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EDITORIAL

It was the retiring president of the Transvaal Provincial Institute, who earlier this year said that: "The study of Town Planning is rapidly becoming a normal post-graduate extension of the architectural profession." As the chances of ever designing a town, a township, or even, in the language of today, a "neighbourhood unit," are limited, the subject must have a very real lure. It is the lure of architecture. It is also the lure of planning simply as planning. The planning of houses calls for the planning of towns, which in turn points to planning on a regional, a national, and, as was hinted last month, a world-wide basis. It is not proposed to consider planning in its globular dimension. Britain has put town planning on a national basis, and that is as far as these words need range.

The material from Britain is no longer news, but, because it is still of interest, we do not hesitate to publish it. Britain is well advanced in the study of town planning in relation to national needs. The Barlow, Uthwatt, and Scott reports, have been drawn on by our own Social and Economic Planning Council. Nothing tangible in town planning has yet resulted from its studies in South Africa, and we must therefore content ourselves with watching developments in Britain. Town plans show graphically the distillate of wordy reports. Stevenage is such a plan.

Mr. F. J. Osborn's article explains the reasons for the founding of towns like Stevenage. There is always a reason for a town's existence; though towns founded purposely have had various historical reasons for their establishment. In ancient times the Greeks founded towns to settle surplus population; Alexander to consolidate as empire—his generals to consolidate the fragments—the Romans to extend and to bolster up another empire; and to-day the British are founding towns to redistribute industry and people in Britain, and to obtain peanuts from Africa. Nothing much except the name is known about Port Peanut. Even Stevenage is only presented in the form of a master plan for a new town; and Stevenage is not entirely a newly founded town. The existing town has been used as a nucleus for the new. This is indicative of the now accepted approach to town planning in Britain.

It is an approach that seeks to give continuity, to graft the new on to the old, rather than to abandon tradition by isolating the old within the new. There is much to commend it. Modern Turin still finds a source of pride in its development on the two thousand year old pattern of a Roman *colonia*. The development of Stevenage will be different in principle from that of Turin, because its enlargement will not be derived from the extension of a fixed pattern, but from an accretion of cells called "residential neighbourhoods." Yet fundamentally, a pattern will persist, the pattern of house and garden. Mr. Osborn quotes figures to show that: "In Britain the overwhelming majority of people would like to live in single family

dwelling houses." The people's wish has been accepted as a determining factor in the planning of the "New Towns in Britain"; the demands of the plan form the other determinant. Eric Linklater, a few months ago, drew attention to the lack of knowledge of local conditions shown by the faraway planners of the "New Towns" in Scotland. The plan's lure can become the district's corset, the shape not always being comfortably attained.

Shaping is a concomitant of all cultivated growth. "Neighbourhood unit" is not a sobriquet for village, which might in the words of the popular song be said to grow by "doing what comes naturally." The expansion of towns in "neighbourhood units" is a stimulated and artificial growth. Although the fact does not condemn the idea of cellular growth in "neighbourhood units," it ought to dissipate some of the biological aura given to the conception by such theorists as Eliel Saarinen in his book, "The City." Artifice and artificiality, after all, also come naturally to man.

There is another conception of the town so pregnant with artifice that many find it repellent. It is the vertical town proposed by Le Corbusier. No excuse is made for introducing the name again; though this month mention will also be made of Frank Lloyd Wright, whose conception of an arrangement for living is rather different from either Le Corbusier's or that of the British Ministry of Town and Country Planning, the last corresponding most perhaps to Eliel Saarinen's. Le Corbusier would go up, Frank Lloyd Wright out, and Eliel Saarinen would largely make do with what is by a process of "organic decentralization." Each method is not only inspired by an ideal, but is based on a logical assumption. Their ideals will be considered as one, to provide a more viable existence for the human being; but their assumptions differing widely in emphasis cannot be so treated.

To start where most human endeavour starts, close to the earth, we shall consider Wright first. He assumes that the motor-car is an instrument for dispersal, its possession by every family a possibility, and that agriculture is a wholesome pursuit for mankind. Therefore in his conception of "Broadacre City" each family is allotted an acre of ground. Mumford, generally favourable to Wright, makes this criticism of the scheme: "Apart from the burden of providing such scattered housing units with necessary collective utilities, this plan makes no provision for the spontaneous association of primary groups—a handicap to mothers and children—nor does it allow for close daily contacts as an indispensable element in group life." It is possible that some "collective utilities" could be curtailed; sewage, for instance, is not difficult to dispose of on an acre of earth. H. J. Massingham is illuminating on what can be generally accomplished on one acre. Lilienthal's "T.V.A." is as illuminating on the distribution of electricity. However, the

provision of "collective utilities" depends ultimately on how a civilization feels compelled to use its accumulated wealth.

How neighbours use their time is as much an interest of Mumford's. Suburban neurosis is an accredited malady of today. Although it might be caused by the absence of "spontaneous association" and "close daily contacts," it could not lightly be ascribed to distance. A criticism of Wright's plan cannot ignore his assumption of agricultural activity, in itself a means of "spontaneous association." This emphasis on agriculture raises another criticism, that of the "subsistence homestead." However, Wright does not envisage a family's subsisting entirely on an acre. Implicit in his assumptions is the background of modern technology. It is not beyond the bounds of possibility that a ploughing service could be provided as a "collective utility." Objections to Wright's scheme lie not so much in what is physically possible, but in what is thought to be humanly desirable. That is the quiddity of Mumford's criticism; he, who postulates urbanism in biological terms, hesitates to accept an urbanism that is insistently biological. The criticism is, then, that "Broadacre City" lacks sufficient centres of concentration.

Le Corbusier contemplates such centres. He states that: "This group [Ascoral] had made a particular study of the places and conditions of work in a technical civilization, recognizing three natural establishments already mentioned:

- (1) The unit of agricultural production.
- (2) The linear industrial city (the manufacturing industries).
- (3) The radio-concentric city of exchange (government, thought, art, commerce)."

The quotation expresses Le Corbusier's logic; he accepts the implications of a "technical civilization." His reasoning has a French thoroughness. Cities cover too much land; therefore he proposes to build vertically. Men are steadily gaining a shorter working day, whereas women have no respite; therefore he would incorporate communal services and restaurants in his residential buildings. As his latest book, "Concerning Town Planning," gives his propositions simply and shortly, no more space will be used in expounding them in these columns. Nor will much time be spent on the criticisms that are to be found scattered throughout architectural books and periodicals. Incisive criticism might be made on economic grounds. Le Corbusier characteristically makes his own economic assertions, and claims that in his cities men would no longer have to expend half their labour in paying for the contemporary city's extended services. As much guesswork would be necessary to balance one factor against another, the claim will be left as it stands.

The claims made by Le Corbusier for the living conditions in his "Ville Radieuse" are many. Yet anyone living in one of Le Corbusier's projected cities would have to be at once a sportsman, sage, and artist—perhaps the combination is latent in each of us. Another reflection arising out of the last is that the contemplation of spreading vistas of parkland is

not conducive to even the mildest form of gardening. Bathed though his skyscrapers are in sunlight and air, with parkland spreading all round and underneath, Nature is still kept very much at a distance. The skyscrapers, logically, would be air-conditioned; and the parks, as logically, would probably be cared for by professional gardeners. The vertical city designed for a division of functions would induce in its inhabitants a vicarious interest in the world of Nature.

It is arguable, of course, that insulated living is conducive to mankind's development. If, then, our "technical civilization" is a completely healthy form, its consummation in cities of great artifice would provide a fitting way of life; but if not, then "Broadacre City" might be nearer to being a solution for the rehabilitation of men.

Saareinen's interest is in the rehabilitation of cities. Therein lies the strength of his logic. Working from a biological concept he develops a theory of town planning or "architecture." It has the merits of flexibility and immediate practicability. If it lacks the visionary impetus of Le Corbusier's and Wright's theories, it cannot be branded as either uneconomical or Utopian. It is not pure contingency that makes the methods of the British Ministry of Town and Country Planning correspond most to Eliel Saareinen's; for the middle way is the characteristic British way. To spread and concentrate urbanization, but not to extremes, appears to be the policy.

Time will show whether this traditional policy of compromise—unwitting in this case, perhaps—will be the best, or lose the best of both extremes. A "Broadacre" City would be designed for cultivation; and mechanical—or animal—means to help in the cultivation of a "cultivable yard" could hardly be used on any plot of much less than an acre. A "Ville Radieuse" would be designed for easy living; and the all weather provision of communal services and eating facilities would not be possible for "one family houses." Ironically, though Wright propounded his "Broadacre City" for America, where food is still plentiful, it is in Britain, where acres are scarce, that additional cultivation is needed. Certain English writers have predicted a movement back to the land for a people driven by continual shortages. Britain also suffers from a shortage of labour. "Ville Radieuse" offers a pattern for an efficient division of labour. If Britain solved one of her shortages, the other might be more easily solved. F. J. Osborn states that the "New Towns" and new industry will be located to serve each other's needs; it remains to be seen if all the needs of the inhabitants will be satisfied in the towns to be planned.

Britain has started to plan, and projects begun carry with them the shape of future development—and possibility. In South Africa we have scarcely started. Architects' interest in town planning will be justified, if the result is to get planning started where it is most needed. In this connection, Sandringham, which will be presented next month, is of interest, and the paper read by Mr. Connell at this year's Congress is to be commended.

NEW TOWNS IN BRITAIN

F. J. OSBORN

Britain's decision to build many new towns, and the passing with the consent of all parties of the New Towns Act 1946, may seem surprising to those who realise that the country has an average density of population only exceeded by Belgium, Egypt and Java, and is the most urbanised in the world. Living on Britain's 56 million acres are 47 million people. More than 80 per cent. of them are in cities and towns, and more than 90 per cent. are "non-farm." Of the total land area 46 million acres are farm lands, grazings and heaths, and before World War II these produced only one-third of the food consumed by the population. Even now, with heavy subsidies and rationing, half the country's food has to be imported. Statisticians have demonstrated convincingly that the population, already at a standstill, will shortly begin to decrease, and that the decline cannot be corrected for some years. How can such a nation need new towns?

The answer is, of course, that the present distribution of the urban population is grossly unbalanced. Of the 38 million people living in cities and towns, about half are massed in seven huge urban agglomerations—each consisting of a number of towns coagulated into a continuously built-up area. The centres of these seven great cities all have extensive residential districts where overcrowding is prevalent. So also have most of the other 65 cities of 50,000 upwards. The older parts of all these cities took shape a century or more ago. The majority of the dwellings therein are obsolete, and in many places their layout is at a density that would not be regarded as tolerable when rebuilding takes place. For the next few years demolition and rebuilding are out of the question; the war-time shortage has first to be overtaken. But thereafter Britain's housing problem becomes one of replacement much more than of supplementation.

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Britain was far from happy about the continued suburban expansion of its great cities even before 1939. The propaganda work of the Garden Cities Association (now the Town and Country Planning Association) had been maintained since 1898, when Ebenezer Howard's famous book was published, and Letchworth and Welwyn Garden City had proved that it was possible, even for private enterprise, to establish new industrial and commercial towns in an old country. The Barlow Royal Commission, to which the Association gave evidence, and which completed its Report just before the outbreak of World War II, endorsed the Garden City thesis for social, economic and strategic reasons. The aerial bombing of 1940-41, by clearing sample areas in city centres, produced object-lessons in the possibility of replanning that were quickly generalised. For

the first time city planning became a popular enthusiasm, and even while the bombs were still falling, discussion of the principles on which it should be based claimed much attention.

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Conflicting ideas of all kinds were presented. In Britain the overwhelming majority of people would like to live, if they could, in single-family houses with gardens front and back (the one at the back being enclosed and private). And as the controversy went on, and innumerable public opinion surveys confirmed each other, whatever the bias of the people who asked the questions, it became clear that the planning policy of the future must take account of two major popular demands:

- (1) That at least 80 per cent. and in most districts 90 per cent. of dwellings must be one-family houses, not necessarily free-standing, but certainly with a garden (or cultivable yard);
- (2) That houses must be reasonably near workplaces: even within walking distance, if practicable.

Many other requirements were formulated in the course of the controversy, but they are the two that are most difficult to meet in combination. Demand No. 1 for the one-family house, is increasingly characteristic of all countries with a high standard of living. But almost without exception, as the standard of living of a country (or of a class within a country) rises, the demand has been met by suburban building, up to the limits permitted by the development of transport facilities. Those limits are, of course, very elastic. Rapid transport has enabled the better-off people who work in city centres to obtain the sort of family dwellings they want, in open surroundings. But it has done so at the expense of longer journeys to work, of the social disintegration of town life, of suburban sprawl and rural spoliation, and of the marooning of many under-privileged people in graceless city-centres cut off from the countryside by miles of streets and buildings.

Not all these drawbacks are so acutely felt by the public as to be effective determinants of a planning policy. Some of the more important are as yet only realised by philosophic students of society. But the journey to work has become, in large cities, a burden in time and money great enough to cast a political shadow. In London, for example, despite its brilliantly-managed subway system, a journey of an hour a day each way is common: thousands have to travel standing at the peak hours; and the cost of travel is a formidable element of the personal budget. Other cities in Britain have been educated by propagandist planners to see in London a warning of their own future if each pursues a policy of expansion.

The ordinary citizen, perhaps, is more receptive to education in this matter than the officials of the city, who have an institutional interest that blankets their humane intelligence. But the recognition that cities should have limits of expansion has now made such headway in Britain that any city unwilling to fix its own limit is likely to have a limit thrust upon it by the central Government.

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The housing programme of the coming period will be in the main a rebuilding programme. Millions of old dwellings in city centres have to be replaced, in most cases at considerably reduced density. This means that some people will be displaced, and unless they are to be compelled to travel long distances between home and employment, an equivalent proportion of workplaces must be displaced also, and provision made elsewhere for both work and workers. In a small town some suburban extension may still be possible without imposing a burdensome journey on the 'overspilled' people. In a big city that easy solution is ruled out by the new policy of city limitation and green-belt reservation. The people who cannot be rehoused in the rebuilt city centre must instead be given the opportunity to settle in new towns or extensions of existing country towns beyond the green belt. The factories and offices in which they work must also be enabled to move to the new towns or country towns.

The problem was studied by the New Towns Committee (Chairman, Lord Reith), which issued three Reports between February and July 1946. The Committee estimated that something like three million people, with their industries, will ultimately need accommodation in new towns and major extensions of small towns. The Government have stated their intention to start, in the next few years, on 20 projects. About seven new towns have been announced, and definite steps taken to acquire the sites for four of these in the London region. Under the New Towns Act, 1946, each new town will be developed by a public corporation appointed and entirely financed by the Government. The Reith Committee, of which I was a member, recommended the Government-sponsored corporation as only one among several types of agencies for which sites should be acquired compulsorily — the others being municipal authorities, county councils, and profit-limited private enterprise companies — but the alternatives were not accepted by the Government.

Under the Act the Minister of Town and Country Planning designates the whole area of the future town as subject to compulsory purchase: this may apply to an area of anything between 5,000 to 10,000 acres. In any such area in Britain there will be hundreds of residents already, and farmers and country-house owners cannot be expected to welcome dispossession. Before making the Designation Order the Minister holds a local enquiry at which any person affected may submit his objections. Several such enquiries have already been

held; strongly-worded protests have been voiced by farmers, by residents, and sometimes by local public authorities. Though it is unlikely that an enquiry will produce evidence strong enough to cause the Minister to abandon the project, the points of view put forward may influence its planning in detail. Compensation is payable for all properties acquired, and when residents are displaced they are offered alternative accommodation within the area.

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It is laid down in the Act that the freehold ownership of the whole new town must be retained by the developing corporation. Residents and industrialists of the town may be offered building leases for not more than 99 years. All land in Britain is now subject to planning control, and the further control by covenants in leases to some extent overlaps this. There are some planners who hold that a perpetual lease, which would maintain the sentiment of freehold ownership, might be preferable. But there is a strong feeling in other quarters that the increase of land values produced by the growth of local population and stimulated by public expenditure in developing the town should benefit the community as a whole and not particular private owners. The New Towns Committee studied this problem carefully, especially in connection with the shopping and commercial premises in a town, which are likely to show the highest appreciation of land value. It came down on the side of the ownership of shop buildings by the town corporation, which should lease them to traders at occupation rentals. The Town and Country Planning Act, 1944, passed before the change of Government, leans heavily against public ownership of buildings in the analogous case of a redevelopment area, where the land is to be owned by a local authority. The New Towns Act puts no such limitation on the powers of the public corporation.

In this, as in many other matters, the New Towns Corporations have the experience of the two Garden Cities available for study. These two essays in the building of complete and detached industrial towns outside the metropolitan suburban zone, are known by name, but their lessons have not been fully absorbed by planners and town-developers. Letchworth was started in 1904 on a site 37 miles from central London, by a private company limiting its annual dividends to 5 per cent, and pledging any surplus to the benefit of the town and its inhabitants. This first Garden City now has a population of 22,000 and, its full dividend having been met, the public interest in its surplus values has become a reality. The Company retains the entire freehold, but has not invested much in buildings. Welwyn, 22 miles from central London, was begun in 1920 with a similar financial structure (since modified) and now has a population of about 18,000. It followed a different development policy, investing vigorously in commercial and factory buildings and houses, as well as retaining the entire freehold of the estate. It even ventured

into retail trade with a departmental store unique in a town of this size.

There has been controversy as to what is the best size for a new town. It must be remembered that the background of this discussion is that there are already in Britain, besides the seven cities of a million or more, another 30 of over 100,000, of which 23 are over 150,000. The nation is well supplied with regional capitals and with cities which are too large, and has plenty of cities large enough to take the few industrial units of exceptional size. It has only about 70 cities between 30,000 and 50,000, the size which the New Towns Committee regarded as the optimum for a good balance of economic and social desiderata. But it has no less than 800 "towns" (in the British sense of centres having urban powers) of less than 30,000, of which 330 are of less than 5,000. Many of these towns are stagnant or declining, because they are not large enough to attract typical modern industries, while their functions as market towns for agricultural areas decline with the secular basic shift of population from agriculture to urban occupations. It is part of the new national policy to revive and enlarge some of these smaller towns.

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Some interesting problems arise in the relationship of the building of the new towns with statutory planning and the national policy for the location of industry. It is important to remember that the New Towns Corporations will not be local authorities. They are for legal purposes in the position of joint-stock companies or incorporated bodies owning land. The land is acquired by the Corporation to hold and develop. Their capital is provided for them by Britain's Treasury, and their boards have responsibility to the public much as private enterprise directorates have to their stockholders, and much the same day-to-day freedom of decision and action. They appoint their own executives and personnel. They may be subjected to "directives" by the Minister in matters of policy, but they will not be interfered with by the bureaucrats of the Ministry. The local government of the place in which a new town is situated remains the ordinary local government of that place, though there will be adjustments of boundaries so that the whole site comes within one local government area.

The new town corporation may in some cases provide certain services — for example roads, water and drainage; or even electricity or gas — if there is no local authority or public utility undertaking there to do these things; but private land-developers could in similar circumstances do the same.

The success of the new towns depends much on the transfer of industries to them at the same pace as their growth of population. The Board of Trade plays the major part in the policy for location of industry, and not the Ministry of Town and Country Planning. Its thinking (there are good historical reasons for this) was for a time dominated by the regional unemployment problem. Under the Distribution of Industry

Act 1945 the Board of Trade has wide powers to promote industrial development, to build factories, to spend money on local improvements, and in many ways to aid particular enterprises where there is a likelihood of unemployment.

These powers are being vigorously exercised. If a firm goes where the Board of Trade thinks it should go in the national interest, life is made easier for it. If it wants to go where the Board thinks it ought not to go, there are powers surviving from World War II under which permits to occupy a factory, to obtain materials for alterations, or to do any building work, may be refused.

In principle I think the method is correct. There should in any civilised state be a restriction on the right of a firm to establish itself where there is over-concentration or congestion or in a city that is too big, or in an area where it is undesirable for good planning reasons, or costly to society, that urban development should be started. That type of restriction is as justifiable as the prohibition of child labour, and only an extension of the already accepted principle of zoning. Second, in Britain all parties accept that encouragement should be given to enterprise to enable it to establish itself in areas where for national reasons industry is urgently desired.

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If there is a criticism of the present operation of the policy, it is that it is too exclusively conscious of the distribution of industry as between regions and not sufficiently alive to the importance of reducing congestion and promoting dispersal within each region. The machinery however exists for the co-ordination of policy for planning and location, and, no doubt, will be of service in the industrial development of the new towns. It is significant also that a fashion is beginning for the dispersal of large businesses of the head-office type. If that fashion grows it will help in securing a good social balance in the new towns.

There are differences of accent between planners as to whether it is preferable to base a new town on an existing community of appreciable size or to start on a "green fields" site. In that extreme form the choice hardly exists in Britain; there is scarcely a site of 10,000 acres in any region where development is practicable that does not already contain at least one small town or village with some hundreds or thousands of inhabitants. Letchworth and Welwyn were built on sites that were as free of prior buildings as any that could now be found; but even on their sites there were a number of villages and some hundreds of inhabitants. The less building there already is on a site, the freer the planning of the new town can be, and for this reason I think a "green fields" site is to be preferred. But some planners hold that it is better to expand a small town of three to five thousand people, because it already possesses a nucleus, some social life and a tradition.

Whether there is already a town of a few thousands or not, a rapidly expanding new town will necessarily have much of

the character of a pioneer community. The "tradition" of the small town may persist in the old part retained; I doubt if it will much affect the atmosphere of the new and larger part. Where there is a good social life and a living tradition, it would be a pity if it were to be submerged by a too-rapid introduction of new life of a different type. The more real

the tradition is, the less would it be likely to be submerged.

The feelings of the British are both deep and subject to drastic revision. But they must make their revisions in their own time. What makes a project as the New Towns eminently practicable is that it attracts the more enterprising and adventurous without disturbing the more sedate.



The Master Plan for Stevenage prepared by the Ministry of Town and Country Planning as an example of the kind of scheme, which would be suitable for the proposals which the New Towns Act makes provision for. The various elements on the plan can be identified on the simplified map overlaid.

STEVENAGE

A PLAN FOR A NEW TOWN

Stevenage has never been more than a manorial market town. It lies 29 miles from London on the Great North Road, which forms its main street. By the time of the Conquest a settlement had become established by the roadside, where at the fork at Hitchin, at the north end of the town, was a natural site for the market granted in 1281 to the Abbot of St. Peter's, Westminster, the Lord of the Manor; but it has long been discontinued. By the beginning of the 15th century the settlement was being frequented by travellers on the Great North Road, and, despite the fact that the greater part of the town was burnt on July 10, 1807, some good 17th century buildings still survive, including some of the old inns. No measurement of Stevenage parish existed until a perambulation was made in August, 1728, by the Rev. Thomas Stamper, the Rector, who reckoned it about 14 1/4 miles in circumference. The population in 1800 was only 1,254, but in 1940 was estimated at 6,421. Under the Act of 1894 the parish became an Urban District.

NEW TOWN

Stevenage was one of the ten sites for new towns suggested in the Greater London Plan from which eight were to be actually developed. The choice of Stevenage as a pioneer study

In his Greater London Plan, 1944, Sir Patrick Abercrombie reported that the reconstruction of London, as envisaged by that Plan and by the County of London Plan which he had prepared in conjunction with Mr. J. H. Forshaw, would involve the outward movement of some 1,000,000 persons from the inner districts of London. He recommended that some 400,000 of the population thus displaced should be accommodated in self-contained towns, together built in previously open country or created by the expansion of an existing small town. Such towns should provide within their borders employment, and full social amenities as well as housing for their inhabitants. Ten sites were indicated as suitable for new towns, from which it was suggested that the required eight sites might be selected. One of these sites was Stevenage. The Ministry of Town and Country Planning has prepared a Master Plan for Stevenage as an example of the type of plan which would be suitable for these new towns. In doing this work, the Ministry will have made available the results of much useful research on this subject.

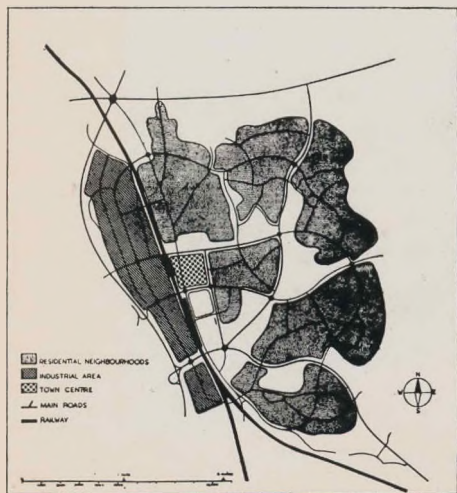
was made after a preliminary survey of the factors weighing in favour of early development, including its location in relation to London, and to the manufacturing area of the Midlands, and the North; the existence of a thriving industrial nucleus; and the presence of an established shopping centre and other social amenities. On the west the new town will be limited by the lines of the New Great North Road; on the north by the east-west road referred to above and by the natural watershed of the Region. On the east the boundary is more variable, though here it will be governed by natural valleys for drainage purposes, by farm ownerships, and by the villages of Aston and Aston End. In the Outline Plan prepared by the Ministry of Town and Country Planning is a suggested type plan for a new town. Every precaution has been taken to cause the least disturbance to the old town of Stevenage, which it is hoped will maintain its present character within the framework of the Plan, and provide by its character and charm an admirable link with the past.

ROADS

There will be good access from London or to the North of England via a new length of arterial road, which will pass by the new town, running parallel to the existing Great North Road from the end of the Welwyn By-Pass northwards towards Baldock. Access to the Midlands will be via a partly-new road connecting with the new London-Birmingham Road, and to the east via Bishops Stortford and Colchester. Main collecting roads will take the people from homes to work, or to the central shops, or open country, without passing directly through built-up residential areas. Some of these roads will be parkways. Many will be bus routes.

INDUSTRY

The site proposed is admirably suited for industry, being well served by the new arterial road and the railway lines on



either side of it. A properly laid out Industrial Estate with all the necessary services is here projected, designed to include industries affording various types of employment. The industrial area, though quite separate from the residential area, will be conveniently linked to it by bridges over the railway.

HOUSING

Southward-facing slopes provide admirable sites for homes for different income groups. All types of dwellings will be provided, but the majority will be one-family houses. The town will consist of six residential neighbourhoods, each with a population between 8,000 and 12,000 persons. The existing old town of Stevenage will form one of these neighbourhoods. One of the principal proposals of the Plan is to incorporate the existing houses within its framework. No material demolition of existing properties is contemplated for some years. In the determination of the land to be acquired care has been taken to avoid the severance of farm units. The development programme will be so designed that farm units will be taken in an orderly sequence, notice well in advance being given before the land is actually needed. Many farms will not be disturbed for a number of years.

The comprehensive plan for the new town will enable an ideal school system to be provided in accordance with the new standards proposed under the Education Act, 1944. All schools will be within easy reach of every house, there being Nursery, Infant and Junior Schools, modern Technical and Grammar Schools, and a Central County College.

TOWN CENTRE

As the centre of gravity of the new town, to the south of the existing old Stevenage, the new commercial and administrative centre will be placed with its Town Hall, large stores and shops, central library, theatres, cinemas, community building, fire station, etc. A new railway station and central bus station adjoining the commercial area will serve the whole town. Each neighbourhood will have its own local shops, churches, halls, cinema and pubs, within convenient walking distance of every house.

RECREATION

Playing fields of many types for young and old, parks, scenic viewpoints, and woodland reserves will be provided or preserved on generous standards. These will be interlinked where possible into a Park System of open spaces running through the town, separating neighbourhoods and so arranged as to be within easy access of every house. Existing groups of trees and woodlands (e.g. Whomerley Wood, Ashtree Wood and Great College Wood) will be preserved and form part of this Park System.

The development of the new town would proceed by stages. Present estimates are that development would commence in 1947, the peak of development activity being reached in 1951. The aim would be to make full provision for a population of 45,000 in about 10 years. Natural increase would thereafter bring the population to a total of 60,000.

THE WORLD OF ARCHITECTURE

By DONALD PILCHER

THE OTHER MODERN MOVEMENT: CHINA.

Not the least important of the problems which face the post-war world is the cultural adjustment between a distracted West and an East which is rapidly re-emerging into independence and individuality. In architecture there have in the past been points of contact between the two worlds and a line drawn between them indicates a direction which is of considerable interest to us to-day.

In two periods particularly, Europe has looked to the East to help her solve her architectural problems. I am not now referring to the purely fashionable borrowing of Oriental forms, although this was in considerable evidence during the first period of contact, but to periods during which European architecture derived from the East new approaches to design and new ideas in the handling of space. One such period has been in our own day, when many architects have derived ideas of this sort from the Japanese house. The other was during the seventeenth and eighteenth centuries, when inspiration was derived from the architecture and gardening of China. At this time *Chinoiserie* design was the symptom of a more deep-seated indebtedness to Chinese culture as a whole which culminated in Quesnay's proposal to remodel the French constitution along Confucian lines, and which led Reichswein to refer to Confucius as 'the patron saint of eighteenth century Enlightenment.' For to the radicals of the eighteenth century China became the land of political reason. Its constitution was the model form of government for free men and its architecture a model of 'free planning' and uninhibited design. It provided a refuge above all from aristocratic ennui as embodied in the Baroque palace and its formal gardens. So at least had Louis XIV considered it when he ordered Le Vau to build for him the 'Trianon de Porcelaine,' the parent of innumerable *Chinoiserie* pavilions in the courts of Europe.

To some extent the seventeenth century here hit on a valid view of Chinese architecture; for in it there are two basic forms of design. One is embodied in the 'Tien,' the pillared hall with lightly filled-in walls, and the other in the 'Ting,' the open garden pavilion which is designed and sited integrally with the garden layout. Attempts to design buildings unified with their surroundings, an escape from the rigid framework of the 'façade' and a general impatience with Rules of design; these were continuous undercurrents in European architecture of the seventeenth and eighteenth centuries, and in realising them architects looked largely to China for inspira-

tion. What is remarkable is their intuitive understanding that these qualities were to be found at all in Chinese design, for knowledge of China was necessarily limited at this time, when the Ch'ing emperors had placed a rigid ban on European entry into any part of China except Canton and Macao. The Jesuit Fathers at Peking were able to give some sort of verbal account of Chinese architecture, but ideas generally must have been derived from quite inconsequential porcelain decorations and a few illustrations such as those of Nieuhoff's

'Embassy,' an account, widely read in Europe, of the Dutch Embassy to Peking in 1655. The Dutch ambassadors saw the Imperial City in all its grandeur, recently restored after its damage at the fall of the Ming dynasty, but little of value is to be derived from Wenceslaus Hollar's whimsical illustration of it published in the 'Embassy.' Nevertheless light, airy buildings did arise in Europe, however inconsequential their embellishments, which reflected something of the spirit of Chinese architecture. More remarkable was the insight into Chinese landscape garden design at this time. Sir William Chambers, after a brief visit to Canton, gave a view of the Chinese garden which, at first sight, corresponds less with the facts than that with a Dante-esque vision of horticultural Hell. Nevertheless in certain fundamentals he is not far from the truth, and the landscape garden theory which was based on his ideas is recognisably Chinese in outlook... 'Harmony, irregularity, concealment, suggestion and surprise.' This definition of the garden designer's aims does not come from Sir Uvedale Price or one of his disciples, but from Chi Ch'eng, whose book on landscape gardening 'Yuen Yeh,' was published in 1636.*

A more definite idea of Chinese landscape design was acquired through Lord Macartney's Embassy to Peking in 1793. Illustrations of scenes on the journey were made by William Alexander, who also recorded views of the Summer Palace at Jehol, the 60,000 acre layout of landscape and garden pavilions in one of which the Embassy was actually lodged. Its free planning incidentally did not appeal to Macartney who, although accustomed to English country houses, nevertheless found the buildings excessively draughty. Some of Alexander's drawings have recently been published in the 'Geographical Magazine' in its series of articles on 'British Artists Abroad,' and in the Library of the University of the Witwatersrand we are fortunate in having the illustrated catalogue of the Chater Collection

*This important book still awaits translation into a European language.



The Ideal and the Reality. ABOVE: A landscape painting by Chow Wen Ching. RIGHT: A park landscape in Peking. From "The Architectural Review," special Chinese issue, July, 1947.



which makes it possible to study them in greater detail. In doing so it becomes clear that Regents Park and its lesser progeny of landscape housing layouts owe a good deal to the landscape groups which Alexander recorded.

In this sense artificial landscape, such as that of Jehol, must be distinguished from actual garden design, which in China assumed the form of enclosed courts traversed by open corridors, while grotesquely shaped window openings gave peep-show views of the garden compositions. This type of design is not likely to have been seen much by Europeans, except perhaps in the gardens of the Hong merchants, but it finds its way nevertheless into some early nineteenth century garden designs in England. Repton's first project for the Brighton Pavilion is a case in point. It was at this time that the idea of unifying house and landscape in a single continuous composition (the essentially Oriental approach) assumed the proportions of a 'movement' in English architecture. The house began to open to the landscape, the garden to penetrate into the design of the house. This, the so-called 'Regency' style, was short-lived, but in many respects it was the forerunner of the 'Modern Movement' of the twentieth century; and in many aspects other than those which I have mentioned it derives its forms from Oriental origins.

A special Chinese Issue has been produced by 'The Architectural Review' for July 1947 and its contents give us

many new and interesting views of Chinese architecture as a synthesis of building and landscape. An introductory article by Sir John Pratt discusses 'The Country and the People' and serves to outline the landscape into which Chinese buildings are designed to be assimilated. It is followed by a 'Historical Sketch' in which Richard Harris discusses the various elements and structural features of Chinese buildings, while another explanatory article by Charles Chen emphasises more the landscape connection and the fact that the Chinese house is the product of the carpenter, the poet and the landscape painter; the architect, as such, hardly making any contribution to its design. This fact that the house tends to be more of a literary conception than a formal one is again important in the European context. For at the time of Chinese influence, Europe was tending to take a more and more literary view of the arts. The movement which started with Shenstone's use of poetic garden inscriptions (an essentially Chinese feature), reached its climax in the late nineteenth century, when the formal appearance of the house came to be of less importance than the fact that on its gate there hung the label 'Chez Nous.'

A different aspect of the connection between buildings and landscape is embodied in the geomantic ideas which determine the siting of Chinese buildings. This system of 'Feng Shui' is described in a separate article in the China Issue, in which some practical ideas disengage themselves from the mass of superstitious formulae. Something of the Chinese

painter's contribution to the siting and design of buildings can be appreciated from Sir Kenneth Clark's article 'An Englishman Looks at Chinese Painting,' and the survey concludes with a somewhat depressing article on 'Recent Architecture in China.' As long as the country continues in its present chaotic state there seems little likelihood of a coherent architecture arising in China. Perhaps the most encouraging sign is the mere existence of such a writer as the author of the article, Charles Chen, who is capable of bridging the architectural ideas of East and West. It is difficult to see how an effective architecture can appear in China without the infusion of some ideas from the West, and it is important that these ideas should be carefully weighed and not applied indiscriminately to a Chinese background as they have been in the hideous monument to Dr. Sun Yat Sen. This special Issue makes valuable additions to our knowledge of Chinese architecture and we may hope for similar ones later, perhaps on India and Japan.

PAST INFINITIVE: INDIA

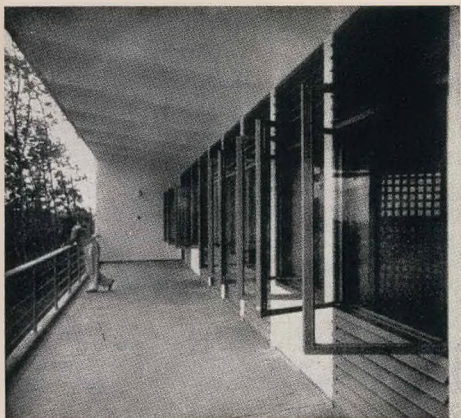
The special importance of India to the architect is that it helps him to see Oriental architecture as a continuous whole; for Indian craftsmanship has permeated the greater part of Asia and architectural ideas have been exported along with it. The Middle East particularly made use of Indian craftsmen. Mahmud of Ghazni enlisted thousands of Indian craftsmen and established a slave market for supplying them to the Mohammedan Middle East. Descendants of these Displaced Persons returned to India with the Mogul conquerors to construct buildings which in many respects show a remarkable continuity with ancient Hindu traditions. In the other direction, Indian craftsmen took their ideas to China along with the Buddhist faith in which originates so much of the landscape architecture of the Far East. The idea to begin with owes a great deal to the siting of temples and monasteries in mountain retreats. The sites for Hindu, as well as for Buddhist temples were chosen for their religious inspiration, and the buildings were burrowed out of the landscape which became a part of their design. The climax of this is the magnificent Kailash Temple at Ellora, in which a two storied temple is carved out of rock which has been left as a solid core in the centre of a man-made pit averaging more than a hundred feet in depth. The sides of the pit are honeycombed by cloisters and subsidiary temples hollowed out of the rock, the whole representing an interpenetration of architecture and landscape which is unique in its scope and imagination. Buddhist missionaries took the idea of the cave temple, along with the 'Pagoda' to China, where it became involved with Chinese theories of landscape design. Nor was its importance overlooked by the Oriental enthusiasts among European landscape gardeners; Repton analysing with some care the technique of Indian rock-hewn temples in his 'Theory and Practice of Landscape Gardening.' Repton and his contemporaries extracted

many ideas from Daniell's fine prints of India and they were particularly attracted to the Hindu temple Mandapams or assembly halls, and to the open ambulatory and porch of the Sikhara type temple. Sometimes, as in the Vittalaswami Temple at Vijayanagar, the open Mandapam embracing landscape views would have awnings attached to its heavy cornice, and this form approaches clearly the verandah awning so consistently and effectively used by Repton's contemporaries. So there comes to be a recognisable similarity in architectural atmosphere between the approach to Old Delhi and the approach to Brighton, with its oriental insistence on the verandah of the first floor and its houses appropriately overlooking the Indianized Pavilion set in its landscape layout. Sezincote house derives directly from Daniell and its open connection between house and garden is more significant in its oriental derivation than the mere use of Indian forms on the exterior.

It is interesting to see this Oriental synthesis returning to India after it had been digested by European architects. Calcutta's 'Maidan' is a splendid conception of this sort, a vast open landscape laid out where it is sorely needed, but seldom provided, in the centre of an oriental city; while in Lutyens' New Delhi the connection is particularly poetic. The grand axial approach to the Secretariat building cuts across the ruins of a previous city and these ruins have been cleverly incorporated into the layout to soften the insistent symmetry, while the rear landscape is enclosed by a silhouette of ruined buildings, just such a setting and just such a shaping of it which was eagerly exploited by eighteenth century garden 'improvers' versed in the oriental aesthetic. Europe's architectural relations with the Far East have not been all a one-way traffic.

Something of this mutual indebtedness can be seen in a new house at Kandy, Ceylon; architect, Andrew Boyd, which is illustrated in the March issue of 'The Architectural Review.' The design embraces the landscape in the appropriate oriental tradition: a deep verandah to the bedroom wing makes the most of an extensive view, while a pillared ambulatory round the living room is arranged to frame the distant prospect. The actual design, with its large glass surfaces with louvres above and below them, derives essentially from contemporary practice, but at the same time a certain traditional continuity can be appreciated; for this house is recognisably of the same family as, for instance, the fine and imaginative buildings in Fort William in Calcutta. India, like China, can benefit much by this sort of architectural approach, and from this point of view, it is encouraging that she has sent a representative to this year's C.I.A.M. Congress at Bridgewater.*

*There has also been founded in India a Modern Architectural Research group who are publishing a quarterly magazine MARG. The names of some contributors to the first three issues will give some idea of its scope. These include Francis Watson, Andrew Boyd, Karl Kandavelave and Frank Lloyd Wright. There are articles on such diverse subjects as Mohenjo-daro, Jamshedpur, and a demonstration farm centre in the Punjab.



A house at Kandy, Ceylon: Andrew Boyd, Architect. LEFT: The balcony to the bedroom wing. RIGHT: The upper terrace. From 'The Architectural Review', March, 1947.

PRESENT INDICATIVE: JAPAN.

India and China are the countries of greatest importance during the first period of architectural contact between Europe and the Far East. During the second period, that of our own day, it is Japan who has become the Most Favoured Nation. In a recent lecture to the Architectural Society of the University of the Witwatersrand, I suggested some points of significance which arise from this contact, and I will not repeat them here. One new point which it may be as well to make however, is that Japanese architecture is essentially a part of the continuous oriental tradition. Japan developed for herself a highly individual architecture but, at bottom, her temples, her open planning and her house-garden synthesis are all derived from India by way of China. The continuity in temple design hardly needs emphasis. It is implicit in the name of 'Tenjiku-yo,' the 'Indian Style.' In ancient India garden layout was endemic in the town plan as well as in the temple, the village community having a garden and parks committee incorporated in its administration. The climax of temple garden design was perhaps the Vihara of Nalanda, described with such enthusiasm by the Chinese envoy Hsueh Tang, and it is significant that the nucleus of these gardens is said to have been the garden pavilion in which the Buddha himself lived and taught.

It hardly needs emphasis that the second 'Modern Movement' derived from much the same causes as the first; mainly from dissatisfaction with the rigid 'facade,' dictating no longer acceptable plan forms, and from a general impatience with rules of design which were felt to be obsolete.

At the same time, the increasing horror of the industrial city had made some sort of return to nature a hygienic as well as a spiritual necessity, and the Japanese house suggested one way in which the house could be opened up to its surroundings and a closer house-garden relationship established. There is no doubt that we still have much to learn from Japanese principles and that, in this sense, Japan is still the most important bridge with the Far East.

In 1940-41 Charlotte Perriand spent a year in Japan studying its design technique and use of materials and, at the end of her stay, designed an Exhibition Living Room which is illustrated in the June issue of 'The Architectural Review.' What is remarkable in the design is the new give-and-take which it shows between Western and Oriental ideas. In it Japan benefits as much from a sympathetic introduction of Western forms (comfortably designed chairs and hard-wearing floors) as the Western user does from an imaginative handling of simple materials (polished wood, reed matting and bamboo). The most interesting of the furniture designs shown are the beds and chaises-longues made of flexible bamboo strips. These should be quite economical to manufacture and open up possibilities for the marketing of cheap furniture of a type which has hitherto only been carried out in luxury, manufactured, materials.

A more recent instance in which Oriental and Western design has been advantageously telescoped is in the project for a station for Pacific Cable on the island of Guam. It has been designed by Antonin Raymond in collaboration with L. L. Rado, and is illustrated in the July issue of the 'Architectural Forum.' Antonin Raymond's eighteen year practice in Japan



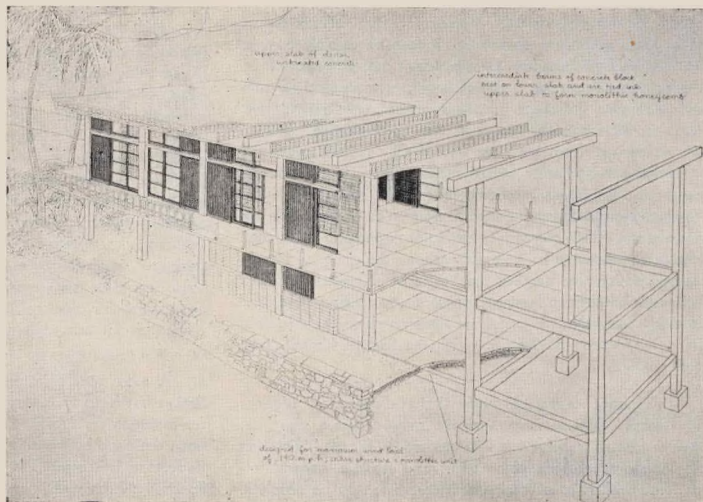
An exhibition living-room designed for a Tokio store by Charlotte Perriand. From "The Architectural Review," June, 1947.

has obviously helped him to solve this problem of providing weather-proof buildings in an extremely difficult climate. On Guam the temperature is comparatively mild, but humidity is very high, the seasonal rainfall intensely heavy and wind very strong, rising at times to typhoon force. A homogeneous concrete frame structure has accordingly been used with roofing of the type originally evolved by Antonin Raymond for a monastery in India. It consists of two dead flat concrete slabs distance by continuous reinforced fins. The upper slab

acts as a heat-break, while the lower, which is continuous with the frame structure, provides the weather-proof roof, and is covered by a layer of bituminous material. Air circulates between the slabs whose ends are finished with concrete grilles.

For shading the interior the slabs are projected 6 1/2 feet on either side of the building, which has continuous verandahs running down each side. Three blocks of buildings contain living quarters and the fourth, which is air-conditioned, contains the Cable Office, and differs in design from the other blocks. These, in principle have been planned with the main rooms on the first floor, where they take advantage of cooling breezes, and with service rooms below. Between the concrete framework, the walls have been designed purely as screens, in fact as series of screens sliding in brass runners, which can be used in various combinations according to prevailing weather conditions. There is no glazing and there are no windows, as such. The sliding screens are in three layers, the inner of bamboo lattice, the next of bronze mosquito netting, and the outer of solid wood, similar to the Japanese 'amado' and proof against driving rain. Rooms are 12ft. high and a 6 inch concrete transome is carried across them at 7ft. bins, above floor level. This serves to carry the sliding screens below and also another series of screens above. These, of course, will generally be left open to give cross ventilation.

The interior furnishing is also to be designed by the architects. If it is carried out with the same imagination as has been shown in the design of the buildings, this project should demonstrate effectively enough that, in architecture at any rate, East can meet West with considerable advantage to both sides.



One of a series of buildings on the Island of Guam for Pacific Cable. Antonin Raymond and L. L. Rado, Architects. The drawing shows the structural system and suggests the arrangement of sliding screens in three layers, which form the external envelope of the building. From "The Architectural Forum," July, 1947.

THE STUDENTS' FORUM

THE HISTORIC BUILDINGS OF JOHANNESBURG - 15

HOTELS, CLUBS AND DOMESTIC BUILDINGS

By Cyril A. Stoloff, Dip. Arch. IV

Johannesburg established hotels and clubs from the very outset—the mining camp boasted several even in 1887, a year after the proclamation of the Witwatersrand Goldfields. These establishments were, of course, typical wood and iron affairs, the first being Height's Hotel, the second Central Hotel, corner Commissioner and Ferreira Streets, Ferreirstown. It is an ugly grey barrack-like structure, almost Oriental in appearance, but is rich in historical association, for here the early diggers entertained their friends, public dinners were given, and champagne flowed freely. Mr. Height, who was the American Consul, bought the first piano ever seen in Johannesburg, and provided his guests with an added luxury.

At this stage of the study of Victorian architecture in Johannesburg, it is possible merely to give an historical account, as early Mining Camp Architecture simply cannot be analysed beyond a certain basic point—column and lintel, in wood and corrugated iron. In 1890, the Grand National Hotel was con-

structed in Rissik Street, by a Mr. A. Zoccola, an Italian restaurateur. New features for the mining camp were cast iron pillars and balustrading imported from England, and gabled attic windows. Other hotels of early Johannesburg included the North-Western in Pritchard, and Long's Hotel in Rissik Street. The Carlton Hotel in Eloff Street was built in 1904, and to this day has remained the largest in the city.

Height's Hotel in Pritchard Street, opposite John Orr's, was the temporary home of many famous visitors, including Mr. Rudyard Kipling, who arrived on March 31st, 1898.

Clubs were numerous in Johannesburg, the most well known being the Rand Club, the history of which has been recorded in the February issue of the "Record". The Goldfields Club, at the corner of Rissik and Jeppe Streets, was opened in 1903, while the New Club occupied a three-storeyed building corner of Fox and Loveday Streets. The Johannesburg Club was in



RAND CLUB, 1890. The leading club of the Mining Town, with libraries, restaurant, billiard room and bedrooms. On the same site as the present Club, fronting on Loveday, Fox and Commissioner Streets, this building is characterised by the extensive use of cast iron and stock-pattern wooden balustrading, gables and turrets, and the crowning motif of cast iron patterned ridging. Architects: Reid and McCowat.



NORTH-WESTERN HOTEL, 1891. Situated on the corner of Pritchard and Fraser Streets, this exuberant "Late Victorian" building is decorated with wooden balustrading and verandah pillars. A popular feature at this stage was the use of dormer windows. Sir John and Lady Loch stayed at this hotel during their visit on June 9th, 1893. Lady Loch then christened the deep level shaft of the Simmer and Jack Mine, which in 1893, had reached the greatest depth in gold mining history.



GRAND NATIONAL HOTEL, Rissik Street. One of the first double-storey hotels in Johannesburg, it was built for Mr. A. Zoccola, an Italian restaurateur in 1890. Mr. H. M. Stanley, the famous African explorer, stayed here on his visit to Johannesburg on November 18th, 1897, and Mark Twain was a resident for some weeks from May 18th 1896.

Photo: Africana Museum.

Photo: C.A.S.



ABOVE: HEIGHT'S HOTEL, 1887, the first hotel in Johannesburg, corner of Commissioner and Ferreira Streets, Ferreiraestown.

LEFT: The rebuilt Heigh's Hotel on the same site, and still existing today. The name of this building has undergone a number of vicissitudes, from Federation Buildings to Balmoral Chambers and finally New Court Buildings.





CARLTON HOTEL, 1904. Built on an entire city block, and fronting on Eloff, Commissioner, Market and Joubert Streets, this was Johannesburg's first "skyscraper," a term that had only become widely used in the Edwardian era. [The first "skyscraper" actually erected and planned on modern principles of construction was William Le Baron Jenney's building of the Home Insurance Company in Chicago in 1885. In many respects the Carlton Hotel is no unlike that building.] Whereas the American architects of the late 19th century attempted to express the skeleton from of steel in the facades of their buildings, the architect of the Carlton has disguised the steel structure with masonry and crowned the whole building with a massive cornice. The vast wall surfaces are punctured with neatly spaced windows and doors, and further patterned with cast iron balconies. The general effect is impressive and restrained after the general melee of the Fancy Dress Ball of Architecture that was the Victorian era. The Carlton Hotel represents the transitional period from Victorian to Edwardian, and forms the basis of the contemporary "skyscraper" in Johannesburg, which emerged in the post-war period of the twenties and early thirties.

Market Street, and the Athenaeum Club was situated in Hospital Hill. After the initial Mining Camp Period of wood and iron construction came the steel-framed building, such as the Rand Club in Loveday Street, 1904. Of course, it is extremely difficult to see that this is a steel-framed structure, because the steel skeleton has been carefully and conscientiously shrouded with its Classical clothing. As a structure, the steel-framed building was complete in itself, and only required a thin skin of walling and window to make it habitable. Architects, and particularly clients, demanded the usual paraphernalia in the way of columns, pilasters, pediments and cornices, to give, as they thought, the correct proportion and appearance. This, then was psychological, as far as the clients are concerned, for the appearance of such ostentatious edifices satisfied their desire for a showy display of their newly-found wealth and prosperity. They did not realise that the building could express itself satisfactorily from the aesthetic point of view, rather by its shape, than by added and unnecessary architectural detail. There seems to have been an inability

to adapt, or appreciate the potentialities of the Industrial and Machine Age, in relation to a new architecture, which this new age demanded. The inception of the machine was sudden, and the progress that followed it so rapid that man was unable to adjust himself to the changes in the world about him, and before he was aware of it, the machine had outstripped him. "Its portent he did not comprehend: he failed to realise that it must undermine the existing social system; and there is evidence in every direction of his unplanned, uncontrolled struggling to adapt scientific inventions and discoveries to his own immediate purposes." The artist, instead of working in co-operation with the manufacturer towards a machine aesthetic, tried to suppress its re-establishment of craft work. Hence the very ugly stock patterns executed in ironwork that became the "leid motif" of most of Johannesburg's early architecture. The architect, careless of the real purpose of the new materials and methods of construction, found in the steel frame a medium that would enable him to perform feats impossible in solid stone. In consequence we see pillars and

arches that not only support nothing, but are themselves supported, at considerable expense, and solid walls of stone that serve no useful purpose, but impose additional load upon the steel. This is evident in the elaborate arcading and colonnading in the Rand Club building in 1904. F. R. S. Yorke has said that: 'Architects had ceased to be planners and designers of structure, and had become specialists in the reproduction of the antique.' In England and America, a few men realised the futility of the pursuit of the styles, and tried, each in his own way, to supplant the academic by creative effort. In England there was Voysey and Mackintosh, in America Frank Lloyd Wright and Louis Sullivan, and in Europe Otto Wagner and Peter Behrens.

* * * * *

The Victorian house presents perhaps, the most fantastic picture from the architectural point of view. Of course, it may well be that the Victorian era is still a little too close to us for fair assessment. It was an age of economic affluence for a growing proportion of the people; servants and property were cheap; houses of the wealthy were large and families were likewise. The houses of the wealthy reflected, as always, their social background. They consisted of a series of wholly separated boxes in which separate activities were carried on—sitting room, withdrawing room, dining room, morning room, day and night nurseries, bed rooms, dressing rooms, bathrooms, boxrooms, reading room, billiards room, nurses' rooms, servants' rooms. The Victorian period was under the disruptive shadow of the literary and romantic ideal which forced architecture into a series of literary pictures copied from the pattern book of the past. Design came to mean only the outer appearance of the house to the Victorians. The shell became a framework upon which to hang the latest "revival" in taste, mock-Tudor, mock-Gothic, mock-Indian, mock-whatnot. W. S. Gilbert used to sing, "Oh, be Early English, ere it is too late!" Meanwhile, the plan was generally left to look after itself with the aid of the many servants who lived either in the damp darkness of the basement, or in the chill desolation of the attics.

Generally the Victorian houses were of brick, with corrugated iron sheeting as roofing and wall lining, and cast iron or wood verandahs. The wealthier houses, particularly those of the Mining Magnates, were built at first in Doornfontein and Jeppestown, and then in Parktown. Apart from the assorted styles available in the Fancy Dress Ball of Architecture that was the Victorian Period, the clients and architects generally chose what appears to have been a combination of pseudo-Gothic and Prussian Baronial. Most of the big houses in early Johannesburg are characterised by a confusion of turrets and gables, culminating in the picturesque. Sham leaded light features were incorporated, this being, as Anthony Bertram has said, "deliberate retrogression, technically, in convenience and pleasantness, with no functional, social, political or economic cause, but brought about by the bankruptcy of taste. The Gothic and Classical Revivals, instead of giving something new

Photom. P. Fisher



"NORTH LODGE" Oxford Road, Parktown. This house, although not representative of the Victorian age, is yet another example of the Battle of the Styles prevalent at this time, and finding expression in Mock-Tudor, Mock-Gothic or Prussian Baronial.



Residence in Charlton Terrace, Doornfontein. Many of the old mansions of Doornfontein have been adapted to other purposes, including nursing homes, boarding-houses and homes for the aged.



Residence in Parktown, 1902. Characteristic of the Late Victorian house, built between 1890 and 1905. Foundations and plinths are of stone, red brick was contrasted with white wooden verandah pillars and railings. Other features include sliding sash windows, and gables to roof and attic windows terminating in finials.



ABOVE LEFT: Residence in Parktown. A typical Victorian home in Johannesburg, neither Neo-Classical, Neo-Gothic nor Neo-anything else. A reasonable use of materials is evident, with a degree of simplicity but without taste in decoration. The "style," a course cliché, is perhaps essentially South African.

ABOVE RIGHT: "THABANA," Kensington, originally the home of Mr. Sam Marks, the great Mining Magnate of early Johannesburg, exhibits a strange combination of solid dignity with stylish whimsicality.

RIGHT: "TSESSEBE HOUSE," situated on a hillside between Kensington and Belgravia. Built by Sir Julius Jeppe in 1896, the house was taken over by Sir Abe Bailey in 1909. When first built it was named "Friedenheim." The abode of peace. Associated with the place are the names of Lord Roberts and Lord Kitchener, who both lived in the house for some time. In 1918 the property was bought by the Provincial Administration and the house was converted for the use of the Jeppe High School.

Photos: P. Fisher.

to architecture, as each generation had done before, were content to imitate, sometimes cleverly, most often clumsily." There is a very good story told of early Johannesburg, in which a wealthy client called on an architect, and complained that he had repeatedly said that the design he required must be Gothic, and all those sent to him were Classical. "Well," said the architect, "I'm very sorry, but as a matter of fact, my Gothic assistant is away ill." R. Norman Shaw, the English architect of the late 19th century, once complained that "he had spent years in persuading people to have mullioned windows with casements and lead glazing, and then when his own style changed to Classical, found it difficult to persuade them not to."

The extraordinary bad taste of the Victorian house-owner is manifest in the overwhelming interiors of these houses. Brass and other metal ornaments and statuesque cluttered up every corner, gasoliers and accompanying shades were ornamented, door panels and fireplaces were decorated, walls were covered with strongly patterned paper divided into panels by equally aggressive borders and partly obscured by pictures in



gilt frames. The carpet was patterned all over, and decorated furniture covers and cushions completed this picture of opulent ugliness. The Victorian house was indeed the triumph of the picturesque.

In reminiscences of early Johannesburg, Mary Packer writes: "Somehow or another, with all the reversal of taste in architecture, with all our modern horror of domes and turrets and gables and iron fancy-work, these old Victorian houses have preserved a certain dignity of aspect which has overcome any latent inclination on the part of speculators to demolish them. Some of them have suffered a temporary eclipse, but lately seem to have taken on a new lease of life, in terms of paint and whitewash, for their walls were built to last.

"There hangs about Saratoga Avenue, Doornfontein, where Cecil Rhodes once took his morning walk, the lingering romantic aura of all places where history has been made . . .

BOOK REVIEW

HEPPLEWHITE FURNITURE DESIGNS with a preface by Ralph Edwards (A. Tirante, London) 7/6 nett.

This little book gives one an insight into the work of George Hepplewhite, one of the famous triumvirate of furniture designers in England in the eighteenth century.

After his death in 1786 his wife carried on the business and published a work entitled "The Cabinet Maker and Upholsterers' Guide; or, Repository of Designs for Every Article of Household Furniture."

The publication under review contains the original preface, together with a selection of 80 of the best plates and an abridged version of the descriptive notes. In the preface of the original work it is stated: "To unite elegance and utility, and blend the useful with the agreeable, has been considered a difficult, but an honourable task . . . It may be allowable to say, we have exerted our utmost endeavours to produce a work which be useful to the mechanic, and serviceable to the gentleman."

This summarises the aims and achievements of the eighteenth century furniture designed in England whose work is unrivalled to this day and has been a source of inspiration to the contemporary designer and cabinet maker, because of its lightness in character and its superb methods of construction.

There is a delightful naivete in another statement in the preface which reads as follows: "English taste and workmanship have, of late years, been much sought for by surrounding nations; and the mutibility of all things, but more especially of fashions, has rendered the labours of our predecessors in this line of little use; nay, at this day, they can only tend to mislead the Foreigners, who seek a knowledge of English taste in the various articles of household furniture."

"The same reason, in favour of this work, will apply also to many of our own Countryment and Artizans, whose distance

from the metropolis makes even an imperfect knowledge of its improvements acquired with much trouble and expence. Oyr labours will, we hope, tend to remove this difficulty; and as our idea of the useful was such articles as are generally serviceable in genteel life, we flatter ourselves the labours and pains we have bestowed on this work will not be considered as time uselessly spent."

The book is well produced and should prove a valuable addition to the collector's library. — G.E.P.

"GEOMETRY OF CONSTRUCTION" by T. B. Nichols and Norman Keep, F.R.I.B.A., published by Clever-Hume Press, Ltd., London, is designed primarily as a text book for use by students of architecture and building. A large number of everyday drawing office problems may be solved by geometrical methods. The present trend in architectural education is to combine more closely the study of geometry with that of architectural drawing and design. In accordance with this trend the authors of "Geometry of Construction" endeavour to illustrate the practical application in architecture of each geometrical principle. Students will be assisted by the arrangement of the text on the left-hand page with the corresponding diagrams opposite. The book covers adequately the syllabus prescribed for students of architecture in South Africa, except for one serious omission. It makes no reference to the geometry of perspective. The book fails also to deal fully with Isometric Projection in that it does not demonstrate the plotting of irregular curves, nor does it, to my mind, sufficiently emphasise the advantages of Isometric Projection over the obvious distortions of Oblique and Axonometric Projection.

Apart from these omissions the book with its concise text and clear diagrams will prove valuable to students of architecture and building. J. M. S.

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