are usually centers of assembly for an entire people—structures that symbolize in their external form the shared general values that unite a people, which are almost invariably their religious ideas. A familiar example is the Tower of Bel, in Babylon, of which Herodotus

speaks. The structure as a whole is hardly a temple in our sense of the term, but rather a temple-precinct a quarter of a mile square, with gates of solid brass. In the middle of this sanctuary there was a tower or block of solid masonry, about an eighth of a mile in length and breadth, upon which was raised a second solid block, and on that a third, and so on, up to eight. The ascent to the top was on the outside, by a path that spiralled around all the towers. On the topmost block there was a spacious temple, and inside the temple, a couch of unusual size. It did not, however, contain any statue of a god; so that, for all its gigantic size, the thing could not be regarded as a temple in the Greek or modern sense. The god's statue, in fact, stood below, outside the building, which was thus manifestly raised as an independent, selfcontained structure. Its expressive significance lay, perhaps, in its solid stories which numbered seven, probably symbolizing the seven planets of the heavenly spheres.

Symbolica

When such solid structures are more individualized, when the uninhabitable meaning symbolized is determined in greater detail, their forms too are more particularized. On the one hand we get lingam-pillars and obelisks, for instance, while on the other, with the adoption of organic animal and human shapes, we get structures that press us beyond architecture into the sphere of sculpture. But works of this sort are usually assembled, set in rows or otherwise arranged to form colossal wholes, to which partitions, walls, gates, and passages are added; so that what is sculptural within the whole is treated and presented to us in a purely architectural manner. The sphinxes, Memnons, and enormous temples of Egypt fall in this category.

> When such vast composite structures are examined more closely, symbolic meanings are seen to be interwoven throughout, so that the number of sphinxes and Memnons, the positions of the columns and corridors are related to the days of the year, the twelve signs of the zodiac, the seven planets, the great periods of the moon's course, etc. Here, as we noted, sculpture has not yet worked itself free of architecture while, on the other hand, the distinctively architectural featuresproportion, distances, number of columns, walls, levels-are treated not according to their intrinsic character and function, but symbolically. These huge temple-like structures, labyrinths, subterranean excavations, etc. are seen to be built, therefore, as ends in themselves, pertaining to a cult in which ruler and people are united.

In Egypt's underground tombs and pyramids, the architecture is no longer independent but clearly serves an end beyond itself

Egypt's tombs, however, both its pyramids and its vast underground realms of the dead, clearly move us in the direction of an architecture that serves an end beyond itself. The Egyptians, Herodotus says, were the first to declare that the souls of men are immortal. There is not a profound sense of spiritual individuality in the notion that the deceased must for 3,000 years run through the entire series of animals of the land, sea, and air in order to enter, once again, finally, the human form. And yet, in that notion of transmigration of the soul, as in the embalming of the body, we have what is undoubtedly a deeply fixed conviction about both corporeal individuality and self-subsistent

existence apart from the body.

In this sense we may say that the Egyptian "houses of the dead" are the earliest temples. In them the central thing, the core of worship, is an objective individual who is important on his own account and for whom the surrounding edifice is but a serviceable enclosure. The grandest and oldest of these Egyptian mausoleums are, of course, the pyramids. What amazes us at first sight is their enormous size which makes us reflect on how much time and human energy must have been expended for their completion. A mere glance, however, suffices to grasp the simplicity and regularity of their shape. The most ancient seem to be just stones piled on one another in a more or less pyramidal shape; the latest ones have a more regular construction; some are flattened at the top; others rise consistently to a point. For all else that is astonishing about them, they are, we may say, essentially mere crystals, simple shells that enclose a kernel, which is a departed spirit whose enduring body and form they preserve and protect. The pyramid's true meaning is concentrated in the deceased person. Thus separated from its meaning, architecture becomes subservient to a purpose outside itself, while sculpture assumes the task of giving shape to that meaning from within, though at first the individual thing actually made keeps its own immediate natural shape as a mummy.

Architecture approaches its classical phase when it abandons sculptural forms and leaves the direct expression of its meaning to other arts

Here, conceptually, we make the transition from strictly symbolic or independent architecture to architecture which begins to approach the classical form by excluding sculptural forms and by subserving other purposes. The extreme opposite of the wholly symbolic construction is the house, which, to serve its purpose, requires perpendicular walls and columns with beams set upon them at right angles, and a roof. Practical necessity dictates these basic elements and relationships; but we must consider, nevertheless, whether classical architecture, about which we must now speak, develops out of such practical necessity alone and not also out of the process whereby works of symbolic and independent architecture have themselves led us to the notion of buildings that subserve a purpose.

To serve a purpose, symbolic architecture must regularize its essentially organic forms: but, on the other hand, if the purposive forms of purely practical building are to become inherently artistic, they must in turn undergo an inner transformation in the direction of parpowe the organic. Where these two extremes of building—the purely independent and the exclusively purposeful-meet and merge, we have the beginnings of genuinely beautiful classical architecture.

> As we have seen, the oriental architecture of Babylonia, India, and Egypt took for its content what counted indeed as the absolute for those nations, and, to give that content expression, it adopted organic forms from nature. Classical architecture, on the contrary, leaves to another art-namely, sculpture-the expression of its spiritual content in organic form; and the shape it gives itself to enable it to serve its spiritual purpose is a product of mind that follows no natural model directly. Still, this freedom gained by classical architecture has a rather limited application, and, precisely because of their rationalized regularity, its constructions tend, on the whole, to have an abstract and somewhat dry character. Friedrich Schlegel has called architecture "frozen music," and the two arts do in fact rest upon a harmony of relations that can be quantified and thus readily grasped in their fundamental traits.

> The house, as we noted, supplies the chief determinant of these quantifiable architectural traits (and their simplest relations) in its stanchions, the cross beams they support, and the partitioning and enclosing walls, floors, and roof. Built mainly for protection against bad weather, dangerous animals, and men, a house has to be a complete enclosure pieced together in a mechanical way, so that a family

or larger group can effectively shut itself in and pursue its needs in seclusion. But the temple, or god's house, has other, less utilitarian requirements. In its construction, stanchions which are linked with enclosing walls give way to columns, whose sole purpose is support. A series of columns set in a line marks a boundary, but it does not enclose the way walls and partitions enclose. Support being its sole will tare function, the column must show in its mass and shape that it has been Punction built to support precisely what it carries; it must be neither too strong nor too weak, and while it must not appear to be overburdened and compressed, neither should it rise with such ease that it seems to be playing with its load.

In the Greek temple, the relation of primary importance is the right angle which the column makes with the entablature as well as with the ground

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What the columns support is the superimposed entablature. The relation of primary importance that presents itself here is that of the right angle. With the ground as well as with the architrave of the entablature, the supporting column must form a right angle. For the horizontal position, according to the law of gravity, is the only one that is adequately stable in itself; and the right angle is the only angle that is fixed, the acute and obtuse being indeterminately varied.

The architrave or main cross-beam rests directly upon the row of columns of equal height and, binding them thus together, it imposes on them, in equal measure, a common burden. The architrave in turn has the load-bearing task of supporting the rest of the entablature. 5 tructure This includes, first of all, the frieze, which consists of the heads of the beams of the roof that rest on the architrave and the spaces between structure these, and, above the frieze, the cornice, which supports the roofing. of granty Because it is supported but does not support anything in turn, the roof terminates at an angle, whether obtuse or acute, which shows that it now cannot in fact support anything. Horizontal roofs don't give the impression of a whole that is complete in itself, for a flat surface on the top can obviously support something else. Even in painting the pyramidal grouping of figures is for this reason the most pleasing.

After the columns and the entablature, we have to consider, finally, the aspect of enclosure, with its walls and partitions. Columns, as we noted, are load-bearing and can form a boundary; but

others but re-explains its significance

they do not enclose. Walls can, of course, bear loads. But where that task is already performed by columns, as in classical architecture, walls are usually so made and placed as to show that enclosure is their essential purpose. For this reason, the enclosed central hall of the temple where the image of the god stood was often left open overhead; or, if a covering was required, beauty demanded that it be given separate support, apart from the enclosing walls.

In the Doric, Ionic, and Corinthian orders, the determinant criteria are the height and thickness of the columns and the types of base and capital

But having considered its constituent elements separately, we must now speak briefly of the classical temple as a whole in the major phases of its historical development. Throughout that development, what remains constant is a horizontal rather than a rising emphasis. To view the whole, one scarcely needs to raise one's eye upward at all, as one must to take in the whole of a medieval cathedral, for instance. Equally constant is the subordination of ornamental detail to the proportioned simplicity of the whole. The chief differences of style that develop come out most strikingly in the characteristics of the so-called columnar Orders-the three principal ones being the Doric, Ionic, and Corinthian. In these orders, the determinant criteria are those of the relation between the height and the thickness of the shafts, the different types of base and capital, and the relatively greater or lesser distances between the columns. For the shaft, the general rule is that it be smooth and undecorated, and that it be slightly thinner above than below its middle, where there must be, for aesthetic reasons, a hardly perceptible swelling.

In the earliest of these styles, the Doric, the overriding concern is the security of the building. The Doric columns are thus the broadest and the lowest. Their height never exceeds six times, and is often no more than four times their lower diameter; and the general impression, particularly in the case of the temples at Paestum and Corinth, is thus one of simple and unadorned manliness. In later Doric columns, however, the height often rises to seven times the diameter, and for buildings other than temples, even half a diameter more, according to Vitruvius. As for the distance between the

columns, it is usually only twice, and only occasionally as much as two and a half times, the thickness.

Ionic architecture, departing notably from the pleasing solidity of the Doric style, rises, with equal simplicity, to what is manifestly a style of slenderness, grace, and elegance. The height of the columns varies between seven and eight times the width at the base. Vitruvius explains that the precise height varies according to the distance between the columns; for where that is greater, the columns look thinner and taller, and vice versa. Unlike the Doric column, which rises straight up from the substructure, the Ionic is set on a many-membered pedestal and its slender shaft has twenty-four deeply-hollowed grooves or flutes. Its capital is comparably gracious with its smaller carved abacus at the top, the echinus or egg-and-tongue ornament of the ovolo, its astragal and its volutes or spiral-mouldings on each side of the front which, hanging lower than the echinus between them, give the impression of turning the rising slender shaft back down upon itself.

We come next to the Corinthian order, which develops Ionic slenderness into a tasteful brilliance with consummate finish and ornament. The Corinthian column does not exceed the Ionic in the height of its shaft, but because its capital is so much higher—rising one and an eighth times its lower diameter—it appears more slender and, above all, richer. Its abacus is not square, and the small volutes beneath it bend downward like stalks and the whole is surrounded by two circular rows of leaves. The Greeks have a charming legend about this. A particularly beautiful little girl had died; her nurse collected her playthings and placed them in a basket, on her grave, where an acanthus had begun to grow. Soon the acanthus leaves enveloped the basket, and out of that arose the idea for the capital of a column.

With its development of the arch and vaultings, Roman architecture stands as an intermediate form between classical and romantic architecture

Roman architecture takes the Greek for its model; but, with its arch and vaultings, it occupies a middle ground between the Greek and the Christian. We can say with a large measure of certainty that neither the ancient Egyptians, for all their great building, nor the

Babylonians, Israelites, or Phonecians ever came to know the arch and both the vault. We find arches of Greek construction, but they are rare and relate, none of them being datable as earlier than the Periclean age. What characterizes Greek architecture, as we saw, are the vertical column and the cross-beam. The arch that links two columns and the vaulted cupola point us in another direction, because the column here has already begun to lose something of its functional identity as a support. In fact, in its rise, curving, and fall the arch focuses its thrust on a point that hasn't much to do with the column as a support. The constituent parts of the arch are wedged together so that they carry, sustain, and extend one another and are therefore far less dependent on a column for direct support than a horizontally superimposed beam must be.

One of the most famous constructions of Roman architecture is the semicircular-domed Pantheon of Agrippa, dedicated to Jupiter Ultor. In addition to the statue of Jupiter, it reportedly contained at one time, in six other niches, colossal images of Mars, Venus, the deified Julius Caesar, and three other divinities that are not readily identifiable. Pilasters and marble Corinthian columns flanked each niche, and the whole was vaulted over majestically by a roof in the form of a cupola or half-globe, imitating the vault of heaven. On the technical side, it is to be noted that this roof was not vaulted in stone. The usual method of the Romans was to build a wooden dome as part of the framework for the centring of the actual dome; that wooden dome would then be covered with a mixture of chalk and pozzolana cement made of a rubble of soft tufa and broken bricks. When this cement mixture dried, the whole became a solid mass; the centring would then be struck and the actual settlement of the light vault would be so stable that relatively little pressure would be exerted on the supporting walls.

As for the general character of Roman architecture, apart from this novel development of the arch, it differed fundamentally in scope from the Greek. Without sacrificing the purposiveness of their buildings, the Greeks distinguished themselves with a display of artistic perfection in the nobility and simplicity of their constructions, as well as in the lightness and delicacy of their decorations. The Romans, on the other hand, at least in the mechanics of building, worked much

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more richly and magnificently, but with less nobility and grace. And they introduced, besides, a variety of purposes for architecture that were unknown to the Greeks. As I noted earlier, the Greeks reserved the splendor and beauty of art almost exclusively for public buildings; their private dwellings remained insignificant. Among the Romans, on the contrary, not only was the range of public buildings that might be given a grandiosely magnificent construction greatly expanded to include theaters, arenas for gladiatorial combat, and other types of public entertainment, but architecture came to be directed also toward private uses. Especially after the civil wars, villas, baths, galleries, grand stairways, etc., were built, of extreme luxury in every respect and at fantastic expense. A whole new sphere was thus opened up to the art of building, of which, incidentally, gardening now became an essential part, and it gained a perfection that was at once tasteful and intelligent. A striking example is the villa of Lucullus.

This type of Roman architecture has often served as a model for later French and Italian builders. In Germany, we have long followed either the Italians or the French. Only lately have we turned once again to the Greeks, to take classical art in its purer form as our model.

Christian romantic architecture was Romanesque before it became Gothic, and it has had a subordinate secular development

Turning finally to Christian architecture, we must note that medieval Gothic, which is the real center of genuinely romantic architecture, is to be clearly distinguished from the Romanesque style that developed earlier directly out of the Roman. The most ancient form of the Christian church is that of the basilica, because the early churches originated out of the huge oblong public buildings or halls, with roofing framed in wood, of the kind that Constantine made available to Christians. In halls of that kind devoted to the religious cult, there was a tribunal which the priest mounted to lead the chant and to preach or lecture, and the idea of the chancel or choir may have arisen from this.

Many other elements of Christian architecture, as for instance the use of columns with rounded arches, domes, the whole range of typi-

cally classical decoration, were adopted in the same way, particularly in the Western Empire, while in the Eastern Empire adherence to that style continued to the time of Justinian. Even the buildings raised by the Ostrogoths and Lombards in Italy retained in essence the Roman characteristics. The later architecture of the Byzantine Empire, on the other hand, introduced major changes. The central innovation was the rotunda supported on four great piers, to which other constructions were added to meet the needs of the Greek, as distinct from the Roman rite. But this architecture of the Byzantine Empire itself must not be confused with the so-called Byzantine style which was used in Italy, France, England, Germany, and other places down to the close of the twelfth century.

The genuinely Gothic architecture of Christendom has another history. For a long time, especially with the wide-spread diffusion of French taste, it was looked upon as something crude and barbaric. Recently, however, and largely on Goethe's initiative, the style has been restored to a place of honor. The critical concern today is to get to appreciate in its great works not only what makes them peculiarly appropriate to Christian worship, but also the essential identity or correspondence of the architectural form with the inmost spirit of Christendom.

In romantic architecture, the fundamental traits of independent or symbolic architecture and serviceable or classical architecture are combined

With respect to the general character of this architecture, we need to re-emphasize what we said in our introductory outline, namely that, in it, independent or symbolic architecture and serviceable or classical architecture are united. The unification is not, however, a fusion of oriental and Greek forms; it consists rather in the fact that enclosure provides the fundamental characteristic to a greater extent than in the Greek temple, while, on the other hand, the "houses of God" as actually built have a manifest independence that transcends any specific purpose: they stand there as perfect in themselves, fixed, and eternal. Their interiors do not have the box-like construction of our modern Protestant churches which consist of nothing but pews set up

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like stalls in a stable. And their exteriors rise to a pinnacle, freely, so that their purposiveness, though present, is almost lost from sight, and the impression left upon us is that of a self-subsistent whole.

No one thing can of itself exhaust the significance of such a building; its vast proportions absorb all. Though it has a definite purpose, its grandeur, its sublime calm, lift it high above the purely utilitarian. That it can thus soar above the finite in its simple solidity is one of its characteristic aspects. The other is that, without sacrificing its essential simplicity, it is able to give full scope to particularization, diversity, and variety. The substance of the whole fragments itself into Fragment a multiplicity of seemingly infinite detail, which is nevertheless so simply and regularly dispersed and articulated, so symmetrically and tythmically moved and composed that it arrives at what is obviously a secure and independent unity.

Proceeding to particular forms of romantic architecture, we must limit our discussion, as already indicated, to the sphere of genuinely Gothic architecture, and, even more narrowly, to Christian churches as contrasted with Greek temples. The distinctive form here is the fully enclosed house. In fact, just as the Christian spirit concentrates itself with itself, so the building becomes the place, closed in on all sides, where the Christian congregation assembles and concentrates its thoughts. But the self-concentrated devotion of the Christian heart is also an elevation above the finite; and this elevation too is a factor determining the shape of the enclosed house of God, which thereby expresses a significance, as we noted, independent of its purposiveness. Instead of the open cheerfulness of the Greek temple, what art gives us now, in other words, is an impression of the heart's calm, concentrated within itself, which is at the same time an impression of solemn sublimity, aspiring to transcend, and in fact transcending, the furthest limits of our understanding.

Classical temples in the main spread themselves out horizontally whereas Christian churches seem to thrust themselves upward out of the ground

Thus, while classical architecture on the whole lays its buildings out horizontally, the characteristically romantic feature of Christian

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brought in; in between there may be a slow procession. Or we have a

churches consists in their thrusting themselves up out of the ground toward the sky.

solidity and mechanical suitability of the supporting piers and the vault that rests on them, as of the vaulting of a forest where the branches of great trees set in rows reach out toward one another and touch over our heads. But we are by no means asserting that Gothic architecture has taken trees and forests as actual models for its forms. We are simply noting, rather, that tapering to a point, which is the fundamental trait of the Gothic style generally, shows itself in the interior of churches in the specific form of the pointed arch which, of itself, gives the columns particularly a significance and form they could not have in the Greek temple. Instead of columns supporting horizontal beams we get pillars or piers that rise into branched vaultings so as to constitute in appearance a single construction. The same form is variously repeated in windows and doors as well as in the nave. side-aisles, chancel, and transepts, so that, within the enclosing walls of the building, all the different parts of the whole open up into one another beneath outstretched arches that touch like boughs of trees.

In such a cathedral, there is room enough for an entire people. The idea is to assemble the whole community or city and its suburbs not around such a structure but in it. All the interests of life which are assic propri in any way related to religion are therefore simultaneously admitted to sort themselves out in its wide space, where everyone comes and goes at will, hires a chair, or kneels and prays, and moves on. If it is not the hour of high mass, all sorts of things go on at the same time without confusion. Here we have a sermon; there a sick man is

Moreover, the inner devotion and elevation of Christian worship involves ceremonial obligations that cannot be met outside, in open halls or in front of temples, but only in the interior of God's house. Thus, while the external form is the chief thing in the temples of classical architecture, where its independence from the construction of the interior is emphasized by the colonnades, in romantic architecture, where the building is essentially an enclosure, not only is the importance of the interior stressed in itself but its spiritual significance so thoroughly permeates the exterior as to determine its particular shape and articulation in detail.

Inside a medieval cathedral, one has a sense not so much of the

functur on a priest reads the mass or blesses a marriage. All these things happen in one and the same building. Yet their diversity in all its detail and individuality is nevertheless lost in the vast expanse of the building's interior. Nothing suffices to fill it; everything passes, excepting the infinite spaces that the gigantic structure in its immutable form itself suggests and contains. These are the chief determinants for the interior of Gothic churches. About their exterior, we have already made the point that, as contrasted with the Greek temple, the external shape, decoration, and interconnection of walls, etc., are determined from within outwards, so that the exterior appears indeed to be nothing other than an Inner

diversity baptism at one point, and a bier being set up in another, while further

enclosure of the interior. The outer shape, in other words, immerses fore itself in the inner, which glints through it, even as the heart that withdetermines draws into itself becomes wholly immersed, externally, in its inwardness. Subjective by

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The upward thrust of the Gothic cathedral into pointed buttresses, pinnacles, and towers gives it the unified look of true artistic independence

And yet this exterior that is so intimately linked in form to the interior 5 brucked begins nevertheless to gain an autonomy of its own because it has tasks Greener of its own to fulfill. We need to take note, for instance, of the buttresses. They supplement the supportive work and in part take the place of various pillars of the interior and are necessary as points of support for the elevation and stability of the whole. In their disposition and number, they show externally how the rows of pillars are arranged within, yet they do not exactly imitate the shape of the inner pillars, for the higher these buttresses rise, the more they diminish in strength at each set-off. In keeping with the general character of the exterior, as contrasted with the interior, where enclosure is the chief thing, these buttresses—like the upswept arches above the portals of the main facade and the great windows of the nave and choir-have the shared simple character of ever rising upward into peaks and pin-

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nacles, and of breaking out of one soaring apex into another. Just as the rows of interior pillars create a forest of trunks, branches, and vaults, so here the exterior elements of construction give us a forest of soaring pinnacles.

But, rising most independently, as the sublime summits of these structures, are the towers Indeed, one may say that in them the entire mass of the building is as it were concentrated-lifted up with ease to a height that the eye cannot calculate, while its character of restfulness and strength is in no measure lost. Towers of this kind are to be found in the main facade over the two side aisles, while a third and heavier main tower is apt to rise at the point where the vaults of the choir, nave, and transepts meet; or else a single tower constitutes the main facade and rises above the entire breadth of the nave. At any rate, these are certainly the commonest positions. For purposes of worship, the towers include belfries, since the simple and indeterminate sound of the peal of bells provides an excellent external call to inner meditation, whereas the determinate sound of the song expressing the content of what is deeply felt and thought, belongs to the interior of the church. The inarticulate bell-sound can indeed have its proper place only outside the building, and most appropriately in its towers, where the peal from such pure heights can be heard far across the land.

We need finally to say something about the link between this romantic architecture that reached full maturity in the thirteenth century and the tribe of the Goths that settled in Spain, and remained there in some measure of independence after being driven up into the hills of Asturias and Galicia. In the buildings of old Spain there are indeed traces of what has come to be called the Gothic style, and for that reason it has seemed likely that there might be a significant connection between Gothic and Arabic architecture. Yet the two are essentially diverse. Arabic medieval architecture is characterized not by the pointed arch but by the so-called horse-shoe arch; and, beyond this, the Arabic buildings were designed for an altogether different form of religious worship and they in fact display a characteristically oriental excess and splendor of plant-like and other varieties of decoration in which Roman and medieval elements appear combined in a purely external fashion.

The Gothic secular architecture of Christendom subordinates art to utility, but there are traces of true artistic individuality in much of it

The secular architecture of the Christian Middle Ages parallels the development of its religious architecture, repeating but modifying to suit its own point of view the essential structural traits of the church buildings. In secular architecture, however, art has less scope. The more restricted aims of secular existence are invariably linked with a variety of needs that demand very precise forms of immediate satisfaction, and beauty, for the most part, cannot pass much beyond the services of decoration. The walls, doors, towers, bridges, etc., of fortified halls and private dwellings are built as need dictates and are simply decorated and embellished by art. The essential determinant is structural stability and security, coupled with grandiose splendor and, more often than not, with a genuinely vital individuality traceable through the simple forms and their harmonious interconnection. But to undertake a detailed analysis here would take us too far afield.

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