

~~sculptural form that its instrument is structure. And since it is created form it comes from a mind, an architect's mind. Function becomes form~~

by being squeezed through the sieve of an architect's mind, and during this process it is shaped by many influences, including the architect's background (which sets down his style), his temperament (Does he want to remake the world with every building?), his creativity (or ability to focus on some formal order), his compassion (by which I mean his ability to sense human needs beyond the immediate functional requirements), and his structural vocabulary (or mastery of his medium ~~building~~). The first three - background, temperament and creativity - work involuntarily on the architect and are always present. The last two - his compassion and his vocabulary - are more or less voluntary and variable and can be cultivated.

*The first factor, background, is of major importance. Any*  
~~Now let's imagine a typical case of an Australian architect, a~~ conscientious  
 and keen ~~young~~ man, facing a new client's problem, <sup>apparently</sup> working on a clean slate, <sup>is</sup>

*in fact involuntarily dominated by his*

~~First consider the background, the prevailing climate~~ in which he has been brought up, and the one in which he now works. ~~isolated as we are from personal~~

~~contacts with architects abroad, architects in Australia are chained nevertheless~~ *Architects everywhere today*

*are chained* by historic and economic and social ties to the developing ideas of international architecture; so it is necessary ~~to divert~~ for a moment to look at this situation.



# THE PHASES OF MODERN ARCHITECTURE

*periode or*

There have been three phases this century in the development of architectural <sup>form</sup> - three phases since architects started to look to the future, or at least to the present, instead of the past.

① The first phase was of course the Functionalist: buildings that boldly followed the shapes of most of the activities being housed, after which they were usually done over in flush white cement to symbolise escape from the ornamented past. Thanks to Henry Russell Hitchcock <sup>and Philip Johnson</sup> this is also known as the International Style. <sup>Here is Corbu's Moscow office block of 40 yrs ago</sup> Or it can be called for simplicity the Butter Box period. It was of tremendous significance and strength but of course it was followed by reaction - and, as it happened, by a split reaction.

③ Some architects reverted backwards out of the picture to ornament and romanticism. Others sought what <sup>was often</sup> ~~they~~ called 'significant form', with or without the help of the engineers' shell concrete and tensile rods. Significant form was sometimes based on no more than <sup>geometry =</sup> an exactly square or circular plan, revealing a hunger for formality and orderliness. Usually it meant a monolithic, geometrical, memorably shaped coverall for the activities being housed, almost without reference to the natural shape of those activities.



the reaction

Before long <sup>a</sup>the reaction came to this also, and again <sup>it</sup> was split into two, though not so obviously as before. The most apparent reaction to the

8

monolithic shapes of the second phase took the form of fragmentation.

9

The smooth suitcase container of functions, so exciting in the 1950s, retired out of fashion in the 1960s to give way to complex, busy forms, with all plain

10

surfaces gone - chopped up cleanly as if by a cleaver. Sometimes, <sup>butcher's</sup> behind <sup>here</sup> was nothing more to these buildings than the fragmentation. But this reaction, was an urge to return to the first principles of first phase

11

sometimes the separate parts were related and ordered in a way that drew functionalism - the proud exposition of separate parts. Yet sometimes it a new monumentality out of the functional elements. In short the shared with the second phase the excited creative delight in monumentality.

best points of both earlier phases were combined - the ethics of the 1st & the Now it should be said immediately that not all of it was pure and good. Just

aesthetics  
of the 2nd.  
This was  
and is, the  
3rd phase.

12

as half the reaction to the first phase took a form - romantic revival - which

could never be received seriously, so at least half of the reaction to the

second phase has become little but fashionable trivia and is not worth

13

considering. Simply because it is in reaction to the second phase does not

automatically put any building into a third one. It can still be a mess.

14

Nevertheless the symptoms were much the same in good and bad buildings.

Strict geometry lost all its attraction. So did the relentless module, and the centre-line, and all rigid visual rules, <sup>except the one of ORDER - which is really</sup> <sup>INTELLECT</sup> <sup>UAL. &</sup> <sup>NOT</sup> <sup>VISUAL</sup> <sup>EXPO 67</sup> <sup>the 1st</sup> <sup>3rd Phase</sup> <sup>World Fair</sup> <sup>NEW YORK</sup> <sup>was the last</sup> <sup>2nd Phase</sup> <sup>fair.</sup> <sup>At the same time an interest</sup>

15

in internal space revived strongly after its temporary eclipse during the

second phase, with that stress on exterior monumental mass.



(15) This revival of interest in space was of the greatest significance. The art of architecture, the heart of architecture, the thing that quickens the pulse of

(16) architects - or, I should say, of architects whose pulses are quickenable -

(16A) the disturbing, glorious, transforming element of architecture, <sup>of course</sup> is space. Space

(17) is the medium in which the architect plays and composes. <sup>Despite some</sup> ~~Space is what an~~ avant garde talk lately about an anti-architecture, <sup>space is what an</sup> architect means when he talks with ~~lowered~~ <sup>an earnest</sup> voice of real architecture. Space

(18) is what carries architecture soaring out of the company of other useful arts

(19) and crafts - its blood brothers in all other respects. <sup>PICTURE</sup> To enclose a great volume

of it is the crude basic activity of architecture, but enclosure is not the whole

story. <sup>PIC</sup> To send a needle <sup>great</sup> up into the ~~limitless~~ arc of the sky and thus to punctuate

(20) open space is equally exciting, for external massing is the reverse version of

(21) the composition of space. Yet the real orgasmic thrill comes with the complete

mastery over a parcel of space that one has created. To stand in an interior

in which every important element is directed towards a premeditated spatial

concept is at least as great an experience as to surrender oneself to the emotional

(22) delivery of a performer in any other art: music, and painting included. It

should not be necessary to have to argue about that in this enlightened age, and

(23) yet I fear that numerous worthy people, leaders of intellect and art, are not

aware of what the serious architect is trying to do, let alone whether or not

he is doing it well. But let them explore the shafts of a mine or try walking a

(23A) tightrope across Niagra Falls; then explain to them that the architect is trying

to compose with the dormant senses that are alerted in experiences of that kind.

(24) Architecture plays with heights and depths, with enclosure and release, and when

the sense of these things is related to the use of the building the unique expression

(25) of architecture is experienced. It was this timeless expression that the third

phase revived.



Between first, second and third phases other whims and fashions swung around loosely from one extreme to another, changing appearances to a degree without reference to theory. For instance, the amount of glass.

- 26 [ Men of the first phase were not especially excited by glass. They could take it or leave it. Windows were still acceptable as holes in walls. In the second phase they got positively mesmerised by glass, although not in the form of windows. Whole buildings were apparently made of glass, or of something painted glass colour. Then the third phase swung away and adopted various slits, slots, shields, and other devices in lieu of glass. The mood became defiantly anti-window.

- 29 Then roofs were flat in the first phase. They were curved or folded into dominating monumentality in the second. They are often high pointed in the third. Colour was brutally primary in the first, subtle in the second, banished from the third. Textures were mechanistic in the first phase, smoothly elegant in the second, and crunchy in the third. All this play of visual fashions, action and reaction, affected the style of many buildings in each of the phases, but not the essential form.

- 30 Complicated as all this is, thanks to the wonder of modern computers the development can be expressed in a graph. The overall message of this graph is that, whereas the first and second phases swung from extremes to extremes, the lines tend to converge in the third phase, indicating and promising a better balance.



[ Thus three phases have passed already in 70 years or so of 20th century architecture. The obvious question is: how long till another reaction presses the third phase into oblivion? As I see the phases, this is not going to happen. There will be reactions, of course, in the ~~field~~ of detail: colour, texture, the attitude to glass and to roofs. There will be a reaction from fragmentation. All this will happen no doubt quite soon, and over a longer term the emphasis undoubtedly will swing to and fro between interior space and exterior massing. But as I define the phases so far such fluctuations in taste as these will not constitute a new phase. [ The significance of the three phases is that they marked stages in modern architecture's maturation, in its adjustment to the problem of function, which is the major factor distinguishing architecture from all other arts.

## LIGHTS

The first phase was over-enthused by a naive idea of direct translation of function into form.

The second phase reacted so emotionally against the first that it was inclined to stamp down function right to the bottom of the list of considerations.

The third phase is trying (and here I must emphasise again that every fashionable building today is not necessarily an honorable member of the third phase) is trying to restore function to its rightful position at the head of the list of architectural motives.



(The older ones are, of course less responsive to the more recent moves.)

Now

So much for the background of every young architect. When a new client presents him with a problem he is led by his temperament, creativity, compassion and vocabulary to a solution. But where does he begin? Well, we know that some start by thumbing through the latest magazines and others start right in with a 6B pencil roughing out arrangements of rooms or zones, and others sit and wait for a visionary idea. Yet in their different ways all seek the same thing, more or less. It is an order, a pattern of inevitability, old or new, for the job in hand. If they can find it, this order will embody simul-

taneously the timeless virtues of architecture. [No matter how we may play with words, these timeless virtues remain as defined by Sir Henry Wotton, in 1624, paraphrasing Vitruvius. They are: "Commodity, Firmness & Delight." Commodity means functional efficiency—even in some anti-architecture of the future when space is enclosed by air curtains. Firmness means technical efficiency—mainly

a matter of masonry in Sir Henry's day, but now including the air conditioning and music systems. Delight will always mean the joy of design or order. It means more than the narrow satisfactions of visual beauty. It may mean the intellectual pleasure of an order which happens to destroy conventions of visual beauty.

[The design process is now, as always, a trial of strength between these 3 qualities—C, F & D—the object of the designer being to finish with the three evenly balanced. But which of the 3 will first set the pace? What kind of idea should spark off his train of thought?

- 31 A functional idea—like walking downhill?
- 32 A structural idea—like the warped plane?
- 33 A sculptural idea of free expressive form? Each of those 3

famous buildings finished with a reasonable balance of C, F & D but each was sparked off by a different motive force: WRIGHT by a functional-humanist thought; CANDELA by a structural-geometrical idea; LE CORBU by a sculptural-emotional whim.

Now, which makes the best architecture?



I vote for the Guggenheim. ~~Despite~~ Despite Wright's distaste for the paintings being housed — that is, for non-objective art other than his own — which led to the practical disadvantages of this gallery, it comes

closer than either of the others to a convincing balance of the three qualities. It will continue to convince as a real building, I suggest, in a hundred years or so, when one of the others may tend to look like an interesting engineering novelty of its time and the other like a piece of overgrown or overblown sculpture.

Here then is a rule:

Architecture is a functional order (realised <sup>of course in a</sup> ~~in terms of~~ structural order).

Now, <sup>if</sup> we could agree to follow the rule, would every building be a brick box, or a glass box, or a concrete box — some dumb and deadly shape depending only on the region's material resources and social economy? Emphatically no; every building would not have to be dull. The structural imagination and the emotional excitement can enter, and they must enter, immediately following if not integrally with the functional concept. Now, here is a difficulty in semantics. The word functional when applied



to architecture changes meaning, thanks to the theorists of the late 19th and early 20th centuries. It takes on a visual image, of a concrete box, rather stained with mossy overflows from a leaking flat roof. In the past decade or two, since it has been discredited, <sup>'function'</sup> ~~the~~ has become virtually a synonym for anti-aesthetic behaviour.

All this is emotial reaction to an emotional action - the first strong action of the Functionalists in declaring a revolution upon styles and ornament and pretence and fake. So there was fault on the side of the revolutionary Functionalists. They were carried away by the blinding flash of light of the truth they had seen: one corner of the lid over the creative mystery had been lifted for them. They were naïve. In our puny wisdom we can see that now. But still they were a lot closer to the truth than those who reacted against them and brought back romantic allusions in a shallow search for beauty. { We should not be reacting against early Functionalism. We should be trying to rid it of its naivete'.

In every problem the architect should be searching for a sense of order that will rule his design. This sense of order should be based on function. It must be based on function or the result will be something other than architecture. To say this does not mean the same as to say 'Form Follows Function'. If form



always followed function all building would be honest, though perhaps often visually confused and often dull. If that was the worst that happened we would not have much to worry about. However, we would get architecture only rarely, by coincidence, and it would be Primitive Architecture. / Indeed the ancient world and the

34

rural countryside is filled with such functional architecture of the strongest naive nostalgic charm. (This is a wheat storage shed in the Australian outback.)

What we must strive for today in the sophisticated modern building industry is not a return to that sort of naive charm but an advance to a valid super-functionalism. By this I mean that we should search for an order that characterises or averages out the functions of the building. Then we should allow form to follow

this order of function. This is not the same thing as a call back to First Phase Functionalism, a call to Humanism at the expense of Art. It is a call for better Art while protecting Humanism.

[In the concept of Super-Functionalism the spirit or the poetry or the art of architecture enters in at the point when the architect, led by his background and his society and all his private personal pressures, selects what he perceives to be the functional order of the building. If you like, he perceives the function in an emotional light. Yet at the same time, even in his mind at this early stage, he must be building - he must be picturing the functional - emotional concept in structural terms. When he was a Roman he saw it in masonry and concrete terms. Today if he is,

say, a Mexican, he sees it in reinforced-concrete terms; if a Bay Region man in timber terms - and so on; everyone limited by his society, background & personal aspirations. P.A! - Here we are back with the major influence on Modern Architecture: the architect, and his sometimes blazing aspirations; & his sometimes hot, dark, smouldering ambitions; & sometimes his

40

splendid visions.



One man cannot possibly embrace the competence of architect along with that of structural and mechanical engineers; Wright and Le Corbusier believed they could, but they were the last to do so. Therefore the idea of cooperation at the conceptional level sounds a little like asking a committee to design a building, and it is in human fact impossible. Yet while the architect must go away to a private cave to fulfill that moment, there can be conversations around the problem before the moment, and consultation immediately after it. At the least such cooperation can avoid difficulties like those encountered by the Sydney Opera House.

Inevitably the <sup>Sydney</sup> Opera House must come up in <sup>any</sup> discussion of modern architectural form. What were the factors influencing Utzon's historic choice of this already famous tho' still unfinished form?

So Briefly let's look at it:

The Sydney Opera House was conceived in 1956 at the height of the second phase, of the avant garde's reaction to naive Functionalism. The proud uselessness of the giant pointed sails was half their attraction to some people. Sigfried Giedion, the man who did most to teach the second generation of modern architects about <sup>the first phase &</sup> the principles of Functionalism, was tremendously impressed by the opera house. He wrote a new chapter to his monumental Space, Time & Architecture, called 'Jorn Utzon and the Third Generation', and he spoke of the opera house with reverent awe. He professed to see it as a natural next step, and saw no inconsistency in approving the non-functional sails because they were overhead, out of reach.



So Giedion justified ~~and approved~~ Utzon's sails. <sup>Certainly</sup> He warned that the independence of expression from function is only for master hands as yet and not for minor talents, but even with this proviso his statement seemed to take us round full circle back to the beginning of <sup>his</sup> Giedion's <sup>own</sup> great story in the voluptuous Baroque's breakaway from the stiff classical aesthetic.

(41) The sails of the Opera House are <sup>conspicuously 'ART' architecture,</sup> the most flagrantly unfunctional elements that came forward in that naughty decade of delinquent architecture: the 1950's. Many other critics were shocked into silence by them. Since they fitted no pigeon holes and obeyed no rules, and were so preposterous and so stunningly attractive, <sup>the easiest</sup> ~~an easy~~ way out was to call them sculpture, <sup>and</sup> not architecture.

Thus they, and the critic, were free of practically all discipline and the need to rationalize.

<sup>Even tho' it's nonsense</sup>

I like this <sup>semantic</sup> explanation a little better than Giedion's rather desperate attempt to justify the sails. I suggest that Giedion went further than necessary to be with it. I think it is early yet for the modern movement in architecture to renounce the most important of its former ethics. It is too early yet to admit that our practitioners are too ignorant, insensitive or feeble to achieve the inspiring expression we all want to see - and to build sensibly at the same time. I prefer another explanation altogether for the errant opera house.



The sails, which have become so important to the building, are not sensible. Functionalism aside, it is downright silly for anyone to argue that millions of dollars should be spent on erecting such huge aimless vaults just because they look nice. Imagine the feast of real sculpture, the dozens of Henry Moores, not to mention two or three Michelangelos, which Sydney could have bought for the same price. Yet Jorn Utzon is a sensible as well as a sensitive man; so how could he do such a thing? The answer is of course that he was forced by the circumstances into doing it against his grain, <sup>against</sup> - as I see it - the grain of his whole career. Never before did he design anything so irrelevant as this. It is not part of Utzon's *life* pattern. Yet the idea with which he won the competition was entirely Utzon. It was also - and this is the essential point we must never forget when we look at the huge wayward sculpture that eventually appeared on the harbour edge - it was also at heart a functional scheme. The motivating idea, that caught Saarinen's eye, that caught Giedion's imagination, that sent half the architectural world into raptures when first published, was no external aesthetic dream. It was an intellectual, sensible, functional order: a realistic physical solution to the complicated problem set in the competition conditions. As Giedion pointed out, Utzon and others of his generation had long been fascinated with the horizontal plane or platform as a major element of planning, and composition. He wrote an article on the subject in Zodiac in 1959 and referred to the horizontal plane as a means of architectonic expression, calling it a 'fascinating feature'.



42 'I first fell in love with it in Mexico,' he wrote, 'on a study trip in 1949, where I found many variations both in size and idea of the platform...A great strength radiates from them.' 'They are,' he decided, 'the backbone of architectural compositions.' Giedion made a characteristically valuable search through Utzon's sketch-books and brought out little drawings which gave evidence of a repetitive theme of space: a strong horizontal line with a great mass suspended freely just above it. Thus <sup>the</sup> sketch of a Japanese house was a floor line with a roof floating over it - a caricature of the reality in which a heavy tiled roof is raised on sticks and paper - thin shojis. Another sketch of the ocean shows a mass <sup>of</sup> cottonwool clouds floating above a limitless horizontal plane of water. And an early scribbled study for the opera house shows vaults of a

43 lazy S shape floating above a wide flat floor. So it was not the shape of the floating mass that was important to the concept of the architect, it was the plane below: the stage, the functional element.

44 'The idea,' Utzon wrote in that Zodiac article of 1959, some two years after he designed the building, 'the idea has been to let the platform cut through like a knife, and separate primary and secondary functions completely. On top of the platform the spectators receive the completed work of art and beneath the platform every preparation for it takes place.' Of course in order to present the completed work of art in a way that would allow a fair number of spectators simultaneously to receive the work of art the platform



could not be flat as in the conceptual sketches. It had to slope up from one end, where two stages stood side by side, up past tiers of seating to the high rear of the gods. The platform was in effect tilted to become a hillside, a hollow hillside under which all the practical and dull but necessary functions could be stuffed:

rehearsal rooms and restaurants, lavatories and stores and all the rest of it. The two separate audiences side by side on the hill had to be acoustically isolated from each other, and so the next element of the design was added: lightweight acoustical screens gathered around each audience and its respective stage. The acoustic engineers eventually would dictate the shape that these screens would have to take, multi-facettted forms to fragment reflections. Now, at this conceptual stage, not even an acoustic engineer freed of all other considerations could say precisely what shapes he would later demand. So it was clearly <sup>sensible</sup> ~~obvious~~ of the architect, and nothing if not realistic, to leave these screens free of the architecture; just as one would not presume at a conceptual stage to determine the precise details of the seating or lighting. Indeed Utzon called the enclosing screens of the auditoriums 'acoustical furniture'.

There were to be numerous gaps in the sides of these screens so that the audience could come and go from the auditorium to the concrete hillside outside almost as freely as if it were indeed at an openair theatre. All the complexity of escapes and tortuous stairways that bugged most of the other competition entries were thus eliminated.



This was the heart and essence of the Utzon concept. Certainly the design at this juncture was not yet weatherproof. The hillside and acoustical screens still had to be covered from the rain. A hood - a hovering cloud - was necessary. Thus Utzon in 1956 finally threw a few sails over it all. He thought lightly of featherweight concrete shells such as Felix Candela was building galore in Mexico and as Eero Saarinen had just done at M.I.T. He made a lighthearted, spontaneous gesture exploiting the new technology of concrete to the full.

How glorious it was to live in the middle of the twentieth century, when any giant shape could be made in <sup>glass or in</sup> the new miracle shell concrete technique, with hardly any trouble at all! What shape shall <sup>he cover all</sup> be? A glass box like Mies's? A funny dome like Saarinen's? No. Because Jorn Utzon was what he was, he chose something quite unexpected and different. Because he was at work in <sup>the second phase -</sup> the decade of engineering excitement, the days of shell and tension, he chose dashing plastic multi-curved forms. Because he was <sup>precocious</sup> a third phase man, he chose not one, but a fragmented series, a closely related family of shapes. Because he knew the building was to be beside a deep harbour and he had seen pictures <sup>(in the competition conditions)</sup> of sailing boats cutting up crisp white foam on dark water under a big bridge, he thought of the shapes of billowing sails. Because he had the huge embarrassing loft above the stage to contend with he thought in terms of a main sail, high enough to encompass this, and jib sails



~~others~~ wrapping over the lower acoustic furniture of the auditoria and building up to the main sail. Because he was a Dane, the sails got pointed rather like Viking helmets.

Thus, I believe, grew the conceptional form of the Sydney Opera House. A plan concept, a margin of flexibility left for acoustical engineering, and finally an overcoat conceived in a broad gesture, a grand sweeping statement of the freedom of the new technology. Whatever you think of the outcome, you might allow at least that it was not the anti-intellectual, non-functional, and purely sculptural concept that many said <sup>and still say</sup> it was. At the time of its birth it was a functional thing. However,

before long the concept struck difficulties. *Utzon finally accepted the best world engineers' advice that the sails could not be built as shells. It was those damned Danish Viking ridges. Imagine a hen's egg with knife-edge styling! Or a stiff wind on Viking helmet 200' high. What crack along the ridge, of course* At that point most ordinary architects, including thousands far less perceptive and pragmatic than Utzon, would have thrown in the dream. ~~xxxxxxxxxxxx~~ But these were not ordinary circumstances; the sails were set; Sydney had adopted them already; there was no turning back.

47 How, then, to build them? It was Utzon himself who finally came up with the answer. By changing the shapes, not drastically but quite perceptibly, he remoulded the free flying sails ~~into~~ into the discipline of spherical geometry. Here was a way to save the greater part of the vision while making it practicable,



For once Utzon had reduced all the wild curves to parts of the same theoretical sphere he had translated them into a language which the modern building industry could understand. Utzon, not Ove Arup, his engineer, devised this change and Utzon was proud of the fact. He was critical of Arup for not having come up with some such solution, for having indeed said that the sails could not be built. But then it was not Arup's, the consultant's, place to change the shapes in order to find a solution. Only Utzon, the architect, the vision-keeper, could do that.

48

Now the vision which Sydney had glimpsed when the competition results were announced could at last be built. Or something fairly close to it. Utzon had been pressed by a political and social necessity to fulfill the vision, and he had finally succeeded in preserving it all but intact. Yet even if the external appearance was close enough to keep the political critics at bay, the sails were no longer the free swinging exclamation of joy in the new technology. The pre-cast ribs were in some parts feet thick where <sup>Utzon had proposed a shell of a few</sup> ~~once a slab had been~~ inches. They had <sup>once</sup> been so disarmingly lighthearted, and now they were so much more ponderous, solemn and expensive. Gradually, as the work of making the precast units grew in immensity, by trial and error, they became the focus of the vision instead of a fine gesture ~~x~~ on the periphery. And this made all the difference in the world, if not to their appearance at least to their intellectual justification. // Some arch'l

ART is obscure to the public, an esoteric interest (hobby) for architects. E.g. most cities now have GUIDE BOOKLETS. E.g. "N.Y.'s NEW ARCH". What? About 35 bldgs. Biggest? No. Latest? No: Apartments, SOM, 1951. Best? No. Home of Mr. ED D. STONE: Amille. Even the GUIDE BOOK different...



Not biggest, newest or best, but those which by some subtlety of imagination or intelligence have illuminated old problems. What an esoteric art, clearly seen only by <sup>little intel</sup> ~~coserie~~! The ART in the S.O. House sails not subtle like that. (<sup>Vikings</sup> Sledgehammer). Can they be justified? Never! So Let us not try to justify the Opera House sails. But also let us not denounce

the whole of the great concept underneath them because the inflexibility of competitions, and governments commissions, and politics, did not permit a basic rethinking of the roof after the early disappointment. Rather, condemn the competition system, which puts architects in a temporary, false and unsafe ivory-veneer tower, insulating them from users of the building and often enough from engineers and all technical consultants. Let us appreciate the essential greatness of the opera house concept, remembering that its greatness grew out of an initially sensitive, super-functionalist idea. In trying to justify the sails let us not renounce the struggle of 20th Century architecture against all bogus forms. Especially let's not try to rewrite the history of the struggle to allow the sails a cosy nest in it. We don't have to retreat from the Functionalist plateau in the continuing search for a sound basis for architectural creation. We have to push on up to the next stage of Super-functionalism.

(49)

In the best work of the present phase of modern architecture one can sense the promise of success in this thrust forward. [What does this mean in visual terms? Can <sup>we</sup> ~~be~~ expect more <sup>classic formality</sup> ~~shells~~ or more <sup>curvations</sup> ~~tensile~~ excitement? More random pylons, or more funny roofs? More arches or more zig-zags? Who can anticipate the next swing of taste and be the new star architect for a few months?



To the concept of Super-Functionalism such questions are of course irrelevant. Any of those shapes may be the basis of a Super-Functionalist order. We may see more of them and we are bound to see entirely new ones. But the shapes in themselves are not important. Only the way they combine, the sense of order they create, \* and the relevance of this order to the human occupation of the building, are important. [And who will be the star engineer of tomorrow, to replace Nervi, Candela, and Fuller? What will be the 'in' structural system of the coming decade? Will there be more tension, more shells, more prestressing or poststressing, more folded planes, more lift slab or slip-form or bearing wall, more trabeation or more vaults or back to curtain walls? These also are meaningless questions if you accept the prospect of architecture as order based on function. The fascination of a structural system for its own sake belonged to the second phase that is past, just as the fascination with the machined look belonged to the first phase. All known structural systems and any more that come to light should be welcomed by the creative architect to increase his vocabulary, but the novelty of new structural shapes is gone. What could be flatter next morning than a hyperbolic paraboloid?

What the architect will be searching for <sup>in structural form</sup> is not engineered excitement but engineered order that fits his functional order, that dissolves into it, so that the two are indivisibly one.



Brick and timber will do, if they answer up, as well as prestressing and pneumatic envelopes. Any structure is acceptable, provided it obeys a functional order rather than inflexibly

dictating it, provided it is clear and unconfused and has its own integrity. <sup>The question of ART v. TECH is no diff. from</sup> undeviating logic and ~~order~~ <sup>the ? of HUMAN BEINGS v. COMPUTERS.</sup> ART - HUMANS have to set the program. <sup>then</sup> TECHNOLOGY takes charge.

After two false starts, <sup>it looks as if</sup> the best modern architecture is back on <sup>the ART is in the expression of the REALITY of the bldg not of the archt</sup>

the path of an essentially rational architecture that will

transcend simple functions. <sup>avant garde is</sup> The ~~theories are~~ settling down to

some sort of consensus.

<sup>That still leaves trailing behind an awful lot of bad building, and an awful lot of misunderstanding. Yet the key is so simple.</sup>

LIGHTS To put it all another way, <sup>or commodity</sup> function <sup>is still,</sup> and must be, in

control of architecture, but not as a <sup>despot</sup> ~~despot~~; rather as a

constitutional monarch. While this is so there is order. When

either of the other two elements of the triumvirate of

architecture - <sup>firmness or delight</sup> ~~structure or aesthetics~~ - rules, there is sterility

or chaos respectively. <sup>As time goes on TECH will of course grow &</sup>

<sup>the ARTIST architect will have a harder time, and eventually</sup>

~~It may be argued that the period of lone artistry in architecture~~

~~is dying and anonymous technology~~ <sup>will</sup> ~~be~~ all but supplant ~~the~~ the artist.

~~Yet so long as function rules constitutionally,~~ <sup>yet even then</sup> an overall <sup>integrity</sup> ~~order~~

in the man-made environment <sup>will be</sup> is possible. Building projects <sup>will</sup> fall

into a natural heirarchy. Most everyday functions may be served

fully and adequately by technology without reference ~~necessarily~~

to an architect or <sup>the</sup> ~~to~~ architectural <sup>art.</sup> ~~form~~. Yet any special function,

any activity that calls man to raise his eyes for a moment above

<sup>the drawings and balance sheets will always call for expressive archt</sup>

ART, i.e. form. If that form is ruled by function there will be order in the environment. If that special form is ruled first by 'delight', then outlook is stormy. <sup>for tomorrow.</sup>