COVER AND FRONTISPIECE ● Living Room ● House in Brooklyn ● Pretoria

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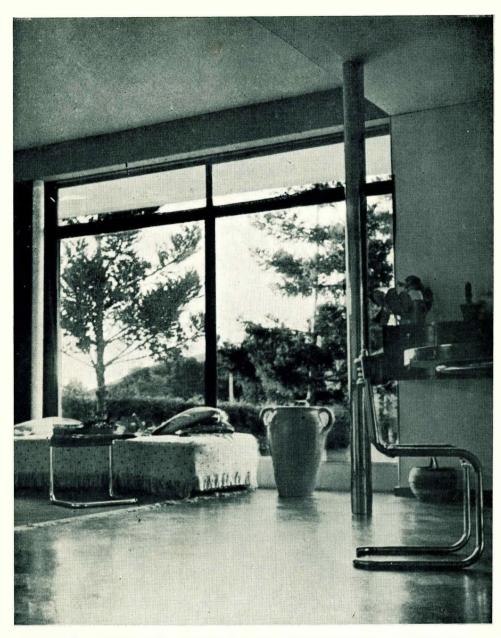
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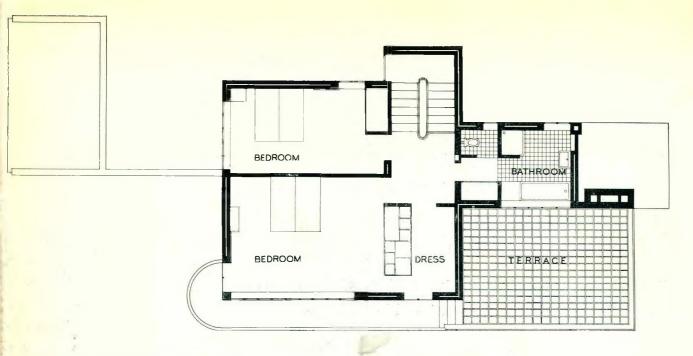


LIVING ROOM • HOUSE IN BROOKLYN PRETORIA An expression of simple architectural elements creating an unobtrusive internal subdivision, while harnessing the endless kaleidoscope of nature—a rippling contrast to man's geometric postulates.

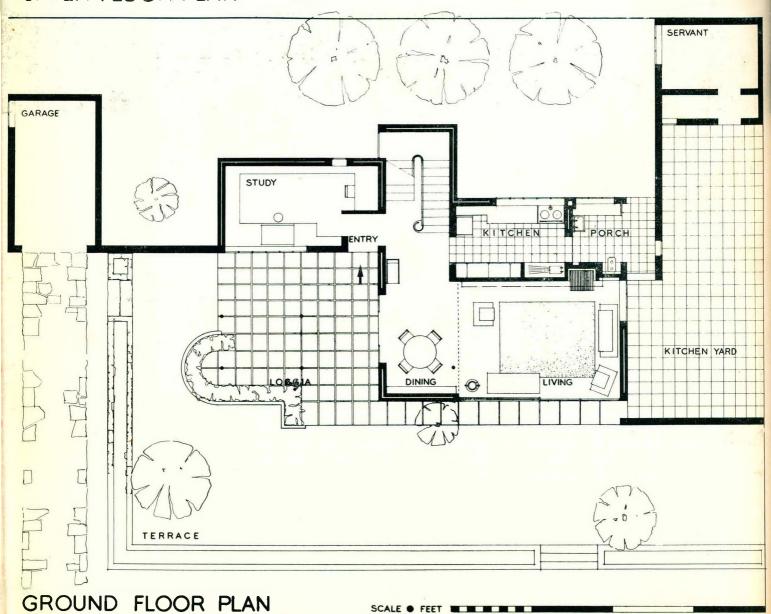
A Martian spectator of the superficial aspects of our town, in terms of the buildings we live in, would inevitably deduce an enormous and an essentially trivial variation among human beings. Humanity appears to demand or to have imposed on it the most astounding variety of shapes, angles and meretricious decorative knick-knacks. But the observations of the Martian would fall far short of the truth. In fact, the needs of man, as far as his habitation in particular is concerned, are obviously and demonstrably equal and similar in every essential to those of his neighbour. Even if this is a statement of an ideal, architecture is the sociological weapon with which man's spiritual and physical status may be brought to a uniformly higher level.

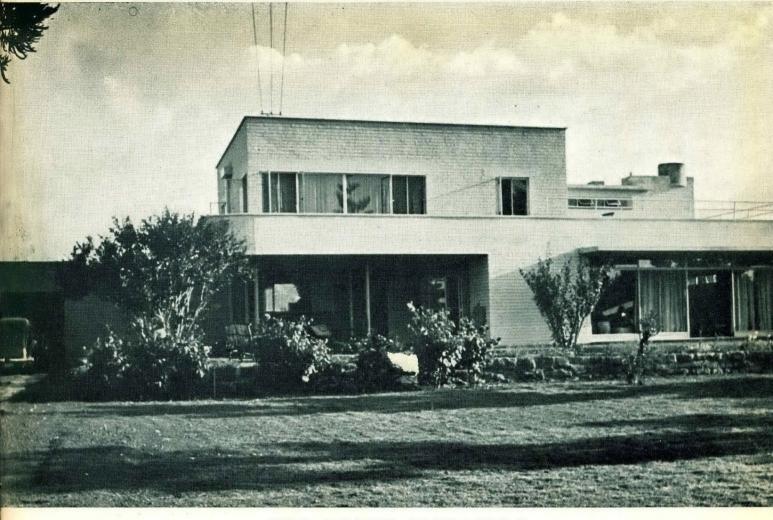
In dealing with the problems facing modern architectural development, it is desirable to postulate the essential factors, both creative and limiting, The given conditions will which form the basis of a satisfying solution. include elementary facts such as situation, climate or aspect, and the major considerations of economic levels, technical potentialities, and local or national Dealing with the more complex postulates-firstly, the economic under the existing social system—it is essential to assume a minimum wage earning capacity in relation to possible housing, but, once established, this factor must not further affect the fixed architectural assumptions-for example, the minimum allotment of space to individual or the basic freedom of movement required for the preservation of family life. Secondly, as far as technical potentialities are concerned, the fact is that the majority of structural problems are capable to-day of universal and reasonable practical solution, although, economically, one particular form may be preferred to another. It is in the field of mass produced building material, however, that conditions vary considerably, and it is here that South Africa, in particular, This is the greatest difficulty retarding architectural lamentably lags. research in this country. In fact, the architect's vocabulary of materials is amazingly limited—a factor which must inevitably stiffen reactionary In the third matter of local or and non-creative resistance to progress. national temperament, the architect functions within the great historical process of tradition-building-a process in art which, contrary to the general belief, is far from definitive in intent, but rather, in fact, guarantees the perpetuation of first principles, without which art movements become The difficulty facing the architect is to determine decadent and futile. the point at which his expression of national life and development merges with the international common factors (structural, sociological) and to express adequately these two essential facets of significant design. must discriminate between what is deeply vital in the mental and psychological make-up of the nation and what may be a prejudice arising from false sentiment or mere insularity.

On these general lines, then, the task of the architect is formulated, and we may now pass on to a consideration of the house at Brooklyn, Pretoria, designed by Mr. W. Gordon McIntosh. The achievement that this house represents can best be measured in terms of the foregoing remarks, the critical attack developing from a statement of the problem and terminating with an evaluation of the achieved solution.



UPPER FLOOR PLAN



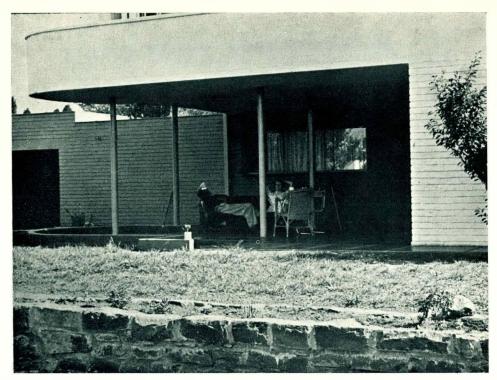


THE NORTH ELEVATION



HOUSE IN BROOKLYN • PRETORIA

ARCHITECT • W. GORDON McINTOSH



THE SPACIOUS LOGGIA PALE GREEN WALL AS BACKGROUND Photos: Duncan Howie



THE SLIDING GLASS SCREEN OF THE LOUNGE

A house may satisfy personal requirements and yet point the way to a generalised application of principles. In a given limited area a proper allocation of space to various functions must inevitably lead to the estab-These in turn determine a nucleus round lishing of certain fixed minima. which variable and flexible combinations may be disposed. A small house can thus demonstrate living, working and service units which represent a feasible minimum. No significant work of architecture can, indeed, emerge unless these primary conditions are fulfilled. The architect who is active in the contemporary movement will not deny that at every opportunity he endeavours to universalise the problem presented, and so illustrate with as much force as possible the breadth of approach and the truth of expression inherent in the method of solution. In the house under consideration this The basic requirements of this technique has been admirably followed. problem were, firstly, a living area for repose and entertainment, dining and sheltered outdoor enjoyment; secondly, a study for working privacy; thirdly, the necessary services for these ground floor elements; and, fourthly, the sleeping quarters, situated on the first floor. It will be immediately apparent that the arrangement and treatment of the ground floor assumes an importance Methods become all-important beyond that of a particularised solution. factors in a definitive postulation of the essential spatial requirements, as well as establishing the points at which personal tastes may properly allow a departure from functional necessities. Methods, here, can best be dealt with under the divisions of economics, structural systems and materials, while the handling of the psychological issues raised completes the architect's task.

The architect, in the house at Brooklyn, has enunciated clearly an adequate system of spatial division, presupposing an initial acceptable minimum assignment. This automatically defines an economic level—in this case typical of an average South African household of the middle class.

The structural systems adopted for the house naturally bear an immediate relationship to the economic factor. South Africa reveals here the lag previously emphasised, so that the architect is restricted for the most part to the customary and traditional methods, namely, brick walling supporting the floors and roofs. Overseas developments in structure indicate to the architect the use of reinforced concrete slabs for these purposes, and of steel columns for points of support where necessary. These elements, at least, are required for research in the contemporary field. Actually, the limitations set by the rigid and unimaginative methods which are here economically possible, constitute an almost insuperable barrier to significant experiment.

This must be borne in mind in any critical survey of modern South African architecture. It remains at present for the designer to extract the maximum from the available methods, and it is in this that the important achievement of the Pretoria house can be estimated. A colour-washed brick exterior, reinforced concrete slabs and steel points of support constitute the structural alphabet of the house. On this basis a simple and effective essay in ground floor planning has been evolved. A notable contribution in the plan is the generous area given to the living-room and covered verandah and the fine relationship established between these two elements. In this area a most effective use, aesthetically speaking, of the structural steel columns has been made. They give the dual purpose of defining both space and function, with a resultant accentuation of scale and form.



THE LOUNGE AND DINING SPACE LOOKING TOWARDS THE LOGGIA



THE STUDY

BAGGED AND COLOURWASHED BRICKWORK

THE BATHROOM

Ceiling Walls

Sky Blue

White

Floor

Black



STAIRCASE DETAIL

Handrails

White

Steps

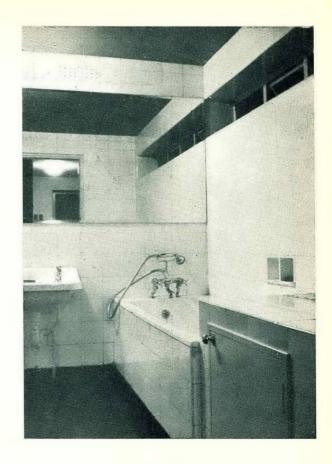
Black

Soffit

Sky Blue

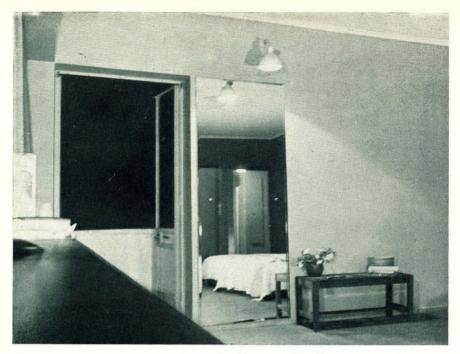
Main Wall

Neutralised Carmine



KITCHEN DETAIL • Deep Cream Glazed Tiles • Red Curtains





TWO VIEWS OF THE MAIN BEDROOM

Ceiling • White

Walls • Pale Blue

Fittings • Oiled Sycamore

Carpet • Terra Cotta



As far as materials in the house are concerned, economy dictated the use of those which are the most easily obtainable. The treatment of the study is brilliantly illustrative of the values to be extracted from the simplest materials, while creating, in some indefinable way, a peculiarly South African character. It is my conviction that, up to this stage, the constituent elements of this ground floor plan define an arrangement and a minimum to which South African housing, as a general problem, should adhere. The local implications emerge with striking force, while the international common factors are given due consideration and accent. At this point a departure from the generalised solution may be considered possible and even desirable. That does not imply that the architect, as a creative artist, should cease handling the media for personal expression, but rather that he should control or interpret the decorative instincts and idiosyncrasies of the individual. To achieve harmony between man and his architectural setting, the contemporary Materials, of course, designer uses colour as his most powerful weapon. automatically come into this category, and a satisfying relationship may emerge from a sympathetic handling of surface and function. applied to walls or planes, however, raises the most interesting and significant problems. This subject is receiving expert consideration elsewhere in this number, so that it will be sufficient here to indicate the possibilities of inter-Form, direction, breadth, design receive a pretation open to the artist. modulation which can stimulate or relax, without, in fact, departing from In the Brooklyn house the colour experiment is an initial personal bias. markedly successful, and definitely points the way to a wide acceptance of this method of differentiation and accent. In the visual arts, colour, perhaps, creates the most direct emotional reflexes, and is, in fact, closely related to The appeal of pure form is not an easy one, but an music in that respect. inspired use of colour values, by striking back to a fundamental reaction in man, can bridge the gap between a mental process and an instinctive awareness. The contemporary architect is enabled, by these means, to bring into alignment parallel developments in the arts of painting and sculpture, and, indeed, for the first time in the twentieth century, plastics and murals find a fitting and sympathetic surface background. This phase of modern architecture is beautifully developed in the Brooklyn house, and an imaginative and effective composition has resulted from the skilful handling of colour The interior aspect of the house now assumes a new surfaces and tones. character, built up on a fixed framework, but allowing the utmost aesthetic variation in decorative or formal values.

In summing up the achievement of the house at Brooklyn, the duality in the task of the architect should be kept in mind. Firstly, the local problem and its solution, and, secondly, the broader problem of modern architectural development and its international implications. It can be categorically stated that the Pretoria house represents in the first place a serious and competent effort to express, within the limitations imposed, the technical and economic conditions obtaining at one particular level of South African life to-day. In that single sphere the achievement is considerable though obviously restricted by the problem set. Research in free planning, in functional expression, and in colour notation, make the house an important contribution to international architecture, and, as such, a potent factor in the advancement of contemporary Significant in both categories, the house, therefore, must take its place in the historical development of architecture, one phase of which is now being evolved in the Transvaal. When the work of the active group of architects who are participating in that effort can be justly assessed, not the least part of the success that may be granted will be attributed to the sincere and thoughtful work of creative art, which is the house at Brooklyn.



THE DINING SPACE

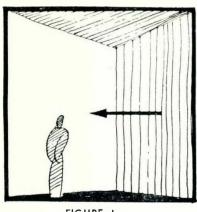


FIGURE I



FIGURE 2



FIGURE 3

The arrows indicate the direction of the lighting.

Normal side lighting. Tone values define planes.

Artificial lighting tone values equalised.

Artificial lighting. Definition of planes reduced by the application of colour.

It is not my purpose to deal with the theoretical aspects of contemporary architecture, of its insistence on the value of surface, on the relationships of volumes, on the creation of space. These principles have been dealt with in detail by others in recent numbers of this publication.

It is my purpose to commence at a point where, having solved a problem in terms of the principles mentioned above, it remains to marshal the surfaces and forms in a manner which will best achieve the character, atmosphere, and feeling envisaged by the designer. As an example of this final integration, together with a consideration of colour treatment, House McIntosh will form an ideal illustration. To commence with, let us look a little more closely at the elements with which it is necessary to deal. Surface and volume. Volumes exist by virtue of limiting surfaces which define portions of space. One surface can completely define a space, as for example, the inside surface of a sphere. But usually we find that two, three, and even more surfaces define the volumes in which we live. A rectangular room requires six. Now it is necessary for the architect when creating the volumes in which we are to live to ensure that these will be proportioned in relation to the purpose for which they are In addition they must observe the idiosyncrasies of the client. to be used. His claustrophobia, or agoraphobia.

A living room, for example, should be so arranged that the relationship of the parts to each other creates an agreeable impression. We should be impressed by the good proportion, by the feeling of equilibrium between the parts, by the feeling of repose.

Let us, then, at this stage assume that such a space has been created. How would we complete this? Too often the surfaces are finished with white or cream distemper. The result is satisfactory up to a point, but does not by any means realise the possibilities which a more insistent presentation of the space could achieve. Let me illustrate how the properties of the space we are considering can deteriorate under the effects of lighting. Consider an angle of the room shown in figure (1). If the lighting is arranged as indicated, the three surfaces will be clearly defined due to differences in tone value, and since surface defines volume, this will be clearly defined. If on the other hand the lighting is arranged as shown in figure (2), then the definition of the surface will disappear, and with it the form of the space. Now it is not practicable to control lighting to a degree where the definition of surfaces is maintained at all times, and it is therefore logical to assume light as being a variable factor. If light cannot satisfactorily define surface, and so volume under all conditions, then what can? Colour furnishes the answer to the above question.

Consider figure (2) again. Leave the lighting as shown but differentiate the surfaces by means of three colours. The definition is restored and will be maintained under all normal conditions. The same result could be obtained by using three well defined tone values derived from the same colour. Thus we can conclude that it is possible and desirable to model space by means of planes of colour, as in figure (3). These can be strident, clamouring for attention in the case of an exhibition pavilion or soft and pale, full of repose in the case of the living room.

The ease with which we can now define volumes carries with it a further complication. All people prefer different colour ranges. Some are pleased by clear unbroken hues, whilst others can only enjoy neutralised colours.

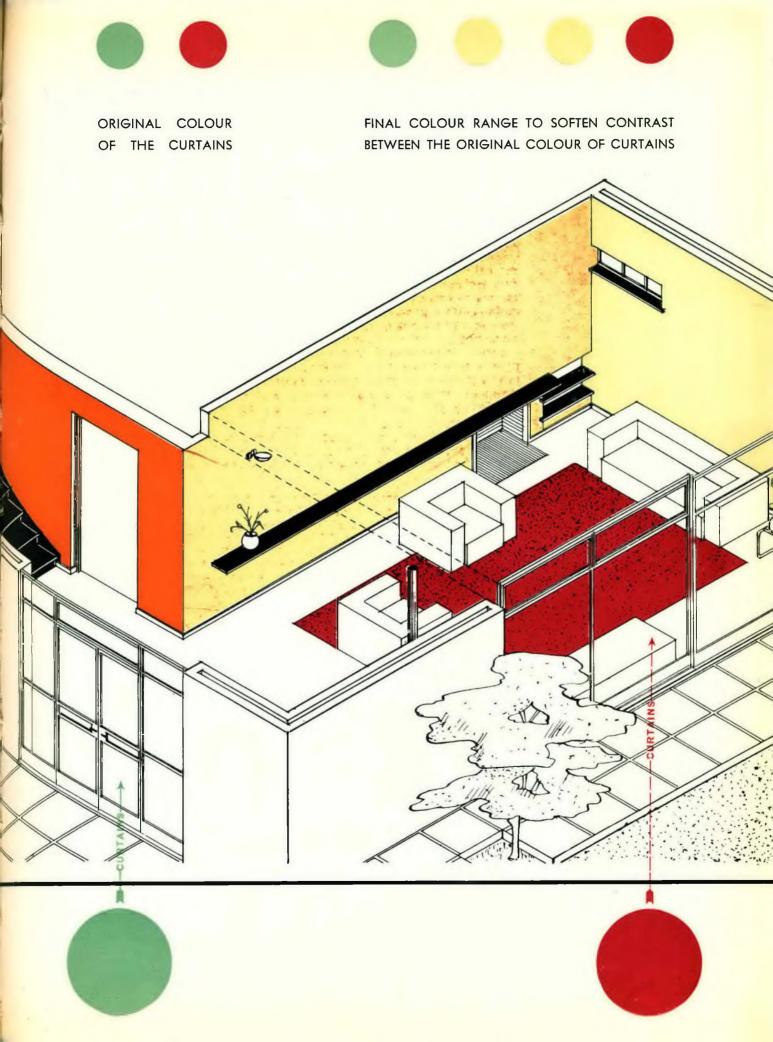
The architect will not find himself in harmony with all shades of taste, but since he has to create the surroundings for his client, he must arrive at some solution which will be mutually gratifying. Before anything can be done, then, the architect must ascertain where the colour sensibilities of his client's wife lie, for it is with her that the final arrangements have usually to be settled. This can easily be achieved by means of specially prepared colour cards, which I do not propose to describe in detail in this paper. In addition, a few simple observations will give a direct clue. The general quality of the colour of her dresses, the lining of her coat. It is not so much a matter of determining whether greens or blues are favoured, as of determining whether pure or neutralised tints are preferred, and, if neutralised, to what extent.

Suppose that the architect has succeeded in obtaining the information suggested above, how should he set about the distribution of colour in the interior? No hard and fast rules can be put forward for this operation. From this point it becomes a personal matter on the part of the architect. A few factors, though, must be borne in mind. Firstly, all surfaces in a room do not receive the same amount of light. Those opposite windows are brilliantly lit, those at right angles to windows come next in order of brightness, and lastly those in the same plane as the windows are in shadow. These relative tone values must be considered when distributing the colour values. For instance, in order to even up the tone values in the room, to assist the feeling of equilibrium between the parts mentioned before, the palest tints should be placed on the darkest walls, while the strongest tints should be reserved for best lit walls.

It must be remembered that the problem is a living space where a feeling of equilibrium is necessary to promote an atmosphere of repose. Under different conditions, for instance, where a directional quality is required, it would be preferable to place a tonal emphasis on those elements which build up the directional quality. The curved wall of a foyer, for example, or the side wall of an open staircase. It is obvious that the requirements of each problem will have to be decided on their merits.

So far this survey has dealt with the necessity for colour application, the personal factors involved, and a method of attack. All that remains is the practical application. The examination of a building in which the above theory has been carried out, House McIntosh at Brooklyn, Pretoria, will form the basis of a descriptive analysis.

The diagram indicates the wall systems in isometric projection and furnishes samples of the colours as applied to the various wall surfaces. How was this arrangement evolved? To commence with the colour sensibility of the clients was fixed by their choice of carpet and curtains, the colours of which are shown. It will be apparent that these form approximate contrasts, and as contrast over large areas is the most stimulating form of colour arrangement, it is imperative to tone this down if repose is to be achieved. The simplest method is to add another colour which will act as a go-between. In this case a deep cream. Deep cream and the colour of the curtains are harmonious. Deep cream and green are harmonious. That is, deep cream furnishes a transition between the two contrasts. The green curtains in the dining space at one end of the room are rather distant from the neutralised carmine curtains in the living space, and, in order to relate them, the wall at right angles to the latter curtains has been finished pale green. A deep cream lintol over the neutralised carmine curtains softens the juxtaposition of the two contrasts. The wall opposite the carmine curtains, as well as that in the plane of the dining space curtain, have been finished deep cream. It should be clear from the diagram how the tints alternate round the sides of the living and dining spaces. At one point only do the contrasting colours come into contact, and that in the corner furthest away from the approach. This



accent is valuable as it measures the diagonal of the area, and this in turn establishes the length of the room. Next it was considered important to accent the direction of the approach to the living space. This was done by placing a deep toned neutralised carmine on the wall surface flanking the staircase, which also formed a fine background to the white handrails. In addition, by continuing this colour up the side of the stair well on to the first floor landing, it linked together the two floor levels. The soffit of the stair, pale blue, lightens the sense of structure. On the loggia, which must be considered as part of the living space, a feeling of coolness and shade is promoted by the back wall, which is finished pale green. Set in this field of green, pale cream picks out the main entrance door. A deep green granolithic floor with wide grey joints, and the remaining walls in ivory white, complete a scheme which, with its feeling of shade and freedom of plan, is impressed with a strong South African character, a quality which has been dealt with in detail by Mr. Hanson.

Having had the opportunity of observing this experiment from its commencement to its completion, it is difficult for me to estimate the success or otherwise which has attended what must be one of the few attempts in South Africa to unfold the possibilities of the modern interior. Perhaps the reactions of individuals with no interest in architecture will give a clue. Firstly, in spite of the fact that six entirely different colours are embodied in the living zone, these balance so well that the normal individual is not conscious of them. It is only when attention is drawn to the differences that recognition of them follows. One aspect impresses everyone, the feeling of space, of good proportion, and repose. The setting is one which is ideally conceived to decelerate the tempo of urban life. It refreshes and stimulates, and because of its carefully ordered parts conceived in terms of the human scale and consciousness, has an appeal which is instantaneous and universal. It is absorbed at a glance.

In January of this year, an extremely significant exhibition of contemporary architecture was held in the New Burlington Galleries by the MARS (Modern Architectural Research) Group.

The well-defined and carefully conceived demonstration of the elements, the statements and the ideals of modern architecture was presented in a manner designed to stimulate an intelligent interest in, and understanding of, the meaning of Modern Architecture.

The arrangement of the exhibition centred round the words of Sir Henry Wotton, who, in paraphrasing Vitruvius, wrote in 1624: "The aim of architecture is to build well. Well building has three conditions: Commoditie, Firmenes and Delight."

The individual and general needs of contemporary society are set out in the first room, under the heading of Building Needs—" Commoditie."

The second section provides a pictorial answer to the question of how these needs may be satisfied. Ten display windows illustrate by means of specimens, models, drawings and photographs the various characteristics of building science—"Firmenes."

Commoditie and Firmenes then merge and lead to Delight.

The second room displays a number of significant modern building types in photographic sequence, while further photographs and models emphasise the formality and universality of this architectural idiom.

THE BASIS OF ARCHITECTURE



On January 19th I dropped out of an airplane into the midst of a charming demonstration of youth, which revealed the architecture of to-morrow to be as smiling as it is self-reliant. Much has certainly been accomplished. It is no longer a case of fighting a battle all over the world, but of a victory

already won in every part of it.

The characteristic quality of the New Architecture—and therefore of this MARS Exhibition—is that it anticipates the needs of mankind. Consequently, it substitutes dwellings which vouchsafe their inmates all the essential joys of life for the gloomy dens built during the last century. The New Architecture springs from the depths of the human heart. That is why it has launched a deliberate crusade against brutality, indifference, selfishness, and stupidity. This generous sentiment has prevailed because it knew how to dispose of the marvellous resources which the Mechanical Age has put into our hands. Those constructive weapons were the fruit of a Technical Revolution. Thanks to it, the sensibility of our generation has been able to discover or create those new forms which the modern dwelling embodies.

These have been perceived more or less clearly, though often intuitively. That MARS, the British national group of the international federal organisation known as "Les Congrès Internationaux d'Architecture Moderne," has been able to plan and produce this magnificent exhibition in London is sufficient proof of this. C.I.A.M., as the parent body is usually called, was founded in 1928 at the Château de La Sarraz, in Switzerland—not to solve the general economic problems of modern architecture, but to affirm its moral principles which had been outraged by the jury's verdict on the competition for the Palace of the League of Nations at Geneva. Though that conference awoke vital echoes in a score of different countries, it was as much the quality of heart as that of mind of the enlightened men who took part in it which brought into being these various national groups.

In this London exhibition you are confronted with men of good faith and good-will, men with the enthusiasm and sensitiveness of artists, who found their architectural faith on the heart of man, imbued with the tender aspiration to shape a home for it that shall be truly such on every day in the year. But to do so they have to face the gravest problems of planning, sociology, and economics—problems which raise the question of action as the only answer to inertia and routine.

answer to inertia and routine.

But there is another reason why MARS has been able to score such a brilliant success. Important industrial enterprises and wealthy commercial organisations appreciated the generosity of mind which animates the Group, and have contributed so liberally to its funds that it was possible to stage this exhibition under conditions which I have never seen approached elsewhere. Is it Old England's greatest secret that, in her chosen hour, she always knows how to blend the noblest ideals with the measured realities of hard economic facts?

What strikes one particularly in this exhibition is the elegance, the intimate eloquence, of its sequence of presentations, none of which could possibly alarm anybody. The visitor is led by the hand, and almost imperceptibly finds himself convinced by one after another. The sunshine of innumerable electric globes suffuses every room in the gallery with the soft atmosphere of springtime. The pictorial argument adopted—a selection of photographs chosen from the whole world—is so arranged that from every angle the pure prisms of the New Architecture can be seen rising out of sunlit trees and lawns, or from the water's edge. There are great glass bays bathed with light; interiors lovingly proportioned to the human scale. Some rooms have been actually reproduced with their furniture so as to offer the visitor a concrete fulfilment of the expectancy born of all these photographs.

The party I attended in this setting was a crowd so delighted with all it saw as to let itself be gently carried away by the promise of town-planning, construction, technology—things which by all the rules ought to have been invincibly tedious and forbidding. But the only memories of these the guests took away with them were of the lyrical appeal of those poems in steel, glass, and concrete. The New Architecture can no longer be reproached with being mere insensitive and soulless technics. The MARS Exhibition will prevent

the repetition of such calumnies as these.

The greater task still lies before us. The benefits of the New Architecture must not be confined to the homes of the few who enjoy the privilege of taste or money. They must be widely diffused so as to brighten the homes, and thus the lives, of millions upon millions of workers. That is the present position in all its earnestness, and that is why our generosity impels us to pursue this aim and assure its triumph. It necessarily postulates the most crucial issue of our age: a great campaign for the rational re-equipment and proper utilisation of whole countries regarded as indivisible units. Granted a due aesthetic sensibility to form, that campaign will enable us to carry out vast undertakings, like the rebuilding of our towns, in a spirit of grandeur, nobility, and dignity. When the hour for it strikes, planning—urban, regional, national, international—will become humanity's omnipotent orderly officer, the universal disposer, the Supreme Architect.

In every truth our epoch holds out the promise of a fresh cycle of architecture that shall express the Mechanistic Civilisation we are now entering upon—a civilisation that has no reason to prove inferior to any which have preceded it, and ought to be worthier, purer, more resplendent than all of

them

One must be allowed a little indulgence to weave such luminous dreams as these after seeing the MARS Exhibition, for that exhibition was one where youth and enthusiasm have expressed themselves in purity and precision.

Trans. P.M.S.

Reprinted from "The Architectural Review," March, 1938.

ARCHITECTURE • GARDEN • LANDSCAPE

The architecture of the house embraces the garden. House and garden coalesce, a single unit in the landscape.



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