THE APPEAL OF ARCHITECTURE.

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THIS might seem hardly a suitable subject for a Presidential Address to a Society which styles itself "Field Club and Archaeological Society." It is certainly not a Field subject and the definition of Archaeology can only with difficulty be stretched to cover it. But our wanderings take us to many Architectural buildings and I suppose the most archaeologically-minded of us will hardly fail to take some cognisance of their aesthetic beauties *en route*. After all most of them were artistic works of 'sacrifice and devotion' before they became 'mausoleums and museums.'

Whether the process of analysing our pleasures tends to deepen and broaden them or whether they become lost in the analysis, just as over-exercise of the critical faculty is apt to swamp and destroy much of the pleasure to be derived from the essential beauty of the subject criticised, is a matter for individual opinion.

The pleasurable effect of works of art on the human senses has been the subject of speculation and investigation from very early times and the problem has been approached from various points of view. Philosophers, from Plato and Aristotle downwards, to Burke and Kant, analysing the effect that beauty has on the human mind; artists, ever striving to produce objects which will carry over to others their own artistic visions and perceptions; critics, like Ruskin, hoping to systematise art and eliminate its falsities; scientists, investigating and experimenting to discover the physical basis of the qualities by which works of art make their appeal. The subject is of course a much wider one than that of architecture only, for it involves all the senses and all the arts which stimulate and can react pleasurably upon them.

Generally speaking, when we refer to the arts, we think only of those which are directed to the particular senses of sight and hearing: Painting, Drawing, Designing, Architecture, to the one: Music, Poetry, Rhythm, to the other.

But the sense of taste can definitely be appealed to by the Cordon Bleu or the skilful housewife; and that of smell has had a great deal of thought and energy, not perhaps very deeply organised, bestowed on it by horticulturists in the development of the scent of flowers and by those who cater for toilette perfumes. The sense of Touch, never perhaps developed into an art, is capable of giving us some of our acutest pleasures.

To-day however we are considering architecture only, and there is no doubt about its strong appeal to a very large section of the human race. One cannot frequent the precincts of a recognised architectural treasure-house without observing the real pleasure that a visit of inspection gives to all sorts and conditions of people, men, women and children; many of them with no architectural knowledge and little apparent aesthetic sense. Many make only a very superficial survey, contenting themselves with a rapid run round and a general picture; but if they are brought into conversation, they are invariably enthusiastic in their admiration.

It is of course Romsey Abbey that I have in mind, and it is to Romsey Abbey, whose artistic merits will, I think, be generally accepted that I shall go for most of my examples.

With this in view, to remind you of what is probably well known to most of you, I have brought one or two engravings of the Abbey, and have prepared a sketch plan of the interior, primarily intended to show the outline features of the internal architecture.

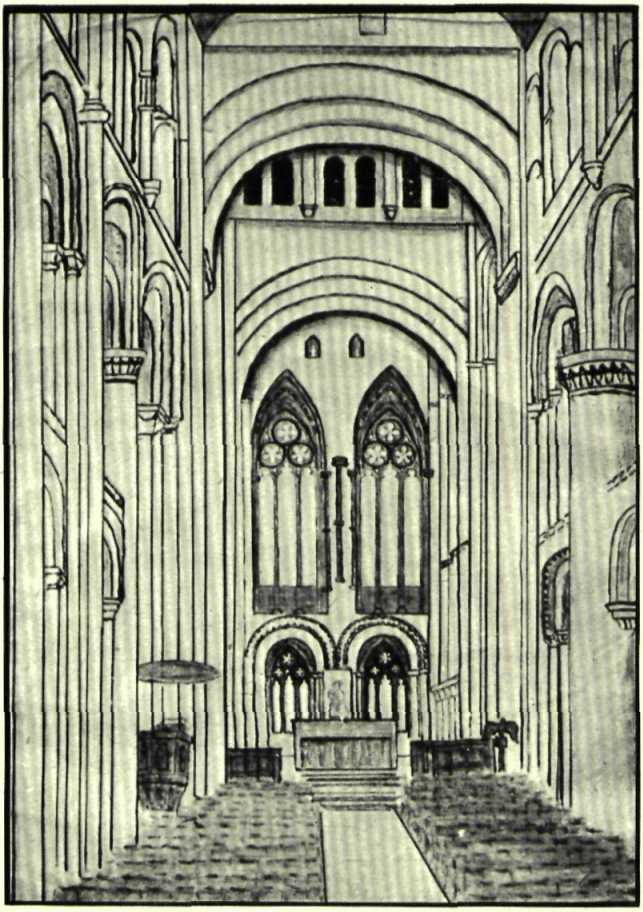
In spite of the immense amount that has been said and written about artistic appeal and the complicated theories which have been propounded as to the nature and causes of beauty, it has always seemed to me that they must, in the case of architecture at any rate, be based fundamentally on very simple principles. The effect of a beautiful building on an observer is so rapid and often apparently so automatic, that in the first survey, which gives undoubtedly a very important part of the pleasure effect, there has been no time for detailed consideration or reasoned thought. The effect must be produced by some very obvious and simple attributes. It must be remembered that if the picture is to be really pleasurable it is essential that it shall be free from jarring or discordant elements.

What then are the properties and attributes on which an architectural building depends to produce its effects? They may perhaps be listed as follows:—(1) Individuality; (2) Size; (3) Symmetry; (4) Proportion; (5) Form (outline); (6) Form (solid or perspective); (7) Light and Shade; (8) Colour; (9) Decoration; (10) Style; (11) Adventitious ornaments; (12) Fitness for function.

In considering these properties shortly in turn I shall make use mainly of a view of the interior of Romsey Abbey seen by a visitor standing beneath the great triple lancet window of the west end looking eastwards, the view shown in the diagram picture.

From this point a good general view of the interior is obtained from which I think it is at once obvious that the building is a complete and single unit, a church, undivided in its purpose and allegiance, with an *individuality* of its own; a fact which at once focuses one's attention with a feeling of satisfaction.

The church is of great *size*, and if it cannot compete with our greater cathedrals whose immensity is capable of producing that



To face p. 229] ROMSEY ABBEY INTERIOR.

pleasurable sense of awe akin to fear which our forbears associated with what they called the sublime, it is big enough to give a stimulating sense of wonder and respect ; especially if we come to think of the pluck and long vision of that party of ladies who sat round the Chapter House near by some 800 years ago to consider and pass the plans for their new church ; and of their successors who through more than 150 years of difficulty and delay maintained the resolution to complete it.

The *symmetry* of the church is unusually perfect. A complete cross ; the two sides evenly balanced, but with sufficient variation to prevent boredom. In its main *proportions* of length, breadth and height the church conforms to the simple accepted standards for buildings of its kind. There is of course no law about these, but I believe that a simple, not necessarily exact, mathematical relation between them is required to give satisfaction and that any great divergence or incongruity produces a feeling of discord.

Solomon's Temple was 60 cubits long, 20 cubits wide and 30 cubits high ; a simple proportion of 6 : 2 : 3. In his palace the proportions were 10 : 5 : 3. The Parthenon at Athens, which has always been extolled as the perfection of architectural proportion has an external arcade of eight equally spaced pillars across the ends and sixteen down the sides. The nave of Romsey Abbey is near about twice as long as it is broad, and each of the other segments, chancel, transepts and crossing, are approximately squares. The height of the nave to the beginning of the roof is almost exactly twice the width. It will be agreed I think that these simple proportions are quite satisfying.

In three-storied buildings such as the Abbey, the relative heights of the different storeys vary, though it is usual for them to diminish in gradation upwards in some simple proportion. In Romsey the proportions are 7 : 5 : 4, a simple formula which is undoubtedly satisfactory. In the nave at Winchester Cathedral, before the great alterations by Edington and Wykeham, they were 16 : 15 : 12. With the cutting out of the intermediate storey and the loss of a triple proportion, there will be some who think the cathedral lost by the change.

As one looks eastwards from our station in Romsey Abbey the most striking feature of the distant view is the succession of three great semi-circular arches ranged one above the other in apparent proportion as they mount upwards ; the outline of the barrel roof above, and the two great Norman arches of the crossing, one seen through the other, beneath.

Within the frame of the lower arch is set the most characteristic part of the picture, the east wall of the chancel, divided horizontally into two halves ; the upper, with its two great decorated windows, seated as it were on the lower, which contains the two semi-circular

Norman arches opening into the retro-choir. These show through them the two lovely little decorated windows, whose geometrical tracery makes them sparkle almost as if they were set with jewels. This arrangement provides a double set of proportions for consideration, the various sized semi-circular arches and the two groups of decorated windows.

The two great early decorated windows of the east end are perhaps the most striking feature of the church, and it must be remembered that they did not form part of the original structure. When, in the 13th century, the pointed window with geometrical tracery had come into fashion and there was a craving for more light, the architect of the day boldly cut out the original Norman windows of the clere-story and introduced the two much larger up-to-date ones which we have before us.

A single pair of exactly similar windows is not a usual arrangement. They give no opportunity for comparison. The contemplation of two exactly similar objects side by side is apt to be boring. The mind begins, unconsciously perhaps, to look for differences. If it succeeds in finding them it is cheered, but if it fails there is a feeling of disappointment.

There were reasons at Romsey for the double arrangement at the east end. The Abbey had two patron saints, the Virgin Mary and a private saint of its own, the Abbess Ethelfleda. There were therefore two east end chapels, one dedicated to either patron. But the architect, in designing his two new windows, well aware of art's dislike of exactly similar twins, introduced a curious little difference in the traceries of the windows, by which the apices of the cinquefoils point upwards in the one and downwards in the other, as can be seen in the diagram. It is a small difference, perhaps not noticed at first, but its recognition gives that little prick of satisfaction which goes to make up the pleasure of investigation. To-day there is of course the much more obvious distinction in the different designs of the glass.

Enough has been said I think to exemplify the pleasure to be obtained in the recognition of *proportion* in architecture based generally on simple mathematical relations.

We come next to consider the influence of *form* in the attractiveness of architecture. If we analyse the forms and shapes used in architectural structure and decoration we find that the pleasurable ones are based almost entirely on simple geometrical figures. These figures are used in all sorts of ways and combinations and a large part of the pleasure to be derived from architecture depends upon the recognition, often almost automatic, of the figures and the skilful manner in which they have been woven together.

The most ancient world buildings are mostly rectangular, though the Egyptian pyramids have triangular faces. The Greek

temples were rectangular but had triangular gable ends for the support of the roofs. The tops of the doors and windows were flat and straight.

It was not till Roman times that the semi-circular arch, though not a new invention, came into use for windows and doors.

The circle and its segments once adopted became a regular and almost necessary part of architecture. Besides using it for arches, they began to make some of their theatres and temples circular and, as in the case of the Pantheon in Rome, covered them with hemispherical domes.

The introduction of the circle and its segments for decoration was a great addition to the architect's resources, and its popularity has continued.

The circle is the simplest of mathematical curves. Its form has always been familiar to man in its two best known natural objects, the sun and the moon. And though its accurate delineation without the help of instruments is one of the most difficult of tasks for the draughtsman, any deviation from a true circle is at once detected and resented. At Romsey, one of the most prominent arches of the side aisle vaulting is definitely horse-shoed, whether by design or by subsidence bulging is not certain, but it is almost immediately noticed by visitors and critically commented on.

In the Norman part of Romsey Abbey there is ample example of semi-circular arch and rounded pillar, both in their simplest and more complicated use. The solid masonry of the great round pillars in the first bay of the nave is typical Norman in its heaviest and severest form, which, however, subsequent architects saw fit to modify in the later work.

Towards the end of the 12th century it was realised, almost suddenly, that the semi-circular was not the only possible form of arch to support masonry above a space. The pointed arch was invented and after a transitional period of trial was universally adopted. It was formed by setting up two equal segments of a circle on the top of the side pieces of window or door and leaning them against one another so as to form a pointed arch. But the curve of each side was still part of a true circle and no deviation from this was allowed for a long time.

The use of these lancet windows in their simplest form but grouped in various ways constituted the Early-English style.

The three west bays of the Abbey belong to this period, and a look over your shoulder will show you many examples of light and graceful arches and windows in this style.

The next move in the development of architecture was the filling in of the upper portion of the pointed Gothic window with tracery. The tracery consisted in the introduction of geometric figures and designs, all having the circle as their basis, fitted into

the available space in various ways, leaving curved angular spaces between them.

This constituted the Decorated style, of which the two great east windows are examples. They are very simple, but many will think that in windows of this style Gothic architecture reached its highest point of aesthetic beauty.

The tracery of each window consists of three circles fitted into the top and supported with the necessary bars of masonry. Each circle is divided up by means of cusps into foils or portions of circles, arranged in groups of four or five so as to make up the so-called quatrefoils and cinquefoils like the leaves of a plant.

This form of decoration is definitely based on simple geometric figures, and much of the pleasure to be derived from it is due to their recognition, conscious or unconscious.

It will, I think, be almost universally admitted that these simple decorated windows are beautiful, and they should be able to give us a clue as to what it is in them that gives pleasure to the beholder and constitutes their beauty.

You will probably by this time have already divined that according to the theory which I am supporting, the basis of the pleasure which comes to us from the observation of so-called beautiful objects is the mental exercise involved in the recognition of the elements of their make-up, and that so far as form is concerned these elements consist for the most part of the simpler, easily recognisable geometrical figures such as the square, the circle and the triangle skilfully arranged and set out. And also that the claim for an object to be called beautiful depends on its having the qualities which can produce this pleasure.

There are of course other pleasures to be derived from the observation of objects such as association, resemblance, etc., but these do not form part of what can strictly be called beauty or belong to architecture proper.

I should like to develop this subject further but it would take too long. I may however suggest that it is quite possible to extend the theory to the pleasure to be derived from other forms of artistic beauty. Perhaps this can be done most easily in the case of music where both rhythm and harmony are based on very definite and comparatively simple mathematical formulae.

For the recognition and enjoyment of *solid form* in architecture in its three dimensions we have to depend chiefly on three data :—

(1) The *perspective* obtained by the apparent direction of the horizontal lines of the building converging to their vanishing points.

(2) The perspective lines of the mortar joints between the stones which give the direction of flat surfaces and indicate the curves of rounded objects such as pillars and arches. It is not perhaps always recognised how much these joints help us to appreciate the structure of buildings and in the pictorial delineation of interiors how much we depend on them.

(3) The lights and shades produced by the way the light falls on the various projections. The abrupt change of tone marking the edge of an angular moulding and the soft gradation of tone when it is rounded. There is also the importance of depth of contrast in shadows in portraying depth of recess.

But *lights and shadows* in architecture are not mere aids to perspective. They themselves produce patterns and designs of wonderful variety and scope, the disentangling of which is a real source of pleasure. These forms and contrasts change from day to day and from hour to hour, dimmed by an overcast sky, accentuated almost to fierceness by a brilliant sun, and then completely changed and diversified by artificial illumination.

It is this capacity for infinite variety of light and shade which makes it impossible to tire of architectural works of art.

Next we come to the use of *colour* in architecture. In mediaeval times the stone surface of the interior of buildings was looked upon as a fair and suitable basis for colour work, either in the form of conventional designs or actual pictures. It is probable that most of our more important mediaeval buildings had their interiors so decorated. There is evidence that the walls of Romsey Abbey were used in both these ways though probably only to a limited extent. There are traces of coloured conventional design on the south pillars of the chancel and of picture painting in the retro-choir. All this was obscured with limewash in Puritan times and only patches have been rescued.

Coloured mosaic work which forms so important a part of the internal decoration of Italian and Greek churches has rarely been used in this country.

In some places a certain amount of pattern work has been produced by the systematic use of different coloured stones, but this is exceptional.

One sometimes hears it said, "How splendid this interior must have looked when it was a glowing mass of brilliant colour." But on the whole, I think, most of us are satisfied with the wonderful variety of soft colours that the surfaces of cut stone can exhibit, especially when age has mellowed the tinges of yellow, blue and red which Nature seems to give almost haphazard to the different veins and beds of the native rock. In the Binstead stone of which Romsey Abbey is built there are innumerable patches of varied hue, sometimes in individual stones, sometimes in groups of stones coming perhaps in batch from a particular bed.

These soft gradations of colour have an undoubted charm, and personally I am content in architecture with the colours which Nature has given us. Regular colour schemes artificially applied would seem to detract from the general black and white effect of the stonework with its infinite variety of form and shadow.

But the introduction of adventitious spots and gleams of colour in the way of ornament, quite independent of the architectural design, is another matter. They serve as a foil to the possible drabness of unmitigated stonework and have a cheerful effect. Coloured altar furniture, painted windows, banners and the like create a happy diversion.

I must not now go into the cause of the pleasure to be derived from the contemplation of colour, though I believe it could be shown that it is based on the recognition of certain simple relations of the various wave lengths of light or on proportional combinations of the three primary colours.

The aesthetic value of the infinite variety of *ornament* and sculpture which can be added to the framework of architecture is beyond our scope to-day. They do not form part of the immediate pleasure impression given by fine architecture. Their presence is recognised in the first survey, and the pleasure of individual investigation is postponed.

Such ornaments are glass, sculpture, carving and the typical mouldings and ornaments of the different periods and styles. Romsey has much good modern glass and happily little bad.

The next attribute on the list is *Style*. It corresponds to Ruskin's seventh and last 'Lamp of Architecture' which he calls 'Obedience.' It is really the code of laws under which at any given period or locality the architect of the day drew his designs, based on the taste and fashion then in vogue. Few venture to diverge far from them, but a variation which comes to be accepted introduces a new style.

We, who have lived historically through so many styles, are free to make our preferences among them. Our architects who until recently at any rate had not developed any new style of their own, have done the same. They have jumped about from style to style, bound strictly by the laws of none ; so that there was no recognised contemporary style.

This was a condition against which Ruskin in his time delivered some of his heaviest thunder.

To-day the position is not quite the same. The introduction of ferro-concrete has revolutionised the possibilities of building construction and has led to a new style of architecture. In this the old scale of arithmetic proportions has been entirely changed. Heights have increased in comparison with length and breadth to such a degree that to properly appreciate a modern building a "rubber neck" or a photographic "rising back" is required in the anatomy. Arches are no longer necessary to cover spaces, however wide, and have almost disappeared, and with them most of the curves on which architecture depended so long for so much of its ornament.

It is now often frankly maintained that the sole aim of architecture is " fitness for purpose intended " and not " appeal to the imagination." They say that, if function is perfect, imagination will look after itself.

But this aspect of architecture does not come legitimately within our survey, and I will leave it for discussion by one of my successors some 100 years hence.

In the matter of mediaeval style of architecture Romsey furnishes examples of all the various styles from " Late Norman " to " Early Perpendicular," and there is undoubted pleasure to be got from spotting and differentiating the various representatives and allotting them, as far as our individual knowledge and experience goes, to their respective periods and dates.

And here comes into play that most pleasurable exercise of comparing one object or sensation under consideration with another locked up in the recesses of the memory. The mental exercise of tracing resemblances is one of the real intellectual pleasures. It is the source of many of our special delights. Humour is largely based on setting dissimilar things before us in such a way as to give some unexpected suggestion of similitude. Caricatures, puns, cross-word clues, metaphors and similes, tracing family likeness between a new-born infant and its hoary and rugged grandfather are examples. And so in architecture comes the pleasure of tracing resemblances between one building and another.

And now we come to the last of our list, on which I have already touched, "*fitness for function.*" A church is a place in which to worship and to perform its duties in this respect, besides giving shelter and providing an organ, pulpit, seats, table and the other necessary furniture, it will not give its maximum amount of help to devotion unless it makes clear that this was the object before its designers and builders, nor unless those who are charged with its maintenance do this with reverence and due sense of the responsibility to both the living and the dead.

All this is, I think, quite obvious in the case of Romsey Abbey, and those who are privileged to worship there are grateful for their inheritance and for the care that is bestowed on it.

I have now rapidly surveyed the chief attributes by which architecture, especially church architecture, appeals to those who study it.

You will have gathered that my approach has been chiefly from the scientific point of view, though I hope not too materialistically. This applies particularly to the theory I have put forward that beauty is not an intrinsic attribute of the objects which possess it, but depends on the properties they possess which can give pleasure to man. So that beauty depends ultimately on ourselves and our capacity to derive pleasure from objects put before us.

I am certain that this conception of beauty need not detract in the least from the pleasure which it may inspire.