Elementary Lectures on Christian Architecture

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ELEMENTARY LECTURES

ON

CHRISTIAN ARCHITECTURE

BY

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INTRODUCTION.

THE study of architecture in the present day engrosses a considerable share of the attention of the public, but not more than it can justly claim, for a knowledge of architectural style is of infinite service to the student of history by affording him data from which he can trace the habits and customs of former times. The buildings of a country are the illustrations to the pages of the history of that country—the sole tangible remains —the facts of the past. Chronicles may perish, traditions may be forgotten, but so long as the monuments of a people remain, their forms of religion and modes of government and the degree of science possessed by that people may be inferred from them. Thus, so long as the mighty pyramids of Egypt and her vast temples, with their gloomy recesses remain, it will be said there dwelt a nation whose religion was mysterious, whose government was despotic, and whose science was limited; or wherefore do we find these dim adyta guarded by gigantic divinities? How could these piles have been raised, except by compulsory labour enforced by despots? Why do we find evidences of this great waste of materials and labour in raising these ponderous architraves?

So long as the chaste and elegant monuments of Greek art remain, it will be said, Here dwelt a people of refined and cultivated taste, yet of simple habits of life; or, Why do we find temples characterised by such beautiful proportion and beautiful ornamentation, while there are no remains of sumptuous palaces?

So long as the thermæ, circi, and amphitheatres of the Romans exist, it will be said, Here dwelt a people who cared more for "sport" than religion, and whose rulers sought by amusing them to divert their thoughts from political affairs.

So long as the cathedrals of the Middle Ages exist, it will be said, The men who raised them were animated by intense zeal, united by a common faith, endowed with wonderful inventive faculties, and possessing great constructive skill, or why do we find throughout Christendom these magnificent structures, erected at various periods, but on a uniform plan? Whence this infinity of ornament; or, How were these vaults and spires made to spurn the earth and stretch towards the sky?

The feeling of religion—the most powerful by which man is influenced—has induced him in every age to devote his talents to the erection of places of worship, to build them in an enduring manner, and to preserve them with reverential care. The temples of Egypt, Greece, and Rome remain, while the houses and palaces have been almost universally destroyed. In Europe few only of

the houses of the thirteenth and fourteenth centuries remain, but thousands of churches. To the student of ecclesiastical history, therefore, an acquaintance with architecture is especially valuable, as in all ages the forms of churches were adapted to the peculiarities of worship, and by a thorough knowledge and close observation of these forms, he can ascertain the changes which took place in ritual. By an examination of the details, he can ascertain at what period these changes took place. He can perceive how the primitive Basilica, with its one altar, was by degrees transformed into the more intricate Cathedral, with its innumerable chapels, each possessing an altar of its own.

By noticing the sculptured and painted decorations, he can remark how simplicity merged into complexity, and how direct representation became substituted for emblem. A simple moulding will afford him a clue to the date of the foundation of a church more surely than any documentary evidence.

Those who, in the course of their travels, pass through renowned cities or remote villages, will find their pleasure much enhanced by being able to ascertain the date of the churches and other edifices they visit, and this a knowledge of style will enable them to do with tolerable accuracy.

I have written thus much as an apology for publishing a few short elementary lectures on Christian architecture,—intended chiefly for the non-professional public,—which I have delivered at

various periods in London and the provinces, in which the characteristics of the earlier styles are described, and the buildings belonging to them classified. A rudimentary work of this kind seems to me to have been long wanted, for until a knowledge of architectural style is made part of the ordinary course of education, it is evident that neither architecture nor architectural art-criticism will make much progress in the right direction. To those who thirst for a more extended knowledge, I would recommend—for England the study of the works of Rickman, Bloxam, Parker, and Sir Charles Anderson; for France, those of De Caumont and Viollet-le-Duc; for Spain, Street; for Italy, Street and Freeman; for the East, the History of "Byzantine Architecture," published by M. Texier and myself.

In the first three lectures I have endeavoured to classify the round-arched styles which prevail on the Continent and in the East. This classification is the result of an actual examination of almost all the buildings mentioned. A more complete description of many of these edifices may be found in a volume which I publish contemporaneously.*

* Eastern Cities and Italian Towns. With Notes on their Architecture. Crown 8vo. E. Stanford, Charing-cross.

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I.

ROMANESQUE.

In the early days of Christianity—which were times of cruel persecution—the faithful worshipped God by stealth, in the rooms of private houses, or, for still greater security, in the mansions of the dead.

We read that many were gathered together praying in the *house* of Mary, the mother of John, when St. Peter, having been miraculously liberated from prison, knocked at the door.

Beneath the city of Rome, there is a second and more silent city, of passages innumerable, forming a labyrinth so vast and so full of intricate turnings and windings, that those who venture without a guide run great risk of never again seeing the light of the sun. This was the receptacle of the ashes of Pagans and of the bodies of

Christians. And to this city of the dead,—to these Catacombs, the members of the early Church retreated, in the hope that they might there perform their worship without interruption from their malicious foes. The walls around the spots where their primitive altars once stood, are covered with carvings and paintings of religious emblems and inscriptions. Many of these are of the most simple and touching character; in some we find the Saviour represented as the Good Shepherd, bearing the lambs in His bosom—the Twelve Apostles, as sheep, standing between the palms of Paradise—the Resurrection signified by Jonah and the whale; and the Church by the Ark of Noah resting on the troubled waters of the deluge.

Those who wish to obtain a full account of these interesting paintings and sculptures will find it in Dr. Maitland's work on the Catacombs, or a still more complete description in an older book by Bosio; in this the sculptures are engraved and the inscriptions given entire. Most of the inscriptions from the tombs of early martyrs have been deposited in galleries in the Vatican Lateran; and many of the entrances to the Catacombs have been blocked up.

When times of tranquillity and tolerance arrived, the Christians emerged from their hiding-places, and sought out for themselves suitable places of worship. The Pagan temples were then at their disposal, but their abhorrence of things and places

consecrated unto idols would have led them to reject these, even had their plan and arrangement of parts in every way suited the requirements of Christian worship. But this was not the case; the internal portions of the temples were small and dark, for it was beneath the spacious porticoes without, that the Pagan priests generally performed their sacrifices. So they destroyed many of these edifices, and used the materials for the construction of more suitable houses of worship, choosing the basilicas or courts of justice for their models. These courts of justice were of an oblong form, divided generally into three parts by ranges of columns. At one end was the tribunal—a platform in a semi-circular recess, called the absis or apse, where was the seat of the prætor, and around it the seats of other officers. This apse, with a portion in front of it,—which occasionally consisted of a complete transept,—was separated from the body of the hall by screened enclosures of stone or wood, called *cancelli.*

Had the basilicas been planned expressly for the reception of the Christian congregation they could not have been of a more appropriate form. There was an elevated platform for the altar—the due separation of the ecclesiastics from the laics was provided for by the *cancelli;* of the men from the women, according to the custom then prevalent, by the division into nave and aisles. There

was a raised throne for the bishop, and lower seats for his presbyters,—a crypt beneath for the bones of martyrs,—and a porch for the penitents. The basilicas were accordingly temporarily occupied, and afterwards new buildings, exact copies of them, were raised over the graves of the martyrs.

An atrium or open court was added frequently, in imitation of the Court of the Gentiles of the Temple, and in it was a laver, in which the worshipper washed his hands before entering, the original of the stoup and holy water of the Romish Church. The narthex or porch, which frequently was formed by the east side of the cloister, was intended for the accommodation of penitents and of those who were not qualified to be present at the more solemn services.

As the cross on which the Saviour hung, exposed to the taunts and mockeries of man, was exalted from the moment of His sacrifice from a badge of infamy to a sign of honour; so in a more mysterious way the Hall of Judgment, in which He was condemned, was destined to become the type for those courts in which He was to be hailed as the King of Heaven and Earth by a grateful posterity. There was a Roman basilica attached to Pilate's palace at Jerusalem, and the raised part where the Judgment Seat stood was called Gabbatha, the Pavement.

Through all subsequent periods, whatever were

the changes of style, this type was retained. Our own cathedrals and parish churches have their naves and aisles, their chancels or parts screened off, sometimes in the form of the apse, but more generally square, their porches, their thrones for bishops, and stalls for inferior dignitaries.

The style of these early churches being a corrupt Roman, the term Romanesque has been applied to it. The columns used in their erection having been for the most part taken from Pagan temples, corresponded with one another in height alone. The capitals were of various forms and sizes, and there was nowhere to be observed that relative proportion of parts which was the charm of classic architecture. The exteriors were plain and almost rude, but the interiors were extremely beautiful, for what was lost in form was rendered by colour.

The roof of the nave was invariably of wood, the exposed beams being frequently coloured and gilt. A lofty arch divided the nave from the chancel; this was then called the Triumphal,—now it is termed the Chancel Arch; and on either side of it was placed an ambo or pulpit, from which the deacon and sub-deacon read respectively the Epistle and Gospel. A screen ran across the church beneath this arch; this was of marble or stone, and consisted of a basement with six or eight columns supporting an entablature, on which in later times were placed figures of the Apostles. This screen

stood on the uppermost of a lofty flight of steps. In the aisles were other flights, descending to the crypt or subterranean chapel. An altar stood in the sanctuary, either in the apse or removed towards the nave, covered with a rich canopy or baldachin. In the apse, also, were the seats of the bishop and priests. The roof of this part—called a conch, on account of its shell-like form—was adorned with rich mosaic work. The mouldings were rude imitations of those found in Roman buildings.

Altogether, the effect was grand; the long rows of marble columns, the broad flights of steps, the rich screens and the apse glowing with gold and colour afforded a perspective of surpassing beauty.

There are no basilicas remaining that exhibit *all* these original features, so much have they suffered by alteration. St. Paul's without the walls at Rome was, until its partial destruction by fire in 1823, one of the most perfect. It was 419 ft. long and 217 ft. wide. It was built by Theodosius. The columns supporting the triumphal arch were 45 ft. high. This building is now in course of restoration.

The old church of St. Peter also was of the same description; it was destroyed about the year 1506 to make way for the present structure. San Clemente; Santa Maria in Arracœli, San Lorenzo, Santa Maria in Trastevere, Santa Agnese and San Pietro in Vinculi, are all basilican churches. There are very few

examples of this kind of church out of Rome. That of Torcelli, near Venice, built in 1088, offers an admirable instance of the old arrangement. Here the bishops and priests' seats in the apse are still perfect.

Although there is no basilica in Rome that was an original Roman court of justice, there exists one in the city of Trèves on the Moselle, the ancient capital of the Roman Empire beyond the Alps. It was converted by the Empress Helena into a cathedral. It was partially rebuilt A.D. 1010, but the original work is apparent throughout. In plan it differs slightly from the early churches remaining at Rome, in having apses at both the east and west ends. This building may be fairly considered the prototype of the Romanesque churches existing in such numbers in the neighbourhood of the Rhine and in some parts of the interior of Germany, in the style often called by writers indiscriminately Lombard and Byzantine—both of which terms are incorrectly applied—for there exist but very few specimens of Byzantine in Western Europe, and these are almost entirely confined to Italy; and the architecture of Lombardy alone should be called Lombard. The appellation of Teutonic Romanesque has been more aptly given to it by ecclesiologists. This name is very comprehensive, and embraces all the round-arched styles north of the Alps except Norman. That the Teutonic

Romanesque was derived from Trèves is evident from the fact that some of the chief cathedrals in Germany—amongst others those of Bamberg and Mayence—have double apses, the chief characteristic of the plan of the basilica of that city.

It was in the lenient reign of Constantine the Great that the Christians were first allowed to erect places of worship. These were, as we have stated, on the basilican plan; but when this monarch removed the seat of the Empire to Byzantium, the edifices erected under his auspices were of a different character. The two principal churches erected by him in his new city of Constantinople were that dedicated to the Holy Apostles and that dedicated to Heavenly Wisdom. They exhibited considerable ingenuity and novelty in their plan; but the feature the addition of which more completely caused the character of these churches to differ from the Roman basilicas was the dome. The architects had an affectionate recollection of the magnificent cupola of the Pantheon, and attempted to imitate it. The employment of the dome was the cause of greater massiveness in the walls and solidity in the piers, and brought about the solution of the difficult problem of "How a domical vault should be raised on a square substructure." This was accomplished by the use of immense brackets, technically called "pendentives." The "contemplative dome," as Lord Lindsay has happily called

it, became a favourite in the East, and St. Sophia was destined to be the progenitor of a numerous offspring, which the Mosque of Omar at Jerusalem, the tombs of the Caliphs at Cairo, and the Kremlin at Moscow respectively represent. It was employed throughout the East both by Christians and Mahometans at the time of the schism between the Pope and the Patriarch. The Eastern Christians adhered to the type of St. Sophia, and ever afterwards made use of the cross with equal arms, in contradistinction to the Latin cross, or that with unequal arms. The plan of St. Sophia is perpetuated in the present day by the Greek Christians of Europe and Asia.

This cathedral, founded by Constantine, was rebuilt by Justinian in 547, who was so satisfied with the result of his labours, that he is related to have exclaimed, on beholding its completion, "I have outdone Solomon!" It has been stated that but few specimens of Byzantine were to be found in Italy. These were constructed by the Greeks themselves in those parts of the country which belonged to the Eastern Empire. The cathedral of San Vitale at Ravenna, also erected in the reign of Justinian, and that of St. Mark's at Venice,—built in 977 by Greek architects from Constantinople,—are the two chief, if not the only perfect, churches in this style. That of Venice has been but slightly altered in succeeding ages. From

it we can form a tolerable idea of what manner of building St. Sophia was in its days of pristine grandeur, for the latter has been so shorn of its beauty by the Mahometans, that but few of its former features are to be traced in the present mosque.

St. Mark's is as unique in its appearance as the city in which it stands—the "sea-born Venus," as an old writer has termed it. It is a mixture of mosque and cathedral, standing at the extremity of an immense piazza, surrounded with palaces, its picturesque forms contrasting strangely with their stately regularity, its innumerable bright tints with their sombre grey, its clusters of thin shafts with their classical columns. In it we behold the contemplative dome of the East, side by side with the aspiring pinnacle of the North. The west end faces the piazza. It is low and broad. There are five doorways in this front, with pointed arches, which spring from clusters of slender-banded pillars. These arches are additions to the original edifice. Scriptural subjects in rich mosaics on gold grounds fill the *tympana*, or spaces above the doors. These have been exposed to the action of the weather for seven or eight centuries, yet they retain all their original brilliancy, and on a sunny day give a gem-like, glittering effect to the whole façade. In the central part above the arches is a gallery, on which the famous bronze horses of Lycippus prance. These horses fell to the share of the Venetians when they took

Constantinople in conjunction with other Crusaders. Above all rise five large domes, whose leaden sides mingle in colour with the sky. The doors in the west-front lead into a long porch, extending the whole width of the building. This is divided into compartments, each crowned with a domed ceiling, adorned with the mosaics representing the scenes of the Creation. Three other doorways beyond admit you into the nave, the westernmost arm of a Greek cross. Entering from the blaze of an Italian sun, the porch is in twilight, and the nave in still greater darkness, for but few rays of light can struggle through the small arched windows in the upper part of the building. And this gloominess is rendered more perceptible from the twinkling light of little gold and silver lamps, which hang suspended beneath the vast concaves. This obscurity seems to point out the Eastern origin of the building, for a church built in this manner would be suitable for an atmosphere lighter and a sun brighter than that of Italy. The geometrical figure of the square has been employed throughout by the architects. The plan consists of five squares arranged in the form of a Greek cross, and marked by ponderous arches springing from immense piers. Each square is covered by a dome. The spaces in the angles are filled by pendentives. These domes are most probably constructed of very light material; those of San Vitale are formed of earthen vessels,

making them very light, yet sufficiently strong. Rows of columns and arches run between the larger piers, dividing nave, chancel, and transepts into three unequal parts. The wall above these arches reaches only to the springing of the larger arches; but what most excites the admiration of the beholder is the richness of the materials of which every part around him is composed. The uneven pavement is tesselated in interlacing circles of agate and jasper; the monolithic columns are of porphyry and verde-antique; the roof throughout is of gold mosaic, covered with many-coloured figures; yet with all this variety of hue there is no glare, no gaudiness. So little light is admitted, that the different tints are blended and sobered in the gloom, and are not more obtrusive than the tones of a picture by Rubens mellowed by age.

A screen resembling that mentioned in the description of the basilica partitions the eastern arm or chancel from the nave. Upon it there are figures of the Twelve Apostles. There are rich wheel windows in the transepts, but these are of later date.

The details of this style vary little from those of the Romanesque. There is, perhaps, a greater simplicity in the parts, and the general effect of interiors is that of hugeness, and of what some have called barbaric splendour. This style may be said to have risen and fallen with the Eastern Empire. I know of only one specimen in Germany, that is

the Cathedral of Aix-la-Chapelle. This is polygonal, each side is finished with a gable externally, and the whole crowned with a lofty cupola. Here, as at Venice, there are no windows below, but the light is admitted through perforations in the triforium, or upper gallery. It is the mausoleum of the great monarch, Charlemagne. A simple flag in the centre of the pavement beneath the dome is the only mark of his sepulchre. A few columns of his palace at Ingelheim are preserved in the palace at Mayence. These are rude imitations of Roman.

Such was the origin of the two primitive styles of Christian architecture. In conclusion a few words may be said on the Lombard and Teutonic Romanesque, which proceeded from their union. The general plan, the crypt, and the apse, came from the basilica; the dome—which, by the bye, seldom occurs—from the churches of Byzantium. But vaulting was a new element in their composition; it naturally sprang out of an increased constructive skill, and finally entirely superseded the low wooden roof of the basilica. Consequent upon the use of the vault was the introduction of long, slender, vaulting shafts, clustered columns, and triforia. The campanile, or bell tower, was also a new feature, so were the arcades, which ran round every part of the building.

We find these characteristics in the churches both on this and on the other side of the Alps, and you

of the Saints Gervasius and Protasius, rebuilt in the ninth century, and repaired in later times, but still retaining all the features of the second structure with the arrangement of the first, so that it exhibits a complete specimen of the early Lombard style. The baptistery in St. Ambrosio should be dear to all Englishmen, for it was here that St. Augustine (who, as Fuller quaintly says, "Having come to have his ears tickled had his heart touched, and got religion in to boot with the eloquence of St. Ambrose") was baptized. The apse is enriched with mosaics, and in the presbytery in front stands a magnificent baldachin, resting on four short columns of porphyry.

II.

CHRISTIAN ARCHITECTURE IN THE EAST.

In general, when we speak of Christian architecture, we are understood to mean either some of the Gothic styles, or, at the utmost, some of the various forms assumed by the Romanesque, such as the Lombardic, Teutonic, or Norman, during the period of its gradual development subsequent to the ninth century. But this is, at the best, but a limited and narrow sense, for it excludes all that was done by Christians before that period, and leads to an ignoring of the fact that in the East there were architects and church builders no less expert and in many respects quite as inventive as those of the West—men who originated and practised a style as grand in its masses, almost as beautiful in its details, and as magnificent in its decoration as any style which prevailed in the West—I mean the Byzantine; and I assert that that building, which was at once the prototype, and which is also the most perfect specimen of the Byzantine art, that in which the style sprang into perfection from the brain of its inventor, the architect Anthemius of Tralles, garnished at all points, and perfectly beautiful—

St. Sophia, at Constantinople, presents the finest interior in the world. It possesses all the elements of good architecture—those of grandeur and stability in the massiveness of its enormous piers, and its vast arches, from which spring the pendentives of the dome;—and that of appropriate decorated construction in its rich marble columns, with their elaborately-carved capitals, in its inlaid spandrels, and in its mosaic decorations, which are now unfortunately only visible in the soffits of the arches, as the domes have been whitewashed by the Turks.

All these qualities are seen at one view; hence the magnificent effect of the *coup d'œil*, which surpasses in sublimity that of the interior of Milan Cathedral, the finest in the West for general effect, irrespective of detail.

The Byzantine style, then, of which this beautiful building is the type, and which some people regard as a semi-Pagan corruption—although it was as distinct a style as the Gothic, and had almost as many ramifications—has some claim to be studied, and, if not to be imitated, to be ranked amongst the Christian styles of architecture.

Assuming the reign of Justinian, A.D. 527—56, to be what the thirteenth century is in Gothic—the Pure Period—we may class all buildings erected before his time as belonging to the First or Early Period, in which the style was not fully developed—

the numerous churches built by Justinian to the Second or Pure Period—those built between A.D. 556 to A.D. 1000 to the Third,—and those erected between A.D. 1000 to the fall of Constantinople (A.D. 1453) to the Fourth Period.

In addition to this general division, there are those of local and geographical peculiarities, such as those of the Armenian, Georgian, and Servian styles, so that the archæologist has quite as wide a field for study amongst the churches of the East as amongst those of the West, and it is, comparatively speaking, untrodden ground.

Before Constantine founded the city on the Bosphorus to which he gave the name of Byzantium, there was, of course, no architecture that could properly be termed Byzantine; but we have proof that churches did exist before his time in the edicts issued by Decius ordering their destruction. It is a matter of speculation what the forms of these churches were, but the generally-accepted opinion is that they were square in plan, and covered by plain, semi-circular vaults; thus they were in the form of a coffer, and were intended to represent the Ark of Noah—the type of the Christian Church. It is said that there are examples of these primitive structures in Syria and the Taurus, but I know of no representations of them.

Perhaps the earliest specimens of Christian architectural ornamentation—it can hardly be called

architecture—is to be found in the rock-cut cells and chapels of the anchorites at Urgub and Surp Garabed, near Mount Argæus, in Cappadocia. These must have been executed by refugees from the cities during the times of persecution which preceded the time of Constantine. That they were the work of Christians is evidenced by the crosses and other religious emblems carved on the walls, and from the fact that some of these caverns are on the plan of chapels, with apses and nartheces.

Columns and pilasters, with rude capitals and horse-shoe arches, appear on the façades of these grottos and in the chambers, which were also used as the residences, and afterwards the tombs, of the anchorites. One of the principal grottoes of Urgub is three stories high, and is divided into three compartments in its breadth by pilasters with deep capitals, not classical in character, and without bases. Each of the three lower divisions has a doorway in the centre, with a horse-shoe arch;—that in the centre has an acute pediment over it. All the upper divisions have three arcades of horse-shoe arches springing from small flat pilasters. The whole composition has a cornice ornamented with niche-like recesses. There is nothing in the elevation that is beautiful and attractive, but its interest lies solely in the fact that it is a specimen of the earliest Christian architectural ornamentation,

and one of the examples from which the Saracenic arch was derived.

But after the conversion of Constantine there was no longer occasion for the professors of the true religion to avoid the towns, and seek refuge in the gloomy solitude of the desert. Christianity having become, so to speak, the established religion, and the converts increasing by multitudes, there was not at first time to erect new churches, so they were allowed to take possession of the Pagan temples, and convert them into places of Christian worship. This was a simple process. There are two examples which show in an evident manner how the transformation was effected. One of these —the Temple of Venus at Aphrodisias—was octastyle and pseudo-dipteral. The cella was removed bodily, four of the columns of the posticum were arranged so as to make eighteen on each side, in place of fifteen, walls were erected on each side beyond the columns, and an apse was built at the east end; and in this manner a grand basilican church was formed without very great labour or expense.

At Ancyra the cella of a prostyle temple was lengthened, and a window cut in the side wall to admit the light. But in Byzantium itself, where there were no old temples, the case was different. Here the people were left to their own resources, and were obliged to have recourse to their inven-

tive faculties. Thus they were in that condition which is the most favourable for the creation of a new style.

I may here remark that we talk much of the desirability of producing a new style for ourselves—one that shall differ from all that have gone before in that it shall surpass them. Were we in a similar condition to the Byzantines, no doubt we should astonish posterity by the production of an architecture more novel than theirs, and much more perfect as regards its constructive elements. But the fact is, we know too much; we cannot divest our minds of the recollection of what others have done before us; therefore, most of our efforts at novelty result in buildings which have no distinctive character, but which are mixtures of all known styles. If an earthquake were to destroy all existing buildings, and a fire to consume all books on architecture, we, too, might hope to produce some style that possessed a perfectly novel character.

Yet, after all, the Byzantines were, to a certain extent, content to borrow and adapt much from the former capital of the Empire. The architects who accompanied Constantine to Byzantium seem to have carried back with them a vivid recollection of the most striking feature of one of the most sumptuous edifices of Rome—I mean the dome of the Pantheon; and as they found that domes could be

easily constructed with bricks, and other light materials which, we may assume, were more plentiful in Byzantium than large blocks of quarried stone, they adopted the dome as the leading feature in their new architecture, which did not immediately become a settled style, but was characterised by individual efforts at novelty. Hence, amongst the churches built by Constantine, we find every variety of plan; many round, in imitation of the Pantheon; such as the Anastasis at Jerusalem, and the Church of St. George at Saloniki—some octagonal, like those of Antioch; others were of the basilican, or, as it is termed by ancient writers, dromic—meaning oblong—from δρομος, a course, road, or stadium—of this sort were several of the fourteen churches built by Constantine at Byzantine, and also the church he built at Jerusalem.

Again, others were of similar form, but with transepts. Of this description is the basilica of Bethlehem. Others had, in addition to the transepts, domes at the crossing, such as the Church of the Apostles at Byzantium. So that we see that at this early period the Greek cross inscribed in a square had not become the type of a Byzantine church, nor did it, we believe, until the time of Justinian, two hundred years later.

In all these churches the general divisions of space were similar, and were suited to the then requirements of worship. Converts, in those days

had a period of probation to go through before they were admitted to full communion with the faithful, and were divided into various classes of catechumens, hence the necessity for the narthex or porch, and the exonarthex, or outer porch, before which was a square court or atrium, generally surrounded by arcades, or rather, in those times, by colonnades, and in the centre of which was a fountain for ablution, the origin of the holy-water stoup. It may here be remarked that the first Mahometans appropriated this atrium and fountain bodily, and attached it to their mosques. The forecourt of any large mosque and its central fountains, with the crowds of Moslems washing at it preparatory to their entrance into the place of worship, presents a complete picture of the atrium of the early Christian Church.

At the east end there was a semi-circular apse, containing the altar. This part was separated from the rest of the church by an immense screen, covered with painted figures of saints (carved images are not allowed in the Eastern Church), called the iconostasis. On either side were two chapels, generally with apses, called the *diaconicon* and *skeuophylakion*, in which the vestments and sacred vessels were deposited.

The screen had three gates in it, called the holy gates. That part of the church immediately outside the screen, which we should call the eastern

part of the nave, was called the choir, and had stalls; beyond it was the nave proper.

There were no bell towers, as bells were never used in the Eastern Church, but worshippers were summoned by the sound produced by striking a board called the *semantron* with metal hammers.

But the feature which most influenced the character of the interior was the women's gallery, necessitated by the separation of the sexes customary in the Eastern Church. In most churches this consisted of a large second story, almost as spacious as the aisle below, and the existence of this constitutes the chief difference between the basilican churches of the West and the dromic churches of the East. From it our triforium is derived apparently. Such was the plan of the Byzantine Church.

As to the character of the architecture: in the time of Constantine classical forms had not been abandoned, though to a certain extent corrupted. Columns preserved the same forms and proportions as formerly; indeed, many of them were the columns of ancient temples brought from the ruined cities of Asia Minor. Capitals retained their forms, and those of the Corinthian order their acanthus leaf foliage. But in the proportion of the entablature a change took place. Architrave, frieze, and cornice no longer preserved their relative sizes. The corona lost its projection, modillions were dis-

used, and the cornice became simply a slope of enriched mouldings, instead of having the bold projection it had before. These differences were more marked in Byzantium than in Rome, where the influence of classic proportion lingered for a longer period.

The only church erected in the far East during the reign of Constantine that has remained unspoilt by restoration is that of Bethlehem. It is dromic in form, with apsidal transepts, and an apse at the east end. It has double aisles, formed by colonnades, which were generally used in the place of arcades, and it had an atrium, which is now destroyed. Like all other similar edifices, it had a wooden roof. It is remarkable for the absence of the women's gallery. Where this should have been, there are plain walls, decorated with the richest mosaics. Unfortunately, the effect of the interior is marred by the erection of an ugly wall, separating the nave from the east end of the church.

An interesting example of a round church, which we have grounds for supposing to be of Constantine's time, exists in the city which contains the finest gems of Byzantine art, all now, unfortunately, converted into mosques—that of Saloniki, the ancient Thessalonica, the Athens of Byzantine art,—I mean the Church of St. George. It is built somewhat on the plan of the Pantheon, though of smaller dimensions, the dome being 80 ft. in

diameter. It has radiating chapels, with barrel vaults constructed in the thickness of its enormously thick walls, and a projecting bema, terminating in an apse at the east end. The entire surface of the dome and the roofs of the chapels are ornamented with a series of the finest Byzantine mosaics existing, on gold ground, which, from the style of the architectural ornamentation in them, resemble the wall paintings of Pompeii. Beyond the gorgeous mass of colour, the building is destitute of ornament, as it is built of brick, and without mouldings, either external or internal. For a long time it was supposed to have been a temple, but the bricks of which it is built have Christian emblems on them, and thus afford an undoubted clue to its origin.

The octagonal Dome of the Rock at Jerusalem is supposed by some to be the real Church of the Holy Sepulchre, built by St. Helena; but the occurrence of the architrave block or dosseret, and the use of the arch in combination with a wooden architrave, seem to point to a later date. In fact the carvings of the cornices on these beams appeared to me to be rude imitations of Byzantine work by Aarb hands.

From the time of Constantine to that of Justinian, architecture appears to have made no great progress. The old forms and proportions seem to have fallen into disrepute. The arcade became

generally adopted in lieu of the colonnade; the sculptured foliage was treated in a freer manner; and the architrave block was used for the purpose of giving height to columns taken from ancient buildings and too short for their new positions. Pedestals were also used for the same purpose.

During the reign of the Apostate Julian—A.D. 356 to 362—there were, of course, no churches erected. Theodosius, who reigned from A.D. 379 to 395, on the contrary, erected many noble buildings; but there are none remaining that we can attribute to that monarch with any certainty. There is, however, at Saloniki, a fine mosque, called Eski Djouma (its Christian dedication is quite unknown), which is probably of his time. Certainly, it was built before the time of Justinian, and was a work of the fourth century. It is extremely simple in plan, being a parallelogram, having a nave 119 ft. long by 48 ft. wide, and aisle of the width of 22 ft.

The east end of the nave has a semi-circular apse. There are no chapels at the sides; a narthex runs the whole width of the church at the west end. The aisles are divided from the nave by marble columns, with capitals of classical character, bearing the architrave blocks or *dosserets* (which by this time had become characteristic of the Byzantine style), from which spring semi-circular arches. Above this arcade there is a second row of Ionic columns, also with *dosserets* and arches. The sim-

plicity of the plan and the semi-classical mouldings and foliage help us to attribute the date approximately.

Another dromic church, which, from the classic character of its columns and capitals, we may suppose to have been erected before Justinian's time, probably at the commencement of the fifth century, and which is the most perfect specimen of its class in existence, is the Church of St. Demetrius at Saloniki. It has a nave 172 ft. in length and 40 ft. in width, terminating in the usual apse, with double aisles, and a sort of transept opening to the *bema* through two archways. A women's gallery runs the whole length of the building; the arch of this gallery is round, and the lower columns are imitations of the Corinthian. Above all, there is a clerestory; the walls are richly adorned with mosaics and marble inlays.

Until the time of Justinian, the plans of the churches were of various forms, as no fixed type had been reached, notwithstanding the efforts of architects during the course of two centuries. But after the accession of that liberal patron of the arts, a new era opened in the rebuilding and remodelling of the ancient St. Sophia, which was a dromic church on the basilican plan.

The present Cathedral of St. Sophia was commenced in the fifth year of the reign of Justinian. Its architect—Anthemius—was evidently a man of

genius; he seized those features of the older architecture which were the most suitable for his purpose, and, so to speak, recast them, uniting them in such a manner that they did not appear to be a number of distinct elements derived from various sources; but so that they formed a coherent mass, exhibiting unity of design and novelty of adaptation. In fact, Anthemius was a judicious eclectic, and not a mere copyist; he was quite untrammelled by precedent, therefore his powers of mind had free scope, and he may be called with greater justice than any one else the inventor of a new style. He took the dome, which until his time played a subordinate part in the churches of Byzantium, and made it the most prominent feature in his new architecture. The most simple way of supporting the dome was upon four massive piers and four wide arches, with pendentives above them. This arrangement naturally suggested the Greek cross as the best form for the plan.

He made use of the column not only to support the arcades, but by altering its proportions he was enabled to use it as a mullion, thus forming the two-light window, the germ of all the richly-traceried windows of later times. Finally he abolished the colonnade and substituted the arcade as the division between nave and aisle. Hence resulted buildings entirely different from any that had been erected before.

Justinian was a great church builder, and for-

tunately he had in his court an historian—Procopius—who has bequeathed us a list of all the principal ecclesiastical structures of his reign. One of the chief of these is the St. Sophia at Thessalonica, erected soon after the larger St. Sophia at Constantinople.

This building is now, like all other churches in this interesting city, a mosque; but, with the assistance of a cavasse from the Consulate, one can obtain admission, and even draw and measure without being molested. The plan is almost square, as is usually the case in the pure Byzantine, with projections at the east end terminating in apses, and forming the *bema* and its contiguous chapels. Over the body of the church, almost in the centre, rises a dome, 53 ft. in diameter, springing from four massive piers. The aisles are separated from the nave by two sets of two round arches rising from short columns: these two sets of arches are separated by a pilaster.

A women's gallery runs over these aisles, and over the narthex,—which occupies the entire west end of the church. The capitals are ornamented with foliage in low relief, like those at Constantinople.

There is a large church at Myra, in Lycia, which from its plan may be safely attributed to the time of Justinian. Here the narthex and exonarthex are unusually spacious. This is, perhaps, to be attri-

buted to the fact that it was a pilgrimage church, containing the body of St. Nicholas, from which a holy oil was believed to issue that cured all sorts of diseases. The body of St. Demetrius, in the church at Saloniki, had the same properties. The Normans, as historians relate, applied it to quite a different purpose when they captured the town in 1185. They took it home to grease their boots and to fry fish!

The plan of the Greek cross was retained subsequently to the reign of Justinian throughout the Third and Fourth Periods; indeed it became the leading characteristic of the Byzantine Church, although it was not always clearly defined. Columns lost altogether their classical proportions, and were used in the form of mullions and colonnettes. The chief alteration was in the dome, which by degrees was elevated until it became a lantern or cupola, frequently polygonal on the exterior; buttresses and string-courses became more common than formerly; and more attention was paid to the external decoration, which was generally effected by bricks and tiles laid in lozenges, frets, and other ornamental patterns; the galleries for women were discontinued and the nartheces diminished in size and importance.

The Church of the Holy Apostles at Saloniki is a good specimen of the Third Period. It is square in plan, and has a central cupola resting upon columns

in place of massive piers. There are wide aisles and cupolas at the four external angles. The eastern apse is polygonal on the exterior. This form always denotes a comparatively late da te Slender columns are used in the exonarthex and colonnettes at the angles of the cupolas.

The Church of St. Bardias, in the same town, was erected A.D. 937. It also is square in plan, with a central dome rising from four columns. It has narrow aisles, with cupolas at the angles, like the Church of the Holy Apostles.

The Church of St. Elias was built A.D. 1012, and it varies in plan from any of those already described, in having a large square narthex and apsidal transepts. It has a central cupola, higher than the rest, with narrow windows and colonnettes. All the apses are polygonal on the exterior. This and the various small churches that one sees at Athens, Mistra, and other towns in Greece, belong to the Fourth Period. They, as a rule, have mullioned windows and high cupolas; and the transepts are distinctly marked on the exterior, which was not the case in the earlier churches. This type of church continued until the Mahometans subdued the Christian countries of the East, after which period the churches which were erected were in general insignificant in size and destitute of architectural character.

There is one building, however, which is deserv-

ing of notice, as presenting a mixture of Byzantine and Gothic—that of St. Sophia, built at Trebizond —the seat of the Empire of the Comneni—by Alexius III. A.D. 1349. It has the usual central lantern, which is here polygonal, narrow aisles, eastern apse, and large porches on the north, south, and west ends, which altogether occupy an area as large as the rest of the church. But the chief peculiarity is the introduction of the pointed arch in the porches, and the use of sculptured figures in the decoration, contrary to the practice of the Greek Church.

The Armenians, Georgians, and Servians each composed a distinct style, based upon the Byzantine; but the variation from the original type was not so great as to call for notice in a brief sketch like the present. One fact remains to be remarked, that is, that the Armenians employed the pointed arch about the year 1000. This goes far to prove that this form of arch, which effected a complete revolution in the architecture of the West, originated in the East.

Byzantine churches, though the only edifices designed by native architects, were not the only Christian buildings erected in the East. Syria and Asia Minor contain here and there interesting examples of the works of the Crusaders and their successors. Jerusalem itself possesses several specimens of fine Gothic architecture. These are: the façade of the

Church of the Holy Sepulchre; the Chapel of the Holy Cross, erroneously supposed to be the work of St. Helena—in reality, a work of the thirteenth century (the capitals have the peculiar ornamentation which is an imitation of basket work, certainly, but the arches which spring from them are pointed); the Hospital of St. John, which has a fine Norman doorway, ornamented with the signs of the Zodiac; part of the Mosque El Aksah in the Haram, and the Church of St. Mary. The Church of St. Anne has nave and aisles with pointed arches, a stone vault, and eastern apse. There are also some remains of the Church of the Ascension and the Tower of the Virgin Mary. These are, for the most part, good thirteenth-century work, and appear to have been the work of French rather than of English architects. There are also churches at Ramleh, Jebail, Ludd, and that of the village above Gad, which appear to be of the same period, and in a similar style. On the walls of the latter, which is at present used as a stable, frescoes are still visible. The works of the Knights of Rhodes at Cyprus, Rhodes, Boudroom, Cos, and other places afford specimens of the various countries from which the Knights came. Many of them appear to have been designed by Spanish architects. In the castle of Boudroom I found an English doorway of the Decorated Period, and upon looking above it, I saw shields of noble members of the

English "House of Knights," and above all, the English lion, familiarly wagging his tail. This building was the refectory. Those who wish to study the Christian architecture of the East most thoroughly are referred to the "History of Byzantine Architecture," mentioned in the preface.

III.

A CLASSIFICATION OF CHURCHES IN ITALY.

THE fertile and prosperous country of Italy has, since the decline of the Empire, attracted invaders from all parts of the world, many of whom took possession of large tracts of territory, and each race brought with it its own peculiar style of architecture, of which many lasting monuments still exist. Thus in Sicily, we have Norman and Arabo-Norman; in Ravenna, Byzantine; and in the North, Lombard; each styles having characteristics differing from those of the others. Again, every petty State affected certain peculiarities, either in plan or detail, producing the differences which distinguish the churches of Pisa and Lucca from those of Venice and Florence. In addition to these causes of variety, the wandering companies of Freemasons who traversed the country, apparently coming from Germany, have left at intervals specimens of their art, far purer in style than the productions of native talent.

Thus it is extremely difficult to present a general scheme of classification, which shall include all these various varieties of style. I shall attempt, however,

to give a general insight into the principles which guided the progress of architecture that were common to Italy and the rest of Europe, and to describe some of the characteristic marks of the different schools in order that you may be able to distinguish one style from another, and to decide which churches were erected in a comparative earlier or later period, according to the knowledge of construction manifested in them.

It is true that in very many instances the earlier work has been concealed by the restorations and additions to which Italian churches, especially those in Rome, were subjected in the sixteenth, seventeenth, and eighteenth centuries. Still, you will frequently find under the superimposed mass of incongruous decoration a simple moulding or bit of foliage that will speak to you of a period of primitive simplicity.

1. In Rome, the native soil of Christianity, are to be found some of the earliest buildings erected for the purposes of worship. I say some only, for under Constantine, in whose reign the Christians first enjoyed peace, churches were erected simultaneously in Rome, Constantinople, and Jerusalem. These were, generally speaking, similar in plan and arrangement. The numerous communities of Christians, when they emerged from the Catacombs and could worship in the light of day, had to be provided at once with suitable places of worship. In

some cities the temples were adapted to this purpose by pulling down the cella walls and building other walls between the columns; or in the case of smaller temples, by making the columns of the peristyle serve as those between nave and aisles, while outer walls and an apse were added. There are several temples thus adapted—at Syracuse, Vienne on the Rhone, and at Cora, in the Volscian Mountains, where the portico of the temple has been left standing, forming anciently a vestibule to the church. But as the cella was often too small, or the peristyle too large, for this purpose, and as the Christians preferred buildings of their own to places defiled by the former presence of idols, they either took possession of buildings of another class, or erected churches after these edifices. These were the basilicas or courts of justice, the plan of which was admirably adapted for their purposes. On the Palatine Hill there are in the Basilica Jovis, the apse, a portion of the *cancelli*, and the columns dividing it into what we call nave and aisles. This building was not converted into a church; indeed, I know of no basilica existing that was thus converted except that at Trèves, the chief Roman station north of the Alps.

The basilican plan became general throughout Christendom both in the East and the West, and it can be traced in every cathedral and parish church in our own native land. In the East another plan,

that of the Greek cross with domes, was ultimately adopted.

In the construction of basilicas, the columns, capitals, and other parts of ancient temples were employed; consequently, we find, as at St. Lorenzo and St. Agnese, that the architraves and columns do not correspond with one another, but are of various heights and sizes.

Rome adhered to her early traditions of church building, consequently, we find but few variations in plan and details. We have the division into three or five sections, of which the centre is the widest; the apse adorned with mosaics; the episcopal seat and the altar with its crowning baldachin. Those who wish to obtain an idea of the primitive basilica should visit San Lorenzo, which is about half a mile outside the gate of that name, or San Clemente; the former has not the apse, but with that exception it is easy, in both cases, to realise the form and proportions of the original basilica. In San Clemente the atrium, or outer court, is perfect. Other examples of it are to be seen at San Ambrogio, Milan, and the Cathedral of Salerno.

2. The connection which existed between Ravenna and the East was the cause of the introduction of the Byzantine style, which is only to be seen there and at Venice. San Vitale, erected in the sixth century, is a pure Byzantine church, octagonal in plan, and adorned with splendid mosaics.

Most of the churches in Ravenna have some Byzantine character about them. One of the distinguishing marks of this style is a large square block between the capital and the arch, which replaces the ancient abacus. The dome, however, is the feature which was chiefly affected by the Eastern architects, and it became the distinguishing feature of their larger churches. Consequently, St. Vitale and St. Mark's, at Venice (built by architects from Constantinople in the tenth century),—which were copied from St. Sophia, have both fine domes. The plan of St. Mark's is in the form of a Greek cross with four equal arms within an inscribing square; that of St. Sophia and that of a smaller church of the same name at Saloniki are similar. These two cities are the only places in Italy in which we find specimens of pure Byzantine style.

3. The knowledge of the art of building, which travelled from West to East, from Rome to Constantinople, was destined to return in an improved form; for the Arabs, who were in the early period of Mahometanism a quick, intelligent people, borrowed the dome from the Byzantines, improved the form of the arch from round to pointed, and brought both these features back with them to Sicily in the ninth century. There are specimens of their handiwork in La Ziza, Palermo, and other buildings. Their successors, the Normans, who were noted for their church-building talents, per-

ceived the beauties and refinement of Arab architecture, and made use of it in two buildings, which all who have seen will allow are gems of architecture and decoration. These are the Maritana, or Capella Reale, at Palermo, built in 1132 by Roger II., and the cathedral at Monreale, built by William II. in 1176. In both these churches stilted pointed aisles spring from elegant marble columns. The roofs are open and painted, the walls covered with a profusion of mosaic.

4. The Normans left traces of their architecture in various parts of Sicily, and also on the mainland; as, for instance, in the cathedrals of Salerno, built by Robert Guiscard in 1084; of Amalfi, of the same century; and in other parts of Southern Italy. The characteristics of these edifices are very similar to the Anglo-Norman, so they do not require special mention.

The country possessed by the Longobardi, or Longbeards, which extended from the Apennines to the Alps, abounds with fine cathedrals in a Romanesque style, called from its inventors the Lombard. Although it has many features in common with the Norman, it differs from it in various material points. Its chief marks are vaults in place of the wooden roofs which cover the churches south of the Alps, pilasters and columns in place of flat buttresses, external arcades and corbel-tables; and particularly projecting porches, the columns of

which stand upon lions and other animals. The best examples of it are St. Abbondio at Como, St. Ambrogio at Milan, St. Michele at Pavia, the cathedrals at Parma and Piacenza, the round cathedral at Brescia, that at Ancona, part of that at Monza, and the church of Borgo San Donino. The style seems to have lasted to the end of the twelfth century. At the beginning of the thirteenth century the pointed arch is found in conjunction with the round arch, as in that interesting edifice St. Maria della Pieve at Arezzo, finished in 1216—this, however, can hardly be called a Lombard building. Of the Pisan school, the picturesque group of Cathedral, Baptistery, and Campo Santo springing out of the green sward in a deserted corner of the city, affords an example of the perfection of the Romanesque art. The external decorations consist of innumerable arcades, inlays of marble, and sculptured foliage imitated from the antique. In the baptistery you will perceive a gradual uprising from the round arch to the pointed style. It resembles a pollard oak crowned with fresh sprouts. The tracery of the Campo Santo, 1278, belongs to the Gothic period.

It may here be mentioned that, in the neighbouring city of Lucca, there are several Romanesque churches which yield in interest to none in Italy. They are, for the most part, copied from the cathedral at Pisa, but have features which differ from

Pisan architecture, inasmuch as the mouldings partake of Greek character.

5. The Classical tradition of art seems to have affected the Mediæval builders in Florence. The two principal churches after the cathedral—viz., St. Croce and St. Maria Novella—have wide naves covered with wooden roofs instead of vaults, such as we see north of the Alps. The transepts are of great extent, and have, on each side of the principal apse, three or four chapels opening into them, which give great importance to this part of these churches. The windows are lofty, with geometrical tracery in the heads, and in some cases transoms.

The cathedral and its campanile afford a perfect specimen of Florentine Gothic. There is much elegance about the windows, but the contrast between the dark and light marble, with which the whole exterior is panelled, tends to destroy the breadth of effect which is so charming in the earlier styles.

The churches of Venice resemble those of Florence in their general features. The two chief churches are SS. Giovanni e Paolo and the Frari. Both are lofty, with simple columns and plain pointed arches, high windows with very massive transoms filled with tracery. In all these edifices there is much elaboration in the doors and windows.

Two churches, entirely of Northern growth, are

more attractive than any purely Italian building. One of these is the monastery of Casamari, near Sora, Terra di Lavoro, a fine thirteenth-century church unspoiled by modern additions. The church is cruciform in plan, with compound piers, massive string-courses, a simple arch in the triforium, plain lancet windows above, and very elegant vaulting. The chapterhouse has a groined roof supported by clustered columns, with remarkably elegant capitals. The local tradition is that it was executed by a company of *muratori*, evidently a wandering body of Freemasons.

The other church is one close to Montefiascone. It is of thirteenth century, built by Urban IV., who was of French origin, A.D. 1262, hence, perhaps, his partiality for the French style of architecture. It has clustered columns, pointed arches, and capitals covered with rich foliage, altogether recalling some of the best Gothic edifices of the North.

It will have been evident from this slight sketch of the local styles which occur in various parts of the country how difficult it would be to frame any scheme of classification which would be applicable to all. The following is a simple chronological arrangement of the prevalent styles, which, however, must not be taken as arbitrary.

In the First Period of the Basilican style, the architraves of the old temples and other edifices

were placed upon the columns to support the walls of the nave; frequently these are of different styles and orders.

At the sanctuary of San Lorenzo interesting specimens of this variety may be seen, plain and rich pieces of architrave side by side. In other churches, such as St. Maria Maggiore, St. Maria in Trastevere, St. Prassede, and St. Crysogono, the architraves were executed especially for the building; the old St. Peter's had the architraves on the columns between the main and principal aisles, and arcades between the outer aisles. There are only two examples of this style out of Rome, one of which is at Murano, near Venice. This style was confined to the fourth century.

The Second Period of Basilican architecture embraced all those churches in which arches are used upon the columns instead of architraves. In the earlier examples there is an entablature of some kind, in the later a mere string moulding.

This style prevailed from the fifth to the eleventh century; the examples in Rome are St. Paolo fuori le Mure Ara Cœli, Quattro Coronati, St. Giovanni Laterano, St. Bartolomeo in Isola, Santa Prisca, St. Pietro in Vincoli, &c. At Ravenna, St. Francisco, St. Appollinare, St. Agata, St. Apollinare in Classe, St. Teodoro. In Lucca, St. Giovanni, St. Michele, St. Frediano, and others. St. Zeno, Verona, St. Miniato, Florence. In almost all these the

columns, with their capitals and bases, are classical; the roofs are of wood. In Monreale, La Maritana, and Madonna del Pieve at Arezzo, the cylindrical columns support pointed arches; these date from the twelfth to the fourteenth century. Square rectangular or polygonal piers are generally later in date than the plain cylinders.

Most of the churches of the Second Period had wooden roofs; this fashion of covering the building prevailed south of the Alps, in some localities such as Florence, till the fifteenth century. The introduction of vaulting, which began in the Lombard edifices, produced a corresponding change in the piers. For the support of the main and cross ribs of the groining, small columns or angular projections were required; these were attached to the faces or angles of the main piers, whether they were circular or rectangular; this introduction of the vault brought about an entire change in the system of building. The first period of vaulting was by means of a plain cylinder called a barrel vault; a pilaster was attached to each face of the pier to sustain a broad vaulting rib, as at San Celso, Milan, and Sta. Maria in Cosmedin, Rome. In the latter church we see an example of the compound rectangular pier, used alternately with round columns. The piers are, however, sometimes much more complicated; as a general rule, the more elaborate the division the later the date.

The *Lombard* style prevailed during the first half of the twelfth century. St. Ambrogio, Milan, is a good type of it. There each bay of the nave encloses two arches and two low arches in the clerestory above. In this category should be placed St. Michele, Pavia, and St. Eustorgio, Milan.

In the next Lombard Period we find a loftier vault, a defined clerestory, and more slender columns, used both for internal and external decoration. Some of the most interesting examples of this period are the church of Borgo St. Donino, near Parma, the cathedrals of Piacenza, the Baptistery of Parma and Modena.

The Pointed Style of the Thirteenth and Fourteenth Centuries.—It may here be remarked that in Italy, after the introduction of the pointed arch, the vertical or aspiring principle so completely mastered the horizontal or classical principle of architecture that even string-courses were abandoned, as in the churches of St. Francesco, Parma, and Sta. Trinità, Florence; in these there is no regular triforium, and the clerestory, especially in the latter, is unimportant. But this principle of verticality is carried to its height in the interior of Milan Cathedral, where the column is carried to the springing of the vaults, and but a small space is left for a clerestory window; the consequence is that the great height of the columns renders the interior one of the most sublime in the world.

Having given an outline of the progress of Christian architecture to the time of its decline in the fifteenth century, I may mention some points of difference between Italian and Northern Gothic. In Italy the mouldings are weak in comparison with those of French or English, which have more vigour; there is often a repetition of flat surfaces, with carving in low relief, in place of the rich undercut foliage you see in the arch-mouldings of our thirteenth-century buildings. In Italy much of the decoration is derived from panels of rich marble, in place of sunk carving; this may be the most natural decoration to employ in a country where marble abounds, but the effect of carving is more satisfactory. In short, with few exceptions, the Gothic of Italy is unsatisfactory when compared with ours, and for that reason it is to be regretted that it is beginning to be employed in some of the most important works of our own country.

IV.

CHURCH ARCHITECTURE OF THE NINETEENTH CENTURY.

THIS subject embraces a retrospective view of the past condition of church architecture in this century, a consideration of its present state, and an anticipation of its future prospects. At the beginning of this century architecture generally was at a very low ebb, and especially church architecture. People were careless and indifferent about their churches: it was immaterial to them in what style they were built. Renaissance was applied indiscriminately to all buildings, civil or ecclesiastical; and had Sir William Chambers written Chinese architecture into fashion—so little did people care about architectural propriety — we should probably have had now and then a Chinese temple, with pagoda bell-tower, for a place of Christian worship. Gothic was considered a rather barbarous style, and its study the exclusive province of the antiquary and virtuoso. The writings of Bentham, Grove, and Milner had, however, produced some results; and the styles of the "Dark Ages" had their representative buildings in Fonthill and Strawberry Hill,

and other baronial residences of brick and compo, which were not built for posterity, but to suit the whim of a moment, and to satisfy that transitory taste for the romantic which was engendered by such books as "The Castle of Otranto" and "The Mysteries of Udolpho."

The writings of Britton were destined to work a great change. When his magnificent volumes appeared, people began to discover that their fine old cathedrals and parish churches had some claim upon them for admiration; and, as imitation is the natural result of admiration, they soon began to imitate. It is needless to say that their first works were feeble caricatures of the works of the Middle Ages. Still even these showed that, as soon as Englishmen were made acquainted with the fact that their forefathers had done something which they could be proud of, they were anxious to perpetuate the remembrance of their works.

This pride of their ancestral productions had occasionally shown itself during the period which followed the revival of Classic art, notwithstanding the various events, political, religious, and accidental, which tended to keep it down. This was especially the case in the first half of the seventeenth century; during which period the Divinity Hall, Oxford, was built in a passable imitation of Third Pointed style. Most of the Gothic buildings

of the last century were truly very barbarous. There is a church at Moreton, in Dorsetshire, built in 1773, in much better style, and with much more character, than many churches that were built 50 or 60 years later. It has a veritable apse, late Decorated windows, the tower at the side, a quatrefoil parapet, and open seats.

The writings of antiquaries, I said, produced a reverence for the works of our ancestors; but Englishmen are not content with mere reverence: if they admire a thing, they at first imitate it blindly; then they analyse the object of their admiration; discover what qualities produce this feeling of admiration; and finally make these qualities their own. Consequently, after the taste for Gothic had been roused by Carter, Britton, and Hope, the more practical books of the elder Pugin appeared, containing measured drawings of some of the finest works of the Middle Ages, so as to render their reproduction a comparatively easy matter; also Rickman's excellent nomenclature and classification of the various styles, reducing the study of them to a system. How architects, with all these helps, should have produced such abortive attempts at Gothic as were then common, it is difficult to imagine.

The taste for the Castellated style still lingered in ecclesiastical as well as civil architecture. Architects perpetuated the idea of the church militant;

for they crowned nave, aisles, vestry, towers, and chimney-pots with embattlements; enlivened here and there by meagre pinnacles, from which sprouted flowery crockets, and which were surmounted by finials like petrified cabbages. The roofs were invisible from their flatness, and adorned internally with elaborate vaulting and ribs carefully moulded by the plasterer; the windows were all of the same type,—three-light Perpendicular, with massive transoms—for the purpose of hiding the galleries. A thin spectral tower (generally engaged) was invariably stuck at the west end; and, if there was a window on one side of it, the architect necessarily added its fellow on the other, or in place of it, a beautiful blank painted to match. We all no doubt know some of these structures; and as we pass them think that we should like to have the chance of pulling them down and building good First Pointed churches upon the spot with the old materials. We must, however, honour the spirit which caused their erection, though we speak deprecatingly of their architectural qualities. While these churches were being perpetrated, and when men were beginning to tire of mere imitation and to inquire into first principles, a master-mind arose in the younger Pugin. Familiarised from his youth to Gothic art, he excelled every one in his intense zeal for and his consequent acquaintance with it. He first astonished the sober world of architects by the

publication of his "Contrasts," in which he attacked those who had tortured as well as those who had despised his favourite Gothic.

This book, though in it he made use of caricature as a means of depreciating the works of his contemporaries, did good, inasmuch as it stirred up the public to inquire into the merits, and induced them to try to make themselves acquainted with the principles, of Gothic architecture. Many of us, I have no doubt, recollect the sensation which was produced when the publication of the "True Principles of Christian Art" took place, in 1841, in which he showed clearly that almost everything that had been done in the way of revival of Gothic art was full of faults. In it he taught us what he conceived to be the true principles of Christian art, viz.,—that there should be no feature about a building which was not necessary for convenience, construction, or propriety; that all ornament should consist of enrichment of the essential construction of buildings; that all shams were inadmissible in Christian churches; in fact, that the external and internal appearance of an edifice should be in accordance with the purpose for which it was designed. And Pugin carried out these principles faithfully in the buildings he had the opportunity of erecting—St. Marie's, at Derby; St. Alban's, at Macclesfield; St. George's, in Southwark; a church in Nottingham; and St. Chad's, at Birmingham;

but, above all, in St. Giles's, at Cheadle, where he had a *carte blanche* for the cost. I have visited them at various times, and I cannot but think them the best buildings of their day. Pugin saw beauty in every style—although he acknowledged that the later styles showed a decline in art; and, although he was the first to tell us that the thirteenth was the perfect period of art—consequently, several of these buildings before mentioned are in Second and Third Pointed styles.

The "Apology for the Revival of Christian Art" followed soon after the publication of the "True Principles." Before these books appeared, a predisposition for Gothic was shown in the selection of Barry's design for the Houses of Parliament, to which design Pugin seems to have contributed. Meanwhile, a contemporaneous movement in favour of Gothic was going on on the Continent, to which the writings of Du Caumont, Didron, and others in France; and in Germany, the restoration of Cologne Cathedral, greatly contributed. But English architects were considerably in advance of those on the Continent; for, when the competition for Hamburg Cathedral took place, the late Sir Gilbert Scott gained the day; and later, in the general competition for Lille, out of ten prizes, five were allotted to Englishmen.

After Pugin came a writer on principles, whose wonderful command of language, united to singular

boldness, completely led away those whose opportunities for the study of style were limited, and who were content to have their opinions formed for them. What he believed to be true principles of all good architecture, and especially of Gothic, were enunciated in his Edinburgh Lectures. Truly he must have astonished the modern Athenians when he took them to task about the principles on which their stately edifices were built; when he demolished their temples with a breath; set up his own idol of beauty and truth; and commanded them to worship. No doubt he has done good in his generation by making people think about matters which they were accustomed to leave to architects. But what are we about that we should find it necessary to be instructed by amateurs? Surely those engaged in the practice of building ought to know the most about the principles of architecture.

The writings of Pugin, Ruskin, Parker, Petit, and others, all had educational influence upon the public mind; and their results, combined with the various tendencies of religious belief, of early habits, and of local associations, have caused great diversity of opinion amongst architects, as to which is the best architecture for our churches. However, those who hold differing opinions may be broadly divided into four schools. Before considering the claim of each of these to be the right one, I will venture to point

out what seem to me to be some of the errors prevailing in our practice of church architecture. The tendency of the earnest admirer of Gothic is to run into extremes. Uniformity is his great bugbear. As the architect of 50 years ago made everything balance well, he takes a delight in making nothing balance at all. If he has a row of windows on one side of a building, which are all intended to admit an equal quantity of light, and which should, therefore, naturally be alike in size, though they might vary infinitely in detail, he would go out of the way to make them as unlike as possible in form, proportion, and general character.

Again, he says that buildings should speak. Certainly they should. The principal divisions of his edifice should proclaim their use and destination; but then it is not necessary that all parts should equally force themselves upon the attention of the public. These are, however, errors on the right side, so to speak: the errors on the other side are probably more numerous—I mean the errors of those who can hardly be termed Gothic architects. However, as all of them lay claim to the employment of the true style for church architecture, we will consider their merits one by one. These opinions may, as I have stated before, be divided into four classes, viz.—

The Eclectic.—Those who would select parts from each style and combine them.

The New Light.—Those who would invent a new style for our churches.

The Antiquarian.—Those who would faithfully copy old churches with regard to style.

The School of Development.—Those who, taking a point for departure, would therefrom proceed to develop the architecture of the future.

In these enlightened times, when an architect's library is stocked with books on every known style, when his travels may embrace every part of Europe, and when, in the course of an ordinary practice, he is called upon to make use of various styles, it is not surprising if the consequence of his diffuse studies should be, that he should become a general admirer—one not to be won to pay any particular attention to the chaste Ionic, the voluptuous Corinthian, or the demure Gothic; but one having a vague admiration of beauty in general, wherever it was to be found. Therefore the Eclectic is a widely-spread school, and its scholar is a sort of butterfly artist, who sips sweets from every flower. He can show you in his sketch-book beautiful bits of Egyptian, Grecian, Gothic, Renaissance; and, if you give him a church to build, it will probably be composed of portions of St. Mark's of Venice, of York Minster, and of Wren's Gothic churches. It will probably contain a specimen of every known Continental style. It will be a medley of all things rich and rare, and would

bring back to your mind the recollection of your various Continental tours. There would be a want of unity and propriety of design in it, so necessary in all good architecture. This school, therefore, is not that from which we expect much for the future.

"Why should we not have a new style for our churches?" say the *New Lights*. "Sweep associations to the wind; ignore ritual, as it appertains to the Dark Ages. Let us have capacious and comfortable buildings, well adapted for seeing and hearing—the great objects of our churches." But the New Light, though he would create a new style from the Gothic, and call it, perhaps, Victorian, hardly deserves the name of a lover of Christian art. His principle would be the best to go upon if we were to ignore ritual altogether, if we were to pay no attention to associations, nor to architectural propriety. It is altogether utilitarian, and the utilitarian is a good principle to go upon when applied solely to domestic building; but for a church we want something more than a mere auditorium—than a building erected on the best plan for seeing and hearing—or the Colosseum of Rome would be the best model for our churches. A church should possess not only the quality of utility, but that of beauty, and not only beauty of form, which affects only the sense, but a beauty of propriety, which appeals to the intellect, and the attraction of association, which appeals to the

feelings through the senses. We cannot afford to ignore the element of association, which now more than ever connects our idea of churches with good Gothic architecture. We want our churches to be church-like; not to be exactly reproductions of what has been done before (though that would be preferable to the ideal style which we constantly see about us), but to have a broad family likeness to those of the Middle Ages. We want to see chancels, naves, towers, porches, and other features that we perceive in our old parish churches. We want propriety of style.

So, perhaps, the representative of the third class, the *Antiquarian copyist*, would build us the most excellent church. If you gave him a mansion to build, he would erect you a building in which you would have antiquarian perfection, but a great amount of discomfort. It would probably be built in the form of a quadrangle, with extensive passages like cloisters, so that your dinner would have the opportunity of getting cold on its way to your banqueting hall; your withdrawing-room would be occasionally obscured with smoke vomited from the open jaws of an immense fire-place; you would have to climb uncomfortable, corkscrew staircases, placed in all odd corners of the building, to reach your dormitory; your view would be obstructed by quarry-glass in the windows; and perhaps the architect would tell you that you would be quite

as comfortable with rushes under your feet as with a carpet. But give him a church, and you would have something near perfection—a model of good style, with deep chancel, elaborate screen-work, stained glass, and polychromatic painting, all the detail correctly worked out, and of one date.

But even this approach to perfection would not suit some of us—I mean those who have greater hopes in the progress of the fourth class, or that of *Development*. The disciples of this school prefer to take the style of the thirteenth century as the *point de départ*, and to prove its capability of extension, satisfying thereby the idea of propriety, the longing for the beautiful, and the natural love of novelty common to us all.

This is the most advanced school, and its disciples must have undergone a considerable course of study to qualify them to belong to it. No one who has not got the true feeling for Gothic ought to belong to it. Before you can develop a style, you must be acquainted not only with its different details, but also with its principles.

Let us consider the claims of this class at length, as the architecture of the future is of importance to us all. The disciples of the school profess to build exactly in the same way as the old architects would. But can they do so? The question naturally arises, Upon what principles did the old architects build? Pugin considered the principle of

ornamenting only that which was useful to be the true plan. Ruskin, again, tells us that ornament is the principal part of all good architecture: others say that symbolism was observed by mediæval architects. With regard to the latter idea, it seems to me that Durandus's writings are simply a gloss upon churches that were already built, for the purpose of strengthening the faith of the pious observer; and that though here and there a builder, penetrated by a feeling of religion, may have borne in mind the meaning of certain symbolical forms while designing churches, yet symbolism was ever regarded as only an adjunct, as a help and aid to the designer. What the Mediæval builders really did was to make the best use of the best materials. They adhered for the plan and arrangement of their buildings to a certain type, which was modified from time to time. Now, can we work on this principle on church building? Not precisely. The arcuated system is the best for small materials, but now that we have unlimited use of iron, and the advantage of machinery for raising large stones, if we do as they did, and make the most of our materials, the trabeated principle will come in, interfere with our lofty arcades, and destroy the character of our Gothic architecture. I do not mean to say that iron should not be used, but that, if used, it must be employed for the purpose of strengthening roofs in columns, as bands,

ties, and cramps, but seldom in the form of beams. It may be asked, Why should we be copyists,—why not try something new? But that we can do while still confining ourselves to the materials and to the styles used by the men of the Middle Ages. In fact, we find the necessity for admitting the claim of ecclesiology to act as our guide.

I venture to differ from those of the class of development who advocate the adoption of the pure Lancet style as the starting point? It was found capable of improvement, and it was well developed in the Geometrical Decorated, which was the most perfect and the most beautiful style of English architecture. Mullions and tracery are necessary in most cases, and they were invented and applied by the thirteenth-century architects. Are we to consider ourselves better able to give a new phase to the earliest Pointed architecture?

These are the classes into which our architects are divided, and from the last we have great hopes; but as yet few steps in advance have been made.

Our next point for consideration is the prospect for the future: let us briefly trace the progress of development in the Middle Ages, in order that we may gain some ground for future advancement. We shall see that as soon as the utility of each new feature was noticed, this feature was engrafted on to the architecture of the day, so that in this manner there was constant progress.

The arch has always been a distinguishing feature in good church architecture. All progress depended upon the form it assumed. The vaulted roof by its gradual improvement in shape produced corresponding changes in every other part of the building. The barrel vault of Roman buildings was generally adopted by those who built in the Romanesque style. It was soon found how much this form of vault could be strengthened by ribs at intervals, with corresponding piers or buttresses in the wall. The principle common to all good architecture, in all ages and countries,—viz., that of throwing the weight upon some few bases of support by means of beams or arches —was soon recognised and generally employed: it was seen to be best effected by *groining*, throwing the weight of the vault, by means of longitudinal and transverse arches, upon piers, so that the wall space intervening between the piers might be thinned, as it had to bear only its own weight, and not the weight of the roof as heretofore. In Byzantine buildings the size of the dome rendered an immense pier necessary, but in the Romanesque, square projections internally and externally of about double the thickness of the general wall were all that was required. Groining ribs were soon introduced to strengthen the whole and to tie the vault together. The only principle of which the Mediæval builders were

cognisant was that of making the best use of opportunities; consequently, as soon as they saw the pointed arch and its superiority for vaulting purposes, they adopted it universally. One of the first modes of groining was the tripartite system: the bay to be covered was divided into two parts by arches running transversely to the length of the church: other ribs sprang from the outer piers, and met in the centre at the highest point. The best examples I know of it are in the choirs of Canterbury and of Rochester. But this was soon found to be an imperfect mode of working, so the usual quadripartite vault was adopted in its stead. As the transverse arches were at first very massive, they required for their support half-columns, from which also sprang the cross ribs: but afterwards as the mouldings became more elaborate, they were borne upon detached shafts. The wall space between the piers was at first pierced with the usual lancets, but it was subsequently found more convenient to use mullions, and to fill the arch of the window-head with geometrical tracery. Then it was discovered that if flowing lines were used in the tracery, less space was required in the window-head than for geometrical forms. The arches might, therefore, be lowered, and the height might be reduced, and in this manner the Decorated or Second Pointed came into fashion: thus each change in style was produced by the

introduction of what were thought to be improvements in construction.

We do not generally agree with our forefathers in thinking the Fourth Pointed style an improvement upon that of the thirteenth century, so we ought to have nothing to do with this later style for our future buildings.

To return to thirteenth-century churches. By reducing the bases of support, and piercing the wall-space above the nave arches to admit of triforium and clerestory, it was found that the materials were economised and the effect improved. In many of the cathedrals of France, where imposing elevation was aimed at, and the weight of stone as much reduced as possible, it is found that the walls consisted of a mere outer and inner shell bound together by bond stones at intervals, the weight of vault being carried off by flying buttresses, so that the building became what may be termed a complete and perfect *ossature*, light but firm, perfect for the purpose for which it was intended, springing from supports exactly sufficient to sustain the superstructure. We see in these churches an amount of science and a knowledge of the laws of equilibrium which is astonishing when we consider the imperfect contrivances for building and the limited extent of science at the time.

Thus it appears that the common-sense principle

of making the best use of our material is the real one, and that if we wish to develop, the pure Lancet style is not that from which we should start, as art had not in it been properly developed. We see, also, that we must make a restricted use of iron in our churches, if we wish to build at all like the men of the Middle Ages, or, rather, if we wish what appears to me to be a *sine quâ non—i.e.*, to make our churches at all like those of the Mediæval times,—if, in fact, we are to use Gothic architecture for them. We see that the majority of our churches are mediocre, and that many of them are below mediocrity, so much so as to be unworthy of criticism.

I may mention a few things in which our churches fail for want of adherence to style. Most churches are classified as belonging to one style or another (I do not include the eclectic buildings); but we find sometimes early churches built with proportions of later times: we find the square abacus used indiscriminately with the round—flat, shallow, late mouldings in place of bold bowtels—pointed cusps, and deep foliations introduced into English Gothic churches—and square cusps, and flat foliations in Second Pointed buildings. We find plate tracery, bar tracery, and plain lancets close together—moulded piers in place of circular or clustered columns—and arches, segmental pointed and four centred, all used together

in the same building. Now, these are evident inconsistencies; for, as I said before, most buildings are professedly built in one style. But if architects make these blunders, what remedy can there be for them until ecclesiology is taught in our schools with the other *ologies*—until the public taste is so much improved that any ordinary observer can criticise and expose these fallacies? Now, this is not a retrogade doctrine. I do not assert that our churches are all to be built for the future in the Lancet style or the Decorated style, as at present practised; but I do think that it is necessary for the advancement of art that there should be some standard of taste, some canon of criticism; some plain rules that will enable people generally—well-informed people—to protest against the perpetuation of such mistakes, and this before architects, as a body, can venture to trust to their own inventive powers: for it ought to be incumbent upon them, before they invent, to be thoroughly grounded in ecclesiology, or their inventions will be worthless. There are some few amongst us who are so grounded, and who, receiving information from every source, are able to invent in good taste. Everything that passes through the crucible of their minds turns to gold. They are the possessors of that true philosopher's stone—the love of their art: everything they put their hands to turns out of sterling worth. But in order to enable them

and their works to be appreciated, in order that our present churches shall be in good style, and our future ones in still better, it is necessary that the public taste should be raised, and then architects will be forced on ahead. This education of the public mind is to be accomplished by means of books, of criticisms, of lectures, and, most of all, by means of the association of architects to guide and instruct it. Of books on classification of architecture we have several that are most valuable. The publications of Bloxham, of Rickman, of Parker, and of Fergusson, are in the hands of every one who aims at being at all a connoisseur in the art; but we are sadly in want of some cheap and simple treatise, some synopsis, like the "A-B-C-Daire" of De Caumont, to be taught in schools, so that the architecture of France, Italy, and Germany, as well as the architecture of our parish churches, may become familiar to us all. We have few who are qualified for the high position of architectural critic. It is the commonly received opinion that an architect should not criticise the works of his fellows; but so long as he criticises faithfully, and simply for the love of truth in art, surely he may to a certain extent be allowed to do so. However, it is better that the critic should be one who has been an architect, but is no longer one—a man of high standing, honourable mind, and one unbiassed by personal feelings. It would

be absurd to say that he should be a man entirely without bias, for we all have that, to some extent. Let him be prejudiced in favour of one style, if he pleases, for his colleagues in the world of criticism will look after the interests of the others. Let him be bold to speak out his opinions; and, if unsparing when writing down abuses, it will be none the worse for us. He may be as cutting and slashing as he pleases; he may wield the literary tomahawk and bowie-knife as much as he likes, provided he fights under the banner of truth. Otherwise he is but a guerilla, carrying on war on his own account. In that case, the sooner he is put down the better; if a privateer, he should be treated as a pirate.

This is a wordy age. Disquisitions and long lectures on all matters connected with art are common —most of them statements of the lecturer's own views. Would it not improve the public taste more if our lectures were more confined to matters of fact; if each man were to take up the subject with which his practice has made him most familiar; if one gave us a lecture on the architecture of the eleventh, twelfth, or thirteenth centuries, on the Byzantine style, or on Gothic construction; another on stained glass, and another on polychromy? I think we should learn more from them (and we are none of us beyond learning) than from lengthy declamations or flowery articles about theories, and things indefinite.

V.

STYLE AND PROPORTION IN GOTHIC BUILDINGS.

I WISH to call your attention to the general want of pure style and its concomitant quality, correct proportion, in Gothic architecture as at present practised—defects which seem to me to arise either from a mistake about true principles, or from a want of leisure to carry them out. No doubt there are some among you who feel inclined to exclaim, Were not the true principles of Gothic architecture discovered years ago and enunciated by Pugin and others? Have they not been acted upon ever since? Have we not developed the capabilities of the style and made immense progress in it? Has it not, in fact, become the fashionable style of the day, and been adopted most successfully in our public buildings? To this I would reply by endeavouring to show that for the most part there is a misconception about true principles, and that if there has been a movement at all in the art it has been retrograde instead of progressive. It is true that we possess innumerable buildings in various styles of so-called Gothic. We have, for instance, International Gothic (a

jumble of English, French, and Italian details) for our places of worship; we have Victorian Gothic, the chief characteristics of which are granite columns, cabbage-leaf capitals, and arches and mouldings of all imaginable forms, for our club-houses, theatres, and music-halls; we have Builders' Gothic, with its thin clustered columns, dog-tooth and other ornament, for our shop fronts and warehouses; we have Engineers' Gothic, with its cast-iron columns and wrought-iron groining, for our railway stations and bridges, and so on *ad infinitum*. That is to say, we have been driven by the fickle breeze of fashion into the turgid sea of eclecticism because we have abandoned the sheet-anchor of true principles.

Let us briefly consider what the guiding principle of modern Gothic should be. It has been asserted, and with truth, that the principle upon which the Mediæval architects worked was to employ the best construction which the materials at their disposal allowed, and to decorate the constructive forms in the most appropriate manner. This in the abstract is the principle of all good architecture at all periods of the history of the art, for what is architecture but the art, or rather the science, of building in the best manner with the best materials? Thus there is, or should be, a sort of architecture most suitable for iron, another for wood, another for concrete, another for brick

and marble; but these are independent of what we term the styles, that is to say of Greek, Roman, Italian, and Gothic, which are imitations of the buildings of different nations and ages. As soon as we begin to employ them, a new principle (the imitative) steps in, and when resorted to architecture becomes an imitative or fine art. Now, no one will contend that Gothic pure is the best suited for all the multifarious requirements of the present day. In the large public edifices of this gloomy city we require as much light and air as possible, and roofs of immense span, which cannot be obtained if we use only the lancet windows, groined roofs, small openings, mullions, and transoms of any pure Gothic style.

If a Mediæval architect were living now, and had to design a railway station, acting on the principle I have just mentioned, he would put aside his former notions, and adopt cast-iron construction and eliptical roofs in place of lancet windows and stone vaulting.

Thus, our Gothic architecture is purely an imitative art, suitable only for churches, dwelling-houses, and smaller edifices. If employed in large public buildings, it has to be tortured and twisted into all sorts of conceivable forms to adapt it to modern requirements, unless we are content to forego the utilitarian spirit of the day, and to sacrifice some of our comforts and luxuries

for the sake of making our edifices fine works of art.

In all imitative art it is the object of the artist to render exactly the character of the subject he imitates; for instance, when a painter copies a flower he studies the twist of the stem and the droop of the leaves in such a manner that he can at will reproduce a group of similar flowers, all possessing the characteristics of the original model. He does not attempt to improve upon nature by imparting the rigidity of the thistle to the leaf of the rose or lily of the valley, or by joining oak leaves to the flower of the crocus; so the architect, when about to design a church in the style of a certain period, should study the characteristics of the buildings of that period until he becomes thoroughly imbued with the spirit of that style, and able to reproduce the work without actual copyism. He should not, any more than the painter, endeavour to improve upon his models by engrafting the full-blown Perpendicular on to the budding Early English for the sake of a little variety.

I have tried to prove that the principle of the Mediæval architects is not that of our Gothic—that theirs was scientific, ours should be artistic. If we persist in using Gothic forms of all dates and styles, and picturesque bits of our own invention in the same building, together with Italian proportions, let us be fair and call our architecture by the right

name, the Pseudo-Gothic, or, as it might be more properly called, the Eclectic style. It may seem to some a rather narrow view to take of the noble art of architecture, to fetter it by confining it to some of the numerous styles or schools. But it is quite the reverse; it is simply bringing common sense to bear upon the subject, liberating us from the tyranny of schools. Common sense teaches us to build in the manner best suited for the object in view; for instance, pure Greek architecture is fitted only for such buildings as museums, public galleries, porticoes, and such like which can be designed without any sacrifice of the character of pure Greek architecture; Roman, and its adaptation in Italian Renaissance, as practised, for instance, in Venice, is adapted for palaces, clubs, warehouses, &c.; Gothic for churches, colleges, country and town houses, and so forth. So that, if we were guided by common sense, we should select that style which will be most appropriate to the end in view. But there have arisen of late years structures to which none of these are applicable—railway stations, crystal palaces, shop fronts, aquaria, and rinks. Do not let us caricature any of the known styles by adapting them for these purposes. Surely we have sufficient inventive power to enable us to put together our materials in an ornamental manner—to invent a style which shall not be a monstrous combination of all the known modes of ornamentation of which

the principles are utterly opposed to one another. Though sufficiently eclectic in taste to admire any building that has the true character of any known style, except the hybrid Elizabethan, or that negation of style known by the name of another good Queen, I am bitterly opposed to that eclecticism which prevails in many of our large public buildings, and which is the architectural vice of the age, and I take every opportunity of protesting against it, especially when it usurps the rank and title of Gothic. For Gothic is our sole national and sole ecclesiastical architecture—our only national style, because no other style worth the name has ever been developed in England;—it is our only ecclesiastical style, since it is acknowledged on all sides, even by those who have no affection for the word "ecclesia,"—that it is the most appropriate for places of worship; it is, in fact, associated in our minds with the idea of worship because it is the style of the noble cathedrals, abbeys, and parish churches which adorn our native land. Let us, therefore, endeavour to keep it from degradation.

It may be asked to what purpose is all this protestation. Are not our churches and other Gothic buildings sufficiently pure to satisfy critics? and have we not to deal with a public uninformed in all matters which does not require the extreme severity which you advocate? It is true that critics are

easily satisfied nowadays, but outside the profession there is scarcely any one qualified to be a critic. It is, however, no less true that there are but few churches in London that are perfectly pure in style, and that would stand the test of a proper criticism, in which all the details are in keeping with the spirit of the style. This you can prove for yourselves if you will take some reliable handbook on Gothic architecture with you on the occasion of your visits to the public buildings of the metropolis. The result will be that you will find in many churches such anachronisms as these — lancet windows, plate tracery, and flowing tracery side by side; four centred arches and geometrical tracery in others; detached colonnettes and columns in Third Pointed buildings, and mouldings of all periods intermingled. And should you find the details correct you will frequently find the proportions defective; for it must be remembered that each style had a characteristic proportion, and that it is as erroneous to build an Early English church on the proportion of a Perpendicular church as it is to place a lancet and late Perpendicular window in juxtaposition. But more about proportion presently.

It is true that we have to deal with a public utterly uninformed on the subject of Gothic architecture, or we should not see our cathedrals, colleges, and parish churches ruined by incorrect

restorations. But the public will soon become more enlightened on such matters. Before long it is to be hoped the rudiments of architectural criticism will be taught in our schools and colleges, then woe be to the man who palms off an Eclectic for a true Gothic building. Let us not descend to the low level of public taste, but endeavour to improve it. Let us put perfection before us, so that we may at least attain to some excellence.

I have heard a Purist school spoken of, but if it exists, Where are its works? Where its professors? Where its writings? Where its scholars? In a pamphlet published a few years ago,* I remarked that if "Webb, Glynn, Willis, Whewell, Williams, Parker, Bloxham, and others were to have combined for the advancement of correct architecture, the Purist school (which they would have formed) would have triumphed, and our churches, instead of being mixtures of all things rich and rare, would have been harmonious compositions, recalling the best productions of the Middle Ages." But it is too late for this combination now; some of these eminent men have passed off the stage of life.

I said at the beginning of the lecture that sometimes those who understood true principles had not leisure to carry them out. We live too fast for the

* The Altar: Its Baldachin and Reredos. With 16 plates. London: J. G. Palmer, 32, Little Queen Street, W.C. 1873.

patient perfecting of fine art architecture. We for the most part manufacture our churches. Those about to build a place of worship generally go to the firm most in vogue. Acting in the true commercial spirit of the age, they naturally wish to get as much prayer and praise as possible out of the smallest possible space, at the smallest possible cost; they inspect the stock patterns, select their style, fix their prices, probably bargain that a little more ornament may be thrown in, and in due course of time are presented with a neat thing in churches at a reasonable price per sitting, and the job is done.

The Mediæval builders did not act in this commercial spirit; they erected churches which in some way corresponded with the wealth of their community or the size of their town. They did not stint the congregation as to space; they did not feel much concern if there was praying room for a few hundreds more than the inhabitants. They burnt with a noble ambition to erect temples worthy of the purpose for which they were destined, trusting that if they could not finish them their successors would do so. It is no disgrace to their memory if they were often too sanguine in this respect, and if they commenced cathedrals which their successors could not finish. To us it is a matter of congratulation, for it is to this ambition that we are indebted for those colossal fragments of Mediæval architecture which tower above

the mean buildings of modern times in many continental cities; such are the choir of Beauvais, the solitary spire of Strasbourg, the giant tower of Mechlin—grand monuments of the spirit of the age which produced them. I cannot advise, however, an exact imitation of this spirit. It would not answer if we were to overshoot the mark and leave our churches unfinished in order that others might have the satisfaction of completing them; but what I would advise is a careful study of the spirit of the style they practised, and an imitation of it down to the smallest details, and especially of the proportions which characterised the building of each successive period.

Many architects belonging to the so-called Gothic school scout the idea of proportion altogether. They say that it is useless to design a building on paper according to strict geometrical rules, as the foreshortening in perspective and the differences of planes will destroy the proportions in execution; but, on the contrary, we know that Greek and Roman buildings are equally satisfactory in drawing and in execution. We may be certain that there is no good architecture without good proportion, for without proper proportion architecture is merely indifferent building. I am convinced that all the best buildings of the best Gothic Period, such as St. Chapelle, Amiens, and the Cathedral of Lausanne, were designed on certain principles of

proportion. This fact has attracted the attention of many eminent architects and writers on architecture. The first to call attention to it was Cæsar Cesariano, the translator of "Vitruvius," who proved clearly that Milan Cathedral was designed on the lines of a combination of squares and triangles.

A theory of proportion was developed by Kerrich in a Paper in the nineteenth volume of "Archæologia," who applied the form of the *vesica piscis* to many ancient examples with great success; to the plans of Bath Abbey Church, Croyland, Lincoln, Hereford, and other cathedrals and churches. Hawkins, in his book on "Gothic Architecture," published in 1813, recapitulated the evidence in favour of a system of proportion.

Professor Cockerell, in a Paper read at the Winchester meeting of the Archæological Institute, showed that the *vesica* gave William of Wykeham the guiding lines for the plans of his chapels, but he found that the equilateral triangle did not apply to all the sections. In the Lincoln volume of the same Institute there is a valuable Paper by Mr. Penrose on the proportions of Lincoln Cathedral, which he proves to have been originally designed on a system of squares.

Viollet-le-Duc in the essay in his Dictionnaire shows conclusively that triangles of various forms characterise generally the buildings of successive

periods. In the round-arched styles the rectangle was used;—in Early Pointed, what he terms the Egyptian angle, in which a perpendicular line drawn from the apex equals two-and-a-half parts to four parts of the base;—in later periods, the equilateral triangle together with the Egyptian. He applies his system to many of the churches he had opportunity of measuring when engaged in the work of restoration. In the church of St. Sernin, at Toulouse—a noble Romanesque edifice with double aisles, the interior of which strikes every one who enters it on account of its fine proportions—he found that on dividing the ground line into twenty parts, five of them gave the half width of the nave—two the thickness of the pier—four the width of the inner aisle—two the thickness of the second pier—four the width of the outer aisle—two the thickness of the wall—and one the projection of the buttress. An Egyptian triangle, springing from the outer base line, gives the springing of the vault of the nave and the abacus of the arches of the aisle,—an equilateral triangle opening from the centre of the piers of the arch meets this triangle in the centre of the arch, and gives the height of the nave arches. In the St. Chapelle he shows that two equilaterals give the slope of the arch over the windows, that another, based on the window sill, gives the springing of the groining, and that others govern the entire composition

internally and externally. He applies the same principle to Amiens, Nôtre Dame de Paris, and Bourges cathedrals, which last he asserts was designed upon the lines of rectangles, and that this proportion was derived from Romanesque traditions, which prevailed for a longer period in the neighbourhood of Bourges than elsewhere in France.

Whether he be correct in all the details of his system does not affect the fact which he has made manifest, namely, that all the best buildings were designed upon certain principles of geometrical proportion. Even if the fact itself were doubtful there is no reason why we should not design on geometrical lines, for not only should we produce results more pleasing to the eye, but we should find the whole process of designing made easy, if by drawing a series of equilateral or other triangles we obtained fixed points for the positions of doors, windows, vaulting, and so on. In this manner even those who have no eye for proportion could produce excellent designs provided they were masters of detail.

More than twenty years ago (ten years before Viollet-le-Duc's essay was published) I had occasion to make a design for a cathedral in the French style of the first half of the thirteenth century, the period in which the St. Chapelle was designed (the building of it was commenced in 1250). My first object was to ascertain what were the leading

proportions in buildings of that period. All the systems which I have described have reference to what may be called the occult proportions, because,—supposing a building was designed upon a system of equilateral triangles the bases of which did not come within the scope of the vision of the spectator—the beauty of form afforded by the triangles would not be perceptible. My wish was to ascertain the visible proportion—such as the height of nave or aisles with relation to their breadth. On comparing the sections of contemporary buildings, such as St. Chapelle and Westminster Abbey, I noticed the prevalence of a certain triangle, which seemed to afford governing lines for the whole. In that of the St. Chapelle, one triangle of this description embraces the two lower sides of the wall, diverging from the centre and the apex of the main rib. (See Pl. 2.) In Amiens two similar triangles give the height and width of the nave, and in the section of Westminster Abbey (Pl. 1) we see the application of similar triangles. In these cases the base is on the ground, not above the lines of the bases of the columns, as in Viollet-le-Duc's theory.

Having thus discovered what may be called the generating triangle, I applied it in the manner shown in the illustrations.

To refer to the plan of the Thirteenth-Century Cathedral (Pl. 3):—The width of the nave being

given, three of these triangles give the length of the church from the west wall to the *chevet* of the lady chapel; and the apex of the second marks the extent of the transept wall. Similar triangles applied in various ways afford successively,—the external projection of the transepts,—the length and breadth of the western chapels,—the commencement of the *chevet* of the choir,—the positions of the columns and vaulting shafts,—projection of buttresses, and other minor details. In order to avoid confusion, a few only of the lines of the triangles are shown on the plan.

In the transverse and longitudinal sections (Pl. 4 and 5) the same sort of triangulation governs the whole. The east elevation (Pl. 3) affords a complete illustration of this system. Here the single triangle, A A A gives the height of the main roof; divided into two equal triangles, B B B, it reaches the height of the aisle roof; the triangle B C gives the line of the cornice at the springing of the spire, and a similar triangle at the intersection of the smaller ones terminates in the cross on the spire. I applied the same system to every detail, and to all the furniture of the edifice.

What I have endeavoured to show is that by the adoption of this system of triangulation throughout the whole building, a beauty and unity of proportion can be attained which can be produced in

no other way. The system can be applied to small as well as to large buildings, and as in the case of this cathedral, even to the simplest piece of furniture. I am convinced that those architects who try it will find that they make far more satisfactory progress than others who design in a haphazard, undecided manner, by what Viollet-le-Duc terms a series of *tattonements*, however picturesque some parts of their designs may be.

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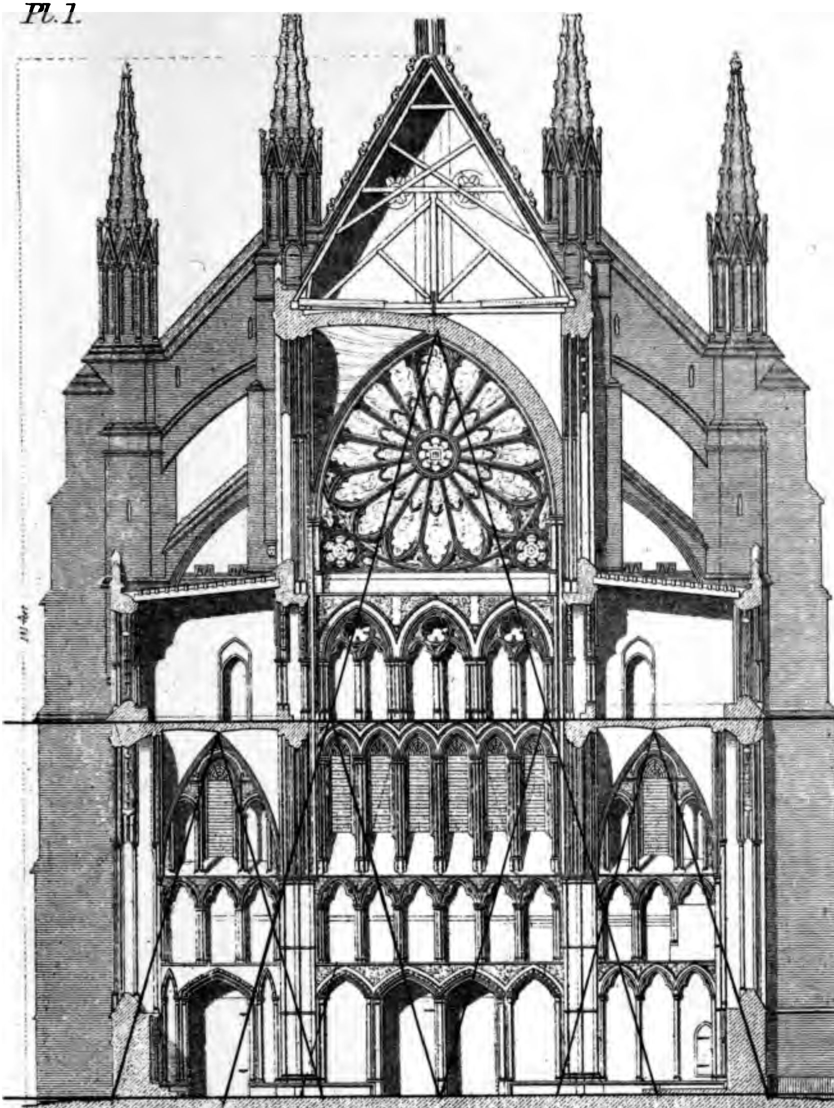

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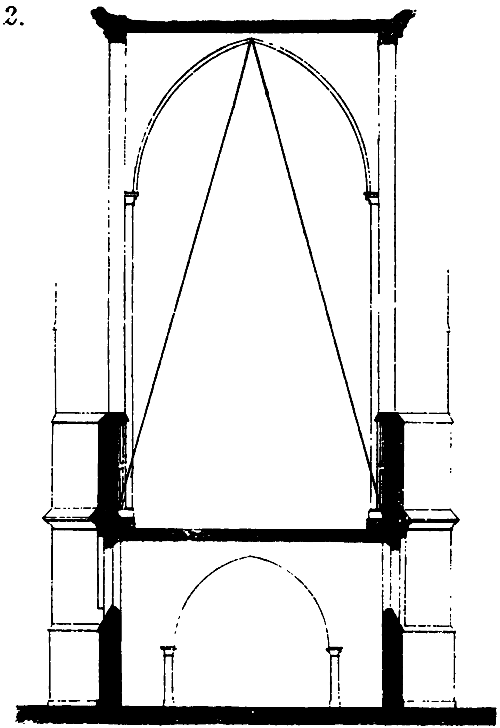

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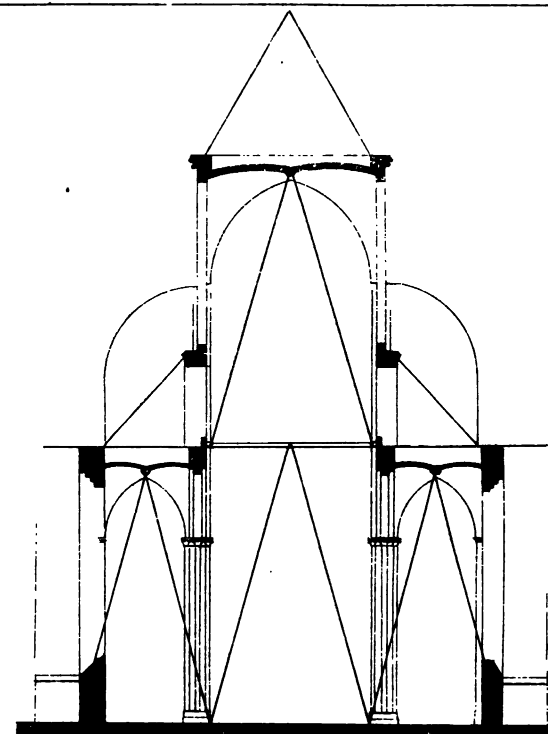

AMIENS CATHEDRAL.

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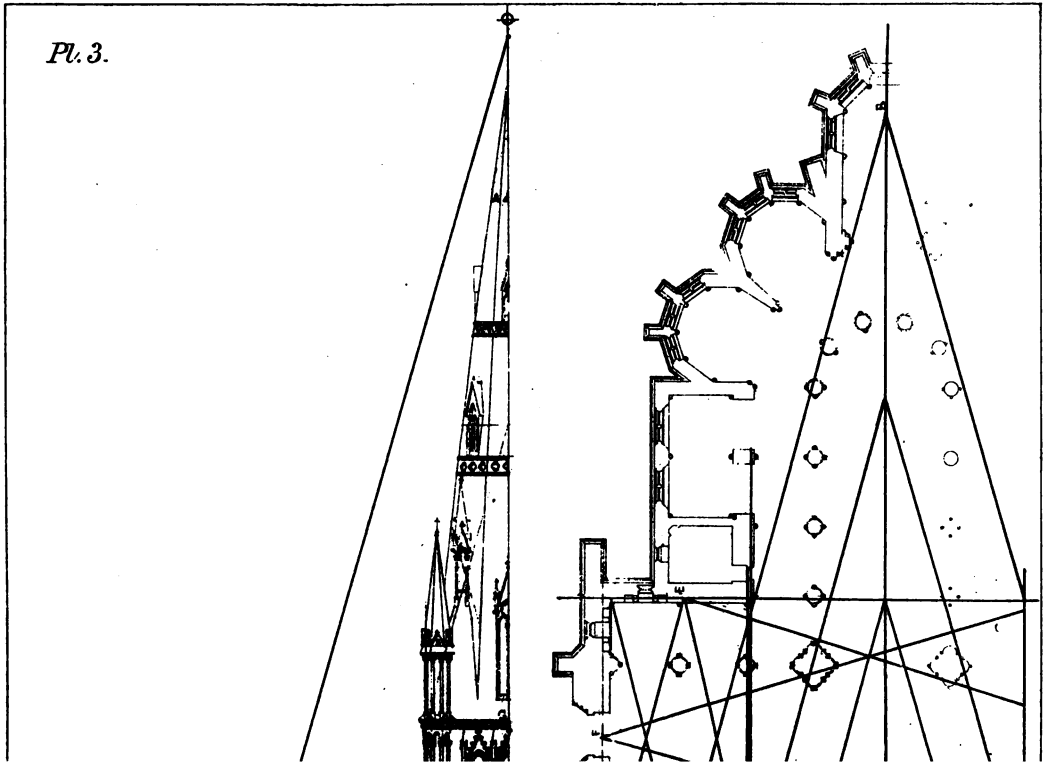
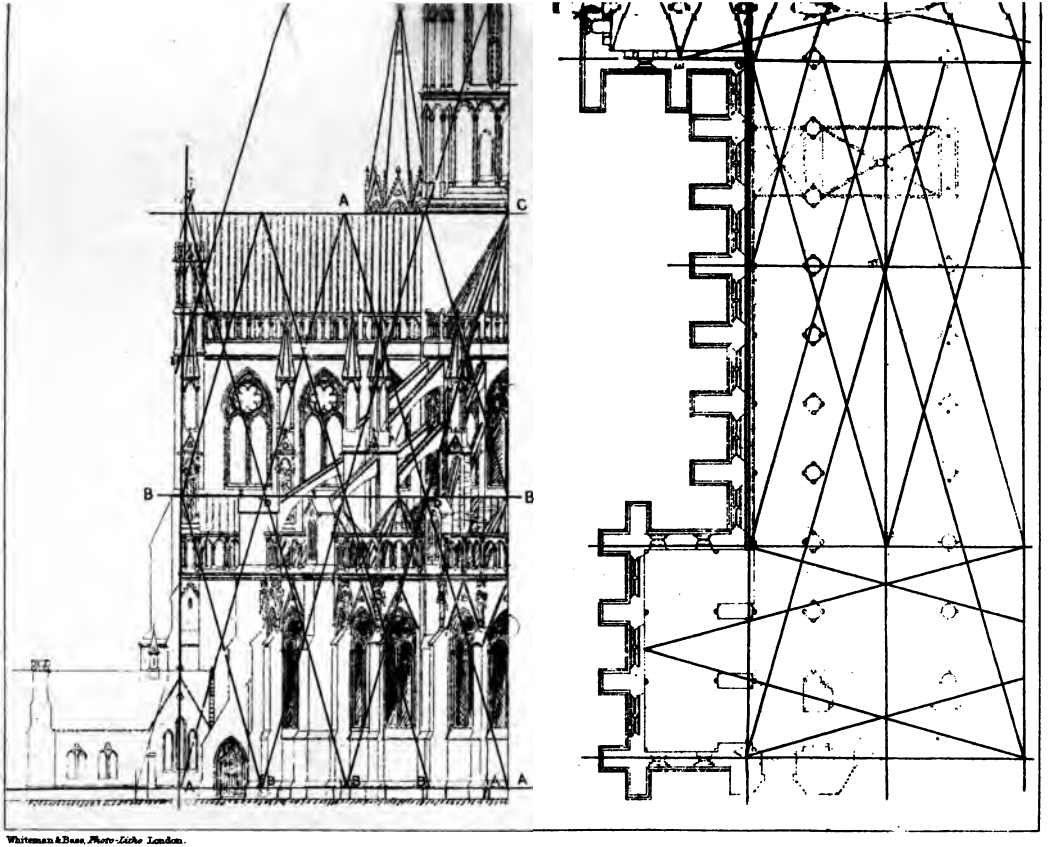
Pl. 3.





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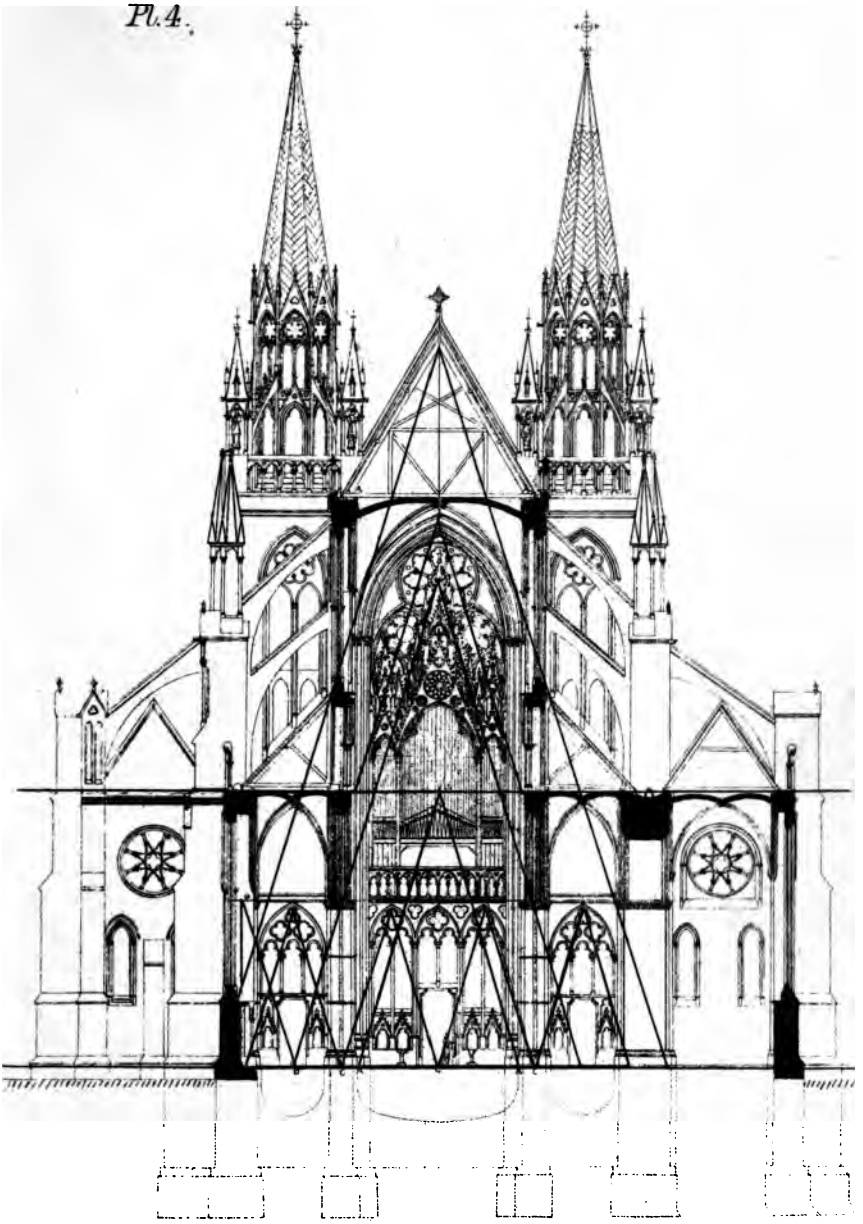

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