We have just compared the art of the Romanesque period with the art of Byzantium and even of the ancient Orient. But there is one respect in which Western Europe always differed profoundly from the East. In the East these styles lasted for thousands of years, and there seemed no reason why they should ever change. The West never knew this immobility. It was always restless, groping for new solutions and new ideas. The Romanesque style did not even outlast the twelfth century. Hardly had the artists succeeded in vaulting their churches and arranging their statues in the new and majestic manner, when a fresh idea made all these Norman and Romanesque churches look clumsy and obsolete. The new idea was born in northern France. It was the principle of the Gothic style. At first one might call it mainly a technical invention, but in its effect it became much more. It was the discovery that the method of vaulting a church by means of crosswise arches could be developed much more consistently and to much greater purpose than the Norman architects had dreamt of. If it was true that pillars were sufficient to carry the arches of the vaulting between which the other stones were held as mere filling, then all the massive walls between the pillars were really superfluous. It was possible to erect a kind of scaffolding of stone which held the whole building together. All that was needed were slim pillars and narrow ‘ribs’. Anything in between could be left out without danger of the scaffolding collapsing. There was no need for heavy stone walls – instead one could put in large windows. It became the ideal of architects to build churches almost in the manner in which we build greenhouses. Only they had no steel frames or iron girders – they had to make them of stone, and that needed a great amount of careful calculation. Provided, however, that the calculation was correct, it was possible to build a church of an entirely new kind; a building of stone and glass such as the world had never seen before. This is the leading idea of the Gothic cathedrals, which was developed in northern France in the second half of the twelfth century.

Of course, the principle of crosswise ‘ribs’ alone was not sufficient for this revolutionary style of Gothic building. A number of other technical inventions were necessary to make the miracle possible. The round arches
of the Romanesque style, for instance, were unsuited to the aims of the Gothic builders. The reason is this: if I am given the task of bridging the gap between two pillars with a semicircular arch, there is only one way of doing it. The vaulting will always reach one particular height, no more and no less. If I wanted to reach higher I should have to make the arch steeper. The best thing, in this case, is not to have a rounded arch at all, but to fit two segments together. That is the idea of the pointed arch. Its great advantage is that it can be varied at will, made flatter or more pointed according to the requirements of the structure.

There was one more thing to be considered. The heavy stones of the vaulting press not only downwards but also sideways, much like a bow which has been drawn. Here, too, the pointed arch was an improvement over the round one, but even so pillars alone were not sufficient to withstand this outward pressure. Strong frames were needed to keep the whole structure in shape. In the vaulted side-aisles this did not prove very difficult. Buttresses could be built outside. But what could be done with the high nave? This had to be kept in shape from outside, across the roofs of the aisles. To do that, the builders had to introduce their ‘flying buttresses’, which complete the scaffolding of the Gothic vault, figure 122. A Gothic church seems to be suspended between these slender structures of stone as a bicycle wheel, held in shape by its flimsy spokes, carries its load. In both cases it is the even distribution of weight that makes it possible to reduce the material needed for the construction more and more without endangering the firmness of the whole.

It would be wrong, however, to look at these churches mainly as feats of engineering. The artist saw in it that we feel and enjoy the boldness of their design. Looking at a Doric temple, page 83, figure 50, we sense the function of the row of columns which carry the load of the horizontal roof. Standing inside a Gothic interior, figure 123, we are made to understand the complex interplay of thrust and pull that holds the lofty vault in its place. There are no blank walls or massive pillars anywhere. The whole interior seems to be woven out of thin shafts and ribs; their network covers the vault, and runs down along the walls of the nave to be gathered up by the pillars, which are formed by a bundle of stone rods.
Even the windows are overspread by these interlacing lines known as tracery, figure 124.

The great cathedrals, the bishops’ own churches (cathdra = bishop’s throne), of the late twelfth and early thirteenth century were mostly conceived on such a bold and magnificent scale that few, if any, were ever completed exactly as planned. But even so, and after the many alterations which they have undergone in the course of time, it remains an unforgettable experience to enter these vast interiors whose very dimensions seem to dwarf anything that is merely human and petty. We can hardly imagine the impression which these buildings must have made on those who had only known the heavy and grim structures of the Romanesque style. These older churches in their strength and power may have conveyed something of the ‘Church Militant’ that offered shelter against the onslaught of evil. The new cathedrals gave the faithful a glimpse of a different world. They would have heard in sermons and
hymns of the Heavenly Jerusalem with its gates of pearl, its priceless jewels, its streets of pure gold and transparent glass (Revelation xxii). Now this vision had descended from heaven to earth. The walls of these buildings were not cold and forbidding. They were formed of stained glass that shone like rubies and emeralds. The pillars, ribs and tracery were glistening with gold. Everything that was heavy, earthly or humdrum was eliminated. The faithful who surrendered themselves to the contemplation of all this beauty could feel that they had come nearer to understanding the mysteries of a realm beyond the reach of matter.

Even as seen from afar these miraculous buildings seemed to proclaim the glories of heaven. The façade of Notre-Dame in Paris is perhaps the most perfect of them all, figure 125. So lucid and effortless is the arrangement of the porches and windows, so lithe and graceful the tracery of the gallery, that we forget the weight of this pile of stone and the whole structure seems to rise up before us like a mirage.
There is a similar feeling of lightness and weightlessness in the sculptures that flank the porches like heavenly hosts. While the Romanesque master of Arles, page 176, figure 115, made his figures of saints look like solid pillars firmly fitted into the architectural framework, the master who worked on the northern porch of the Gothic cathedra of Chartres, figures 126, 127, made each of his figures come to life. They seem to move, and look at each other solemnly, and the flow of their drapery indicates once more that there is a body underneath. Each of them is clearly marked, and should have been recognizable to anyone who knew his Old Testament. We have no difficulty in recognizing Abraham, the old man with his son Isaac held before him, ready to be sacrificed. We can also recognize Moses, because he holds the tablets on which the Ten Commandments were inscribed, and the column with the brazen serpent by which he cured the Israelites. The man on the other side of Abraham is Melchizedek, King of Salem, of whom we read in the Bible (Genesis xiv. 18) that he was 'a priest of the most high God' and that he 'brought forth bread and wine' to welcome Abraham after a successful battle. In medieval theology he was therefore considered the model of the priest who administers the sacraments, and that is why he is marked by the chalice and censer of the priest. In this way nearly every one of the figures that crowd the porches of the great Gothic cathedrals is clearly marked by an emblem so that its meaning and message could be understood and pondered by the faithful. Taken together they form as complete an embodiment of the teachings of the Church as the works discussed in the preceding chapter. And yet we feel that the Gothic sculptor has approached his task in a new spirit. To him these statues are not only sacred symbols, solemn reminders of a moral truth. Each of them must have been for him a figure in its own right, different from its neighbour in its attitude and type of beauty and each imbued with an individual dignity.

The cathedral of Chartres still largely belonged to the late twelfth century. After the year 1200 many new and magnificent cathedrals sprang up in France and also in the neighbouring countries, in England, in Spain and in the German Rhineland. Many of the masters busy on the new sites
had learned their craft while working on the first buildings of this kind, but they all tried to add to the achievements of their elders.

*Figure 129.* from the early thirteenth-century Gothic cathedral of Strasbourg, shows the novel approach of these Gothic sculptors. It represents the Death of the Virgin. The twelve apostles surround her bed, St Mary Magdalen kneels before her. Christ, in the middle, is receiving the Virgin’s soul into His arms. We see that the artist was still anxious to preserve something of the solemn symmetry of the early period. We can imagine that he sketched out the group beforehand to arrange the heads of the apostles around the arch, the two apostles at the bedside corresponding to each other, and the figure of Christ in the centre. But he was no longer content with a purely symmetrical arrangement such as the twelfth-century master of *page 181, figure 120,* preferred. He clearly wanted to breathe life into his figures. We can see the expression of mourning in the beautiful faces of the apostles, with their raised eyebrows and their intent look. Three of them lift their hands to their faces in the traditional gesture of grief. Even more expressive are the face and figure of St Mary Magdalene, who cowers at the bedside and wrings her hands, and it is marvellous how the artist succeeded in contrasting her features with the serene and blissful look on the face of the Virgin. The draperies are no longer the empty husks and purely ornamental scrolls we see on early medieval work. The
Gothic artists wanted to understand the ancient formula for draped bodies, which had been handed down to them. Perhaps they turned for enlightenment to the remnants of pagan stonework, Roman tombstones and triumphal arches, of which several could be seen in France. Thus they regained the lost classical art of letting the structure of the body show under the folds of the drapery. Our artist, in fact, is proud of his ability to handle this difficult technique. The way in which the Virgin's feet and hands and Christ's hand appear under the cloth shows that these Gothic sculptors were no longer interested only in what they represented, but also in the problems of how to represent. Once more, as in the time of the great awakening in Greece, they began to look at nature, not so much to copy it as to learn from it how to make a figure look convincing. Yet there is a vast difference between Greek art and Gothic art, between the art of the temple and that of the cathedral. The Greek artists of the fifth century were mainly interested in how to build up the image of a beautiful body. To the Gothic artist all these methods and tricks were only a means to an end, which was to tell his sacred story more movingly and more convincingly. He does not tell it for its own sake, but for the sake of its message, and for the solace and edification the faithful could derive from it. The attitude of Christ as He looks at the dying Virgin was clearly more important to the artist than skilful rendering of muscles.
In the course of the thirteenth century, some artists went even further in their attempts to make the stone come to life. The sculptor who was given the task of representing the founders of Naumburg Cathedral in Germany, round about 1260, almost convinces us that he portrayed actual knights of his time, figure 130. It is not very likely that he really did—these founders had been dead for many years, and were nothing but a name to him. But his statues of men and women seem to be ready at any moment to step down from the pedestals and to join the company of those vigorous knights and gracious ladies whose deeds and suffering fill the pages of our history books.

To work for cathedrals was the main task of the northern sculptors of the thirteenth century. The most frequent task of the northern painters of that time was still the illumination of manuscripts, but the spirit of these illustrations was very different from that of the solemn Romanesque book pages. If we compare the Annunciation from the twelfth century, page 189, figure 119, with a page from a thirteenth-century Psalter, figure 131, we gain a measure of this change. It shows the entombment of Christ, similar in subject and in spirit to the relief from Strasbourg Cathedral, figure 129. Once more we see how important it has become to the artist to show us the feelings of his figures. The Virgin bends over the dead body of Christ and embraces it, while St John wrings his hinds in grief. As in the relief,
we see what pains the artist took to fit his scene into a regular pattern: the angels in the top corners coming out of the clouds with censers in their hands, and the servants with their strange pointed hats — such as were worn by the Jews in the Middle Ages — supporting the body of Christ. This expression of intense feeling, and this regular distribution of the figures on the page, were obviously more important to the artist than any attempt to make his figures lifelike, or to represent a real scene. He does not mind that the servants are smaller than the holy personages, and he does not give us any indication of the place or the setting. We understand what is happening without any such external indications. Though it was not the artist's aim to represent things as we see them in reality, his knowledge of the human body, like that of the Strasbourg master, was nevertheless much greater than that of the painter of the twelfth-century miniature.

It was in the thirteenth century that artists occasionally abandoned their pattern books, in order to represent something because it interested them. We can hardly imagine today what this meant. We think of an artist as a person with a sketchbook who sits down and makes a drawing from life whenever he feels inclined. But we know that the whole training and upbringing of the medieval artist was very different. He started by being apprenticed to a master, whom he assisted at first by carrying out his instructions and filling in relatively unimportant parts of a picture. Gradually he would learn how to represent an apostle, and how to draw the Holy Virgin. He would learn to copy and rearrange scenes from old books, and fit them into different frames, and he would finally acquire enough facility in all this to be able even to illustrate a scene for which he knew no pattern. But never in his career would he be faced with the necessity of taking a sketchbook and drawing something from life. Even when he was asked to represent a particular person, the ruling king or a bishop, he would not make what we should call a likeness. There were no portraits as we understand them in the Middle Ages. All the artists did was to draw a conventional figure and to give it the insignia of office — a crown and sceptre for the king, a mitre and crozier for the bishop — and perhaps write the name underneath so that there would be no mistake. It may seem strange to us that artists who were able to make such lifelike figures as the Naumburg founders, figure 130, should have found it difficult to make a likeness of a particular person. But the whole idea of sitting down in front of a person or an object and copying it was alien to them. It is all the more remarkable that, on certain occasions, artists in the thirteenth century did in fact draw something from life. They did it when they had no conventional pattern on which they could rely. Figure 132 shows such an exception. It is the picture of an elephant drawn by the English historian Matthew Paris (died 1259) in the middle of the thirteenth
century. This elephant had been sent by St Louis, King of France, to Henry III in 1255. It was the first that had been seen in England. The figure of the servant by its side is not a very convincing likeness, though we are given his name, Henricus de Flor. But what is interesting is that in this case the artist was very anxious to get the right proportions. Between the legs of the elephant there is a Latin inscription saying: 'By the size of the man portrayed here you may imagine the size of the beast represented here.' To us this elephant may look a little odd, but it does show, I think, that medieval artists, at least in the thirteenth century, were very well aware of such things as proportions, and that, if they ignored them so often, they did so not out of ignorance but simply because they did not think they mattered.

In the thirteenth century, the time of the great cathedrals, France was the richest and most important country in Europe. The University of Paris was the intellectual centre of the Western World. In Italy, which was a land of warring cities, the ideas and methods of the great French cathedral builders, which had been so eagerly imitated in Germany and England, did not at first meet with much response.

It was only in the second half of the thirteenth century that an Italian sculptor began to emulate the example of the French masters and to study
the methods of classical sculpture in order to represent nature more convincingly. This artist was Nicola Pisano, who worked in the great seaport and trading centre of Pisa. Figure 133 shows one of the reliefs on a pulpit he completed in 1260. At first it is not too easy to see what subject is represented because Pisano followed the medieval practice of combining various stories within one frame. Thus the left corner of the relief is taken up with the group of the Annunciation and the middle with the Birth of Christ. The Virgin is lying on a bedstead, St Joseph is crouching in a corner, and two servants are engaged in bathing the Child. They seem to be jostled about by a herd of sheep, but these really belong to a third scene – the story of the Annunciation to the Shepherds, which is represented in the top right-hand corner, where the Christ Child appears once more in the manger. But if the scene appears a little crowded and confusing the sculptor has nevertheless contrived to give each episode its proper place and its vivid details. One can see how he enjoyed such touches of observation as the goat in the lower right-hand corner scratching its head with its hoof, and one realizes how much he owed to the study of classical and early Christian sculpture, page 128, figure 83, when one looks at his treatment of heads and garments. Like the master of Strasbourg who worked a generation before him, or like the master of Naumburg who may have been about his age, Nicola Pisano had learned the methods of the ancients to show the forms of the body under the drapery and to make his figures look both dignified and convincing.

Italian painters were even slower than Italian sculptors in responding to the new spirit of the Gothic masters. Italian cities such as Venice were in close contact with the Byzantine Empire and Italian craftsmen looked to Constantinople rather than to Paris for inspiration and guidance (see page 23, figure 8). In the thirteenth century Italian churches were still decorated with solemn mosaics in the ‘Greek manner’.

It might have seemed as if this adherence to the conservative style of the East would prevent all change, and indeed the change was long delayed. But when it came towards the end of the thirteenth century, it was this firm grounding in the Byzantine tradition which enabled Italian art not only to catch up with the achievements of the northern cathedral sculptors but to revolutionize the whole art of painting.

We must not forget that the sculptor who aims at reproducing nature has an easier task than the painter who sets himself a similar aim. The sculptor need not worry about creating an illusion of depth through foreshortening or through modelling in light and shade. His statue stands in real space and in real light. Thus the sculptors of Strasbourg or Naumburg could reach a degree of lifelikeness which no thirteenth-century painting could match. For we remember that northern painting
had given up all pretence of creating an illusion of reality. Its principles of arrangement and of story-telling were governed by quite different aims.

It was Byzantine art which ultimately allowed the Italians to leap the barrier that separates sculpture from painting. For all its rigidity, Byzantine art had preserved more of the discoveries of the Hellenistic painters than had survived the picture-writing of the Dark Ages in the West. We remember how many of these achievements still lay hidden, as it were, under the frozen solemnity of a Byzantine painting like page 139, figure 88; how the face is modelled in light and shade and how the throne and the footstool show a correct understanding of the principles of foreshortening. With methods of this kind a genius who broke the spell of Byzantine conservatism could venture out into a new world and translate the lifelike figures of Gothic sculpture into painting. This genius Italian art found in the Florentine painter Giotto di Bondone (c. 1267–1337).

It is usual to start a new chapter with Giotto; the Italians were convinced that an entirely new epoch of art had begun with the appearance of that great painter. We shall see that they were right. But for all that, it may be useful to remember that in real history there are no new chapters and no new beginnings, and that it detracts nothing from Giotto’s greatness if we realize that his methods owe much to the Byzantine masters, and his aims and outlook to the great sculptors of the northern cathedrals.

Giotto’s most famous works are wall-paintings or fiescoes (so called because they must be painted on the wall while the plaster is still fresh, that is, wet). Between 1302 and 1305 he covered the wall of a small church in Padua in northern Italy with stories from the life of the Virgin and of Christ. Underneath he painted personifications of virtues and vices such as had sometimes been placed on the porches of northern cathedrals.

Figure 134 shows Giotto’s figure of Faith, a matron with a cross in one hand, a scroll in the other. It is easy to see the similarity of this noble figure to the works of the Gothic sculptors. But this is no statue. It is a painting which gives the illusion of a statue in the round. We see the foreshortening of the arms, the modelling of the face and neck, the deep shadows in the flowing folds of the drapery. Nothing like this had been done for a thousand years. Giotto had rediscovered the art of creating the illusion of depth on a flat surface.

For Giotto this discovery was not only a trick to be displayed for its own sake. It enabled him to change the whole conception of painting. Instead of using the methods of picture-writing he could create the illusion that the sacred story was happening before our very eyes. For this it was no longer sufficient to look at older representations of the same scene and adapt these time-honoured models to a new use. He rather followed the
advice of the preaching friars who exhorted the people to visualize in their mind, when reading the Bible and the legends of the Saints, what it must have looked like when a carpenter's family fled to Egypt or when the Lord was nailed to the cross. He did not rest till he had thought it all out afresh: how would a man stand, how would he act, how would he move, if he took part in such an event? Moreover, how would such a gesture or movement present itself to our eyes?

We can best gauge the extent of this revolution if we compare one of Giotto's frescoes from Padua, figure 135, with a similar theme in the thirteenth-century miniature in figure 131. The subject is the mourning over the dead body of Christ, with the Virgin embracing her Son for the last time. In the miniature the artist was not interested in representing the scene as it might have happened. He varied the size of the figures so as to fit them well into the page, and if we try to imagine the space between the figures in the foreground and St John in the background - with Christ and the Virgin in between - we realize how everything is squeezed together, and how little the artist cared about space. It is the same indifference to the real place where the scene is happening which led Nicola Pisano to represent different episodes within one frame. Giotto's method is completely different. Painting, for him, is more than a substitute for the written word. We seem to witness the real event as if it were enacted on a stage. Compare the conventional gesture of the mourning St John in the miniature with the passionate movement of St John in Giotto's painting as he bends forward, his arms extended sideways. If we try here to imagine the distance between the cowering figures in the foreground and St John, we immediately feel that there is air and space between them, and that they can all move. These figures in the foreground show how entirely new Giotto's art was in every respect. We remember that early Christian art had reverted to the old Oriental idea that to tell a story clearly every figure had to be shown completely, almost as was done in Egyptian art. Giotto abandoned these ideas. He did not need such simple devices. He shows us so convincingly how each figure reflects the grief of the tragic scene that we sense the same grief in the cowering figures whose faces are hidden from us.

Giotto's fame spread far and wide. The people of Florence were proud of him. They were interested in his life, and told anecdotes about his wit and dexterity. This, too, was rather a new thing. Nothing quite like it had happened before. Of course, there had been masters who had enjoyed general esteem, and been recommended from monastery to monastery, or from bishop to bishop. But, on the whole, people did not think it necessary to preserve the names of these masters for posterity. They thought of them as we think of a good cabinet-maker or tailor. Even the
artists themselves were not much interested in acquiring fame or notoriety. Very often they did not even sign their work. We do not know the names of the masters who made the sculptures of Chartres, Strasbourg or Naumburg. No doubt they were appreciated in their time, but they gave the honour to the cathedral for which they worked. In this respect too, the Florentine painter Giotto begins an entirely new chapter in the history of art. From his day onwards the history of art, first in Italy and then in other countries also, is the history of the great artists.

The king and his architect (with compass and rule) visiting the building site of a cathedral (King Offa at St Alban's), c. 1240-50
Drawing by Matthew Paris in a chronicle of St Alban's Abbey, Trinity College, Dublin