

THE CRISIS IN ARCHITECTURE

The saddest thing about architecture today is that "Modern Architecture", the movement which came to light in Chicago and Central Europe about the turn of the century and held brilliant promise through its long early struggle, was too pure to live. Its principles were too innocent to survive any civilized age to date - least of all, it seems, this excitable twentieth century. Now it has reached a possible turning-point and the principles are in the balance.

At first, long before it came to light in buildings, modern architecture was not a style and had little enough to do with practical design. It was just an idea, and one which escaped the few attempts made to build it into bricks and mortar. It was one of the revolutionary architectural theories which heaved occasionally under the ornate surface of nineteenth-century building. In the first place it was necessarily destructive, denouncing all smug imitations of the past, calling for freedom from ancient habits of building and the irrelevant rules of historic styles. Then it was constructive, substituting for symbolism and decoration the idea of realism: buildings which are what they are, and look it: architecture for living, pure and simple; all-architecture, spared the indignity of any sort of applied art, uncontaminated even by the desire for beauty.

In practical application the idea had to split into two - as is always necessary in architecture, where form and surface are almost independent elements. Thus the new rule of form was to be "the unflinching adaption of a building to its position and use," as Horatio Greenough, the American sculptor, expressed it in the middle of the nineteenth century. As for Ornament, the new rule was to banish it entirely, since it was, as Greenough

said, no more than "the instinctive effort of infant civilization to disguise its incompetence". To many nineteenth century progressives the spirit of democracy and the nature of technology sent up an irresistible call for a new, rational approach to building.

Yet the revolt resisted translation from words into structure for half a century. Then rapidly in a few years of the eighteen-nineties and nineteenth-hundreds the theories began to bear strange fruit: buildings which were unique in history not only because they allowed themselves to be shaped by new materials like reinforced-concrete, but also because they were deliberately unornamented. While being far removed from the utilitarian, they delight in the look of utility.

But utility is not the best word; the avant garde architects sought suitability on the highest plane. They wanted realism in the interpretation of the needs of the people they were sheltering. They abhorred fake. They did their utmost to be rational.

Now imagine the mood of architects carrying these new rules from the plushy Victorian age into a clean new century - free at last, they imagined, of the suffocating dictation of historic styles. Naturally they reacted violently against the grotesque forms and surface confusion of the past fifty years. The concept of rational simplicity led to the placing of bricks and sticks in the simplest geometrical forms. The anti-ornament ethics led to the extreme pendulum-swing: the absolute plainness of unbroken white slabs and sheets of glass on rectilinear, roofless boxes. The principle of allowing the structure freely to suggest the shape led to minor acrobatic feats like cantilevers and corner windows. And sheer cussedness in distaste for the

old order led to various gestures of independence from the Greeks, such as deliberate effects of unbalance: weight poised over void, gashes for windows where you least expected them.

All this was done in the name of the principles of rationalism, realism, and functionalism, and while the results often were genuine and sensitive, they were still no more than artistic expressions of those principles, and it was art performed in a heady mood of rebellion. The sad thing about the rest of the story of modern architecture is that this mood got confused with the principles.

The architecture just described was seen briefly in Chicago in the eighties and then more consistently developed in Europe before the first world war. After the war it established itself with the inspired encouragement of Walter Gropius in his Bauhaus school, teaching artistic teamwork for a technological era. Gradually it leaked across to England, the U. S. A., South America and elsewhere. In 1932 Henry-Russell Hitchcock and Philip Johnson introduced it formally at the Museum of Modern Art as "The International Style," and slowly through the 'thirties it won over numbers of architects, all the time growing more mature and sophisticated. In the post-war building boom it ripened rapidly, and in 1951 Mr. Johnson was able to say: "With the mid-century modern architecture has come of age."

Its coming of age was celebrated, you might say, by the United Nations' Secretariate building, a big slice of plain fiftieth-birthday cake. With its team of architects from member countries, this building exemplified the international approach and teamwork, as opposed to introverted genius. In its size and elegant slimness it represented the full bloom of the box. It was

a direct descendant of structures like the Fagus factory, built by Gropius in 1911. The U. N. building had the same approach, the same principles, the same aesthetic. All the earlier boxes suddenly looked tentative. This plain slab was, excepting a few minor imperfections, the ultimate rectilinear form - one image, unornamented, windowless (while being all glass), a monument to technology and impersonal technique, and stated in a language which the everyday architect, already tired of his vapid modernistic curves, could easily adopt. This was surely near the end of the search. Modern architecture had arrived at the goal dimly outlined fifty years earlier.

In fact the same straight road did go on a little further. Workaday architects all over the world took the curtain wall from the U. N. and usually made some minor amendments to justify their commission. Often they tried to improve the shining metal panels between the glass with spots or folds. Generally they monkeyed about within the established formula, marking time at the end of the road until someone shouted a new order. But one or two sensitive designers pushed on beyond the U. N. Gordon Bunchaft of Skidmore, Owings & Merrill gave the glass box new life by dividing it and hollowing part of it in Lever House. And later, across Park Avenue in the Seagram building, Mies van der Rohe polished it even more, simplifying its surface to nothing but an elegantly, classically, proportioned bronze grid holding sheets of dark glass. Now surely the end of this road was reached. Further simplification seemed unlikely, at least until someone invented a new sort of fireproof, continuous transparent material which would eliminate even the simplest metal framework.

The atmosphere at the end of the road may suit Mies van der Rohe, who plotted out the journey years ago and led thousands of others all the way. It may suit busy commercial architects who can now produce the basis of a clean, smart design from a catalogue of curtain walling. But it did not suit the small proportion of architects who consider their calling primarily a creative art, and it held the interest of the man in the street only briefly while the novelty-value lasted. Plainness had lost its fashionable lift. Simplicity of form commanded respect but no enthusiasm. A glimmer of the old joy of discovery accompanied early technological developments of the curtain wall, and there were moments of revived visual delight when it was discovered that the glass curtain, although in itself as clean and innocent as can be, reflects in engaging distortions the clouds and any quaint old buildings opposite. But these attractions also faded fairly quickly.

Very soon after Lever House, long before the Seagram building began, architects were growing dissatisfied with the cube, the right-angle, the glass wall and the plain surface. The glass wall had passed from the mind of the architectural artist over to the hands of the technologist, and now the restless creators of the profession set out in their various directions to find something more interesting, something more exciting hidden behind the curtain.

Which way to go? There was one obvious way: to follow Frank Lloyd Wright, who had always disparaged the soulless box. But this did not suit the searching spirit of the architectural adventurers. The abundant decade of the 1950s unquestionably called for a new approach, a new affluence in architecture. The austerity of the International Style may have been meaningful and refreshing after a surfeit of ornamentation, but now it seemed only a restrictive bore.

Again the quest split into the two parts of architecture: a search for new richness on the surface and a search for new excitement in form. The simplest and most convenient way to study the vigorous development of these two quests is to follow two men whose work seems to express the spirit of the mid-century more vividly than others': Edward Stone (for the surface quest) and Eero Saarinen (for the excitement). These are two of the most distinguished members of modern architecture's second generation, two who helped substantially in their time to promote the perfection and public acceptance of the glass box, and two incidentally who have received the accolade of a Time cover story. Mr. Stone has also been the subject of a New Yorker profile. Such fame has come to him because he has tickled the unresponsive public eye with a chiaroscuro splendor quite unfamiliar after two decades of boxing. It should not be necessary to retell the story of his metamorphosis in 1954, when he forsook martinis and the International Style and turned to coffee, fountains and decorative grilles. The full range of his pendulum swing is seen in the two museums he has designed for Manhattan. The Museum of Modern Art in 1939 was wholly International Style, if not all glass at least all box. The Huntington Hartford Museum, designed twenty years later for Columbus Circle, is as romantic in conception as an "Atmospheric" movie palace. The swing was gentle and took him through several gradual steps. The first was the U. S. Embassy at New Delhi, classically square and disciplined behind its frankly Taj-Mahal atmospherics. Then came a pill factory in Pasadena, which, with rather less reason to be Eastern, had even more pools and many more grilles. Still these buildings, despite their romanticism and surface frills, were members of the modern

movement. They were the International Style gift-wrapped. But the very presence of contrived decorative effects, however sophisticated, broke the spell of functional ethics. Once started down the byroad from New Delhi there seemed to be a fatal fascination to reach the end as soon as possible. The ornamentation was not in itself the chief affront to the principles of the old modern architecture. It represented a general drift away from the realities of the function to literary associations and symbolism, to prettiness for its own sake. The end of this little byroad may not yet be reached, but it cannot be far beyond the Huntington Hartford Museum with its Venetian arcade and verd-antique marble medallions promising to be as exquisite as a superbly packaged chocolate box.

Mr. Stone's adventures impressed a number of architects, and many who, unlike him, had never been really at home with modern architecture, were relieved to see the discipline broken by one of the old hands. Grilles of various sorts appeared all over the world and in many architectural circles decoration was again considered respectable. But not, by any means, in all circles. Most ordinary architects were not yet ready to dismiss so lightly the accumulated principles of a century of attacks against applied ornament. Edward Stone's supporters might argue that his work retained the essential simple imagery of the modern movement, but to most architects simplicity meant more than lack of clutter. It meant the indivisible quality of "nakedness", as Greenough saw it in 1852, "the majesty of the essential instead of the trappings of pretension". Perhaps Adolf Loos in Vienna went a little too far fifty years later when he equated ornament with crime, but many still would accept his treatise that "Evolution of human culture implies the disappearance of ornament from the object of use".

Thus Stone's lead was unacceptable to many, and they turned instead to re-examine the structural form of building, and to question the universal rightness of the right-angle. In a matter of months between 1953 and 1955 a number of respected designers made notable assaults on the traditional rectangular form of modern building. Le Corbusier, who had often played with free shapes on the periphery of his buildings, built a famous little concrete chapel, Notre Dame du Haut, at Ronchamp, France, which looked as if it had been shaped by hand while still wet. In Mexico a brilliant engineer Felix Candela performed structural gymnastics with thin shells of concrete twisted in subtle geometrical shapes. Matthew Novicki designed a cattle-pavilion for Raleigh, N. C., whose roof was an enormous saddle composed of cables strung in opposed curves. Nearby in a suburban street Eduardo Catalano built himself a house under a huge warped plane of wood. And Eero Saarinen produced the Kresge Auditorium at M. I. T. in the form of a dome reduced almost to a triangle in plan by removing three big slices from its sides.

Soon the plain but wholesome backdrop of the old modern movement was enlivened with more and more warps, waves, folds, droops and other unexpected shapes. Hugh Stubbins took the Novicki cattle-pavilion structure as the starting point for a Congress Hall built in Berlin on the fringe of the Iron Curtain. Catalano demonstrated at M. I. T. how the warped plane, or hyperbolic paraboloid, could be repeated and varied indefinitely to extend the theme to cover larger structures. By 1956 multiple-unit roofs constituted a new avant-garde movement. At Long Beach, California, Raymond & Rado connected three hyperbolic paraboloids to make a restaurant. Back in

Mexico Candela planned some hundreds of high and low hyperbolic vaults to make the roof of a great market looking from above like plump, buttoned upholstery. For Sydney Opera House, Joern Utzon grouped a number of shells of different elevation to billow like sails at the edge of the harbor.

Despite their apparent diversity these buildings had in common that they could be, and frequently are, called "exciting". The curves seemed to point around a corner to something previously hidden behind the glass box. The shapes were not essentially new. They seldom introduced principles not understood many years ago, but before they belonged to engineering. Now they belonged to architecture, and they were being produced with a nakedness that would have satisfied Greenough and Loos. But were they still on the same path of modern architecture? At this point the excitement was not confined to the concrete, for critics as well as confused architects demanded an explanation from the men who were leading this new development: was it functional, reasonable, rational; where was it headed?

The simplest way to study the galloping development of the excitement - the new search for form - is, as I have said, to follow the second of the two leaders of second-generation modern: Eero Saarinen. He first achieved world fame as a brilliant exponent of Mies van der Rohe's principles in the General Motors' showplace laboratory at Detroit - elegant glass boxes in a supremely regular, rectilinear and reasonable model of the last phase of the International Style. But 'there are many ways of being influenced by Mies,' says Saarinen. 'I would say that I have been most influenced by him in the M. I. T. auditorium - not by his form but by his ... principle of making structure the dominant element in architecture and letting the functional ones

fit in.' This tri-cornered dome, his first important essay in exciting shape, was not however a structural concept. A dome does not stand naturally and comfortably on three tiny pointed shoes. It had to be cramped into them and suffered accordingly. And it was not a functional idea. Saarinen let the functional elements fit in, as he says, and finally the lid was shut. But the success was not inevitable; the container was neither a soft-sided zipper-bag nor a violin case; it was an inflexible piece of geometry. To embrace its functional elements, about a quarter of its 'glass' area in the open segments where the slices were removed from the dome had to be opaque. And it is not a visual, expressive or emotional idea. It does not convey music or meetings and it could have been made much prettier with more feet, or more projections above the bulging glass - if prettiness had been the aim. The M. I. T. auditorium was entirely an intellectual concept, as pure and cold as an International Style cube but suggesting a break free from the cube, a tentative side-step round the curtain wall.

In Eero Saarinen's next notable essay in excitement, the Yale Hockey Rink, designed in 1956, the shape is not so pure and rigid. It is more relaxed and much more convincing as a form derived from functional and structural requirements. An upright arch of a central spine is matched on each side by a reclining arch of a beam running around the back of the raised seating. Thus the basis of two roof saddles is framed from structural requirements. Whether it was absolutely necessary to extend the central arch each end, curving upwards to shape the whole like a cupid's bow, is another matter; at least the body of the building has an authentic and imperative air. But still any expressive qualities which it may have appear to be

accidental; at the most it might appear that the hunch-backed curves express the movements of Ivy Leaguers on skates.

For his next, third, exciting shape, Saarinen changed his starting point again. His design for the T. W. A. terminal building at Idlewild is one of the most fluid designs in the movement. In forming it Saarinen retreated from the box about as far as anyone could go. All that it retains of strictly architectonic, as against sculptural, form is the quality of symmetry. It was designed against a mirror, one half of it being freely shaped while the mirror balanced every move. Its roof springs out like graceful wings from the central axis giving it something of the look of 'a giant bird in flight' as one ecstatic journalist described the model. Inside the giant bird the functions of an airport terminal were fitted easily and loosely, like a week-end's luggage in an ample trunk, with no sign of the squeezing apparent in the M. I. T. auditorium. And the structure was again well considered and convincing, as in the Yale rink. But the initial stimulus was not functional or structural; nor was it intellectual as at M. I. T. It was emotional. The Architectural Forum described at the time (January, 1958) the way "Saarinen and co-designer Kevin Roche set the key to the planning in their design discussions: the sense of movement, which is an intrinsic part of a terminal, should show in the design." The design team was described at work sculpturing the cardboard models, cutting, trying, altering and discussing. In the end they satisfied themselves in shaping the interior to give a visual effect of flow coinciding with the passengers' bodily movement through the building.

Thus Saarinen, under the gaze of a lost, impressionable generation of younger architects, developed in a few years from reasoned rectangles to felt space. But while many hearts warmed to the giant bird, the question still plagued some heads: is it reasonable? The problem of fitting modern services, lavatories and elevators into a bird brought problems that were only partially, only visually, solved. The plans showed some awkward pockets where rectilinear equipment caught in organic intestines, and the main pedestrian bridge across the voluptuous space had a peculiar kink in the middle of which function could hardly approve. But to dwell on these points would be fatuous. This is a key transitional building and if it has practical imperfections, we can rest assured that Saarinen will overcome them later, assuming he continues on the same road. Very few rectilinear buildings are without practical sin. Any irregular building is victim to much more searching and spiteful scrutiny, but there is no inherent reason why a flowing shape should be less functional than a square one - on the contrary, considering the human shape.

The question facing Saarinen and all who would follow him is not the comparatively simple matter of mastering the technique of bending functional and structural requirements with acceptable logic. After the technique - the language of curves - is mastered, what have architects to say? The Saarinen trail leads to the fundamental question of the nature of architectural expression.

Much of the new architecture of excitement is so strong and confident that it may delude us for a moment that it is leading to new realms of architectural beauty. But birds and curves can pall at least as quickly as

boxes. All the shapes of architecture are of equal importance or insignificance in the cosmic pattern. Only associations of familiar shapes and surprise in unfamiliar shapes affect the immediate reaction of the eye. Ultimate satisfaction is achieved only when the long-term visual reaction is singular and appropriate to the human activities involved, when the architectural environment engenders a quicker sense of the realities of the situation, a sharpening of each experience.

Appropriateness of expression has been the aim in most of the exciting shape buildings. Stubbins' Berlin Congress Hall, with its jaunty saddle roof, clearly sought to express the concept of freedom in the speech which it was built to house. Utzon's opera house caught up the sails of Sydney Harbor. A restaurant by the sea in Puerto Rico by Toro-Ferrer shaped its concrete roof after a magnified sea-shell. At T. W. A. Saarinen and Roche let the movement of the crowd lead them. But all this is symbolism, or somewhat shallow emotionalism, or plain high-class advertising. It has nothing to do with the appropriateness of an enclosure as experienced by an occupant. If curves and swirls really do convey a feeling of movement, what has this to do with the emotional state of the average passenger waiting for his flight signal? The mutual adjustment of the spatial expression and the psychological state of a sensitive occupant is more valuable than any ordained symbolism or poetic abstraction. Excitement, in short, should be pertinent.

Architecture is, as most architects will frequently remind you, an expressive art. Frank Lloyd Wright used to insist that no building had a right to exist unless it had poetry. Yet there never have been and never will be enough artists, or poets, to go round, and the world-wide architectural

mess which is the disgrace of the twentieth century is largely caused because we expect plodding, conscientious architectural technicians to act like artists.

Attempts to solve this anomaly sometimes lead to a concept, which has some support, of a frank division in architectural practice: a separation of the technology from the artistry. Thus the repetitive, reasonable curtain-wall grid might become a universal backdrop silhouetting a foreground of special individual gems. The most likely impediments to this scheme are the commercial need to advertise the importance of unimportant buildings and the egotistical urge of some builders and architects to raise monuments on their own inadequate ability. The only counter to this, and ultimately the only cure for all architecture's ills, is a better educated public taste.

At the present time it must be admitted that very few people outside the higher ranks of the architectural and engineering professions take their architectural excitement with any discrimination. To many a somnambulant eye there is no essential difference between a Saarinen shape on the brink of greatness and some convulsive curve bent only to attract attention - Google Style, as it is sometimes called, after the remarkable Californian restaurant chain.

The International Style's plainness was accepted as a fashion and has now run the brief course of any fashionable style. Irresponsible new sorts of enrichment and excitement threaten from all sides. Infant civilization still demands the paint and feathers. At this critical stage the unexpected structural shapes of an imaginative engineer might well hold the greatest promise for the sensible revitalization of architecture. But they are not appropriate, nor even

possible, for all buildings and the architectural profession will have another nervous breakdown if it tries to find the common denominator, for universal application, of the box and the bird. Architectural poetry is not practically possible for every building and automatically is limited to the poetic potential of the community. You can't spread it thin; somehow no-one would contemplate mass-producing giant birds.

The problem is how to control irrelevant enrichment and irresponsible structural gymnastics and to restrict the foreground gems to genuine poetry. This is a task which involves everyone. The better architects should practice relevance in their excitement. Less gifted architects should be encouraged to keep to the anonymous, unexciting but lucrative backdrop. The audience should learn to see the line which divides any sincere expression from the displays and advertisements, and to keep raising the line another peg. This is not an unrealistic call for a knowledgeable and sophisticated public eye. Such discretion is not out of the question. It requires only that people grow more aware of the possibilities of architectural expression, and awareness is undoubtedly being stimulated even now by the experiments in enrichment and excitement. Later, when awareness develops into a public demand for genuine and appropriate character, architecture will be on the way back to its former status at the head of the family of arts.

Will that happy day mark the end of the International Style? Not at all, for technology will continue to work on the problem of universal shelter. Beyond the latest curtain wall there will be even more negative boxes or bubbles offering perfection of press-button control of light, privacy and climate. These buildings will be direct descendants of the early Moderns: rational,

realistic, as scientific as can be. Must we assume that the rationalism and realism will have to be forsaken by those other buildings which seek appropriate character? This appears to be the general assumption today and it holds all the seeds of another breakdown for architecture on parallel lines to that of the late nineteenth century. The principles of early modern architecture were no more than a restatement, in the tightest, almost legalistic, terms, of timeless architectural virtues. They are still as valid this year as ever they were. They do not necessarily lead always to glass or to a box. They need not be applied in a mood of revolt against tradition. They do not by any means debar excitement or genuine poetry. They exert serious restriction only on the various people who use architecture as some sort of monumental advertisement.

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