

https://dspace.org/

South African Architectural Record: Journal of the Cape, Natal, Orange Free State and Transvaal Provincial Institutes of South African Architects and the Chapter of South African Quantity Surveyors.

1948
South African Architectural Institute
http://hdl.handle.net/10539/22928
South African Architectural Record; Journal of the Cape, Natal, Orange Free State and Transvaal Provincial Institutes of South African Architects and the Chapter of South African Quantity Surveyors. 1948. vol 33:1-12; 1-341

Downloaded from a DSpace repository. https://dspace.org/

SOUTH AFRICAN ARCHITECTURAL RECORD

THE JOURNAL OF THE CAPE, NATAL, ORANGE FREE STATE AND TRANSVAAL PROVINCIAL INSTITUTES OF SOUTH AFRICAN ARCHITECTS AND THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS

UNIVERSITY OF THE WITWATERSRAND
7 JUN 1948
LIBRARY

CONTENTS FOR APRIL 1948

THE ART OF ARCHITECTURE

A record of the Symposium and Exhibition presented under the auspices of the Institute of South African Architects, the Transvaal Provincial Institute of Architects and the Students' Architectural Society of the University of the Witwatersrand, Johannesburg, and held at Escom House, Johannesburg, in September, 1947.

FOREWORD 72

PROCEEDINGS OF THE FIRST EVENING 73
OPENING ADDRESS by The Hon. F. C. Sturrock 73
ARCHITECTURE by A. S. Furner, F.R.I.B.A., M.I.A. 77

PROCEEDINGS OF THE SECOND EVENING 77
ART IN ARCHITECTURE by W. de S. Hendrikz, M.A. 82
TECHNIQUE OF ARCHITECTURE by W. D. Howie, A.R.I.B.A., M.I.A. 88

PROCEEDINGS OF THE THIRD EVENING 93
CIVIC DESIGN by R. H. Kantorowich, A.R.I.B.A., M.I.A., A.M.T.P.I. 94

THE EXHIBITION 103

ACKNOWLEDGEMENTS 119

NOTES AND NEWS 120

CORRESPONDENCE 121

EDITOR: W. DUNCAN HOWIE
ASSISTANT EDITORS:
ANGUS STEWART
UGO TOMASELLI
DONALD PILCHER

VOLUME THIRTY-THREE, NO. 4

The Editor will be glad to consider any MSS., photographs or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs or sketches, and publication in the Journal can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. The Institute does not hold itself responsible for the opinions expressed by contributors. Annual subscription £1 10s. direct to the Secretary, 612, KELVIN HOUSE, 75, MARSHALL STREET, JOHANNESBURG. PHONE 34-2921.

BUSINESS MANAGEMENT: G. J. McHARRY (PTY.) LTD., 43, BECKETT'S BUILDINGS, JOHANNESBURG. P.O. BOX 1409. PHONE 33-7606.

FOREWORD

In 1943 the Transvaal Provincial Institute and the Students' Architectural Society of the University staged a most successful exhibition entitled: "Rebuilding South Africa." On this occasion, with the co-operation of the South African Institute, these bodies are portraying a still more important and fundamental subject, "The Art of Architecture."

I am confident that the community as a whole appreciates very well the high standard of performance, technical, aesthetic and practical of the architectural profession in the Union and will welcome this opportunity of seeing and discussing the fundamentals of the subject.

It is advisedly that I lay stress on the technical, aesthetic and practical aspects of the work; unless all three are combined the result can never be a complete success. A corrugated iron aeroplane hangar is a masterly example of light, yet rugged construction affording every facility for the handling of huge modern aircraft, but it is not very beautiful. It is on record that the nave of the magnificent abbey church of Paray-le-Monial in Western France collapsed three times before the monks acquired the technical skill necessary to erect the soaring magnificence of a vaulted roof. How few auditoria erected in modern times are really suited to the delivery of speeches, whereas the outdoor theatres of Greece and Southern France were wellnigh perfect.

The architect must have complete command of the strength and application of his materials; he must make a close study of the use to which the building is to be put and he must ensure that the whole appeals to the aesthetic sense of his client.

It is only by this means that he can create a good building.

H. R. RAIKES,
Principal.

University,
29th August, 1947.

PROGRAMME

Chairman: Mr. N. L. Hanson, President-in-Chief, Institute of South African Architects.

FIRST EVENING

1. OPENING ADDRESS	The Hon. F. C. Sturrock, Minister of Transport.
2. ARCHITECTURE	Mr. A. S. Furner, F.R.I.B.A., M.I.A., Architect.
3. VOTE OF THANKS	Mrs. M. E. Sheridan, Chairman, Students' Architectural Society, University of the Witwatersrand, Johannesburg.

SECOND EVENING

1. ART IN ARCHITECTURE	Mr. Willem de S. Hendrikz, M.A., Artist.
2. TECHNIQUE OF ARCHITECTURE	Mr. W. D. Howie, A.R.I.B.A., M.I.A., Lecturer in Architecture, University of the Witwatersrand, Johannesburg.
3. VOTE OF THANKS	Mr. R. K. Walker, Student of Architecture, University of the Witwatersrand, Johannesburg.

THIRD EVENING

1. CIVIC DESIGN	Mr. R. H. Kantorowich, A.R.I.B.A., M.I.A., A.M.T.P.I., Town Planning Officer, Cape Town Foreshore Joint Technical Committee.
2. VOTE OF THANKS	Mr. J. Fassler, A.R.I.B.A., M.I.A., Senior Lecturer in Architecture, University of the Witwatersrand, Johannesburg.

THE PROCEEDINGS OF THE FIRST EVENING

INTRODUCTORY ADDRESS

Mr. Minister, Mr. Principal, Ladies and Gentlemen:

The Institute of South African Architects is privileged and honoured this evening to have the Hon. the Minister of Transport, Mr. F. C. Sturrock, to open this Exhibition: the Art of Architecture.

I wish to express the appreciation of the Profession to you, Sir, for taking time off from national duties to associate yourself with this effort by Students of the University of the Witwatersrand's School of Architecture.

Such an association is not fortuitous, however, but arises from an association in a wider sphere. The great building programme of the Administration which has developed either from sheer necessity or from intelligent anticipation of the great future of this country, has been, I feel, inspired and guided by yourself.

The programme's fulfilment is bound up with the work of architects both within and outside the Administration. It is a programme of extraordinary range and diversity—from railway stations in Cape Town, Durban, Port Elizabeth and Johannesburg, from headquarters for rail, road, air and sea transport, to the replanning of important sections of our main towns and culminating in the great scheme for the development of the Cape Town Foreshore.

In tackling the programme, two courses of action were open to the Administration. The one, the rather habitual course of just building without inspiration or enthusiasm or any appreciation of the cultural rôle which Government must at times assume in the life of the community. The other, a serious endeavour to create an architecture, worthy of great public functions, and a contribution to the cultural development of a young country.

It is to the everlasting credit of the Administration that the latter course has been chosen, and consistently followed. For this vision the Institute wishes here to pay tribute. It is apparent from these words, Sir, that in chosing this path, you have the full support of this Institute and my Profession.

Professor Pearse said recently that official stimulus of architecture had come, in latter-day South Africa, from two public men only—the first, Rhodes, the second Sturrock. That statement, I feel, is very true, but a significant distinction should be drawn. In case of Cecil Rhodes, we must consider him, in the sphere of architecture, as something of an anachronism, the reincarnation, as it were, of the aristocratic patron of the Renaissance. In your case, Sir, I feel that you represent a wider field of support for architecture and the arts—that of the people themselves, collectively and democratically expressed through you and your Administration. That is the new patronage which presages a new age of building achievement in the Union.

In the series of lectures which start tonight, more than a passing reference will be made to the necessity and desirability of such a development for the proper functioning of the architect in modern society; and a practical demonstration will emerge in the last of the lectures, when the Cape Town Foreshore Development Scheme will be cited as being amongst the foremost examples of modern town planning and civic design.

Is it not then fitting, that an Exhibition devoted to an exposition of the development of, and the principles underlying, good building should receive its formal send-off from your hands?

* * * * *

May I therefore ask you, Mr. Minister, to open the "Art of Architecture" Exhibition?

OPENING ADDRESS BY THE HON. F. C. STURROCK, MINISTER OF TRANSPORT

Mr. President, Ladies and Gentlemen:

I am glad to have this opportunity of addressing the Architects of South Africa, for there is much that I should like to say to them.

It has been my privilege in the last few years to come into contact with the profession at a great many points and in connection with a great variety of work. It has also been my lot in the same period to have had to expend much time and money in overcoming the inevitable inefficiency and difficulty attendant upon railway works which were laid down in past years without adequate planning and without competent architectural assistance.

I had intended this evening to speak about the inadequate recognition that is accorded to architects and architecture in this country, and to point out that any considerable achievement we could show in this direction has been in the

main inspired and accomplished by settlers from overseas, but I noticed that Professor Pearse has forestalled me on this theme. He has pointed out quite rightly that visitors to this country would find, except for a few notable exceptions, a great poverty of good buildings and a complete lack of inspiration in our architectural works. What was interesting, and to me somewhat disappointing, was to read what the critics had to say about the Professor's remarks. They indicated that we had other things besides architecture to attract the visitor, such as our sunshine and good food (laughter): and I would like to take up the discussion at this point and address a few remarks to you bearing on what these critics said:

To say that everything in our land is so naturally right that we need make no effort to beautify our cities, is like cashing in on what God gave us but creating nothing for ourselves. The matter does not end there, however. We do not even look after the beauty God gave us. We cannot interfere much with the sunshine, but even here, are we not turning it into a menace instead of a blessing by indifference, by lowering water levels, burning off grass, and in a variety of other ways? It was only a year or two ago, thanks to the agitation of a few of us, and the ultimate intervention of the Prime Minister himself, that the quarrying away of the face of Table Mountain was stopped. The quarry holes and District Six, both on the lower slopes of this great mountain are likely to be thrown into greater relief by the very sunshine about which we boast. On the National Roads and on railway premises we are preventing the erection of unsightly hoardings but, so far as I know, the Department of Transport is the only department making any effort to control this form of desecration of our countryside. From the visitors' point of view, the suggestion that everything is so attractive in South Africa that no effort is needed to encourage either ourselves or overseas visitors, is lamentably short-sighted.

But the error into which these critics fall is much greater than this. They referred to the fact that Professor Pearse was concerned with the things of the spirit rather than with the things that make for physical well-being: that his complaints were directed against South African culture, not its climate. To refer in this way to the profession and art of architecture must, I feel sure, have left you all gasping. To suggest that the architect does not make any contribution to our physical well-being indicates, to say the least of it, some lack of knowledge of the function of the architect, or in the alternative would be a serious reflection upon our architects.

* * * * *

Let us nevertheless recognise that this error is a common one, and it is one that must be dispelled if serious injury is not to be done to our land. For that reason, Mr. Chairman, I welcome an Exhibition such as this. I hope I am as concerned as anyone with the things of the spirit. I hope that the call of culture does not leave me unmoved, but in my official capacity as a Minister I am called upon to make many decisions which involve the spending of vast sums of money. In all these cases, whether the money is to be spent on railway materials and rolling stock, on engines or on the building and equipping of workshops, power stations and railway stations, harbours or steamships or in any other way, I am concerned that the money is spent to the best possible advantage; that what it buys shall be functionally as efficient as it is possible to make it, so that in the end the highest return for the money expended may be reaped by the Administration.

This is clearly not a matter for the spirit, nor does it directly involve any question of culture, but there is not a citizen in South Africa who would not criticize me if I did not employ the best architects I could obtain, in the planning and designing of all the railway building work.

An engineer has to design the boilers and turbo-generating sets for a power station. He is expected to reach a pitch of possible efficiency calculated to three places of decimals in every part of that equipment, and he achieves that by the application of his scientific knowledge and experience.

An architect has to design a large railway station, covering the operation of rail, road and air traffic, the handling and feeding of tens of thousands of people a day, the linking of such traffic with the traffic of the city concerned, with due provision for the physical well-being of the passengers and the staff, and he is expected to work out all his problems with the same degree of efficiency as the engineer, and he too, achieves this by the application of his scientific knowledge and experience.

It would be as reasonable, therefore, to say that the engineer is concerned only with the things of the spirit, as to allege this of the architect.

The steam flow through a turbine can be well or badly designed and the efficiency of the machine be affected accordingly. The human flow of traffic through a station can equally be well or badly designed with like results, and the only difference is that a bad steam flow will hurt nobody, but in the case of human traffic incalculable harm can be done over the years by bad design.

Whilst on the subject of railway stations, we have in Johannesburg a really classic example of how we should not set about building stations. (Laughter). The present Johannesburg station was completed in 1932. So little conception was held of the future trend of traffic that by 1937 it was already inadequate for its work and completely out of date. In fairness to the architects, let me explain that none were employed on the station proper, although I think three were employed on the concourse. That was a very unwise arrangement. What this inadequate planning has cost the Railways,

I do not know. The fact remains that now, after 15 years, we have to face up to a completely new station and much of the original expenditure will have to be written off. Our critics would doubtless have us repeat the same mistakes to-day.

Even when it comes to the building of an administrative headquarters in Pretoria, because I adopt the policy that this building must be functionally efficient and must be well planned architecturally, I am accused of being too enterprising. This building has to house 3,000 people. As a Transport building it should show what can be done in the way of handling its own motor traffic. As it is on the City Hall Square in Pretoria, it would be most undesirable to have the whole area covered with cars. Whilst this situation also requires an appropriate finish to the building, it must be remembered that the land on which it is to be built cost the Railways nothing, being an inheritance from the old days, so I think a good frontage is fully justified. To liken this building to a second Union Buildings is, of course, absurd. The Union Buildings, erected in days when building costs were at least half what they are to-day, cost 1½ million pounds. They contain 450 offices and house 1,100 people. The Transport Building has three times the capacity both in offices and people and, allowing for the increase in buildings costs, will cost relatively very much less.

There was a time when the South African Railways built in stone and brick — in the Kruger days, and in the early days in the Cape and Natal. This era passed and we entered the Iron Age. Nothing that could be built in corrugated iron was built in anything else. (Laughter.)

The war has prevented a return to stone and brick as rapidly as I should have liked. Iron is not only ugly, it is also functionally about as unsuitable a building medium as could be found, and in the end has proved most expensive especially in the coastal areas. It was the product of the engineer — and I speak as an engineer when I say he tried to be an architect. (Laughter). It is hot in summer and cold in winter, both conditions making for inefficiency. Its maintenance cost is very high and its life is very limited. Concrete and brick lend themselves much better to functional designing, and where there is a permanence as in the case of training colleges, headquarters office and the like, stone is probably the cheapest in the end. Let critics of building costs remember that what would have cost half a million a few years ago, costs a million to-day, and the accommodation needs for 3,000 people are probably more exacting than they were then.

The railways spend much money in buying the most up-to-date and efficient machinery. That machinery will, however, only function properly if handled efficiently by the operative in charge: in other words, by the human machine. What is the sense of spending money on increasing and maintaining the efficiency of machines if we spend nothing on increasing and maintaining the efficiency of the operative who works them? If his well-being is not what it should be, it will render our expenditure largely wasteful. It is, therefore, the function of the architect, in designing his offices or workshops, to do so in such a way as to promote the maximum efficiency and output on the part of the worker — in other words, to promote his well-being and only very indirectly his soul and his culture. That is his business, and he is the only person qualified for this duty.

* * * * *

Let us not talk of architects then as if they were concerned only with spiritual and cultural values. The study and knowledge of these values are part of the training of a good architect, but his practical work is usually on the much more mundane level of creating a machine in which to live and to work, that will operate with the utmost efficiency consistent with reasonable expenditure.

When the new railway bridge entering Pretoria was first designed, it divided the road into two separate sections and made the approach on either side largely a blind one. I sent this design back and suggested that it should span right across the street. I was told that to do this would cost an additional £16,000. I pointed out that the saving of one serious accident would liquidate that cost. Well, the bridge was redesigned. It is now as safe as it is possible to make it, and it is only co-incidental that we have a far more pleasing design and a bridge worthy of the important situation it commands. We hear much about preserving the beauty of Cape Town and are planning accordingly on the new foreshore, but do not let us take one view for Cape Town and another for Pretoria and the rest of South Africa.

* * * * *

Whilst I have now, Mr. Chairman, stressed the important fact that architectural achievement can, and should, be measured and justified in terms of pounds, shillings and pence, let us not forget that by what we build to-day, we will be judged in future years.

I am sure we all disagree with the commonly accepted idea that the man in the street is indifferent to aesthetic values; that he does not like good planning and design in all buildings, especially public buildings that are used by great numbers of people. His taste is fundamentally sound. He knows the difference between the good and the tawdry. No Government worthy of this country should ignore this fact or fail to do what it can to encourage the further development of that good taste.

In applying yourselves to the service of architecture, it must never be forgotten that a building has a quality of permanence; that although I have stressed the material side to-night, it is something more than a place in which to work or in which to live. Ruskin, whose contribution to the literature

of architecture remains unsurpassed, made a good point when he said that the memory of a place was dependent on its architecture. People who have visited South Africa never forget the Union Buildings and Groote Schuur, while St. Paul's brings back London, and the Acropolis makes Athens more real to people who have been there than anything else in the city.

I am convinced that this "Art of Architecture Exhibition" will serve a useful purpose in stirring the public imagination, and I hope that special steps will be taken to encourage people to visit it. It is important to develop the appreciation of architecture as a factor in national life and in its economy and culture, and your effort here should be to break fresh ground in this direction. With such a foundation on which to build it should not be difficult to promote an alert and critical public consciousness.

In this connection it is also important for the architect to remain on terms with the builder. Estrangement between the two will inevitably lead to confusion and a poor job. Remember, we live in the South Africa of to-day. South Africa is on the march to greater things and greater opportunities. Let us then leave the faint-hearted behind and see that the architects walk with the leaders in this progress.

* * * * *

In conclusion, Mr. Chairman, I want to congratulate the Central Council of the Institute of South African Architects, The Transvaal Provincial Institute of South African Architects, and the Students' Architectural Society of the Witwatersrand University on this exhibition which I now have great pleasure in declaring open. (Applause).

THE CHAIRMAN: Thank you, Mr. Minister, for your words of encouragement and support.

You have lent point to my earlier remarks in which I indicated the close collaboration between your Administration and my Profession, as well as the contribution which the Administration is making to the architectural development of the Union. That development, however, is closely linked with another important factor, perhaps the basic factor—an understanding by the public in general, of the meaning and significance of architecture. It was to lay the foundation, and to increase the possibility, of such an understanding, that the Exhibition was devised.

At this juncture in the development of South Africa, it is doubly important that the essentials of good planning and good building should be widely known. Not only is there the forwarding of the national cultural tradition to be considered, but also, the shaping of a new environment; an environment in keeping with the sharp transition from a mainly rural and agricultural economy to a mainly urban and industrial economy which this country is new experiencing.

This change entails the rapid expansion of existing towns and the founding of new. Now, if never before, a grasp of the necessity for advance planning on a broad and generous scale is needed. But advance planning will not gain acceptance unless its nature and necessity are understood, nor, indeed, would it be planning of the kind architects hope for, if it had not run the gauntlet of the democratic process, and had, as a consequence, democratic ends.

In 1943, the Students and the Transvaal Provincial Institute staged the "Rebuilding South Africa" Exhibition and Symposium, in anticipation of the post-war demand for new building and new or replanned towns. From that stage of theory we are now moving to the further stages: firstly, formulating definite programmes, and secondly, going into action.

While I would not say that this country is now fully equipped or prepared for action, progress has not been entirely lacking. We have new industrial towns, which have been planned and which are now starting to build—Vanderbijl Park and the Free State Gold Areas; we have replanned portions of existing towns—the Cape Town Foreshore, the transport developments in Johannesburg, Durban and elsewhere; and we are building, on a fairly extensive scale throughout the Union, houses, factories, offices, schools, hospitals and public works.

The question arises: Is all well with that planning and building? The answer to this question can lie only in a close examination of all these projects. But, whatever the answer, it is certain that the time is now most opportune for a re-examination of our values, not least our architectural values, from the civic scale to the domestic. And that is precisely what this Exhibition and Lecture series set out to do.

We have firstly, a general discourse on Architecture, which will establish the essential continuity in man's conception of good building, and the influence of climate, both natural and social, on its production. The theme of the Exhibition, that Utility, Strength and Beauty are the three unchanging criteria to which architecture must be submitted, will be taken up and expounded by historical reference and example.

The second stage in the series will take us to a discussion of the relationship between art, in its other visual manifestations, and architecture, and a closer examination than will be attempted tonight, of contemporary architecture. Finally, on

the third occasion, architecture, in its immediate context in the city, in its relationship to street and street pattern, and the appearance of the town as a development and extension of the town plan, will be analysed.

Tonight, then, our subject is "Architecture," and our lecturer, Mr. A. S. Furner. Mr. Furner's long participation in architectural education and practice is well known to you. His contribution in both spheres is massive, so that, when he speaks, he does so with authority. I have now great pleasure in calling upon Mr. Furner to deliver his lecture.

ARCHITECTURE

By A. S. Furner, F. R. I. B. A., M. I. A., Architect

Architecture is a fundamental part of the fabric of a civilization. In its shadow men live and die, eat and sleep, play and work. It forms the background of nearly all urban endeavour and much rural activity. Without it, our towns would be desolate and our buildings would have little value.

Good Architecture, to quote an ancient authority, must satisfy the requirements of Utilitie, Firmness and Delight or, as expressed in more modern language in the Exhibition downstairs, Utility, Strength and Beauty.

Great Architecture can only be achieved where the right conditions are present and of all these conditions one of the most important is the appreciation by the building public of the fine qualities of good design.

The glory of the ancient city of Florence owes more to its citizens' ability to appreciate the beauty of a work of art than to its architects, who were themselves inspired by the mental atmosphere of their age and city. In the same way the slums of the "five towns" in England or the Fordsburgs of our own city are the product more of our civilization than of those actually building them.

A clear responsibility thus lies upon the citizen of a democratic age. If he wishes to live in a beautiful city he must develop an ability to appreciate those qualities in building which produce great architecture. To this end he must interest himself in the buildings around him and must attempt to understand the broad principles which have governed their design.

The endeavours of our ancestors and the traditions handed down from the centuries are part of our very being and from a study of the work of the past we can find a yardstick with which to measure our achievements.

"I do not believe," says Louis Bromfield, the author, "that any style either in architecture or decoration or literature or music which breaks clean with the styles and traditions of the past has any chance of survival. Somewhere there must be the discernable line which connects the present with the past, the new with the old. The presence of that line in Dutch and Swedish modern architecture and decoration has, I believe, determined its survival and acceptance, while the French and German modern styles have already become outdated, abandoned curiosities. The French and German styles did not grow old out of the past but sought only to break with all tradition and create forms and styles which were unlike anything ever seen before . . . . Styles in Architecture, even elaborate styles, have grown up through centuries to suit themselves to climates and living conditions of the countries in which they developed. They belong essentially in these climates and conditions since they grew out of them. That is why a Spanish house with a patio is an absurdity in Long Island and a Swedish baroque house or a Tudor house is a monstrosity in Southern California."

There are few fields of human endeavour so little understood by the layman as that of Architecture. It is so frequently regarded as an elaborated form of scene painting, preferably a study in some ancient period of architectural design. The relationship of Utility, Strength and Beauty is not appreciated as neither Utility nor Strength are regarded as being closely connected with design, whereas they are in fact, the skeleton upon which the whole body of Architecture is sustained.

There is a school of thought which contends that if a building functions well and is strong, it must therefore be beautiful, and quote as examples to illustrate their thesis the aeroplane and the motor car. Corbusier, one of the leading exponents of the more recent trend of architectural thought, has said that a house should be a machine for living. But the cravings of our grandmother for an aspidestra in the window or of Jim Fish for bright colours on the walls of his mud hut are fundamental and irresistable; the vine grower of Constantia or the sheep farmer of the Cotswold Hills more often than not prefers to build in the manner of his ancestors.

It is impossible for me this evening to do more than touch the boundaries of this fascinating subject, and it is difficult to know how best to use the short time at my

disposal. I therefore propose to use the "text" of the Exhibition downstairs and to try to explain to you by means of ancient and more recent examples of building the broad principles which have guided the Architect through the ages in his search for the solution of the ever changing problems involved in Building so that you may be able to appreciate more fully the contemporary work you see around you. To illustrate the problem of "Utility" and its influence upon architectural design I propose to show you a few examples of houses both old and new. A well-designed house must fulfil certain requirements. It must keep out the rigours of the climate, provide reasonable safety and such privacy as the owner may desire, space for sleeping, eating, entertainment and cooking and, in our more recent sophisticated civilization, space for bathing and washing.

* * * * *

I shall show you shortly on the screen a Roman House in Pompei. The requirements there were safety from the riotous mobs of the street, shelter from the warmth of the sun and ample fresh air, adequate space for lavish entertainment, but strict privacy for the more intimate portions of the house. We therefore find a house with sturdy high exterior walls with few small windows to the outside and one heavy door which could be bolted and barred against the unwelcome visitor. The more public part of the house is grouped round a central hall, where the guests of the house were entertained. The warm climate enabled the central portion of the roof to be open to the sky with a small pond below to catch the infrequent rain. The better houses were elaborately decorated with marble columns, benches, statues and mosaics and with colourful mural paintings giving in all a dignified expression of the owner's wealth and status. The more intimate rooms of the household, the women s quarters and servants' rooms were grouped around one or more colonnaded courtyards at the back.

The fall of Rome was followed by a period of general anarchy: a period of rough wooden fortifications and later of stone castles around and under the protection of which the butchers and bakers and candlestick makers lived in homes built of less durable materials. The great hall in the castle became the centre of the social life of the community for the lord of the manor and his dependants. As conditions improved and lawlessness was somewhat reduced, the Manor House such as Stokesay Castle gradually emerged. The great hall still remained the nucleus of the community. At one end was a dais or raised platform whereon the lord of the manor and his family sat at meals, while the servants and retainers sat below.

It is not difficult to visualise the life in these halls. One can see the deep winter snow and the keen frost; the stone floor covered with rushes; the fire on the open hearth in the middle of the hall; the heavy pungent wood smoke gradually filtering out through the wooden louvres in the roof and the tiny unglazed windows; the crowd of yokels "who had inherited their coats and hats from their grandfathers and who had never learned the blessing of soap;" the dogs and other animals in the room and the noise and hubbub when the whole population of the little community was driven by the wintry weather to the only warm spot available to it. Privacy must indeed have been a luxury and to this end doubtless the owner built a private room behind the dais where his family could obtain peace and quiet. At the opposite end of the hall was a wooden screen built to reduce the draught from the entrance and to divide the kitchen from the rest of the hall.

In following these few examples from the history of the house, one must notice how building has developed through the ages step by step upon the ladder of tradition, and that the manor house such as I have just described is an ancestor of the modern home.

* * * * *

As wealth increased, so the desire for comfort grew and, in order to obtain greater privacy, a larger number of private rooms were constructed at one end of the hall and enlarged kitchen, offices and servants' quarters were built at the other, thus forming the traditional H plan of Elizabethan times. This type of plan had the essential advantage of being easily roofed with pitched roofs of short span well within the ability of the local contractor and covered with thatch, tiles, stone or slates.

Gradually as the ability of the small builder to make roofs of a wider span grew, and as the need for suites of rooms for a more lavish form of entertainment were required, a rectangular house more suitable to the requirements of the age and the Classical type of architecture of the XVII and XVIII centuries became fashionable. Adequate supplies of glass and the invention of the fireplace and chimney flue had by this time made houses reasonably comfortable, even according to our own standard except, of course, that the benefits of plumbing were still almost unknown.

With the increase of population in Europe during the XIX century and the rapid growth of the big towns under the laissez faire attitude of the Victorians, street sites became more valuable and consequently smaller. The house was thus compressed into a narrow frontage until the logical conclusion of purely economic pressure resulted in the dreary housing of the middle and late XIX century.

In the early days of the XX century new ideals began to appear and the war of 1914—1918 seemed to awaken the sensibility of man's Approach to housing and the whole outlook towards it was changed.

The demand came for more light and air, less privacy, more plumbing, bigger windows and better kitchens, white tiles and

labour saving devices to ease the burden caused by an acute shortage of domestic servants. The restricting shibboleths of the past, the heavy drapings, the dim light were outlawed and the introduction of re-inforced concrete led to new forms of construction and in consequence the new architectural expression you can see around you in the homes of modern civilization. The ideal house of to-day is no longer looked upon as a refuge from the storm, but more as a means of getting nearer to the heart of nature and as far away as possible from the restrictions of the close type of planning of the XIX century.

* * * * *

I would now like to pass on to a consideration of the second item of our text, "Strength."

Once man has succeeded in building a house for himself, he turns his mind to the building of some kind of hall wherein he can meet his fellows whether it be in a temple, a law court, a cathedral, a market hall or a theatre. The ideal aimed at is a wide covered space as far as possible uninterrupted by columns. It is of considerable interest to see how the gradual development and change of structural methods has moulded the forms of architectural design through the ages.

Among the earliest known efforts of mankind to build such places of assembly were the great halls of the Egyptian temples. They were built entirely of stone and in the simplest form of construction. A myriad of columns close together supported the beams and roof slabs of heavy masonry and a dim light was obtained through perforated stonework. The effect of mystery obtained by the elaborate ritual of the priesthood of the Pharoahs against the background of this dimly lighted forest of columns painted in glowing colours with the figures of Egyptian mythology must have been overpowering. But for general purposes of public assembly these halls were of doubtful value owing to the floor space being cluttered with columns.

The Romans of the Empire were probably the first builders to attempt the solution of the problem of wide uninterrupted covered floor spaces. In their great law courts and public baths they developed two types of building — one of heavy open timber roofs on columns and one of heavy concrete vaulting strengthened with brickwork and supported on tremendously massive walls and piers.

Following the fall of Rome the impoverished descendants of the ancient city attempted in cheaper material and from the rubble and ruins of the old city to build churches following as far as they were able the precedent of their great ancestors. As wood was the cheapest material available it was almost invariably used in the early days, but frequent fires in the churches of the Xth and XIth centuries, particularly on the mainland of Europe where fighting and raiding were almost continuous, compelled the builders to consider a more fire resisting roof. They saw the heavy concrete vaults of the ancient Romans and as the secret of the construction of concrete vaults appeared to have been lost, attempted to copy them in stone. Their early attempts were very heavy and clumsy but later a light and faery construction was evolved which still thrills the worshipper in Henry VIIth's Chapel at Westminster.

The same type of plan was almost invariably used all through this period and was really the only way in which to cover a large open area suitable for Christian worship with the materials then available.

The discovery and use of structural steel and reinforced concrete have in recent years revolutionized the design and structure of great halls. The weight of the roof in the new types of construction has enormously decreased, spans in the new materials can leap over open spaces which a century ago could not have been considered, and the supporting piers and columns have been eliminted or been reduced a hundredfold. The old plan used for centuries has thus been almost entirely eliminated by the new methods of construction and a new aesthetic perforce has been and is being developed.

* * * * *

I have made these two brief sketches in the History of Architecture in an attempt to show how the requirements of any age, the materials available and the contemporary knowledge of building construction dominate not only the plan but the form of the buildings erected. As "truth is beauty," the method of construction should be clearly expressed in the architecture of any building, nor must it be camouflaged to look like a different method for the sake of an outward and more familiar appearance. Old timber beams warped and twisted with age must not be copied in fibrous plaster if we are to preserve honesty in design and build an architecture worthy of our age.

In many ways the age of Mediaeval Building is one of the purest and finest periods of architecture. Almost every feature in a Gothic Church was naturally and directly evolved from the solution of a structural problem. The pointed arch, the traceried window, the ribbed vaulting and the flying buttress were all direct expressions of structural requirements.

* * * * *

We now come to the third and last item of our text, "Beauty." I have no intention this evening of considering in detail the technique of Architectural design. The problems of proportion, mass, texture, scale and the like must be left, perhaps with serious misgivings, to the architect.

I should like at this stage to quote a short passage from Somerset Maugham's "Summing Up":

"I suppose that we mean by beauty that object spiritual or material, more often material which satisfies our aesthetic

sense. That, however, tells you just about as much as you would know about water if you were told that it was wet. I have read a good many books to discover what the Authorities had to say that made the matter a little plainer. I have known intimately a great many persons who were absorbed in the arts. I am afraid that neither from them nor from books have I learnt much that greatly profited me. One of the most curious things that has forced itself on my notice is that there is no permanence in the judgment of beauty. The museums are full of objects which the most cultivated taste of a period considered beautiful, but which seem to us now worthless; and in my own lifetime I have seen the beauty evaporate from poems and pictures, exquisite not so long ago, like hoar frost before the morning sun. Vain as we may be we can hardly think our own judgment ultimate: what we think beautiful will doubtless be scorned in another generation, and what we have despised may be raised to honour. The only conclusion is that beauty is relative to the needs of a particular generation and that to examine things we consider beautiful for qualities of absolute beauty is futile. If beauty is one of the values that give life significance it is something that is constantly changing and thus cannot be analysed, for we can as little feel the beauty our ancestors felt as we can smell the roses they smelt.'

* * * * *

I am therefore in good company when I say that real beauty is quite undefinable, although it must be present in any example of great architecture.

There are however certain factors which have a close bearing upon the satisfaction created by a beautiful building.

First of all is the quality of sincerity and truth. A building must clearly appear to be suitable to its purpose, a fire station should not look like a Florentine Palace and the form of construction should be generally apparent from the form of the building. In other words to quote a phrase of modern pargon "form must follow function."

But part of function is to follow the ideas and ideals of the time. Whilst it was eminently right in the XVIIIth century to design buildings with voluptuous curves and decorate them with magnificently carved swags and cornucopias to match the powdered wigs and the velvet coats of that period, to-day such designs would form a quite ridiculous background for the life of the XXth century.

The modern world is the home of Scientific Progress. The conservative outlook of the classical architect of the Renaissance who would include no feature in his design without precedent has given way to the scientific approach where a new solution to any problem is always welcome.

In discussing this we must not run the danger of over simplification. The human mind is a vastly complicated organism which far from being satisfied with logic frequently resents it most virorously. Corbusier's "machines for living" frequently fail to give satisfaction to the home maker. This apparent hostility to a purely logical solution to an Architectural problem is often the result of a desire to escape from the hard realities of contemporary life. This was especially noticeable in the latter part of the XIXth century, in the desire to get away from the ugliness of the contemporary scene and from the acres of slum housing and dreary factories there was a revival of ancient styles of architecture. Neo Grec, neo Gothic, neo Byzantine, neo Jacobean became in turn the rage and dammed the flow of normal architectural development for half a century. While this is all to be deplored we must remember that this superficial cultural veneer on the surface of architectural expression can be the result of a very real and sincere desire for expression. No logic apparently justifies many features of Sir Gilbert Scott's Liverpool Cathedral nor the Town Hall at Stockholm, yet these buildings are almost universally admired as some of the finest architectural flowers of the present century.

This fact emerges that in reality the spiritual and cultural background are part of the essential elements in the design of a building. The spirit of Liverpool Cathedral is essentially part of the religious tradition of the English Church and that of Stockholm Town Hall reflects the spirit of Sweden; the tower with its slight dome reminiscent of the near East and the obvious inspiration of the Doge's Palace in the garden front links the Venice of the Baltic with its sister on the Adriatic.

In the same way a house should be an extension of the personality of its owner. An enclosed space, books to read, quietness, repose, absence of glare, freedom from the rush of the outside world, produce a house where a quiet soul can reflect in peace; whereas another man endowed with unlimited energy may require large windows, ample sunlight, little division between the outside world and his lounge, sunbathing and a swimming bath. Both expressions are justified and both can be adequately satisfied without stooping to the absurdities of a period of study in Elizebethan or Spanish Mission architecture complete with rusty ironwork, wormeaten plaster beams, and a modern bathroom.

* * * * *

What then is the aim of the modern architect? Man is no longer afraid of the elements, he has heating systems and air conditioning, insulating materials and glass. He is in our present civilization generally restricted during the day to an office and wishes in most of his buildings to feel as much as possible the freedom of the countryside which is so frequently denied to him. He has realized the value of sunlight; he is far less bound by social restrictions than was his father, but he has fewer servants. All this is naturally reflected in contemporary buildings; which are better lit with large windows and fluorescent lamps; better ventilated; more

openly planned with less privacy and greater freedom for the individual.

The modern tendency, whether for good or for ill, is for mankind to congregate in great cities, to ride in countless motor cars, massed produced in numbers which stagger the imagination and which ultimately produce such a concentration of traffic that it is quicker to walk than to ride. Owing to the difficulty of communication with the outer suburbs, more flats are built in the central areas and increasing business requires more offices. Since vertical communication by lift has become quicker than horizontal, buildings grow up like towers of Babel to the skies.

All this produces problems never contemplated by the architect of a hundred years ago. Fortunately perhaps we have discovered the value of structural steel and reinforced concrete, and we are therefore able to build Rockefeller Centres and Empire State Buildings to cope with the requirements for covered space in our congested cities.

When the public looks upon the architecture of to-day it must bear in mind the complexity of the modern problem; which includes the structure, electrical requirements, air-conditioning, plumbing, lighting, decoration, economic return and the complicated requirements of modern business. It must also remember that the styles of the past were evolved through centuries solving comparatively simple problems — the house, the temple and the church with materials limited by the systems of transport then available.

Again the social and economic life of the past in distinction to to-day encouraged the work of the craftsman, good stained glass workers, smiths, sculptors and wood carvers were easily available. To-day almost every fitting required in a building is mass produced, it is frequently of excellent finish and comparatively cheap, while the work of the individual craftsman is in business language non-competitive and therefore rarely used. This and the ever present economic outlook have resulted in a great elimination of detail and decoration and the very simplified type of architecture now familiar in contemporary design.

* * * * *

Finally new materials are leading to new forms. Reinforced concrete shell roofs of wide span are replacing domes and masonry vaulting, and the long span beams and light supports of modern construction naturally tend to stress the horizontal lines in the design.

The beauty of ancient buildings, the beauty produced by the individual craftsman and the natural building materials they used so skilfully, has gone and it is difficult to see how it can be recalled in our present civilization. We must therefore build an aesthetic in tune with our own age.

I do not intend illustrating the last section of my lecture with slides, but would ask you to study in particular the modern work illustrated in the Exhibition downstairs. Try to understand the reason behind the various designs and I think you will then realise that within the framework of modern requirements and modern materials a new standard of beauty is being evolved, a beauty of clean forms, a beauty perhaps more closely kin to the crystal than to the flower; but in spite of that one which like all other manifestations of beauty can give great pleasure to those who appreciate it and understand it.

You may perhaps some of you prefer the elaboration of a late Gothic Church or a Florentine Palace but in all honesty would you be willing to pay the price for it to-day and to wait many years for its completion, knowing all the time full well that the craftsmanship available would not be worthy of the time and money spent?

No, ladies and gentlemen, we are for better or for worse citizens of the XXth century and we can only design buildings which are the natural outcome of our way of life. Let us all be sure that within the framework of possibility we build as nobly as we can.

THE CHAIRMAN: Thank you, Mr. Furner.

Ladies and Gentlemen, Mrs. Sheridan, to whom this Exhibition owes its success, will now add some brief comments on the subject Mr. Furner has dealt with, and will also thank Mr. Furner for his address. Mrs. Sheridan!

Mrs. SHERIDAN'S VOTE OF THANKS

THE CHAIRMAN: Thank you, Mrs. Sheridan.

Before the proceedings close, I would remind you, Ladies and Gentleman, that the second of this series of lectures will be given by Mr. Willem Hendrikz and Mr. Howie on Wednesday evening: and the third and last of the series will be a lecture by Mr. Roy Kantorowich, who is coming from Cape Town for the purpose, on Civic Design.

THE PROCEEDINGS OF THE SECOND EVENING

THE CHAIRMAN: Ladies and Gentlemen:

We continue tonight with the series of lectures which accompany the "Art of Architecture" Exhibition in the Hall below.

As you will remember, three evenings of lectures have been arranged. On the first of these, we heard a general discourse on architecture by Mr. A. S. Furner. He laid strong emphasis on the historical basis of architecture, and followed the theme of the Exhibition itself in analysing the architecture of the past in terms of Utility, Strength and Beauty.

These criteria have, over the ages, taken on an objective validity, and thus enable us to evaluate the architecture of today in more or less objective terms. The most armorphous of the three qualities is Beauty. Though Mr. Furner was loathe to go beyond the dictum of Somerset Maugham that beauty, being relative, has no absolute basis, Mrs. Sheridan, who followed him in a vote of thanks, strenuously advocated an acceptance of absolute values in art and architecture.

From this interesting and general discussion, we move tonight to a more detailed discussion, albeit still on a rather elevated plane, of some of the components of architecture, particularly the visual arts, painting and sculpture, and, further, the building up of a contemporary architecture out of the technique now available to us.

If the aspect of architecture in its social context is underlined, you may attribute that emphasis to the growing social consciousness of the modern architect, whose healthy tendency it is to see beyond the relatively narrow confines of his own special sphere.

The first lecture, then, has for its title "Art in Architecture," and will be delivered by Mr. Willem Hendrikz, the well-known sculptor. Mr. Hendrikz had, prior to his studies in his chosen work, spent some years in the study of architecture, and so is doubly qualified to deal with his subject.

ART IN ARCHITECTURE

By Willem de Sanderes Hendrikz, M.A., Artist

Often, when I set out to do a certain thing, it happens that other trains of thought or different combinations of circumstances force me into something whose only association with the original objective is the stimulus that set me off. Perhaps this is an indication of an undisciplined mind, but as I am an artist I crave your indulgence for a change in the subject matter of this lecture.

Originally it was planned that this talk on Art in Architecture should be confined to the part that painting and sculpture have played in the Art of Architecture, and the part that they play — or should play — to-day. But while I was preparing this talk, the signficance of the rôle which the architect can play in the world of art took on such proportions that it completely overshadowed my original thesis. As is usually the case, several good excuses could be found for abandoning the old intention for the new; one was that the exhibition itself has covered all the ground, and that further discussion and illustration would be labouring the point; another was that to an audience like this the words Art in Architecture need only be mentioned in order to produce a fairly complete picture in the mind of almost everyone present, of the progress of architectural decoration — from Palaeolithic cave-paintings to Egyptian low-relief, from Greek sculpture to Mediaeval ikons, from Renaissance murals to Baroque cherubs, from Nineteenth Century Neo-Classic details to Epstein's sculpture on London's Underground Building; a third reason for justifying a change in title was that such an historical survey must lead us inevitably to the barren fields of South African Applied Art where we would proceed to wrestle with the problem "to decorate or not to decorate," and, finally, I saw that I could lead you to the same dry pastures and to the same problem by a more direct way, and possibly, a more instructive one.

* * * * *

With your permission, then, I would like to discuss the subject of "Art and the Architect" and at the very outset I must make it clear that my contribution to this symposium is that of an artist, and to a very limited degree, that of an

educationalist. I admit, however, that, having once upon a time gone through the rigorous training of an architect myself, with rather doubtful success, my arguments may have a certain bias because of both my natural sympathy for the much maligned architect and my steadily growing conviction that the divorce between Architecture and the arts of Painting and Sculpture has been at the root of the incredible confusion of self-expression that is conveniently classified as Modern Art.

* * * * *

As a point of departure, let us examine that particular creative activity of man that is expressed in the forms of painting and sculpture.

The organisers of this exhibition have referred to "the innate desire of man to decorate his person, his weapons, his utensils and his home" as an accepted fact. But perhaps it requires some qualification because, as the Chairman pointed out at one of the conferences that preceded the exhibition, this innate desire is not common to all men and may be involved with an expression of man's mastery over his environment rather than a simple desire to adorn himself. In addition, there have been periods in history when such a desire was either frustrated, stifled, or apparently non-existent. (In the history of our own country, for example, we find that after the brief period of the flowering of Cape Dutch Architecture, the real meaning of the arts of architecture, painting and sculpture were apparently ignored by our forefathers. This may have been due to Calvanistic doubt as to the moral validity of the visual arts, or it may have been due to the hardships and tribulations to which the lives of pioneers are subject. Whatever the reason may be, the fact remains that no signs of a positive **artistic** creation are evident in what remains to us of the things made by them. An attempt to read any special aesthetic significance into embroidered kappies and festive waistcoats, or even the objects made so lovingly in prison camps by republican exiles, will not survive the discriminating scrutiny of an impersonal connoisseur. Actually, most of our cultural activities in the field of the visual arts — with the exception of that brief and glorious period — are a poor reflection of the heritage left by ancestors so richly endowed, culturally, as the French and the Dutch. (Very much the same could be said of the pioneers of the Middle and Far West of the United States of America.) However, from a study of the history of man, it would appear that such negative periods are rare, and, happily, of short duration. Our knowledge of ancient cultures is based almost exclusively on what we recognise as forms of art supported by geological and some palaeontological evidence. And, even as we come nearer to our own times, history would be dull and colourless without the backing of the architectural, sculptural and pictorial productions of the periods under consideration.

So, for these reasons alone, we would find justification for assuming that this desire to decorate, or to express aesthetically, is an ever present attribute of man, and as consistent as any of his other major characteristics.

The analysis or interpretation of this particular urge has exercised the wits of thinkers since thought was first recorded — and probably long before that — and what has emerged from such records has subsequently been enriched (and sometimes confused) by historians, philosophers and scientists. To-day, with man living under conditions ideal for the development of every possible kind of neurosis, the psycho-analyst has come into his own. So for the most up-to-date interpretation of this urge "Aestheticians" are compelled to explore the dark regions of psychiatry as well.

When I used to lecture on the Fine Arts at the Witwatersrand University I was forced, by the demands of my position, to investigate this mass of theoretical data on aesthetics. And I must confess that (though I did manage to survive the ordeal, and even added a theory or two of my own to that intellectual goulash) I was so appalled by its malnutritive effect on art itself that I submitted my resignation. And now I devote myself — without analysis — to my breadless art.

So, on rare occasions such as these, when I am lured out of my self-imposed isolation by my infuriating inability to say no to my friends, I find it difficult to fall back into previous academic habits. But let me try to extract the essense of what was disclosed to me during the course of that painful investigation.

* * * * *

Primitive man, it appears, made himself some implement, some weapon. At first, he was absorbed solely in the object and its function and strove to improve it. Suddenly he found himself infused with a vast pleasure from contemplating the result of his efforts (this pleasure, aestheticians tell us, is the tap-root that nourishes the production of all art forms) so, wishing to distinguish it from other less worthy creations, he marked it in some manner. Whereupon he discovered that he could improve on the marking of the object as well in order to make the mark worthy of the object. (Herein lie the seeds of discrimination and the fruits of critical appraisal). The next stage was the discovery that these markings resembled things observed in nature: An X with a dot could be a running man, or a wife waving don't-look-now-but there's a sabre-toothed tiger creeping up behind you; a V could be the horns of an antelope; a cross could be a tree, and so on. These signs then took on a symbolic meaning and formed the basis of writing. We can well understand how these marks came to possess more than a symbolic meaning and to be more than a distinguishing decorative feature. It is a theme to which a man like Pete Smith could do greater justice than I.

Imagine some more obtuse member of the family or clan saying that he failed to see what all the fuss was about. A V looked like two twigs touching one another and not like the head of an antelope. And an irate kinsman would say: "Look, stupid, here are the horns, and if you are so dumb here is the body, here the legs, and here the tail" and lo! there was the first animal drawn in the sand. So they all rushed around looking for smooth patches on which to scratch antelopes until, like children, they tired of the game. But one little man, pleased because he could draw them better than the others and could not forget the strange satisfaction he found in doing so, tried making other animals; a mammoth, bison, and even the two-legged beasts (and then allowed his hair to grow longer than was the fashion at the time.)

One day, confined to his cave by rain, he drew on the walls and smeared his drawing with wet clay and discovered the use of colour and shading. Then, as some archaeologists suggest, some coincidence or association of ideas made him identify the drawings with his prowess in hunting the animals he had drawn, thus giving the drawing a magical significance and formulating a superstition or religion. So the drawing came to serve something besides decoration, besides self gratification or the alleviation of boredom — it began to express something intangible, some inner excitement, some consciousness of metaphysical forces.

This development from pure decoration through representation of nature to the expression of ideas or emotions, is largely conjectural, but psychologists discern similar tendencies in modern man during the various stages of his development. Recent studies of the art of children have thrown much light on the subject, and amongst these tendencies the dispelling of horror vacui (the desire to superimpose something on an unbearably clean blank surface), the desire to mark, to adorn, to express, have all been subjected to the most learned investigations. I am not sure whether it is necessary or not for us to understand **why** man wishes to pursue these aesthetic activities, but we can gratefully accept the available evidence that these activities take the form of (a) simple marking or space filling; usually of a geometric nature and regarded as decoration of the most obvious kind; (b) such decoration extended to embody a symbolic content; (c) representation of nature; (d) the use of symbols and/or representation to tell a story, i.e. descriptive or narrative art; (e) the use of any of these forms to express an idea, an emotion or an individual temperament; (f) a formal expression of a personal conception of the purely abstract qualities of beauty.

The order of importance of these forms of art is a matter of personal feeling, or one of cultural development, and any insistence on the superiority of one over another is in conflict with the principles of democracy. So I will avoid such controversial issues. The point I wish to make here is that these forms **do** exist. They have existed since prehistoric times, and however obscure the reason for their existence may be, they have been associated inevitably with the other activities which place man above animals. They also occupy a dominant position in the few manifestations of civilization that bring us nearer to an understanding of the ultimate, or the absolute, or the truth — or whatever word we use to describe the indescribable.

* * * * *

These creative activities are most commonly found in the productions of individuals called artists. But creativeness is not the prerogative of specially gifted or talented people. It is the normal faculty of every individual. If this were not the case artists would have no patrons and their works would not be appreciated as they are. The layman who reacts to a work of art identifies his own individuality with what the artist has expressed and in doing so he becomes personally involved with the aesthetic significance of such an expression.

Investigations in this field of human behaviour indicate that it is through expression — and appreciation of expression, or response to it — that the self is discovered, identified, realised and fulfilled. We have recently been made painfully aware of the evil results of allowing unbalanced personalities to guide us politically, and yet philosophers, psychologists and psychiatrists have for many years been at great pains to disclose to us the dangers of our failure to achieve equilibrium of temperament. Integration, they call it.

Integration is one of the principles of the much discussed Gestalt psychology. It is also woven into the fabric of the "Holism" of our Jan Christiaan Smuts whose theories are derived from his philosophical concept of a "progression of wholes, rising tier upon tier, making up the structure of the universe." Man is one element in this progression of wholes, and although the Field Marshal has not specifically said so in this philosophical work, he will be the first to agree that if there are any discrepancies in the wholeness, the completeness of the human being, then his whole structure is in danger of collapse. This is also one of the fundamental principles of the Art of Architecture, and it is accepted as a basic truth by architects and laymen without the support of philosophers and psychologists.

It is possible that the Gestalt psychology and the principles of Holism have been displaced by more up-to-date theories. After all, we are living in an age of progress in which the rejection of principles is the order of the day. But then I warned you that I have withdrawn myself from these academic matters and my knowledge of them must naturally be dated — or old-fashioned if you wish.

But this concept of wholeness, of totality, of completeness, interests me as a student of form, and it also supports my arguments. It postulates that no psychological process can be adequately understood by a partial response of the individual, nor can a single element in his environment be divorced from the rest. No structure of any kind can be

appreciated by a scrutiny of the component parts alone. There is a vast mass of evidence to prove that all mental life has a basic urge toward a condition in which the individual as a whole finds a satisfactory equilibrium with his environment as a whole. Such an equilibrium can only be attained by the integration of the individual. And the creative activity, as I have tried to show you, is a normal function, essential for the **complete** self-realisation without which individual integration cannot be achieved.

These arguments can also be supported by the findings of psychiatrists and of enlightened educationalists who are putting these theories into practice (with the most gratifying results) in the treatment of psycho-pathological cases, in schools for backward children and in sanatoria for maimed ex-soldiers. In these institutions art, in all its branches, serves as an outlet for suppressions and oppressions, and in many cases it serves to adjust unbalanced minds and to heal tortured spirits. I am not sure if those of us who are not maimed physically, mentally or spiritually, can call ourselves integrated. Judging from the mess we human beings have got ourselves into, it seems very doubtful.

* * * * *

However, if we accept this concept of wholeness, are we not then obliged to design a system of living that ensures the conception of life as a whole — complete, covering the full range of human thought, emotion, sensation, intuition, perception, imagination, expression; and including in all these activities the factors that enter into the field of aesthetics? The answer seems so obvious, and yet, so persistent and well-entrenched are the obstacles that obstruct a practical solution of this problem, that our attitude towards art is entirely conditioned by them.

The cause and the effect of this attitude are contained in the character of the Industrial Age with its materialistic ideals and puritan prejudices. It is to that age, whether we like it or not, that the umbilical cord of our civilization is affixed. And, despite all our revolutionary upheavals in the fields of architecture, painting and sculpture, that cord has not yet been cut.

If we compare the art of the Industrial Age with the art of all the previous periods in the history of mankind, we are struck by a very significant discovery, namely, that the art of the 19th Century represents the most curious dead end in aesthetic production. Until the close of the eighteenth century we can say that every period had it specific style, however obscure and unworthy. But after this period the spirit of man apparently ceased to express itself in a direct manner. It began instead to imitate previous modes of expression. And so we get that series of revivals of style: The Neo-Gothic, the Neo-Classic, the Neo-Romantic and the decadent eclectcism that followed in the wake of an artificially stimulated interest in past forms (actuated by the excavations of Egyptian, Greek and Roman antiquities). These revivals of style ended at the close of the nineteenth century in the final sterilization of the academic tradition.

I think it was Ruskin — a product of that particular era — who made the profound and very true observation that the art of any country is an accurate reflection of its degree of civilization. But the general reaction to art during the Industrial Age can be summed up in the attitude of the great Lord Salisbury who opposed the spending of public money on the Victoria and Albert Museum declaring that art was nothing but a trivial amusement for the idle rich! And this can be capped by the enlightening fact that during the same period a Royal Commission, specially appointed, discovered the fact that Britain's incompetence in the arts of design was seriously impairing her export trade!

Such was the nature of the nineteenth century attitude to art in Europe while we were engaged in taming this country for our future civilization. When the purely materialistic demands of existence allowed us to think of cultural matters, we turned to that civilization for guidance in educational and aesthetic matters as well as all others. So, can we be surprised at the frightening result this has had on our man-made creations and planning (architectural and artistic as well as political)?

Judge for yourselves.

* * * * *

The object of education is to develop the mind of the individual and to prepare him for the fulfilment of his life within the framework of the society of which he is a part. In its most ideal form education should aim at a complete integration of the individual in order to achieve security, social harmony and to lay the foundation for the building of a better world.

The extent to which we have failed to achieve this object is reflected in the chaotic state of world affairs to which each nation makes its contribution. I doubt, if in any other period of history, there has been so much evidence of political disorder, individual and social maladjustment, racial bigotry and injustice.

The educational system of South Africa, with its origin in the materialistic damands of the Industrial Age is failing in its social and in its intellectual function by herding children through the requisite number of years and classes for matriculation without and regard for the adjustment of unbalanced temperaments or for the integrated development of individual character. Very few children emerge from this system with an ability to think independently, to weigh evidence, to gain access to accredited sources of knowledge. In fact, as is proved later by both their taste in art and their political judgment, they show an extraordinary lack of capacity to

discriminate between reliable and unreliable sources of information, and fall easy victims to the propaganda of corrupt social forces, operating in the field of politics, or in the field of art. In short, our system of education pays only lip service to our political system of democracy. We deny the individual the right to develop at the same time his unique personality, his sensitivity (through creative expression), his intellect, and his sense of responsibility to the community of which he is a member, because we support a Victorian system of education designed on the lines of a sausage machine.

The institutions for higher education are concerned almost exclusively with vocational training, which by its naturally materialistic nature or the exacting demands of specialization, tends to exclude those cultural courses which may have made up for the discrepancies in school education. The result of this state of affairs is that doctors, engineers, scientists, lawyers and even teachers, destined to play leading parts in the development of this country, are launched from our universities with some of their inherent sensibilities atrophied by neglect. As a protection they become militant philistines or acknowledge proudly that, culturally, they are barbarians. The only art that comes into their lives is introduced by their wives or children, and it is gratefully or absentmindedly accepted.

As the most able of our politicians and statesmen are recruited from the above mentioned professions, it is not surprising that they all turn on the ostrich act when cultural matters come up for discussion. We can, therefore, write such politicians off as a dead loss in our plans for civilizing this country. Worse than a dead loss. They perfected their ability to pass the buck, or to throw the spotlight of public opinion onto comparatively innocuous matters as soon as any situation becomes embarrassingly involved.

It would be even more dangerous to rely on the artists to get us out of this tangle. The conditions which I have described to you tonight have resulted in the disruption of his position as an integral part of a civilized society. The false emphasis on the expression of individualism, the insistence on originality at all costs (how historians must smile at this naive demand!), the boredom that was provoked by a contemplation of the sterile art of the 19th Century, the resultant revolution that led to the formulation of the principles of Modern Art with its attendant hangers-on, its dilletantes, its charlatans, and its fortune-hunting dealers, have — as far as society in general is concerned — completed the dislocation of art as a social need. It has become either an esoteric cult of small groups (with as much use to the universe as the activities of a secret society of schoolboys); an opiate for intellectual freaks; a cleverly exploited racket; or something that arouses the immediate suspicion — even animosity — of the man-in-the-street. The artist of the last century, if he was a success, was lionized, and had his works imprisoned in dungeons called museums, for the delectation of connoisseurs and for the pastime of a semi-enlightened public that really had no use for art. If he was regarded as a failure, he became a social outcast doomed to spiritual and physical starvation by being relieved from the responsibility of working with a community or whole as an active member. And, finally, these conditions, in the words of Eric Gill, compelled artists to become "simply mountebanks or lap-dogs, and their works a sort of hot-house flowers."

* * * * *

I used to think that the only remedy for this state of affairs lay in a complete revision of our system of education. A Revolution in fact. But the world is tired of revolutions and is beginning to realize that revolutions invariably destroy the very principles from which they derive their ideological stimulus. Even a very minor revolution in our Department of Education would have such repercussions that any peace-loving citizen would recoil from the thought of having so many shortcomings of his world exposed to him in one brutal gesture.

I believe now that our immediate hope (I would even say our only hope) lies in the architect. Although he goes to the same school and colleges as any other countryman does, his professional training is more comprehensive (culturally speaking) than that required for any other career. It includes, besides its highly specialised field of Architectural Design (in all its branches), extensive courses in Science, Engineering, History and, unique amongst other vocational training, it includes the Fine Arts. Moreover, it definitely, if not specifically, embodies a comprehensive training in practical psychology and psychiatry — as any of you who have had dealings with more mature architects will readily admit.

* * * * *

I do not wish to ascribe to the architect the qualities of a superman. Like any of us, he makes mistakes, he is subject to influences good and bad, he is given to prejudices and intolerance (which human being is not?). The point I want to make is that, by virtue of his training, he has more hope of discriminating between the real and the spurious, and his life is devoted to solving problems. The demands of his profession are as high as any other and irresponsibility on his part can result in serious repercussions from which there is no protection.

Take, as one example of the qualifications from the task we are setting for him, his particular interpretation and use of the word design. To the layman the word may be confused with "pattern" or "composition" (we speak of the "design" of a rug when we mean pattern and the design of a picture when we mean composition — we even speak

of the design of a dress when we mean the cut), but to the architect it embodies all the following definitions: "to plan mentally, to conceive as a whole, completely or in outline; to organise a scheme of: to execute as an integral or artistic whole." It means "purposive planning as revealed in or inferred from the adaptation of means to an end, or the relation or parts as a whole."

To the architect this word embodies the problem; the function of the work to be done; the material; the tools; the social, climatic and economic circumstances involved; the relation of the work to be done to the total environment; selective (and therefore specially trained) discrimination in solving the various secondary problems arising out of these factors; and, throughout all these considerations, applying the guiding principles of architecture.

And are these things not specifically akin to the factors which we demand in our evaluation of the principles of integration? And, since the architect, while practising his profession, comes to terms of understanding and sympathy not only with his privileged clients, but with tradesmen, engineers, bricklayers, carpenters, plumbers, labourers, municipal employees and even — since the advent of Control — with civil servants, is he not more likely than any other man to have his finger on the pulse of humanity?

* * * * *

George Bernard Shaw once advanced the idea of devising some instrument for measuring the abilities of politicians so that we could ensure that our social problems would be in the care of properly qualified and intelligent leaders. His supporting commentary was, as usual, not very flattering to our statesmen. (And, talking about politicians, it has just struck me that an architect who takes to politics is about as rare as an orchid on the Springbok Flats. I think even Shaw would agree that this is an added recommendation for proposing that we should have more and more architects in Parliament). I cannot help feeling that if it were possible to measure the degree of intergration of human beings, the architects should be in the lead. Call it wishful thinking if you like, but I can assure you that this is no desperate clutching at straws. The reasons for this conviction are derived from what I know of the education, of the training of the architect, and are contained in the stones of the great buildings of the ages that stand as the monuments to our cultural progress as the most positive signs of intelligent, sensitive, co-ordinated planning.

But I have other arrows in my quiver. The saying that architecture is the mother of the arts is not just idle chatter. The unfortunate specialization in the fields of painting and sculpture and the pursuit of these arts as independent activities have had more to do with the confusion of what we call "modern art" than most people realise. Released from the protection of the more stable art of architecture, these arts, with some notable exceptions, have degenerated into an unhealthy form of undisciplined self-expression on the part of the artist and unhealthy self-indulgence on the part of the patron (aided and exploited, of course, by the nefarious practices of unscrupulous dealers). I say "unhealthy" with intention, because these artists are products of an unhealthy world. They are unwanted and therefore unstable. Themselves not integrated, the works that express their incomplete personalities cannot make an effective contribution towards the integration of the society to which they belong. I think I can say, without fear of contradiction from my colleagues, that every sincere artist who is capable of seeing further than his nose would willingly exchange his doubtful liberty for recognised service in the interests of society through the controlling discipline of the art of architecture.

The exponents of the "Austerity" architecture of the Machine Age, who widened the breach between the artist and the architect, were the slaves of materialism. The fact that they actually developed new aesthetic values in purely functional design is to their everlasting credit. (At this rate I will soon convince myself that architects **are** supermen!) But purely functional architecture, however powerfully it is charged with dynamic beauty, is incomplete, since it fails to take cognizance of all the aesthetic needs of mankind, and subsequently leaves its creator and his public with a feeling conscious or unconscious, of unfulfilment. This feeling has been clearly expressed recently in the sensitive use of contrasting materials and colours to relieve the monotony of these austere facades. To me this indicates a turning point. It is one of the long-awaited signs that man is emerging from his absorption in exclusively material matters.

We must concede, however, that this austerity architecture, this denial of everything that did not serve a direct functional purpose, was the best thing that could have happened to civilization. It has rid us of all the cumbersome, irrelevant and only partially appreciated trappings of the past. It has given us the soundest possible foundation on which to commence the structure of a new civilization — a civilization in keeping with the contemporary demands of universal stability.

* * * * *

I can conclude my arguments with this consideration: Every man, woman and child, in whatever walk of life, sooner or later, directly or indirectly, will require the services of an architect. People may have become suspicious of artists, weary of educationalists and bored with politicians, but everybody must have a home. And to have a home—a good home, an integrated home—you must have an architect. (I am talking of tomorrow, not of our immediate and jerry-built past. We know that the idea is still prevalent that every man

can be his own architect, but, as we are no longer cave-dwellers or nomadic hunters, it is a fallacy only too graphically expressed in the general appearance of our towns and cities. The less said about this idea, the better.) To have a good home, man needs an architect. His association with the architect is very nearly as intimate as the association of a psychiatrist with his patient. It could (if we can persuade the the architect to accept this additional burden on his already heavily laden shoulders) open man's eyes more widely to the significance of the visual arts. Under his qualified care, these arts would survive their neglect, be nursed back to strength, fertilized and nourished until they flowered again to reflect the freshness of a new civilization.

If there were anything besides water in this glass, I would drink a toast to the leadership of the architect, and to the future of his art.

THE TECHNIQUE OF ARCHITECTURE

By W. Duncan Howie, A.R.I.B.A., M.I.A., Lecturer in Architecture

The purpose of this paper is to examine the meaning of contemporary architecture, and in particular, to attempt to explain the implications of contemporary technique with its simplification of form and detail; its avoidance of the stylistic motifs and surface minutia of past architectural epochs; its seeming barrenness of expression. Mr. Furner, in his lecture on Monday evening, demonstrated the rich heritage which the romantic architecture of the past has allotted to us. Mr. Hendrikz has developed the theme of the relationship of Painting and Sculpture to Architecture, and has examined the qualities and validity of the Arts in Architecture. This paper will attempt to clarify the apparently conflicting circumstances of modern architecture.

* * * * *

Architecture is a living, growing thing. It is moulded by significant factors; by social and economic conditions, by technological and scientific discoveries and artistic achievements. It is a dynamic art, and, if true to itself, will keep pace with contemporary developments.

In the last analysis, Architecture is compounded of three fundamental attributes — those of Utility, Strength and Beauty. The whole theme of the Exhibition is based on this unassailable truth. The balance between these three requirements of good architecture may vary; indeed it does, as has been demonstrated by the examples illustrated in the Exhibition. It is the changing generator of influence and purpose that occasions a variation of emphasis on each of these fundamentals transcending the stylistic characteristics of the fabric of the building. Yet in spite of this variation, there must be an apparent and discernable equilibrium between them. In order that a building may be considered good architecture it must exhibit all these prerequisites.

In the past the concept of Architecture has lain in the constant endeavours of the craftsman in creating the envelope of the building, whose function has been the repetition and blending of decorative motifs to encompass the work of the artist. The rich texture of ornament and the extravagant surface modulation is a true reflection of the skill of the craftsman. This is one kind of beauty in architecture with which we are all familiar. Yet this is not the only form it may take, and the very elaboration of ornament, quite apart from quixotry, may defeat its own purpose. Beauty may be defined as that combination of qualities of shape, proportion and colour that delight the intellect. It has, therefore, an intellectual quality.

* * * * *

Turning now to the contemporary scene we find a characteristic absence of the forms of ornament and decoration implicit in the past epochs. This fact must be seen against the background of scientific and technical developments which have shown constant improvement and refinement since the days of the Industrial Revolution, and which have engendered the rise of the machine aesthetic in place of that of the craftsman. There can be little cause for surprise that the industrial techniques — the machine aesthetic — should place emphasis on Utility.

Our contemporary civilization demands utility as never before. Without it modern life cannot be sustained. But utility is not all. Alone, it outlaws those aesthetic and dramatic needs so congenial to the good life. Utility, however, is not without charm. It contains within its embrace all those technological and scientific discoveries which promote the comfort of living and which have extended the potentialities of construction and movement. But these technologies have no inherent values as elements of expression, their competence lies in the way they are used. This is the important point, for, when "the only purpose of these technologies is their show, their adventitious nature is soon realised and their application can become as trite as an excess of ornamentation."

Utility in Architecture will concern the organisation of space and the system of construction. In Architecture, as in

everything else, it is the manner in which Utility is applied that is important. The attribute of Utility can impart an expression of value and merit. For, within an adequate solution and integration of the problems of planning and construction expressed in terms of form and proportion, lies the germ of Beauty, which, in skilled hands, can produce the mature blossom of vital charm and intellectual satisfaction.

* * * * *

In parenthesis, one may point to the enormous variation in building types characteristic of our civilization, a variation unique in history. It is not surprising, therefore, that this attribute of Utility, embracing as it does the almost limitless changes in the kind of space and space utilization demanded by contemporary life, should have been subjected to so searching an analysis with the development of a rational approach to the problems of contemporary architecture. This rationalization emerged in the renascence of the 1920's, differentiated to-day by such titles as the "Modern Movement," the "New Architecture" or simply Modern Architecture, and sometimes derided as "cold and uncompromising functionalism."

* * * * *

The architects of this renascence, Le Corbusier, Mies van der Rohe, Walter Gropius and others recognised the depths of decadence and dilettantism to which pedagogical romantic philosophy had driven architecture. It had become mere scholarship bent on refurbishing an outworn and outmoded idiom. They sought to bring to bear on the art and science of architecture a revitalizing philosophy consonant with the spirit of the age. They grasped the opportunities which science offered and gave convincing demonstrations of these in the art of expression. They used structural inventions, not for their own sake, but as elements in a language which could interpret a contemporary way of life. Their reliance was not only on new materials but upon new and significant relationships, among which spatial composition was a prime medium. They dealt in total form which would "admit to a precise and scrupulous structure no technique not consonant with the true culture of our day."

The rationalization of the problem of living endemic in our society has as its concomitant the rationalization of structure and design that would admit of no spurious relief and formed no basis for decoration in the old "l'art pour l'art" tradition. The machine aesthetic exerted a profound influence on the Art of Architecture.

One of the most significant figures of this renascence, Le Corbusier, nevertheless realised that this unrelenting rationalization of approach was not enough. He recognised the necessity for spiritual and intellectual relief. He introduced into his architecture those things which would appeal to the human spirit, in the form of materials and colour. It is important to record that he was a member of the Abstract School of painting. His buildings in their components of materials, colours, walls and space are significant examples of three-dimensional abstract compositions and in themselves represented the creations of one who combined the qualities of an architect and a painter. While his work is not without decorative accents in the form of painting and sculpture, yet like any other significant work of art which has its origin in a highly developed philosophical concept, it demands an equivalent intellectual response, and often, like the work of his contemporaries and followers, it has been condemned as wanting in popular appeal through a lack of appreciation of the motivating causes. The torrent of criticism has made this architecture the "excuse for an avid materialism wholly alien to its intention."

Abstract Painting is a mode of expression eminently suited to exploitation in this way. It, like architecture, was the expression of the creative spirit of the time. It has had its influence. Painting to-day is developing along other lines with an integration of technique and design to produce a wider and richer content than was possible in the pure abstract. This move carries with it, perhaps, a significance for us. Will it be accompanied by a richer visual content in architecture? I submit that there are compelling reasons why it should, and many of these are to be found in the awakening consciousness of the social purpose of architecture. We have seen beauty in form and proportion in much that has gone before, and the new aesthetic has demonstrated in no uncertain terms the visual qualities of material used in the old and new, fascinating ways.

* * * * *

The importance of the role played by materials in the contemporary idiom merits some consideration here. The machine aesthetic has exerted a powerful influence on the visual qualities of architecture, and it is in the pattern of visuals that materials have been raised to a position of unique prominence. Where before they were subordinated to the dictates of an all pervading style of design and surface modulation, now they are the surface modulation. The characteristics of their structural and decorative qualities have been subject to penetrating analysis and exploitation. Time will not permit us to dwell on those visual and aesthetic qualities of materials that are part of the architect's vocabulary. Suffice it to mention but a few; the insistent pattern of the rough stone wall; the robust dignity of masonry; the smooth sophistication of marble; the glitter of glass; the mellow tones of wood; the varied bond of brick and the constancy of ceramics. It is the function of the architect to compose from a palette of physical characteristics a structural entity determined by purpose and consonant with these aesthetic postulates.

* * * * *

It is fitting here to reiterate the dominant influence of the industrial technology — the machine aesthetic, nowhere

more lucidly defined than in Lewis Mumford's "Technics and Civilization." It demands an exploitation of mass production, the multiplication of standard patterns implying the elimination of personality from the process of manufacture. It includes an acceptance of a formal vocabulary derived from the needs of machine production.

It was in pre-Hitler Germany that, perhaps the most complete development of design in relation to the machine economy was to be seen. Men like Gropius, founder of the Bauhaus, and Marcel Breuer, one of the most talented of its architectural exponents of its doctrin, developed to a high pitch the creative interpretation of industrial technique. Their work exhibits an intense organisation and exploitation of the products of industry, of materials and texture. It is highly competent and pleasant to look upon. The doctrine has had appreciable effects on the constructive appreciation of the arts and crafts, and the unifying character of the building in relation to the work of the architect and the artist.

* * * * *

The work of Frank Lloyd Wright epitomises a third important facet of contemporary architectural development. He has brought to bear a highly individualistic approach to design which, coloured by the concept of "organic" architure, the architecture of common sense, exhibited a pronounced sculpturesque quality. Much of his earlier work reflects a preoccupation with the delimitation of space with forms and decoration of the repetitive nature — often of a bewildering complexity. There is evidenced in most of his work the coalescence of the skill of the architect and the vision of the sculptor.

* * * * *

The fourth facet is worthy of mention. For in the coordination of creative endeavour which it displays lie potentialities for a new integration of architecture and the arts. I refer particularly to the sensitive Swiss and Scandinavian architecture on the one hand, and to the surprisingly mature developments in Brazil on the other. Industrialization has come late to these countries, and the impact has been softened, indeed absorbed, by an unusual cultural consciousness which has enabled these peoples to temper the acceptance of industrial technique with the mellowing influence of an indigenous folk art. They are fortunate in possessing a standard of craftsmanship and aesthetic appreciation firmly rooted in the national character. Their art and architecture is for the people. It exhibits an even tenor of expression and development peculiar to these circumstances. As a result this architechture is, particularly in the case of the older European example, a mirror of social enterprise vitally related to the life of the community. It is among the best examples of the architecture of the good life.

* * * * *

These references have been used in order to promote an understanding of the ramifications of the aesthetics of architecture. Their root cause is substanitally the same. The contemporary idiom is, in fact, an evolution rather than a revolution. It carries with it, it is true, an antagonism towards the "Classic" ideas of building. Frank Lloyd Wright in his Sulgrave Manor lectures referred to the declaration of Lao Tse in 500 B.C. who wrote that "the reality of the building consisted not in the four walls and the roof but in the space within, the space to be lived in." The significance of the statement is readily appreciated to-day. Architecture is no longer the prerogative of the few, it is the prerogative of the community, the man in the street and the individual. Freed from the esoteric dictates of "academism" the architects of our environment have recognised that "architecture is out of life itself for life as it is now lived, a humane and intensely human thing." It is "a necessary interpretation of such human life as we now know, if we ourselves are to live with individuality and beauty." Le Corbusier adds his affirmation in one of his characteristically pithy sentences when he said "Architecture and town building belong to the most vital elements of social life." Gropius too has this to add. "The art of architecture and its many branches," he wrote, "should not be a luxury, but the lifelong preoccupation of a whole people."

* * * * *

It is this idea of the essential human qualities of architecture, the ideal of service to the community to encompass the good life that is so stimulating to-day. It is against this concept that the sensitive social achievements of the Swiss and Scandinavian architects can be evaluated and the mature, vital and colourful work of the contemporary Brazilian architects may be measured. It is my opinion that both deserve a full measure of praise. Both live up to the postulates made earlier; both exhibit, to a marked degree, a conscious appreciation of the motivating causes of the contemporary aesthetic and are true to their environment.

We, in a young country of complex social and economic conditions, have not yet achieved that wide cultural maturity which engenders a general appreciation of the good things of life. Yet these values are recognised. The architect is aware of his responsibility to the community. There has been a great body of work executed together with much research and experimentation since the 1930's, which stands to the lasting credit of the pioneers and gives no cause for despondency. It is this very sense of responsibility that has produced this exhibition, that has dragooned some of us to speak about

it, which, in fact, is bringing the art of architecture to the people. It is my view that the architectural profession in this country which is alive to its social responsibilities and to the needs, aesthetic and human, of the community environment, must emerge from the shell of professional reticence and point the way to the glorious potentialities of our future.

* * * * *

By way of conclusion we may ask: "What of the future? Will architecture regain its status as a unifying art?" One of the basic concepts of the contemporary philosophy has been just this desire, not, to be sure, the elaboration of architecture by way of "l'art pour l'art" products but rather by the reconciliation of the forms of contemporary industrial technique which accounts for much of the standardisation of present day design and those of the folk art untrammelled by mannered implications. Outstanding examples of this approach may be seen, for instance, in the architecture of modern Brazil.

There is a further aspect to this question that embraces a deliberate combination of art and architecture. That is the introduction of scultpure and painting to give point to some psychological purpose or merely enrich the social scene — a charming quality of Scandinavian architecture. In this respect painting and sculpture must have a validity within themselves and must be in sympathy with the character and purpose of the building.

Time will not permit of an analysis of the psychological response to visual stimuli. Suffice it to say as a general observation that man is ever intrigued by that complexity of pattern arising from those accidents of design which mark the romantic appeal of the mediaeval street, or from the intricate relationship in design that are incapable of immediate visual reconciliation, or by the mere power of impressive scale and repetition. It is the trite and uninspired, that which presents no challenge to the intellect, that which is lacking in aesthetic stimulus which soon ceases to excite the imagination. Not that there is no beauty or appeal in simplicity. It is the rich modulation and visual stimulus within the framework of intelligently created simplicity which modern architecture is capable of providing that appeals to me as being the direction that this architecture of humanism may well follow. To quote Gropius again, "The character of an epoch is epitomised in its buildings." To-day architecture has descended from the lofty pinnacles of its evolutionary philosophical ideals. It has established itself. It is no longer a luxury, it is the architecture of the community, of man himself. This architecture of humanism must appeal to the intelligent human mind. It must be devised not only by a skillful interpretation of the spirit of the community and the purpose it serves, but by the recognition of man as its unit of measure.

The recognition of the rôle of the architect in society, not by the architect alone, but by each one of us, will render this concept capable of universal understanding and beneficial application. The onus is on each one of us, that by appreciation of the dramatic potentialities of the Art of Architecture, we may promote the well-being of society and enrich our environment.

* * * * *

As an epilogue I quote the words of Alfred Roth in the Reality of the New Architecture. "Even if architecture is an art fettered by its purpose and material, it can in its present new form, and not least by the inclusion of the liberal arts, express the climax of artistic intensity and aesthetic ripeness. In this respect it must not only be regarded as the most distinct social and cultural, but also as the clearest artistic phenomenon of modern times. In this way it points to a distant future and this outlook imposes the duty of advancing with decision and patience, always keeping the goal in sight.

VOTE OF THANKS

By R. K. Walker, Student of Architecture, University of the Witwatersrand

We have listened tonight to two papers read by two dissimilar people in two different walks of life, but I should like to draw your attention to the basically identical motives expressed by both of them.

First that Architecture is the Mother of the Arts—a statement whose validity those of you who have studied this exhibition cannot doubt; and it hardly needs much further amplification.

In all the greatest periods of their history, architecture, sculpture and painting have gone hand in hand—and the exponents of the one have had a very intimate knowledge of the principles and have been in sympathy with the ideals of the others. One of the most certain signs of vitality in the architecture of today is the growing use of decorative sculpture and painting.

The position of Pheidias with respect to the building he embellished was not like that of the modern sculptor, who with very little architectural knowledge models a figure to certain dimensions given him; rather it must have been that of a man whose wide experience of buildings enabled him to

hold a position at least equal to that of the architect. The intimate relation between the arts is continued in Gothic times, when the mason seems to have been the authority to whom all turned for the solution of problems of construction and design. During the Renaissance, and particularly in Italy, the same state of things obtained.

The principal purpose of decorative sculpture and painting is to ornament architecture; when architecture degenerates to a mere setting or field for decoration, the purpose of the building is lost; and it was into this unhappy condition that architecture sank some time after the Renaissance.

It should be borne in mind that it is quite possible to have beautiful modelling and painting which may be utterly bad decoration. It is vitally necessary that both should be not only satisfactory in themselves, but should be in sympathy with their surroundings and partake of a similar character. In support of this—the groups of sculpture which adorn the Parthenon are entirely in character with their surrounding architectural forms, with their peculiar flat surfaces and the square modelling of their detail. Equally striking is the similarity between the stiff vertical folds of the drapery of the Gothic figures and the lines of the shafts and mouldings of the piers and vaults.

So much for what we can learn from the past. For the future—Mr. Hendrikz has clearly marked out the way whereby architecture may regain her rightful position as Mother of the Arts. He has placed his faith unreservedly in the architect of today and it is up to us to prove that that responsibility is accepted and appreciated.

I have been deeply impressed by the stress that has been laid on the work of Le Corbusier, one of the first architects of the contemporary movement to assume that responsibility. It has become almost fashionable to decry Le Corbusier, because of the impractical features in some of his projects, but his influence has been immense.

The attraction of Le Corbusier lies in his new aesthetic, the plea for a contemporary expression based on the conditions and needs of the age. There is good material here and sound reasoning. That is why in countries such as Brazil, his influence has been beneficial and caused good work to be produced.

In Brazil the architects who have followed Le Corbusier's advice, have grasped the importance of what was fundamental in his theories. The success of the new buildings in Brazil must not, however, be exaggerated. They are examples not so much of the excellent results to be obtained by a study of Le Corbusier, as of the values to be achieved by studying the foundations from which progressive contemporary architecture can arise.

All the time, architects who are following Le Corbusier's theories of free planning, and are inspired by his feeling for a pure geometry, are at the same time keeping contact with the general public through the medium of design which seems patently sensible and expressed in materials which are tried and familiar. The architecture which results is in the main readily appreciated—because it maintains contact with the past, and, in other words, as has been said, is **evolutionary.** This new architecture may occasionally be violently opposed, criticised and stigmatized as foreign, but it does maintain a certain communication with the public and it is only a matter of time before it can be easily assimilated. It is on this point again—of contact of the architect with the public—that both speakers tonight have been in complete accord. But this point of contact is not even now as strong as it might be and must be. It is reported that when George M. Cohan was asked to what his success as a playwright and composer was due, he replied that he was a plain guy who gave other plain guys what they wanted. One may suppose, judging by the evidence put forward in this exhibition, that in architecture there have been very few of these caterers to the plain guys' taste. It is a mistake, as far as the architects' contact with the public is concerned, for groups of architects to assume that it is part of their duty to compel people to a way of life which they do not want to follow. As Mr. Hendrikz has said, it is the architects' rôle to guide and inspire, because his training and vision fit him to lead forward.

In buildings used for recreation or business, the average citizen recognizes the possibilities of new techniques. He is accustomed to advertizing and showmanship—and he is always willing to turn for a while from realities and escape into a world of makebelieve. But on the whole, the category of building which caters for this mood is like the mood itself —transitory and impermanent. While admitting a shop or a factory in steel and glass, the man in the street will not, almost certainly, wish to see the same treatment applied to a museum or a public library. An obscure, unformulated, but nevertheless sound instinct tells him that stable things should be expressed with stability and anything that smacks of fashion must not be taken for more than it is—namely, the expression of an amiable but transitory desire to attract and interest.

Under this heading, the average individual will countenance all sorts of novelties, but he is not taking them too seriously; hence he will admit, even welcome architectural adventure which does not impinge too strongly on his own deep-rooted, and often deeply buried conservatism, and all things he clings to as being dependable. When, however, novel architecture is expressed in traditional materials—such as brick and stone—and the forms of building are obviously dictated by necessity and not whim, as in a hospital or railway station, the same individual can recognize that a modern problem has been tackled, and sense the mind processes behind the work in question.

This matter of materials is vitally important to the future of the contemporary idea. Intelligent use of them is a

corrective to some of the abuses which are, heaven knows, all too frequent here in our own city. Moreover, it is one of the most effective means of creating a sympathy for developments which in so many ways are logical and on every broad ground defensible.

The present age is, as Mr. Howie has said, rather overconscious of machine domination and of technique in general; but that does not mean that we ache for demonstrations of it in street architecture. What is needed is an architecture fresh yet familiar, clean but not new-looking, purposeful yet homely, simple yet decorative, comfortable yet not dull, in fact, an architecture reflecting the best characteristics which the general public can readily assimilate.

I have listened tonight as a student of architecture—but I am but a part of a composite whole—integrated if you prefer—in which most of you share. Like you, I have also listened as a "man in the street"—a name which for some obscure reason the average individual is loathe to apply to himself. And if I were to describe my own reactions to what I have heard tonight, I am sure I would be in the main echoing yours. I know my first instinctive reaction in listening to people more conversant with a subject than myself was extreme pleasure at not being—"talked down to." Both speakers tonight have impressed me as having displayed a very keen, thorough and human insight into the subjects they have been discussing, and they have passed on their knowledge in an honest and straightforward manner, which has been no less entertaining **and** stimulating in its simplicity.

On behalf of everyone here tonight, I should like to thank Mr. Hendrikz and Mr. Howie very sincerely.

THE PROCEEDINGS OF THE THIRD EVENING

THE CHAIRMAN: Ladies and Gentlemen:

Tonight we complete the series of lectures arranged in connection with the "Art of Architecture" Exhibition in the Hall below. We have, thus far, given consideration to Architecture, firstly, in its general form in the Western World; secondly, in its relation to the other visual arts (or rather, as it turned out—the function of the architect in our society); and thirdly, in its contemporary form.

On the first occasion the fundamentals of good architecture, formulated in the Exhibition as Utility, Strength and Beauty, were demonstrated by historical example. The case was made for viewing contemporary architecture in the same light, without sentiment and without prejudice, but with a due sense of the continuity of history as it becomes absorbed by, and indeed an integral part of, man.

Having thus had established a basis for passing judgment, we are in a better position to appraise contemporary architecture. Not, however, completely equipped to do so, for what is still needed is a knowledge of the technique—the means of building—which the architect has at his command. This additional basis of judgment was given on Wednesday evening, when the relationship of technique to the other factors of Utility, Strength and Beauty was discussed.

Having then determined what is good architecture, we move tonight into a somewhat larger sphere. The setting itself of architecture—architecture that is, in the sense of individual buildings grouped together to form a larger pattern—is what remains to be presented. The descriptive term we have used for this discussion is "Civic Design," and for its presentation we have had the good fortune to enlist the services of Mr. Roy Kantorowich, of Cape Town.

Mr. Kantorowich, in addition to being an architect, has been actively engaged in town planning in South Africa for some years. He has been closely associated with the two major town planning developments which have taken place in South Africa—the new industrial town of Vanderbijl Park, and the Cape Town Foreshore Scheme. He therefore speaks with authority on such a subject as "Civic Design" where the spheres of architecture and town planning impinge on one another.

CIVIC DESIGN

By R. H. Kantorowich, A.R.I.B.A., M.I.A., A.M.T.P.I., Town Planner

The subject of my paper is a difficult one to pin down and confine. In days gone by, when towns were small and compact, civic design and town planning were virtually synonymous. With the growth and expansion of towns into cities, the two arts have separated. Civic design now suggests something more limited than the visual aspect of the whole urban complex which belongs properly these days to the field of town planning; civic design on the other hand suggests something wider than the architectural merit of an individual building.

We can define civic design, then, as the art of that sphere of activities where architecture and town planning overlap. It deals with the appearance of the urban environment, not considered as an overall whole, (that would be town planning), nor at the level of isolated individual buildings, (that would be architecture), but in terms of relatively local ensembles of buildings and their settings and enveloping spaces. This, at any rate, is the interpretation I am using for the purpose of this paper, forming, as it does, a part of an exhibition on the Art of Architecture — not on the Art of Town Planning. Civic design derives its laws and techniques to a large extent from both parent arts but it has, in addition, its own distinctive disciplines and criteria.

The Exhibition, which I am sure you have all studied with interest and enjoyment, indicates clearly how low our contemporary civilization has sunk in the art of building cities; how desperate is the lack of adequate standards, and conscious practice, of civic design. I shall try briefly to trace the history of the development of civic design so that it may be possible to understand why the present low ebb has occurred. Such an appreciation can then form the basis of an analysis of the many projects and systems of civic re-design that have been offered in recent years. I shall try to analyse some of them, indicating whether I think they are either worthy of being carried out in practice or (perhaps more important) likely to be realised. I shall conclude by trying to indicate what social climate would be required to bring about a renaissance of civic design and what the standards of such an art should be.

THE HISTORICAL DEVELOPMENT OF CIVIC DESIGN

The successive and changing forms of social organisation throughout the ages have found expression in, and have been mirrored by the arts. Their nature has been compounded out of a mixture of influences: historical precedent in the art form itself; the prevailing state of society and its developing tendencies; the personal creative talents of the individual artist and his own range of experiences; and, of course, the functional requirements of the work of art. All these influences go towards the making of a particular work of art.

Civic design is no exception to this general rule. It is however peculiar in this one respect: that the works of one social period may be built within the framework and surroundings of works of previous epochs. Works of civic design are not always completed at one time as are paintings, poems or symphonies. They may stretch across successive social epochs and cultures. For this reason, historical precedent has an even stronger influence on civic design than upon the other arts.

PRIMITIVE TRIBAL SETTLEMENTS

Throughout the successive stages of pre-industrial history, settlements were of a simple and homogeneous character. The earliest settlements, marking the growth of a stable agricultural technique, consisted of standardised huts set sculpturally in a pattern determined by the hierachical order in the clan, with the huts of the headman providing the focal point of the group. The pattern of the layout is elementary in its simplicity, the lack of differentiation in size, shape and material of the architecture reflecting the undifferentiated activities of the tribe. The aesthetic impression is one of simple monotone in unobtrusive harmony with, and subordination to, the natural surroundings.

THE EAST

Of a similar simplicity were the early towns of the Far East — of India and China. The towns were planned as imitations in miniature of the theoretical scheme or ground plan, on which the world was supposed to be built. Thus the central palace coincided with the world mountain; the surrounding houses, to the earth itself; the city walls defined the limit of the surrounding ocean, and the streets corresponded to the rivers leading from the world mountain to the ocean. Gutkind has remarked on this "transposition of the world-concept into architecture" but the "world concept" itself is largely a reflection of the graded social and economic relationships of Eastern Feudal society.

The feeling of unity and completeness in these early towns is most marked. In China, for example, the outside walls were erected first, defining the ultimate limits of the town from the start, and the layout of the town proceeded from the periphery inwards. Thus the most important elements in the aesthetic picture were, firstly, the wall and its gates, and, secondly, the central palace surrounded by its own inner wall.

The palaces of the princes and nobles were constructed within the inner wall. Each palace, in turn, was surrounded

by its own wall so that the basic pattern of the town was repeated on a descending scale. Other official buildings and the houses of the citizens, also walled, filled in the intervening space between outer and inner wall. Gutkind has described how "the whole forms a system consisting of numerous elements encompassed one by the other and all orientated towards the palace." The stability and planned order of the Chinese cities reflect that almost timeless and static social order which lasted through the centuries, only to decay in comparatively recent times.

GREEK AND ROMAN TOWNS

The Greek town or polis was equally an harmonious whole. Aristotle demanded that the polis should house "the largest number which suffices for the purposes of life and can be taken in at a single view." Attention was focussed on the agora and temple group, dual pillars of the city state. Here, in the most prominent and commanding position in the town, the temples and meeting places were arranged in an asymmetrical spacial system providing progressive and changing views of the buildings, seen in the solid. Surrounding the centre, were numerous small blocks repeated regularly in checkerboard pattern with no special accents either on space or of structure. The aesthetic effect is thus of a simple contrast between the dominating symbols of the city-state organisation and the subordinate residential zones.

The Roman town showed a similar unity of aesthetic character although the arrangement of the main elements of the town was rather different from the Greek pattern, more emphasis being placed upon the street network.

THE MEDIAEVAL TOWN

It is with the growth of the mediaeval town that we come to the direct ancestor of the modern city. The mediaeval town, island of rebellion against the feudal countryside, became the focal point for the establishment of that new economy which was to scatter feudal relationships to the four winds, and to usher in our modern industrial era.

Mediaeval towns operated originally as trading centres and markets, and centres of craft industry. They were small and compact, heavily fortified and walled against attack, and usually occupied a strategic site. Dominated by soaring ecclesiastical buildings visible from afar, they therefore must have loomed up like beacons out of the countryside, beckoning to and welcoming the harrassed and sorely beset mediaeval traveller.

The various building types that went to make up the mediaeval scene were limited in number. The church group dominated all and was usually placed adjacent to the main, often only, open space. Between the church and the walls were packed the houses of the townsmen. The houses contained the living quarters of the family and the workshop of the craftsman. Place of work and place of residence were one.

Division of labour in society, although advancing, had yet to reach that stage of complication which ultimately made the small craft establishment obsolete. A great diversion of building types, as we have to-day, was therefore not necessary. Thus, although the town was laid out most informally, with many twisting, narrow streets, and although practically no two buildings were exactly alike in appearance, there was such a similarity of function, a standardization of scale, a restriction in the variety of materials of construction, that an harmonious ensemble resulted.

The mediaeval town presented, for the last time in history, a unified overall aesthetic impression. Its further development saw the beginning of that progressive disintegration which has led to the disorder of to-day, and to that separation of civic design from town planning which was described at the beginning of the paper.

THE EARLY RENAISSANCE

The Renaissance can be considered the decisive turning-point. The struggles with the all-powerful Feudal Church were successfully concluded, and a burst of new scientific thinking and discovery, following the revival and re-discovery of the classic tradition, led to the development of the machine and the birth of modern man.

Early Renaissance towns grew in a sympathetic way out of their mediaeval background. "The Early Renaissance was not an age of vistas, avenues and monumental carriageways: instead we find the introduction of the classic motif in conformity with mediaeval notions of planning." (Cecil Stewart, Journal of the T.P.I., March-April, 1947). Symbolic of the new civic pride of this period was the enlargement of the Piazza of San Marco at Venice carried out by the Doges to express the ideals of the new Republic. This supreme example of civic art was so ingeniously contrived that perfect balance between the old buildings and the new was achieved; buildings of all periods were integrated into a composition of civic art most expressive of the national spirit of the new age.

The Early Renaissance also saw the construction of the first architectural street, the Via Nuova, in Geneva. Twenty feet wide and 250 yards long, the Via Nuova was designed to be flanked by buildings whose height was controlled at 70 feet to the crowning cornice. Most of the buildings were constructed by the designer of the street, Galeazzo Alessi. This event was to have important repercussions in the Grand Renaissance period to follow.

THE GRAND RENAISSANCE

The amalgamation of the numerous petty principalities into states under the control of autocratic monarchs ushered

in a further development of the art of building cities. The centralisation of power meant that a limited number of cities grew rapidly into large urban complexes. These centres of state power were refashioned by great civic works designed to emphasise the all-prevading strength of the monarchy, and to provide an adequate backcloth to the pomp and circumstance of state function. Town planning thus became an instrument of state policy, and a strict and regimental style of geometrical planning developed.

In this planning in the Grand Manner, two aesthetic experiences only were discernable, and they were of a kind. The one was the limitless perspective view down the endless wide street, the offspring of Alessi's Via Nuova. The view was punctuated at intervals by suitable "rond-points," statues or triumphal arches and was enclosed laterally by a neutral facade of continuous uniform buildings. The other experience was that of the enclosed place or square of assembly, the point of departure or the destination of the perspective roads. Here again, a rigid architectural framework provided only an orderly background to pageantry.

Whereas the towns of previous times had either subordinated themselves to Nature (Primitive Tribal) or provided a safe and compact retreat from Nature (Mediaeval), the Baroque town of the High Renaissance stretched out its geometrical and artificial tentacles, its grand vistas, in a dominating way over the countryside.

It was all grand facade, for behind the glittering front was growing chaos, and squalor. The city was divided into two parts — the palaces and boulevards of the Grand Monarch and his court, and the mean and messy quarters of his subjects. Civic design therefore served directly only a narrow section of the population and left its mark on only a portion of the town.

THE INDUSTRIAL REVOLUTION

Whilst the autocratic Kings held court, changes destined to undermine their position were taking place in society. Productive techniques were developing, and, before long, the large scale introduction of machinery operated by steam power ushered in what is known as the industrial revolution.

In the course of the upheavals that accompanied this process, the Monarchs lost their heads and the cities their compact mediaeval character.

Although, in the past, changes in the urban scene took place gradually, and new buildings were absorbed into the urban fabric in a satisfactory way (as, for instance, in Venice) the transformation of cities brought about by the industrial revolution occurred at a hurricane rate. Speed and expansion were the hall-marks and virtues of the laissez-faire economy. A premium was placed on individual enterprise as against communal collaboration, and the only standard of judgment on any activity was its profitability and productivity.

THE PATTERN OF THE MODERN CITY

A pattern of civic building (one could not call it civic design) developed, closely reflecting the jungle economy, the crude survival-of-the-fittest struggle. It arose in no planned or predetermined way but merely by the ruthless working out of economic law.

A great differentiation of building types developed. No longer was place of work and home united in the private house. Special buildings were now needed for industry, for commerce, for business, for housing. The city was now compounded out of a heterogeneous collection of architectural elements, vastly varying in scale, shape and function. The new buildings were so different in nature amongst themselves and from those of previous times that there was no hope of their forming a pleasing and gracious ensemble especially as no positive planning steps were taken to bring about such a satisfactory relationship.

The divorce of home from place of work had a further significance, for it meant that movement through and about the city assumed an ever-increasing importance. Mechanical transport dropped like a bomb into the narrow passageways of the old towns, causing chaos and confusion in the central areas, and making both possible and imperative the further lateral expansion of the city. Urban life, although profitable, was so unpleasant that the one ambition of those with means was to escape from it as soon as their day's work was done. So the great manufacturing and commercial cities expanded, burst their walls and spread like rivers in spate over the countryside.

The aesthetic pattern is what one might expect from a thrustful pushful individualism. The visual impression of say New York reminds me acutely of the mental picture I always have when I visualise a million people literally climbing the half-a-dozen ladders labelled "success." Some thrust their way above the ruck, others get near to the top, but the high pinnacles are achieved only at the expense of the struggling and floundering mass at the base. In laissez-faire cities, everybody aims to get the maximum advantage out of his property, to hog the air and sun from his neighbours, to thrust himself and his advertising in front of all others to evade the few controls and regulations that exist. (In this latter enterprise, he has, unfortunately, often been aided and abetted by his architect). In the final analysis, the mutual strivings cancel each other out and chaos is the result of the dreadful civic carnage. Whether individual buildings are good or bad works of architecture is of little importance; in ensemble they add up to bad civic design.

This then is the aesthetic pattern of the modern city; outwardly vigorous, breathtaking, but inherently ugly, cancerous and anti-social.

ACHIEVEMENTS OF LAISSEZ-FAIRE

It would be quite incorrect to say though, that the record of laissez-faire is entirely black. The revolutionary advances made in harnessing Nature to Man's requirements, the thrilling development of science and technique which turned the dream of a Utopian social order into a practical and realistic goal are the historical achievements of laissez-faire. Parallel achievements are to be found in the growth of our contemporary cities despite their ugliness. The achievement is again a technical one, both in the fields of civil and municipal engineering, and in architecture. Demonstrations of new techniques, although carried out within the framework of the old disorder, nevertheless provide the conclusive proof of the practical physical possibility of urban reconstruction.

MONOPOLIES AND STATE CONTROL

It is generally agreed that we are living to-day in one of those great transitional periods of history. Laissez-faire capitalism of the last century, the age of individualism, has hardened into monopoly and finance capitalism. The blind economic guesswork of thousands of small enterprises has been transformed by the inexorable workings of economic law into the controlled output planning and price-fixing of cartels. The economic and social unsoundness of laissez-faire has led to an ever greater need for State intervention, and for national planning in the interests of the whole community.

COLLAPSE OF THE CITY

Within our cities, laissez-faire has similarly brought us to crisis point. Cities have expanded laterally and vertically on the framework of old layouts until they have strangled themselves. No longer can the majority of people live in cleanliness and quiet, nor work in fresh air and good light, nor move and do their urban business in speed and comfort. Although the whole of the city pattern developed over the last 150 years is outworn, and no part of it is satisfactory, the insufficiency is best summarised and typified by the way that most important new element in the urban scene, the motor vehicle, is handled. The invasion of the city by the modern vehicle has called into question all the old relationships of buildings to open space, and a complete reorganisation of the various elements that go to make up the city has become imperative. The need for re-planning is desperate — a matter of life and death. A friend of mine has aptly expressed it in a rallying cry whose derivation you all must know — "Pedestrians of the world — unite!"

THE SOCIAL BASIS FOR RE-PLANNING

The next question to ask is will re-planning actually take place, and, if so, on what basis? Certainly the centralisation of power that as a product of monopoly capitalism, and the greater intervention of the State in the general life of the community makes it easier to visualise problems in an over-all way and therefore to plan. Add to this the drastic shake-up of both cities and ideas caused by the recent war, and the emergence on many sides of governments pledged to the planning outlook, and one has, it would appear, a healthy climate for planning.

In saying this, I am not blinding myself to the tremendous obstacles which lie between planning and the actual reconstruction. Good schemes have only too often foundered upon the shoals of vested interests. Others have been drastically limited in scope because of the grim spectre, Expropriation. Until the privileges that have accompanied the private ownership of land in the past are curtailed in the community interest, it is difficult to visualise universal reconstruction in our existing cities. Occasional opportunities will present themselves when a fortuitous combination of circumstances arises, such as in the Foreshore Reclamation at Cape Town. General reconstruction, however, awaits major social changes and reforms in the ownership of land.

Without going into detail, these social changes appear to be in process of occurring — more rapidly, it is true, in some parts of the world than in others. Everywhere, however, society is in flux. Planning is decreasingly a theoretical pursuit, and increasingly a prelude to reconstruction.

ELEMENTS OF THE MODERN URBAN SCENE

My paper has almost reached the point where analysis of contemporary planning should take place. Before this can be done, it is necessary for me to enumerate in more detail those elements that go to make up the contemporary urban scene. This analysis is required from two points of view. Firstly, what do we actually see when we look about us in the city; secondly, from what positions do we do the observing?

1. What Is Observed.

My remarks earlier in this paper draw attention to the great differentiation of type and size of building found in the modern city. To-day, we see factories and warehouses, offices and cinemas, shops, bazaars, markets and abattoirs, houses and flats and schools, and many more different classes of building. Each type of structure obeys its own set of requirements, the dictates of its functional needs, and these are inevitably expressed, with a greater or lesser degree of architectural honesty, in its outward appearance.

Parallel to the increased diversification of buildings has come a remarkable development of building technique. This has brought a new rhythm to the appearance of our buildings. The relationship of solid to opening, of support to span typical of modern structural systems is in apparent defiance of the

canons of proportion developed in classic times to suit the stone lintol and arch. As many new works of civic design and reconstruction will be carried out in existing cities, it is plain that old and new buildings will co-exist. The reconciliation of contemporary building adjacent to older works carried out in earlier structural systems is therefore another problem in civic design. It is in my view by no means insurmountable. The scale of the human figure has, throughout the ages, determined the proportions of buildings. Doors and windows, heights of rooms all are ultimately related to the size of those who use them. For all the revolutionary changes in structural design, I think there is a common human module linking the past with the present, making it perfectly possible to design the modern building in harmony with those of the past.

In addition to buildings, other constructed works such as broad motor-highways, fly-over bridges and all the street furniture, poles, signs, kerbs, islands, bollards and so on, that go with them loom almost as important in the total picture as the buildings themselves. This is something that is often overlooked. I recommend as an interesting though depressing experience the attempt to photograph Johannesburg's City Hall from the Cenotaph side without the distracting interposition of extraneous poles, tram wires, incongruous shelter and traffic signs.

2. How It is Observed.

In the past, before the development of the rapidly moving vehicles or the aeroplane, towns and their buildings were viewed at ordinary eye level and by persons moving either at pedestrian pace or little faster. The civic effects were directly related to what the eye was capable of observing at slow speed. Aesthetic interest was kept alive by the avoidance of monotony, by contrast, by accent, by detail, by change of direction and of volume, and so on. Because aesthetic experience in civic design is very much a function of time, more is perceived by a pedestrian moving down a given length of street than by a passenger in a vehicle. Interest must be maintained and re-aroused at closer linear intervals, streets must change direction sooner to avoid monotony. Small-scale decoration and enrichment of facades of buildings becomes worth while, for people move slowly enough to appreciate it. The emotional impact of a walk through the streets of Florence is lost in a drive in a taxi.

To-day one sees a town at widely differing speeds, varying from say 4 to 40 miles per hour and civic design must answer the requirements of all speeds of movement. In addition the view of our cities from the air or from high buildings (in plan, so to speak) is becoming ever more important and familiar and is no longer exclusively the prerogative of the planner and draughtsman as in the past. The component elements of contemporary civic design are therefore buildings, both old and new, of varying mass, colour and texture; roadways; bridges; pathways; street furniture; and trees, shrubs, flowers, lawns and water. These are seen from distant vantage-points and from near, from the driver's seat of a speeding motor-car or from the top storey of a high office building or just from plain Shank's pony.

It is quite clear from these requirements that civic design is a complicated enterprise and has to be satisfying in a comprehensive way—both in its larger lines and in its local details. From the zoning of town-planning, the general disposition of solid space is determined; from the requirements of architecture, the character and colour of surface, the direction and emphasis of minor masses is foreshadowed. Civic design unites these opposing elements into a pattern, or counterpoint in such a way that each detail, while playing its subordinate part in the comprehensive view, is nevertheless itself a rounded and complete picture, a satisfying experience, when viewed locally from within.

EMOTIONS AROUSED BY CIVIC DESIGN

So much for the mechanics of civic design. What however has not yet been discussed is the more intangible question of what civic design should express; what emotion can and should it arouse? We have seen how in the past, civic design has expressed the pattern of life of the community whether it has been in the towns of old China, the polis of Greece, the Feudal strongholds of the Middle Ages, the cities of the Baroque, or even the kaleidoscopic confusion of laissez-faire. What should the spirit be behind the new planning movement?

It is clear that the new social order that is in process of emerging from our present period of storm and stress is a democratic one. The successful struggle, just concluded, against the 20th century revival of autocracy is convincing proof of the trend in human affairs. The new planning then is for a society in which the whole population will take an ever more active and intelligent part in the organisation of community life. No longer will a privileged and all-powerful handful commission all art, but the artist, including the civic designer will work, for the first time in human history, to the requirements of the articulate masses. This is a problem for the technician of stirring possibilities but equally of grave complication. He will be faced with the problem of explaining his ideas to an initially untutored clientele, of meeting the immediate and poorly formulated demands of the mass whilst answering the dictates of his professional and artistic conscience. The conflict will be painful and productive undoubtedly at times of bad work but, I am sure, will be resolved ultimately in the creation of a great new art form.

The civic designer, I feel, should express through the medium of building forms, on the one hand, the epic struggle for democracy against tyranny, and, on the other, the simple

human enjoyment of that victory. Thus there will be parts of the city of a splendour and monumentality rivalling the great works of the past, although they will not be focussed, as in Versailles, on the seat of autocratic power, or form, as in Nuremberg, the backcloth of brutal Fascist mass-mesmerism. Concurrently, there will be parts of the city of an intimacy attuned to the scale of the most modest and humble individual.

By way of example, reconstructed Stalingrad should not only replace the devastated city, providing again the homes and factories that were ground down and gutted. It should also be a living memorial to the struggle that enabled the city to come alive again. Similarly reconstructed Exeter should indeed be Exeter Phoenix, triumphantly rising from the ashes. And there is place in London for a noble expression of the spirit that survived the blitz.

SOME MODERN TOWN PLANNING THEORIES

Over the past twenty-five years, there have been many theoretical suggestions for the rebuilding of our outworn cities. Some have had world-wide publicity and attention, although none have had the opportunity of being tested in practice. As we seem to-day to be closer to urban reconstruction, it would be well to re-examine one or two of these proposals and to discover their contribution in the matter of urban aesthetics.

Le Corbusier's startling "total planning" certainly disturbed the complacency of both academic and practical town planning circles in the twenties. On a previous occasion I have had cause to analyse his town plannning theories. To-night, I have little to add or retract from what I had to say then except (and in the light of my own few experiences) to question whether the plans even function technically, especially in regard to traffic. The aesthetic aspect, however, concerns us here.

Le Corbusier's steel and glass geometrical dramas might, at first glance, be considered to meet the needs of monumentality I have just described, but certainly the complementary humanity is lacking. The harsh generalization and over-simplification of the problem of urban building casts all humanity into the one mould. But the monumental values are also not for people within the scheme and form no part in any expression of democratic living or celebration. The aesthetic values exist only for some all-seeing dictator or super-planner. The ruthless imposition of "geometry" upon natural country and historic towns is nothing more than a return in modern technical terms, to the spirit of the autocratic Baroque of Versailles. Considering the intervening advancement of society towards democracy, these works can be classed only as retrograde and reactionary in aesthetic content.

At the other end of the scale, perhaps, is the petit-bourgeois, compromising cult of Sharawaggi. This latter-day movement, sponsored mainly by the English Architectural Review, arose, I feel, out of despair. The difficulties of reconstruction in our society, the irritation at the niggardliness of minor reforms, have led to a mood where virtues are sought in the palpable ugliness and disorder of our cities. Sharawaggi is the cult of the picturesque irregular, based on the attractiveness of small-scale Japanese architectural and garden tradition and on the recent re-discovery of what is thought a peculiarly "English" picturesque tradition. This is concocted out of an unjustified transposition of the art of English landscape design into the modern city, and a sentimental idealisation of disorder as democratic.

The disparate elements of building, street furniture, advertisement and so on are combined in a jazzy idiom which takes on something of the spirit of analysis found in cubism, and of escape in surrealism. All is reduced to the level of the "peep-show". What is really lacking is synthesis. This art, in contrast to that of le Corbusier, is accommodating to the "humanity" requirement but only by pandering to the lowest standard of values in the community. The rather parochial and precious content of Sharawaggi has not found a great response, and I think that the popular desire for boldness and broader thinking in reconstruction has been in advance of the "purveyors of whims".

For brevity, I have dealt with the extremes of theoretical design. Other theoreticians fill the intervening gaps. There is for instance Hilbersheimer, whose obsession is smoke, and whose replanning proposals are as mechanical as those of le Corbusier but lack all plastic invention and strength. There is also Frank Lloyd Wright who solves the problems of city planning by doing away with cities altogether! But a detailed analysis of the host of theoreticians who have come and gone is out of place in this short discussion.

THE CELLULAR CITY AND ITS SIGNIFICANCE

The recent war years have seen the gradual emergence of the type of planning and civic design called for by the new and developing social values. I will note briefly some of those trends in contemporary planning that go towards this belated integration and will quote one or two examples that appeal to me as being on the correct path.

I think that the most important technique in city planning in recent years is the system of cellular design. This appears in various forms as precinct planning, neighbourhood unit planning, organic planning as described by Saarinen, and so on. Historically, the technique has evolved, I should say, out of a reconciliation of the dispersion ideas proposed in the Garden City — Satellite Town theories of Ebenezer

Howard, and the concentration and super-urbanism advocated by le Corbusier and others.

The city, in this new outlook, is still a compact unit, distinguishable as such from the surrounding countryside, but is itself a multi-cellular structure consisting of units or neighbourhoods linked by a network of greenery in which the main traffic arteries run.

The advantages of this new outlook for civic design are many. Firstly, and possibly of most importance, the form of the whole city can be more easily grasped by the individual. At present the city appears as a nondescript never-ending sprawl with little direction, emphasis or character that can be discerned by the untrained observer. The reason is to be found in the lack of an intermediate unit between the individual building (home or office) and the city as a whole. The multi-cellular structure provides this in-between integration. The pattern of the whole city can be grasped as the interplay and organisation of its component cells. Psychologically, this has significance for the individual who can find his way to an identity with the community life through a series of partial integrations or steps. On the other hand, in the multi-cellular principle, there is the danger of fragmentising the city. Unless the division of the city into cellular units is accompanied by a synthesis of these units into an overall design of compelling strength, a repetition of that atomisation of building found in any residential suburb will occur on a slightly higher level of organisation. The analysis provided by the cellular principle must be accompanied by synthesis at the level of the whole city.

The second advantage of cellular design is the possibility of resolving the conflict between pedestrian and vehicle. Pathways and roadways are separated into distinct channels whose shape, scale, design and treatment reflect the particular traffic carried.

Thirdly, historically valuable portions of the city can be preserved intact, in working condition, as traffic-free or almost traffic-free precincts, the narrow old streets being used in their original context as pedestrian-ways. In fact the precinct principle enables reconstruction of existing cities to be undertaken piece by piece without either razing the city to the ground or confining the work to minor palliatives. Even the ugliest city represents an enormous capital investment of man-hours and one does not lightly throw away the product of so much labour without an effort to accommodate it, to the maximum possible extent, to the new plans.

Fourthly, the zoning of similar functions (like shopping or warehousing in the central area) into compact precincts enables buildings of similar type to be assembled in groups of uniform character. This would tend to deal successfully with the problem of reconciling the multiple types of building making up the city.

Fifthly, the new attitude to the traffic-way, brings about a new relationship between building and surrounding space. At last cities shake themselves free of the restrictive domination of the corridor street, the gift of the Baroque to the city. Buildings can now be designed and seen in the solid and the whole city can be planned with some of that sculpture-in-space spirit that informed the planning of the Greek temple and agora complexes.

Sixthly, many of the attractive civic effects of by-gone times, such as the intimate squares and closes of Bloomsbury and the Inns of Court, the informal market squares of mediaeval towns, can find a place in modern dress, within the traffic-free core of the precinct. In other words, the major cells or neghbourhoods can be in turn broken down into a number of inner cells in which intimate planned groupings can be created.

Seventhly, as the intercellular spaces of the town will be made up of traffic-ways running in parks and open spaces, greenery and planting will once again appear as an important element in the urban scene. Greenery provides a most effective foil to architecture, and the interdigital (to borrow Mr. Osborne's word) meshing of free-standing building and surrounding open green space will be a common effect in the new city.

I have, on purpose, kept my discussion on the problem of modern civic design in general terms. Quite clearly, each particular problem must be tackled within the framework of the general approach in terms of local scenery, requirements and tradition. The civic designer will indicate what types of buildings, what heights and what range of materials, would be appropriate for each particular case. His task does not, of course, include the detailed architectural design of individual buildings, although he may have to prepare sketches indicating "broadly the **kind** of buildings which would be appropriate and to suggest some of the principles which should govern actual design when they come to be worked out." (Thomas Sharp — Cathedral City P. 81.)

AESTHETIC CONTROL

Civic design then gives a positive indication of the architecture that would be appropriate to a given situation. The next phase is aesthetic control so that the execution of the various projects will be in conformity with the design. As my paper is already over extended and as Mr. Fassler, who follows me has dealt fully with this subject recently and might care to elaborate again to-night, I shall not go into the mechanics of aesthetic control in action. It will suffice if I point out that, given a positive goal by civic design, aesthetic control will not be negative and restrictive, as it must be under existing legislation, but purposeful and helpful to the architect. Just as the internal functional requirements of a building do not restrict the architect but are

rather the source of his creative ideas, so equally will the external or civic design requirements stimulate his imagination. Architectural control will have to be of varying strictness, according to the importance of the particular area. In some portions of the city it may be necessary to lay down the bulk and elevational treatment of buildings in obligatory form; in others, more individual freedom of treatment may be permitted. The controlling authority will have to exercise discretion, and be of a flexible outlook in judging new projects. In some parts of the world a three dimensional model of every new project to the scale of a master city model has to be submitted with plans for approval so that the new building may be studied and photographed in situ. This requirement is worthy of adoption everywhere. If this were done, much of the architectural bad manners and bad neighbourliness of our cities would be cut-off before birth. For example I can hardly imagine that the New Post Office would have been allowed to kill the silhouette of the dome of the Law Courts in Kruis Street, Johannesburg, if such control had been in operation.

Architects I am convinced would welcome the opportunity of working towards a positive civic end. At present, each building is carrierd out as an isolate, as if the imaginary lines that mark the boundaries of the plot were impenetrable sheets of armour plate separating the project from its neighbours. And, although this attitude can never bring about a community architecture, what alternative course has the practising architect? Practically anything might happen when the property next door is rebuilt. Architects, it is true, would resent arbitrary regimentation but at the other end of the scale they find little joy in the present anarchy and free-for-all. Once again, freedom will be found to lie in the recognition of necessity, and architectural freedom of expression will be achieved within the discipline of a master civic design, intelligently conceived and flexibly administered.

SOME EXAMPLES OF CIVIC DESIGN

Before I conclude, I feel that I should draw attention to some examples which conform to the standards I have outlined above, and, also, to mention two South African projects. Most of them will no doubt be familiar to you. These will give you an idea of the sort of environment for which we should strive.

In the domestic field, I still consider that Greenbelt, Maryland, near Washington represents a very high point in neighbourhood design. Although the architecture is not unduly prepossessing or exciting, it nevertheless is soberly competent and well-planned. It is refreshingly lacking in mannerisms. But the real achievement is to be found in the happy way in which layout, surrounding greenery and buildings have been integrated into a delightful and human ensemble, ever-changing and full of variety but essentially restful. The layout has a strong bias towards the community focal point and one has the impression that the scheme has gone a long way towards the satisfactory solution of the problems of providing privacy for the family, and, simultaneously, the incentive and opportunity for community life. Many other projects in the U.S.A., erected during war-time have carried the ideas of Greenbelt forward but I have no time to mention them to-night.

As far as the planning of the centres of our towns is concerned, we have few examples worthy of quotation. The new plan for the City of London is not yet available and, although the central redevelopment in Sir Patrick Abercrombie's Plymouth Plan is interesting technically I do not feel that the design has been carried out at a more detailed level than that of over-all town planning, despite the perspective illustrations. To my mind, it is full of architectural loose ends and unresolved relationships between neighbouring building masses.

Of all the overseas work that I have studied, I must say that I enjoy that of Thomas Sharp as much as any. Although Thomas Sharp has worked on comparatively small-scale towns, he has, in his Exeter and Durham Plans shown such a penetrating and healthy understanding of tradition, and a technical skill in preserving the character of historic towns whilst investing them with the ability to function for modern life, that one can only hope that he will be commissioned for large works soon. His two books, Exeter Phoenix and Cathedral City, are excellent examples moreover of how a town planner can take his clientele, the people, into the secrets of the design of the new city.

Nearer to home, there have been two projects in recent years on which I have had the good fortune to collaborate. I refer to the Vanderbijl Park project and the Cape Town Foreshore Scheme.

Vanderbijl Park, a new town growing out of bare veld, is going to be South Africa's first planned city. For five years, it has been mostly on the drawing board but now it is starting to take shape on the site. Although, in its general layout, it represents a considerable departure and advance on current town planning practice in the Union, it does to an extent disappoint at the level of civic design. The universal adoption, thus far, of the small isolated dwelling as the unit of housing accounts largely for this. The quality of the architecture so far erected does little to enhance and express what is implicit in the layout plan. Perhaps with the maturing of the site and of trees already planted, the appearance will improve, though I feel there is a need for a more positive policy on civic design and architectural control.

For that project, I prepared a schematic study for the town centre in which I suggested some ideas on precinct design applied to the elements of the central area. These ideas were further developed on the Foreshore Scheme.

The latter project has been that most unusual and rare opportunity — the refashioning of the central area of an existing city. The problem was both complicated and concentrated, for numerous conflicting requirements had to be met in the few hundred acres of reclaimed laid.

Not only were there practical problems of traffic circulation — of organising new workable areas for carrying on the essential activities of the city — of reconciling the needs of railways, buses, cars and pedestrians — and of linking all into the grid layout of the old city in a sympathetic way; there was also the more intangible problem of finding an aesthetic expression for the warm regard of the citizens of South Africa for their Mother City, the Gateway to South Africa. The great mountain setting enjoyed by Cape Town, and its relation to the city and to the harbour and other approaches provided the stimulus for the work.

Whether, in fact, the Foreshore Plan answers the requirements is impossible for me to access objectively. Posterity undoubtedly will have the last word on this score, and I hope will not find our work too inadequate.

CONCLUSION

In conclusion, Mr. Chairman, I hope you will agree with me, that in time, with the emergence of a better social organisation, our cities will be reconstructed more in keeping with the high traditions of the art of city building, and that the adequate civic setting for the good life and for the new architecture which will encompass the good life, will come. We know well that vested interests and individualism can no longer be permitted the final determination of the pattern of our cities, just as we know that laissez-faire no longer meets the needs of modern economic and social life. It may be that, but for exceptional cases, where fortuitous opportunities afforded by reclamation or aerial destruction have made reconstruction possible now, we may have to wait for the good society to materialise before we can build the good city. But at least, in the struggle to achieve that good society, the beauties and amenities that we know can be realised in the new urban environment will be part of the "world to win," and will help urge us on to win it.

THE CHAIRMAN: Thank you, Mr. Kantorowich.

Ladies and Gentlemen: We felt that an authoritive statement, if it required supporting, called for the backing of authority. We therefore asked Mr. John Fassler, of the University of the Witwatersrand, to discuss briefly Mr. Kantorowich's paper and to move a vote of thanks to its author. Mr. Fassler!

Mr. FASSLER'S VOTE OF THANKS

THE CHAIRMAN: Thank you, Mr. Fassler.

Ladies and Gentlemen:

We have now completed our series of lectures. We hope that enlightenment has resulted from these discourses on the meaning and range of good architecture. Taken in conjunction with the admirable Exhibition below, I think it may fairly be said that a serious effort has been made to bring knowledge of architecture and the implications which surround architecture, closer to the general public. The success of this week's activities must be measured in that way.

It now only remains to thank those who worked for and achieved the results. I shall ask Mrs. Sheridan, Chairman of the Student body, to give those thanks.

Mrs. SHERIDAN'S THANKS

Thank you, Mrs. Sheridan. Of course, Ladies and Gentlemen, you will have noted one important omission in Mrs. Sheridan's words. I refer to Mrs. Sheridan herself. There can be no doubt in anybody's mind, anybody that is, who has been connected with the preparation for and actual administration of the Exhibition and lectures that the inspiration, energy and ability required for the completion of the tasks came in great measure from Mrs. Sheridan. I wish on behalf of my Institute to pay tribute to her work and would enlarge that tribute to include the numerous students who assisted her. I ask you, Ladies and Gentlemen, to join me in thanking Mrs. Sheridan.

This series of lectures is now at an end.

The Editors wish to express their regret in being unable to obtain copies of the votes of thanks delivered both by Mrs. Sheridan and Mr. Fassler at a time which would have permitted their inclusion in this record of proceedings.

THE EXHIBITION

OBJECTIVES

Architecture is a living, growing thing. It is moulded by social, economic and technological factors. It is the encompass of our environment and reflects the spirit of the age in which it is created. Architecture is more than bricks and mortar, it is, in fact, compounded of the three fundamental attributes of good building — Utility, Strength and Beauty. It is the subtle relationship and balance of these three basic postulates which is the validation of sound building, which, moreover, will transform the science of building into the Art of Architecture.

South Africa today is profoundly conscious of building needs. The wartime lag in the provision of housing, office and factory accommodation has brought the people face to face with the problems of building. The demands for accommodation are giving rise to feverish activity which is shaping today our environment of tomorrow.

Will that environment be one that will enrich the lives of men? The answer is in your hands. With an appreciation of the fundamentals of good architecture each one of us can exert an influence on that pattern of environment which will promote the good life. This is not merely the task of the architect, it is one in which we must all play our part.

The future of Architecture is something which cannot be laid down in narrow terms. What is certain is that Architecture will keep pace with social and economic progress, with technological advances and artistic achievement. It is certain that it will remain true to the fundamental needs that have governed it always. The story of Architecture is the story of these unassailable truths.

It is this story that the Exhibition and lectures accompanying it seek to tell. Together they attempt to show "the man in the street" what it is that good building has always possessed; to direct his attention to the logical growth of the modern approach to architectural design that, by an understanding of the prerequisites, he may know the Art of Architecture.

CONTENTS

The Exhibition is divided into six parts, each with distinctive coloured headings, arranged to follow each other consecutively. These comprise Introduction: Fundamentals, postulating the attributes of good building — Utility, Strength and Beauty; Historical Survey of Architecture, illustrating the most significant periods of building; Architecture, Painting and Sculpture, presenting the theme of Architecture as Mother of the Arts; Buildings and their Setting and the Conclusion.

The following pages illustrate a selection of the posters comprising the Exhibition.



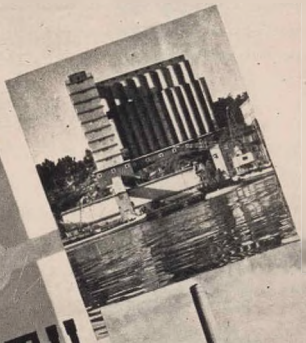
THE PRIMARY PURPOSE OF ARCHITECTURE IS TO PROVIDE SHELTER FOR HUMAN ACTIVITIES • BUT THIS IS NOT ITS ONLY ATTRIBUTE. • • •

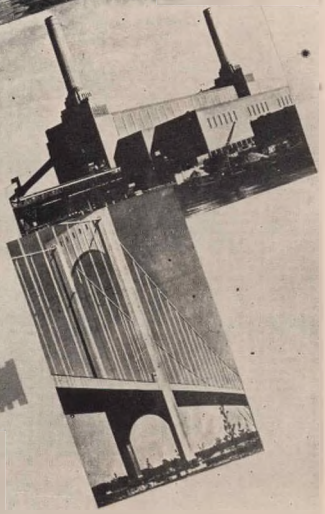
ABOUT 2000 YEARS AGO THE ROMAN ARCHITECT VITRUVIUS STATED THAT ARCHITECTURE MUST FULFIL THREE MAIN REQUIREMENTS.

UTILITY

STRENGTH

BEAUTY





THESE THREE QUALITIES ARE PRESENT IN ALL BUILDINGS OF ANY ARCHITECTURAL MERIT, AND HIS STATEMENT, TRUE THEN, IS EQUALLY APPLICABLE NOW.

LET US CONSIDER THESE THREE QUALITIES SEPARATELY.

ALL ARCHITECTURE CREATED FOR THE USE OF MANKIND MUST HAVE SOME UNDERLYING PURPOSE OR USE. THE UTILITY OF SUCH ARCHITECTURE IS DEPENDENT ON TWO FACTORS

1 THE BUILDING SHOULD WORK — EFFICIENTLY

HOW MANY OF YOU LIVE IN HOUSES WHERE THIS HAPPENS?



2 THE BUILDING SHOULD EXPRESS ITS USE HONESTLY



TO THE ITALIANS THIS WAS A SUITABLE DESIGN FOR A PALACE IN 1481



DO YOU THINK THIS SIMILAR DESIGN IS SUITABLE FOR A SHOP IN THE 20th CENTURY?

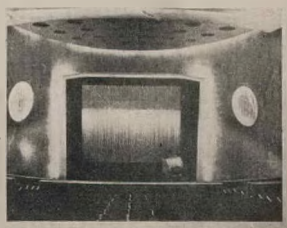


SURELY THIS HAS MORE THE APPEARANCE OF A MODERN SHOP



DO YOU THINK THIS IS AN HONEST EXPRESSION OF A MODERN CINEMA?

SURELY THIS EXPRESSES THAT FUNCTION IN A CLEARER MANNER?

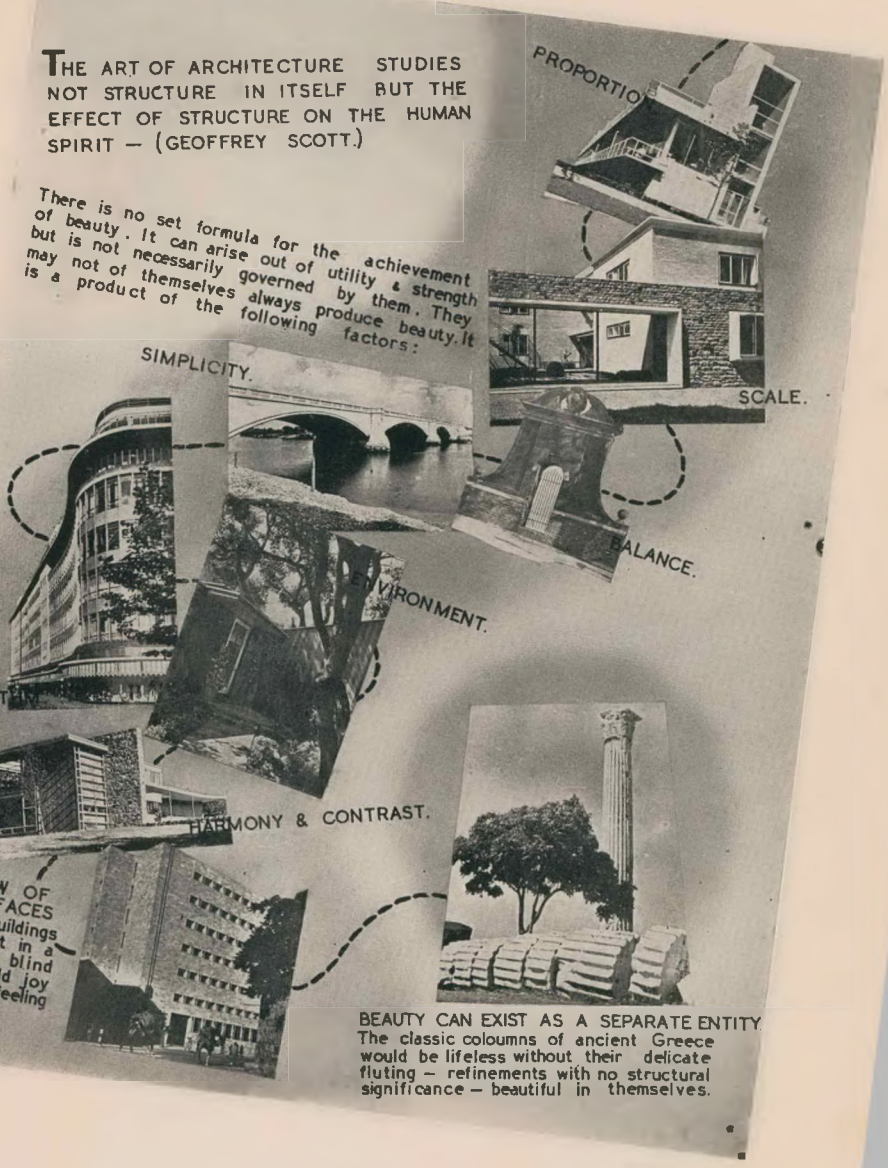


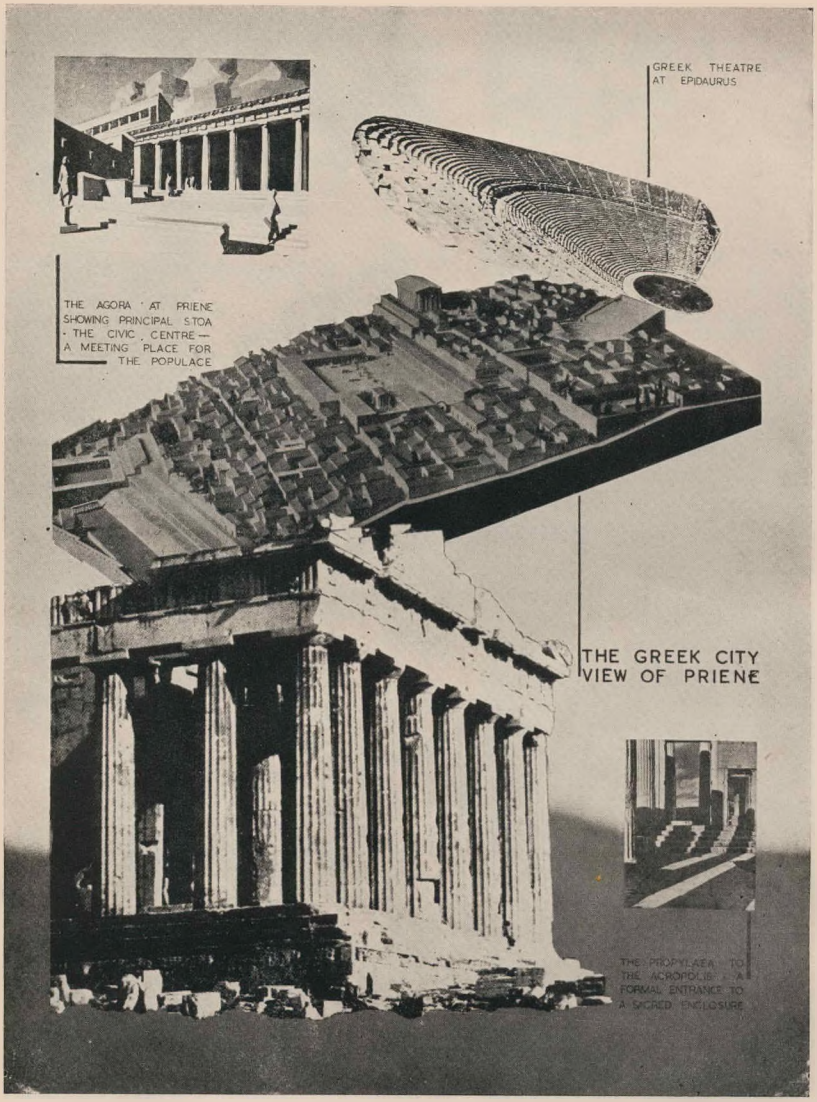

THE SPACES REQUIRED IN BUILDINGS FOR HUMAN ACTIVITIES ARE FORMED BY ENCLOSING AREAS, USING VARIOUS METHODS OF CONSTRUCTION.
OUR METHODS MUST BE SOUND
LET US CONSIDER THE WELL-TRIED AND TESTED STRUCTURAL SYSTEMS OF THE PAST.
POST & LINTEL
ARCH
FRAMED STRUCTURE.
LOAD BEARING WALL
First the oldest – simply two posts carrying a lintel – next the arch. Originally the walls supported the building – but now walls are skins covering steel or concrete frames.
WE MUST EXPRESS
OUR METHODS OF CONSTRUCTION
GLASS
BRICK
CONCRETE.
Every material has a use for which it is best suited.
WE MUST EXPRESS MATERIALS HONESTLY

STRENGTH

THE ART OF ARCHITECTURE STUDIES NOT STRUCTURE IN ITSELF BUT THE EFFECT OF STRUCTURE ON THE HUMAN SPIRIT — (GEOFFREY SCOTT.)

There is no set formula for the achievement of beauty. It can arise out of utility & strength but is not necessarily governed by them. They may not of themselves always produce beauty. It is a product of the following factors:

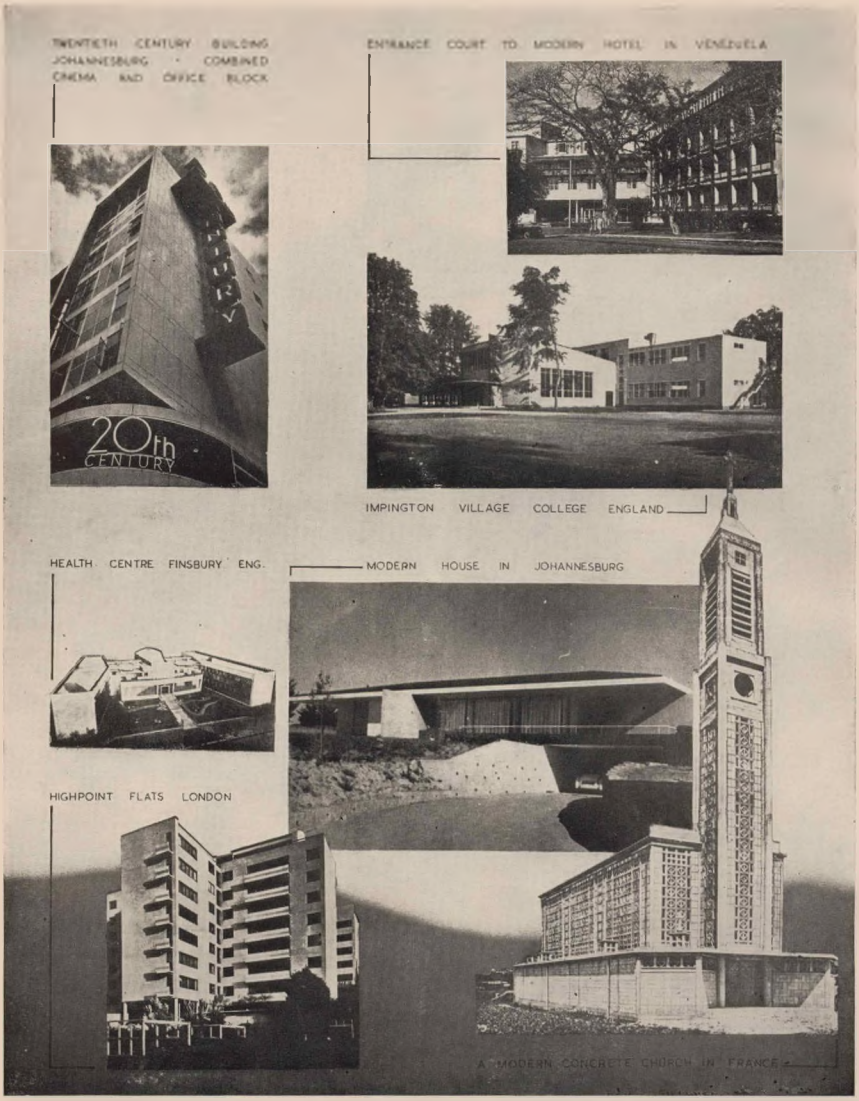




HISTORICAL SURVEY. GREEK



HISTORICAL SURVEY, MEDIAEVAL



HISTORICAL SURVEY, TODAY



IT IS MAN'S INNATE DESIRE TO ADORN HIMSELF AND MOST THINGS ABOUT HIM.

THIS DESIRE IS EXPRESSED IN THE APPLICATION OF SOME ORNAMENT TO:—



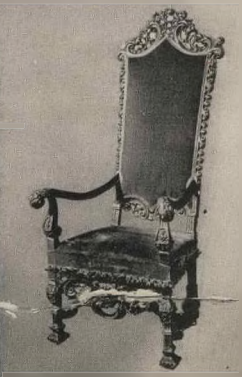
HIS POTTERY—

HIS CLOTHES & WEAPONS

HIMSELF—

AND





HIS FURNITURE

ARCHITECTURE, PAINTING AND SCULPTURE—ORNAMENT

BUILDINGS HAVE ALWAYS OFFERED AN IDEAL OPPORTUNITY FOR ORNAMENTATION.



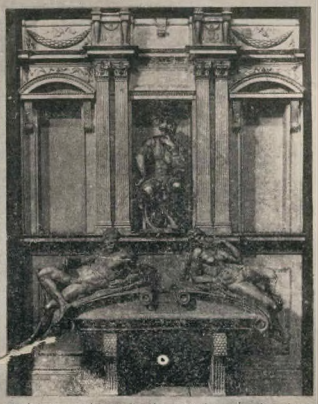
mural painting of the renaissance — sistine chapel



egyptian low relief sculpture



decorative use of materials in the modern home.



renaissance sculpture in the round — medici tomb

ARCHITECTURE ALWAYS GAVE ARTISTS THEIR GREATEST OPPORTUNITIES - THEREFORE IT BECAME THE MOTHER OF THE ARTS.

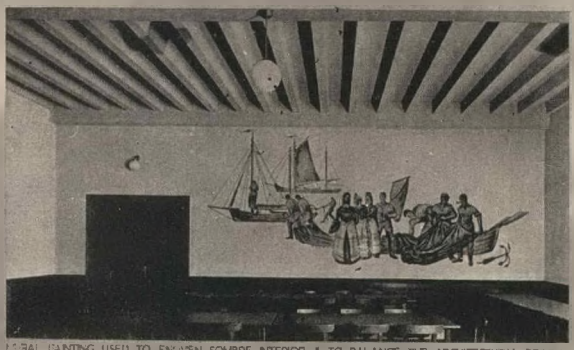


THIS ORNAMENT TAKES THE FORM OF —

- relief sculpture
- painting
- sculpture in the round
- mosaic
- decorative use of material

ARCHITECTURE, PAINTING AND SCULPTURE—METHODS

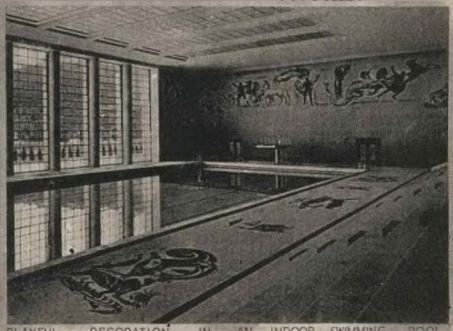
CONTEMPORARY—ART ENHANCES ARCHITECTURE IN THE INTERIOR



MURAL PAINTING USED TO ENLIVEN SOMBRE INTERIOR & TO BALANCE THE ARCHITECTURAL DESIGN



PAINTING USED TO EXPRESS A SPIRITUAL IDEOLOGY & TO ENHANCE THE ARCHITECTURE



PLAYFUL DECORATION IN AN INDOOR SWIMMING POOL



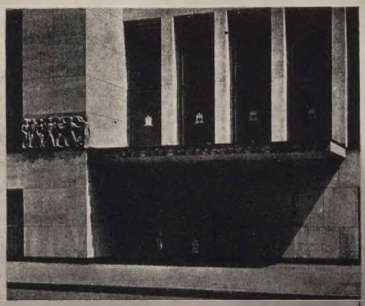
PURE DECORATION USING SYMBOLIC MOTIFS (DETAIL OF A MOSAIC MURAL)

ARCHITECTURE, PAINTING AND SCULPTURE—APPLICATION

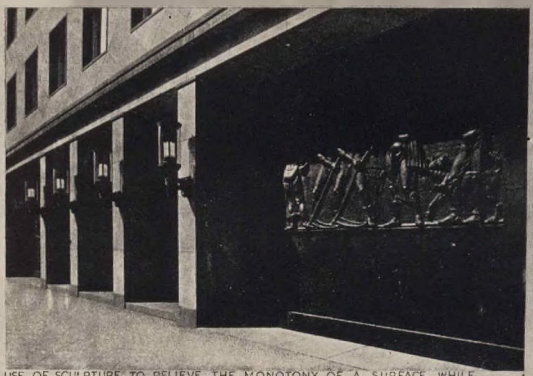
CONTEMPORARY — SCULPTURE APPLIED EXTERNALLY



USE OF SCULPTURE TO LESSEN AN OTHERWISE SOMBRE EXTERIOR



RELIEF PANEL TO GIVE A DIGNIFIED ACCENT TO A MAIN ENTRANCE



USE OF SCULPTURE TO RELIEVE THE MONOTONY OF A SURFACE WHILE RETAINING THE CHARACTER OF THE MATERIAL



LOW RELIEF SCULPTURE ENHANCING THE CHARACTER OF THE MATERIAL & INDICATING THE FUNCTION OF THE BUILDING



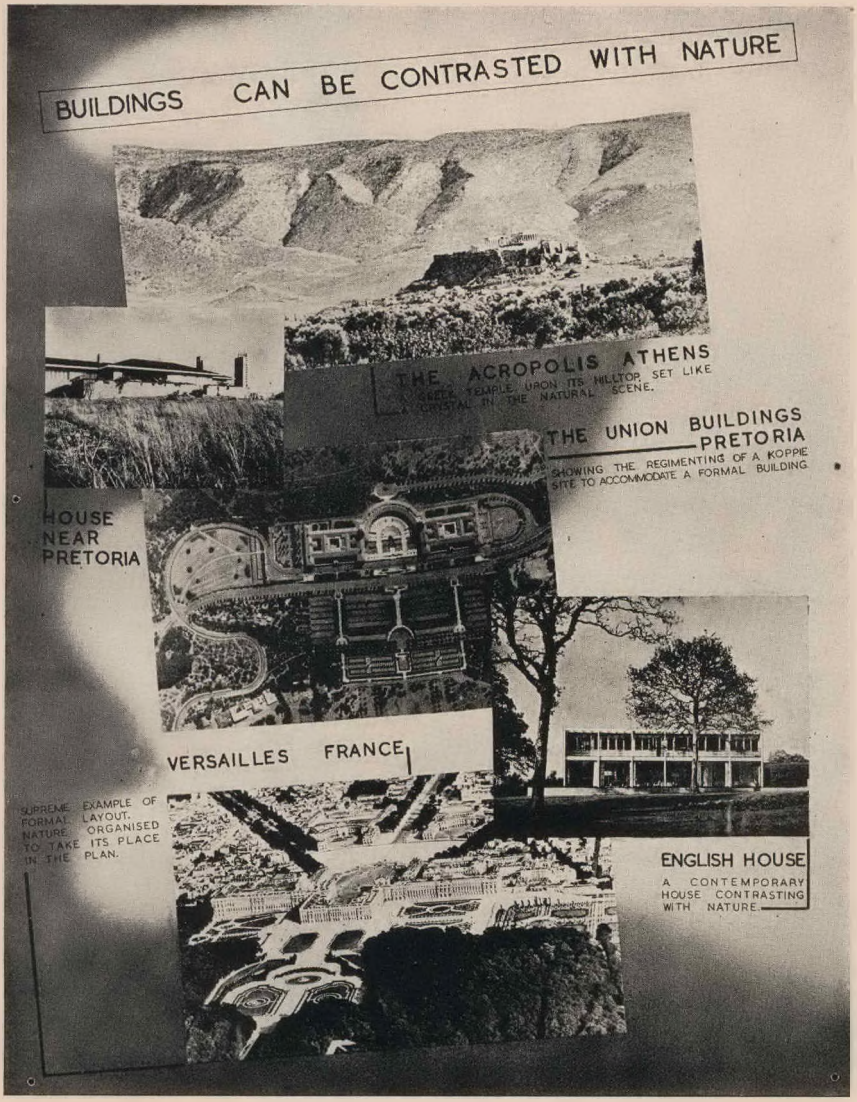


AN ATTEMPT TO VISUALISE THESE BUILDINGS WITHOUT THE SCULPTURE WOULD DRIVE HOME THE VALUE OF ITS USE IN ARCHITECTURE

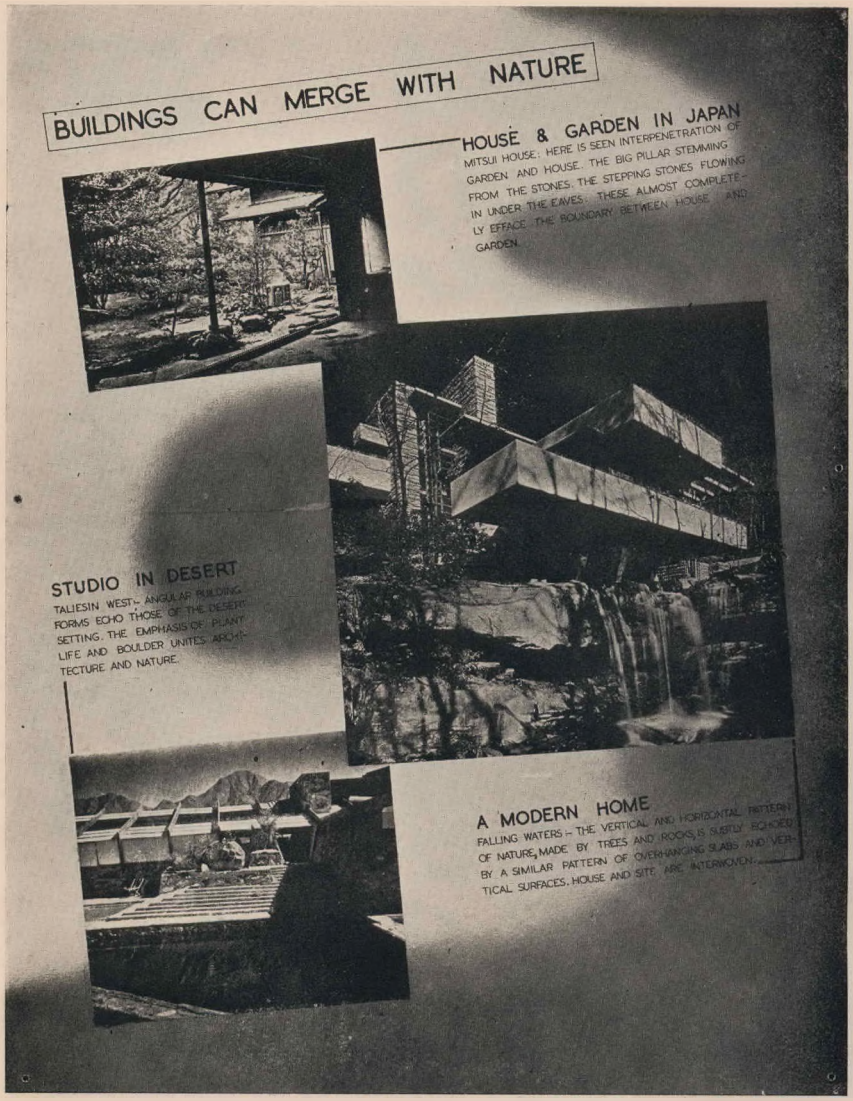


AN ARCHITECTURAL COMPOSITION THAT WOULD HAVE BEEN UNPLEASANT WITHOUT THE USE OF SCULPTURE

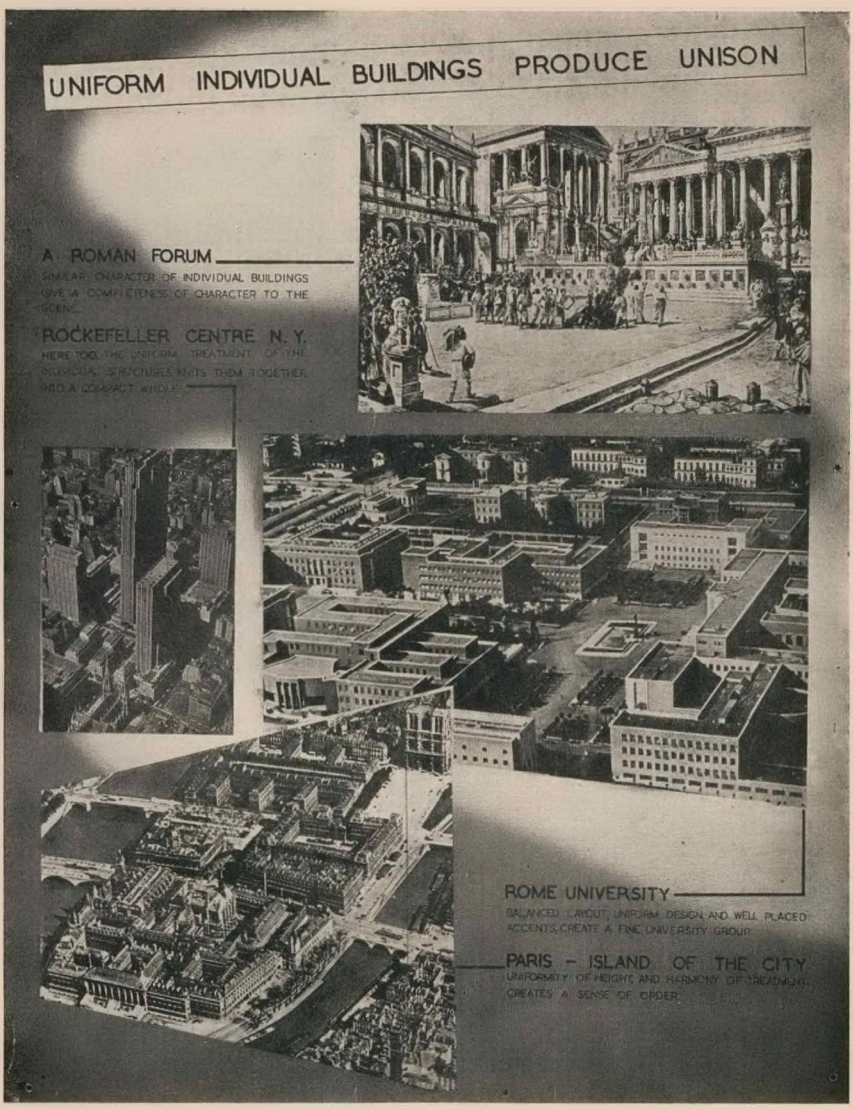
ARCHITECTURE, PAINTING AND SCULPTURE—APPLICATION



BUILDINGS IN THEIR SETTING—LANDSCAPE



BUILDINGS IN THEIR SETTING—LANDSCAPE



BUILDINGS IN THEIR SETTING—IN THE CITY

HARMONY ACHIEVED DESPITE LATITUDE IN DESIGN.

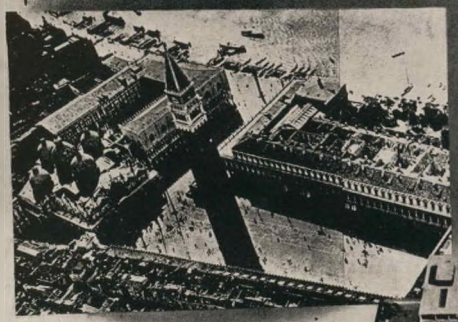
ST MARKS' VENICE

BYZANTINE, GOTHIC, AND RENAISSANCE STYLES OF BUILDING SEEN SIDE BY SIDE, FORM A BEAUTIFUL SQUARE. COMPLETENESS NOT LOST BY THE JUXTAPOSITION OF SUCCESSIVE BUILDING TRADITIONS . BECAUSE THERE IS A UNIFORMITY AND SYMPATHY OF TREATMENT THROUGHOUT.



OXFORD

HERE TOO, GOTHIC AND RENAISSANCE COMBINE TO GIVE AN HARMONIOUS WHOLE.



PROPOSED STATE CENTRE MICHICAN

SIMPLICITY AND BEAUTY ACHIEVED BY SYMPATHETIC HANDLING OF VARIED FORMS AND SIZES IN THE CONTEMPORARY BUILDING MANNER.



CENOTAPH SQUARE JOHANNESBURG

THE DISCORDANT RELATIONSHIP OF BUILDING TO BUILDING, AND THE HAPHAZARD ENCROACHMENT OF TRANSPORT FACILITIES GIVE RISE TO A SCENE OF UNSIGHTLY CONFUSION.



CONCLUSION

PLEASANT ATMOSPHERE CAN BE ATTAINED IN GROUPS OF BUILDINGS WHETHER THE BUILDINGS RETAIN A UNIFIED CHARACTER, OR ARE OF INDIVIDUAL DESIGN, PROVIDED THAT THERE IS A SYMPATHY OF FORM AND TREATMENT.

BUILDINGS IN THEIR SETTING—IN THE CITY

ACKNOWLEDGEMENTS

The following have assisted in the Preparation of the Exhibition:

D. M. Cowin, J. Fassler, A. S. Furner, N. L. Hanson, W. de S. Hendrikz, G. Herbert, W. D. Howie, C. C. Irvine-Smith, R. H. Kantorowich, Professor A. L. Meiring, R. K. L Moore, Professor G. E. Pearse, H. G. Porter, A. G. Stewart, The Students of Architecture and Fine Arts of the University of the Witwatersrand, Johannesburg.

Photographs from the following:

"Libertas," "Rand Daily Mail," S.A.R. and H., The Architectural and Engineering Photographic Service, M. Feldman, N. I. Finkelstein, R. H. Kantorowich.

The following publications have been used as sources of information and photographs:

L'Architecture D'Aujourd'Hui;
Progressive Architecture;
South African Architectural Record;
The Architectural Forum;
The Architectural Review;
The National Geographic Magazine;
Hellas, Huyningen Huene;
En Grece, A. Bon and P. Chapoutier;
The Architecture of Greece and Rome, Anderson and Spiers;
Greek and Roman Architecture, D. S. Robertson;
A History of Architectural Development, Sir Banister Fletcher;
A History of the English House, N. Lloyd;
Growth of the English House, J. A. Gotch;
Space, Time and Architecture, S. Gideon;
The Culture of Cities, Lewis Mumford;
Introduction to Modern Architecture, J. M. Richards;
Civic Art, Werner Hegeman;
Modern Cinemas, Architectural Press;
Helios, Claude Budry;
Architecture Arising, Howard Robertson;
Tomorrow's House, G. Hebson and H. Wright;
The New Architecture, A. Roth;
Old Domestic Architecture of Holland, Yerbury;
Architecture and Personalities, Sir Herbert Baker;
The Modern Flat, F. R. S. Yorke and F. Gibberd;
Resurgam;
Focus No. 3;
Report on the Cape Town Foreshore Plan;
The Gateway to South Africa;
Restauri della Roma Imperiale, Guiseppe Gatteschi;
Nuova Architttura Italiana;
Venezia, E.N.I.T.;
In the Nature of Materials, H. R. Hitchcock;
Art of the Landscape Garden in Japan, Tsuyoshi Tamura;
The Palace of Minos, Sir Arthur Evans;
Domestic Architecture and Old Furniture, Adams Acton;
Countries of the World, Hammerton;
If you want to build a House, Museum of Modern Art;
Brazil Builds, Museum of Modern Art;
Bauhaus Bücher No. 12, W. Gropius;
Design This Day, W. Teague;
Architecture through the Ages, T. F. Hamlin;
Kunst und Kunsthandwerk am Bau, Julius Hoffman (Publisher).

NOTES AND NEWS

THE ÖSTERLEDEN COMPETITION, STOCKHOLM

Stockholm's Town Planning Board is inviting experts of all countries to take part in a competition in connection with a new main artery between the districts of Södermalm and Östermalm via Södra Djurgarden, this artery and necessary approaches being referred to as "Österleden."

The aim of the competition is to produce draft proposals —in keeping with the present and future plans of the districts, and suitable from aesthetic, practical and economic aspects— for an arterial road carrying all forms of traffic, including trams, between the points mentioned.

The projected artery will involve either bridges or tunnelling to cross Saltsjön and Djurgardsbrunnsviken as well as a relatively extensive system of approaches to connect it with specified locations.

An account of the examination of some preliminary proposals carried out by Stockholm's Town Planning Office is given in Kommunalteknisk tidskrift No. 3 (1947), which document, together with a Summary of Particulars of the competition, may be obtained through any Swedish Consulate or Legation in the country, or direct from the competition secretary, "Tävlingsfunktionären, Stockholms stads stadplanekontor, Stadshuset, Stockholm." Entries must be submitted either direct or through a Consulate or Legation, by the 1st April, 1949.

CHAPTER OF S.A. QUANTITY SURVEYORS

PARTNERSHIP

Mr. E. L. Sanders, having transferred from salaried to practising membership, has entered into partnership with Messrs. W. G. Thompson and Martin, Colonial Mutual Buildings, West Street, Durban, the title of the firm remaining unchanged.

Messrs. W. H. Malan and J. Veitch have entered into partnership under the style of Messrs. Malan and Veitch, practising at 19, Market Street, Kroonstad.

VISIT OF THE RT. HON. LORD COURTHOPE

A luncheon in honour of the Rt. Hon. Lord Courthope, an Associate of the Council of the R.I.C.S., was recently held, to which a representative number of members were invited, when the President welcomed Lord Courthope to this country.

JOURNAL OF R.I.C.S. Vol XXVII, Pt. VII, Jan., 1948

Articles of interest: Standard Form of Contract — Proposed Modifications, p. 369; Standard Method of Measurement, p. 371; Present Day Problems of the Builder, p. 373.

ERRATA

JOHANNESBURG CENOTAPH

The caption to the illustration of the Johannesburg Cenotaph, appearing on page 64 of the March issue, incorrectly credited the design to Sir Edwin Lutyens. The Cenotaph was designed by Mr. Harold Porter, Architect of Johannesburg.

PARTNERSHIP

It was incorrectly announced in the February issue that Messrs. Verhoef and Smit had dissolved partnership. Messrs. Verhoef and Smit have withdrawn from the firm Bosman, Verhoef and Neethling, and together with Mr. Viljoen have entered partnership under the style of Verhoef, Smit and Viljoen, practising at Transvalia-gebou 409, Central Street, Pretoria.

The Editors apologise for any inconvenience these errors may have caused these several persons.

SITUATIONS SOUGHT

"Dipl. Eng. Arch. Urbanist and town planner many years of professional activity would like to settle permanently in S.A. should welcome offers for employment. Personal documents have been sent to the Institute of S.A. Architects, 83-85, Walter Wise's Building, Joubert St., Johannesburg. Address: M. Helm-Pirgo, 13, Woodstock Rd., London N.W.11."

Chartered Architect (English) with 17 years' varied practical experience with well-known progressive architects and including own practice; widely travelled; desires appointment as highly responsible Senior, preferably with ultimate opportunity for partnership or interest; at present in Cape Town, but prepared for other parts of Union.— Replies to Editor.

PROVINCIAL WORK

LIST OF ACCEPTED TENDERS FOR PROVINCIAL SERVICES FOR QUARTER ENDING 31st MARCH, 1948

SERVICE	ARCHITECTS	QUANTITY SURVEYORS	CONTRACTORS	AMOUNT
Ventersdorp High School: New Girls' Hostel	Angus Stewart	Quail & Quail	Eloff & Allman (Pty.) Ltd.	£35,528 0 0
Kensington A.M. Junior High School: Additions and Alternations	H. W. Spicer	S. D. van der Merwe	W. S. Crichton	£12,470 0 0
Highlands North School: New Building	Candiotes & Fels	Clark & de la Cour	L. Westly	£31,922 0 0
Pretoria Normal College: Tuition Block Additions	W. G. McIntosh and E. Todd	Dudley S. Mann and Partners	H. D. Abery (Pty.) Ltd.	£19,550 0 0
Joint Laundry for Hospitals, Dunswart: Buildings	Departmental	Departmental	Petra Construction Ltd.	£50,620 0 0

THE WORLD'S MOST MODERN TOWN

A London architect has been given one of the biggest tasks ever assigned to one man. It is to design and build the most modern town in the world. This will soon be taking shape in the north of Britain, and construction will be begun well before the end of this year. The architect, Mr. Berthold Lubetkin, estimates that the job will be completed in ten years. The town will be called Peterlee and will house miners and their families. It is so named as a tribute to a miner who became the first Labour chairman of any County Council in Britain. It will have ten thousand houses and will accommodate about forty thousand people. The cost is estimated at fourteen million pounds.

It is announced that the Minister of Town and Country Planning, Mr. Silkin, has set up a special development corporation to be responsible for the supervising of the project as a whole. This newest of Britain's New Towns is in many ways a plan of greater importance than the parallel developments in Southern Britain. These will have the primary function of relieving congestion in the London area and will be but additions — though modern and exemplary ones — to a district where towns already exist. Peterlee is being built where there is nothing but small mining communities spread over large tracts of country. Its advent will thus revitalise the entire social life of this region. It will serve as an educational, cultural, social and commercial axis for a district inhabited by one hundred thousand people. Its planning is a piece of work that demands courage, openmindedness and vision. Mr. Lubetkin will bring all these to the task. He is one of Britain's most distinguished architects who has already proved his capacity to co-operate fruitfully and harmoniously with Local Authorities. Very wisely, he has not been given any rigid instructions. He has been asked to make the town as modern as possible but has otherwise been given a free hand.

CORRESPONDENCE

19th April, 1948.

The Editor,
S.A. Architectural Record,
Johannesburg.

Dear Sir,

Re: Competitions

While it would appear that our Institute is in favour of the competitive system of selection it is noteworthy that competitions in South Africa are few and far between

I feel that our Institute is not giving sufficient encouragement to this system and that there exists a general misconception as regards its advantages and the cost involved.

The Council of Oudtshoorn which unanimously resolved the holding of an architectural competition for its new Civic Centre in a large park along the banks of the Vaal river is now more likely to favour direct appointment as "it is not prepared to pay prize money as well as architects' fees."

It is for the members of the profession and our Institute to enlighten promoters that the cost of a competition, in comparison with architects' and quantity surveyors' fees, is small and, in comparison with the cost of the scheme **including** land and professional fees, is negligible. In addition, it should be also pointed out to promoters that considerable savings are bound to result from better planning owing to the incentive given by competition and the choice between a number of designs of a variety of conceptions by experts.

In my opinion every possible encouragement should be given by our profession to competitions to improve our standards, particularly in the sphere of public buildings, and our competition conditions should be revised by considering the premiums as part of professional fees and to be deducted from them when the work proceeds.

Yours faithfully,
EUGENE J. D'ANOS.

* * *

L. G. Mouchel & Partners, Ltd.
Civil Engineers,
36-8, Victoria Street,
Westminster.

London, 30th December, 1947.

The Editors,
Dear Sirs,

Recently I received from a friend a copy of your issue of March, 1946, in which I read with interest the article referring to the Hyperbolic Cooling Towers at the Vaal Generating Station. I find, however, a somewhat inaccurate statement regarding the origin of these striking structures, inasmuch as it was **not** in Belgium, as stated, that they were first introduced. The honour of the invention is due to Professor Dr. F. K. Th. Van Iterson, who was then Director General of the State Mines in Limburg, Nederland, where the first examples were erected, towards the end of the first world war. They were introduced in England in 1924 by L. G. Mouchel and Partners Ltd., Westminster, from whose designs towers were carried out later in Algeria, Belgium, Egypt, France, Germany, India, Iran, Italy, Rumania, South Africa.

Hoping that you may rectify the erroneous statement, I remain, dear Sirs,

Yours faithfully,
T. J. GUERITTE.



FEATURES OF THE SHOWROOMS OF MODERN APPLIANCES LTD.

NEW STREET SOUTH
JOHANNESBURG

SUITE OF OFFICES,

AUDITION ROOM AND RECORD CABINET;

DISPLAY FEATURES AND WALL TREATMENT

IN CITRON YELLOW AND GREY;

BRONZE GRILL TO CASH OFFICE,

METAL RIBBON TYPE LETTERING, FINISHED RED.

DESIGNED, FABRICATED AND INSTALLED
BY

FREDK. SAGE & CO. (S.A.) (PTY.) LTD.

SHOPFITTING SPECIALISTS
ARCHITECTURAL METAL CRAFTSMEN

P.O. Box 777

Phone 22-7555

10 HEIDELBERG RD.
VILLAGE MAIN
JOHANNESBURG



Journal of the SA Architectural Institute

PUBLISHER:

University of the Witwatersrand, Johannesburg

LEGAL NOTICE:

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.