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## THE 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.

202, Kelvin House, 75, Marshall  
St., Johannesburg. Telephone 33-1936

Volume Twenty Four. Number Nine.  
September, 1939.

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A CAPITAL OF THE ARCADE, DUCAL  
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# MAY NOT ARCHITECTURE BECOME A DECADENT ART

B Y F . W . P O W E R S

If I were asked what is the value of an Architectural Congress, my reply would be: "The opportunity afforded to members of the profession to meet and discuss the ideals and ethics of professional practice, together with the attendant problems experienced by many of us in the course of practice and the possibilities of finding practical solutions to them."

Although the Central Council of the Institute and the various Provincial Committees meet frequently in order to administer the affairs of the profession and dictate the Institute's policy under the provisions of the Act, the members of the Institute generally have few opportunities of meeting in conference to discuss the more intimate matters and difficulties that arise in general practice and to exchange views that may not only be informative but also provide helpful solutions to many of the problems met by individual practitioners.

For a Congress to adequately satisfy these conditions more is required, in my opinion, than the reading of carefully prepared papers upon some academic subject that will in all probability be filed for future reference or perhaps published in the Institute Journal for the benefit of those sufficiently interested to read them. Visits to buildings or places of interest in the locality and the attendance at those social functions usually arranged with the hosts as get-together meetings for the hospitable entertainment of the visitors have their special social values, and to some extent provide extra attraction and inducement to members to attend Congress, but, as I have already premised, the beneficial value of a Congress to the profession as a whole is the adoption of the various resolutions after considered discussion on the several subjects under review.

It is for this reason that when I was honoured with a request from my Provincial Institute to submit a contributory paper to this Conference that I selected the title "May not Architecture become a Decadent Art due to Commercialism in the Profession?," a subject that I considered would be provocative enough to call for exhaustive discussion and argument from many angles, and in presenting to you this contribution I submit it for your acceptance not as my personal conviction that all is not well with the profession, at least so far as it is practiced in this country, or that it is declining into a state of commercialism beyond redemption. Instances to which I shall presently refer are fortunately not predominant to the exclusion of the more desirable influence on art and master craftsmanship.

The title assumes two points : first, that architecture, as practiced in our own time, is an art built up and developed on the work of the ancients, and later during the Renaissance period. The second point is that present-day practice, may I say, is so fettered with the practical problems of co-ordinating the highly technical work of a multitude of specialists that in order to satisfy the demands of profitable finance by the building owner, whether an individual or public body, that the practice of an architect under modern conditions has become highly commercialised.

In so far as this latter point is concerned, it is only necessary to instance a few of the more obvious aspects of commercialism in architecture to illustrate the argument.

It rarely falls to the lot of the average practitioner to be commissioned to design and erect a building in which the project is not governed by financial considerations : a few, perhaps, are fortunate in being entrusted with work of a national character, such as a commemorative monument; others in designing public or semi-public buildings, in which a financial return on capital expenditure is not a primary consideration.

To many of us, however, the designing of a building in which the maximum accommodation is required for the least capital outlay is in most cases a factor of primary importance, and more often than not, particularly in the instances of blocks of residential flats, offices and departmental stores, this is frequently obtained at the expense of architectural merit.

Other examples are those in which building syndicates are formed to develop city properties and where the architect engaged upon the work receives the whole or part of his remuneration for professional services from an allotment of shares in the company or the particular building enterprise.

I submit that this method of payment of the architect's fees is most undesirable, and should be strenuously discouraged if our professional practice is to be purged of this taint of commercialism; I am of the opinion that when the architect's remuneration for his services is derived from these sources there must be a tendency for this financial aspect to assume more importance than in those instances where the comparatively greater or less profit which accrues to the owners or shareholders does not directly or materially affect him.

Cases are also known where fully detailed drawings for some commercial project have been voluntarily prepared by architects and submitted by them to prospective buyers, prior to sales of building sites, as a preliminary to the formation of syndicates to purchase and develop these sites or to obtain options on them.

This practice presupposes that the scheme submitted will prove a sound investment to the purchasers,

whereas the particular site might be more suitably developed by the adoption of other schemes, and I illustrate this point by the fact that competitive designs are frequently desired by the owner to provide a choice of ideas for the most suitable architectural treatment.

The obvious object of such practice is to be first in the field, and if the particular scheme is not adopted it can be changed or modified to suit the owners' wishes by the architect who has prepared it. This practice is a prostitution of the tenets and ideals of the profession, and, although such cases as these are not uncommon, I cannot recollect that our governing bodies have very seriously viewed this form of commercialism which, in my opinion, is not far removed from professional malpractice.

In the instances of estate development usually termed garden suburbs, or of the architect designing individual houses to meet the popular demand for a particular style in architecture as may happen to be in vogue, such as Tudor, Spanish Mission or Cape Dutch, as the case may be, he is frequently compelled to provide ample accommodation, together with the distinguishing features of the style selected by the owner at the expense of good design resulting in those pseudo types of architecture unfortunately prevalent in many of our residential suburbs of bastard construction with the improper use of materials.

My final illustration of commercialism in architecture I will call the Octopus Estate Co. This expression was used by the President of the Natal Institute of Architects in his address to members at the last annual meeting. The class of company to which his remarks were directed are those whose constitution includes an estate agent, a builder, a solicitor and an architect. This type of company purchases at every available opportunity small or large areas of ground suitable for development as residential estates, and thereupon advertises desirable building plots for sale.

The conditions of sale are (whether on terms or for cash) that the residence shall be erected by the owner company and designed by the company's architect. Then, of course, it follows that if loans are required, as is generally the case, the estate agent firm negotiates that portion of the business, and the solicitor is called upon to prepare the necessary legal documents. It has frequently been stated that domestic work provides the bread and butter for the younger architects embarking in private practice and, quite apart from the argument whether this class of domestic architecture produced by the companies I have just referred to is decadent art or not, this rapidly growing method of estate development will prove a very serious menace by unjustifiable competition to members of our profession, whether by unregistered architects or by qualified members engaged in this kind of practice.

It is, I think, unnecessary to quote further examples of the varied forms of commercialism in architecture



known to many of us. The foregoing will suffice to establish a *prima facie* case of commercialism in architecture. I will therefore briefly discuss the first point of my title, viz., "Architecture and Art."

I have read with very much interest a paper read before the American Institute of Architects and reprinted in the "South African Architectural Record" under the title of "Essentials for Creative Design." The article is by Mr. Walter Gropius, an acknowledged modernist, and who has recently been appointed Lecturer in Architecture at Harvard University. Many of his remarks are so appropriate to my subject that I feel no apology is needed if I quote some of the most pertinent ones.

He says, *inter alia*, that "Architecture is now setting out again to play a leading part in the generation to come and, further, that it has come to terms with the machine and must take the lead in forming the whole entity of our towns with its help." "If in architecture we fail to achieve this, the rapid current of modern development may sweep us aside." He also refers to the painter, sculptor and craftsman as one who builds up his work with his own hands, whereas the architect is dependent upon the collaboration of numerous assistants and specialists. He has to be the co-ordinating organiser who welds all biological, social and technical problems into a homogenous whole.

If we accept this view that modern architecture is a scientific co-ordination of special artists and engineering specialists, is it not developing into more of a science than an art? Or, perhaps, that science and art are now so closely interwoven as not to be divorced in present-day practice. This view is no doubt open to considerable argument. From this theory an impression might be formed that the art of the sculptor, painter or craftsman is selected by the architect as the component parts of his building and then assembled scientifically, as it were, to meet the necessities of his design.

If such is the case, it would appear that the modern architect becomes only responsible for the proper and convenient assembling of the various arts, upon which his designs are built up, and he thereby ceases to be the creator; in these circumstances I contend that architecture will rapidly decline and become engineering projects decorated by the artist.

Further, I feel that as soon as enthusiasm for art in architecture is subordinated to a complacent acceptance of monetary gain, and the architect fails to jealously protect the traditional heritage of his profession, he will eventually be absorbed and become a factor, and "no doubt a very necessary one," in building organisations commercially controlled.

Having prepared this paper which I ask you to accept for discussion, I submit there is a predominance of evidence supporting my assumption of commercialism in present-day architectural practice which, when measured by the standard of financial success, reduces architecture to a decadent art,

Speaking as one of the younger members of our Institute, many of whom I feel are imbued with something of the spirit of the old traditions and the upholding of high standards of professional ethics, I cannot but feel a sense of disappointment at the apparent absence of sympathetic appreciation of true art in architecture that is so essential if our profession is to be raised above the mundane level of the commercial atmosphere into which I fear it is rapidly drifting.

In conclusion, I have to thank members present for their patient attention to this paper, and to ask their indulgence for what may be considered the temerity of a young architect embarking on a controversial subject which may have been more ably expounded by a senior of greater experience than myself.

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## DISCUSSION ON MR. F. W. POWERS' PAPER

The President-in-Chief: Ladies and Gentlemen: I first of all wish to thank Mr. Powers for a most interesting and able paper; and secondly to invite discussion on it.

Mr. T. Moore (Pretoria): Mr. President-in-Chief: There is just one item I would like to refer to, mentioned by Mr. Powers in his paper: what he calls "The Octopus Estate Co." For a long time I have felt that action should be taken in this direction: I feel that no architect, or quantity surveyor, or builder, should be allowed to be on the Board of a building society or insurance company; and that they should be compelled to obtain their technical assistance and advice from independent people in the proper way.

Mr. B. V. Bartholomew (Durban): Mr. President-in-Chief: I am particularly glad to have been able to listen to Mr. Powers' paper, and I, for one, feel grateful to him for it. When the Central Council asked the Natal Provincial Institute to provide a paper for this Congress, the matter was left to me, as President at that time. I got in touch with Mr. Powers, who very kindly agreed to help.

With regard to the contents of the paper, we in Natal are particularly concerned about the development of these "Octopus" companies; they are spreading, and our domestic architecture is passing out of our hands into the hands of estate agents and so on. I feel concerned, because that is affecting what I might call "the bread and butter" of our younger architects. Without doubt the profession as a whole is being invaded, seriously, by the commercialism that has been referred to.

I am not at all sure what we can do about it. Mr. Moore has made a suggestion which may prove helpful, if it can be carried through. I am convinced that the interests of the public are not best served, as pointed out in the paper, where an architect becomes a part of such a company, because the commercial aspect is stressed in a way it should not be.

I do not know whether the universities have considered this question, or whether it is possible for them to discuss it as having a bearing on their curriculum; whether a wiser appreciation of art in relation to architecture might not result. I know there is room for difference of opinion, but I feel we should try and get closer together on this matter. Anything beautiful in any shape or form is art, I know, but I cannot altogether see eye to eye with some of the ultra-modern stuff.

I do hope this paper will help us to get together in a serious attempt to stop this commercialism in our profession, and from that point of view I would like again to thank Mr. Powers for the very able way in which he has presented his paper.

Mr. C. M. Sinclair (Johannesburg): Mr. President-in-Chief, Ladies and Gentleman: I would like to congratulate Mr. Powers on raising a problem that, as he says, has been exercising the minds of the younger members of the profession. I think there can be no doubt that there is a considerable amount of truth in his assertion that architecture is becoming a decadent art. But I would like to say that architecture is not unique in this respect,

The decadence of music, as a contemporary medium, is made evident by turning on the wireless. Painting and sculpture, the stage, and literature, are in tumult; and the screen, the newcomer to the plastic arts, has already become sterile.

Mr. President, I submit that the barrenness of the arts to-day arises directly out of the structure of society. Society is in a state of flux, and conflicting ideologies battle for domination on the five continents. Society, as we know it, is based on a system of capitalism, the so-called system of supply and demand, and theoretical freedom of every individual to make and spend of his own free will. This right of the individual to economic freedom formed an incentive in the growth of our machine age. Under its stimulus society has built up its purely technical equipment above that of any previous era.

Society is now in a position, given proper use of the means at its disposal, to provide all the necessities and many of the luxuries of life to all its people. The fact that this does not happen is proof that society is not making logical use of its opportunities. But even further, society is now debasing that very product that is its greatest achievement. It is turning its unique invention, the machine, from its original aim, production, to another unique expression of this age: mass destruction. Individual man has lost control of his society, and, with it, of the machine.

The architect, in this society, is faced with three possibilities: one, to continue as though we are still in the balmy Victorian days when man was building up his technical equipment; two, to accept the change and proceed to make as much as he can within the present frame of society; and three, to work for and try to bring about that change that will enable him to regain control of society and the machine.

The sincere architect's main problem is that of housing humanity, efficiently and aesthetically. By seriously attempting to create improved living and working conditions, the architect comes into violent conflict with the existing order. He finds that, to attain his object, he has to demand a new town plan; for, although he may design an exquisite building on a 50 x 100 site, this has no organic significance as architecture. The streets are just as noisy and congested; stifling in summer and ice-cold in winter; and the air is still as full of smoke and dirt.

My point is that no amount of tinkering with the secondary details will bring about a change in the primary town plan. As Mr. Martienssen made so clear yesterday, it is in the work of progressive architects who demand a new town plan that we must look for a new architectural form. And it is here, and here only, that we find the embryo of what has been called the bio-technic era—an era of more human quality than this machine-ridden society we live in: "A new relation of man to nature, the simple love of country, home and soil, that needs neither reasons nor justification," brought by means of the machine to consummation.

When this has been achieved, architecture will have been reborn, and the outworn forms and style will be cast off. Then, and only then, will the decadence of architecture that is apparent to-day be replaced by a new and vital architectural idiom.

Mr. Ernest M. Powers (Durban): Mr. President-in-Chief, Ladies and Gentlemen: I feel very diffident about taking part in the discussion on my son's paper. Naturally, before we came to Congress, I was fully conversant with the subject and its details, as put before you. There is one point that has occurred to me, which I wish to mention: a part of the paper—the portion dealing with commercialism—might be regarded in some cases as unprofessional conduct on the part of certain of our members. May I say that that is not the intention of the paper, or of its author,



One of the problems our Institute must face is this. Our students, when they leave the universities, are imbued with the traditions and ideals that my son referred to; but, when they come out into practice, they soon find themselves up against this competitive commercialism. That aspect of the case must be seriously considered by our Institute: whether architecture is purely and simply a profession, and we will not consider any form of commercialism at all; whether, if architects do certain things which, although not actually unprofessional, will indicate that they are in effect outside the profession and on the commercial side.

I am particularly concerned with the invidious position of students who, after they are qualified seek to obtain their livelihood in architecture, and then have to face these problems that have been referred to. Are we going to recognise that commercialism within our profession is to a certain extent perfectly justifiable? We all know that representatives of manufacturing firms come to see us. They tender for work; they put the case for their wares before us, to the best advantage, in order to impress us in their favour. We would not consider that such firms were doing anything dishonest or unprofessional.

But if an architect has, by force of circumstances, to do something of the kind, he is immediately looked upon as—well, if not “unprofessional,” as “rather slim.” And he “gets in first.” Is it not force of circumstances, to a very great extent? I am reminded of a discussion I had a little while ago in regard to the man who undercuts fees. If an architect is “down and out,” and simply has to get a job somewhere, and is offered a job at reduced fees, is it not better that he should take that job, to get something out of it with which to support his family, than to say: “No: there is the Institute’s scale of fees; I cannot depart from that. I will refuse the job”—and have to resort to charitable assistance in some form or other?

I feel that this problem gives us a great deal of food for thought. To steal a loaf of bread from a baker is a crime: are we to put the architect who reduces his fees in exactly the same category, by suggesting that he is pinching a job out of another man’s pocket? It is a social problem, and one that we simply have to face.

Mr. R. Howden (Johannesburg): Mr. President-in-Chief, Ladies and Gentlemen: There is one particular point in Mr. Powers’ paper that I would like to touch on—the relationship of the architect to the engineer. I am afraid the position is getting very serious. I should like to approach this matter from a different angle. There is a certain local authority in South Africa which has approached quantity surveyors with a contract which, they say, should be adopted by quantity surveyors in connection with work given out by this local authority.

The local authority expresses itself as perfectly willing to pay 2½ per cent. for all the work given out, but is not prepared to pay 2½ per cent. for the work that the quantity surveyors do not measure. The quantity surveyors say, “Yes: that is quite a just and legitimate position to take up, and we naturally agree.” But the quantity surveyors, at the same time, say that they are able, and have been trained, to take off the quantities for the other things that have been referred to, which the local authority says they do not intend paying for unless the work is done.

Immediately this particular agreement has been settled between the parties—I believe it has already been done—the next procedure is that this local authority is going to approach the architects; and I can see the following taking place. They will bring their contract to the architect and say: “Mr. Architect, we are prepared to pay you 6 per cent. for all the work you design and draw and specify, but we are not prepared to pay you 6 per cent. for work that you do not design, draw and specify.”

The architect's reply will be: "Yes—but we will, of course, expect you to pay consultants in connection with this work. That may amount to £50,000—in connection with which you say we do not do the design." "No," replies the local authority, "we cannot afford to pay you 6 per cent., and, in addition, pay consultants 6 per cent. on perhaps 75 per cent. of the work, in addition." The architect then uses several arguments. He mentions what he is accustomed to. But if you happen to strike a building in connection with which there are two or three engineers on the committee, you find the position taken up is this: "75 per cent. of the work in a modern building is our work—engineer's work; 25 per cent. of it is perhaps architectural work." The engineers on the Building Committee say: "Why should we pay you architects 6 per cent. when 75 per cent. of the work is our work, and we have to pay 6 per cent. in addition for consultants' work in connection with the building?"

The work will be given out under practically those conditions. The first thing the architect does is to go to a consultant for reinforced concrete: "I have a job; what will you charge me for designing the reinforced concrete?" "20 per cent.," says the reinforced concrete consultant. 20 per cent. on the cost of the reinforcement. "There is no possible chance of getting this from the client," the architect says: "I am getting 6 per cent." "Well," replies the consultant, "We have ascertained that 20 per cent. is the correct charge. I don't mind which way you put it: either 20 per cent. on the cost of the reinforcement, or 6 per cent. on the cost of the concrete shuttering and reinforcement—which comes out to the same amount."

"But then," you say, "that is half the job. You are taking half my fees." And you go on and say, "And there are other consultants' fees to be paid on the engineering part of it—the sprinklers, electric light, lifts, air-conditioning, heating, and so forth." So you find in due course that 75 per cent. of your fees is taken by engineers at 6 per cent., and you are left with 6 per cent. on 25 per cent. of the job.

There is no use kicking against it, I am afraid. The engineers have been made aware of this position. You say to an engineer, as I have heard architects say, "But you want a captain of the ship." Then you get the reply, "Yes: 75 per cent. of that job being engineering work, I will make a better captain of the ship than you." That is the sort of argument we are faced with."

Now, when you get engineers on the Building Committee of a client, are we justified in going on indefinitely and saying, "All we do is architectural design, and there's an end to it; and we expect our 6 per cent. You can get your consultants, and for their services you will pay another 6 per cent."

On this very point I want to say, as Chairman of the Standing Committee on Education and Examinations, that we have certain individuals coming to this country from overseas; they have certain credentials, which we examine, and we find, in regard to the engineering side of architecture, that most of these men are well trained; but, from the point of view of architectural design—that is, as we see design—generally they are weak. We have people coming here with university degrees—in some cases, doctors' degrees—in architecture from Germany, Italy, Poland, and other countries. We say: "We are perfectly satisfied with the constructional side of your education, but we think you must go in more for architectural design." We give them an examination in design. They fail once, twice, sometimes three times.

These men put their heads together and say: "What is wrong? Is there something wrong with us, and our training, or is there something wrong with these people?" These men design their own reinforcement; they design their own steel-work; they design their own heating, ventilation, sprinklers, and practically everything else on the job; and are able to do



it, and do it well. Yet they fail in what we call architectural design. No wonder they say: "Are we right, or are they right?" Yet these people are in a position to go to our clients and say: "We will charge you 6 per cent. and design everything, from top to bottom. And, in addition to that, we will draw our details to such an extent that we can get you competitive prices for all these different things, and probably save you another 6 per cent."

Now, Mr. President-in-Chief, we have got to face the position. There it is. I think our universities should seriously consider the position. Here we have these men from overseas who spend possibly four out of their five years in becoming competent at these particular items, so that they can design them themselves, whereas our training, and the English training, is such that they only get a smattering of these things and have to depend upon the consultants. Which is the better course?

I know there are exceptions. I can quote Sir Edwin Lutyens, for instance: an architect in his position will charge 6 per cent. on the whole job, including the services of every consultant, and yet do nothing but the architectural design. In the case of so eminent an architect you might find every drawing is signed by some consultant, but he is in a position to say to his client: "Take it or leave it." But can our young men, as they come out into practice, do the same thing?

I mention this because we have got to face the facts. The engineers know the position. One of the problems we are having with the engineers now, in connection with what is known as the Omnibus Registration Bill, is that they want this whole position straightened out before they can do anything. Whether it is advisable that the curriculum of our universities should be altered to the extent that we can turn out our architects capable of doing these things, is a point well worthy of consideration. In view of all the criticisms we as architects get, we have to ask ourselves: "Is it necessary to spend four years out of the five of our existing courses in attempting to design modern buildings, yet neglecting efficiency in regard to 75 per cent. of the work involved in such buildings?"

It is a sorry state of affairs, Ladies and Gentlemen, but the position is there, and we have to face it; and I felt justified in referring to it as a side-issue in connection with this paper.

Mr. Angus Stewart (Johannesburg): Mr. President-in-Chief: I am more than pleased that Mr. Powers has read into Professor Gropius' method the same implications that I have done, namely, as stated by Mr. Powers, is it not developing into more of a science than an art, with regard to architecture? This limitation of the purely scientific approach has been efficiently dealt with by Mr. Sinclair. I agree with the remarks of Mr. Powers, Senior, relating to the difficulties of the young architect who has just left the university. We all know what they are.

With regard to Mr. Howden's statement as regards engineering, I think the architect should be a master of structural engineering. I do not think it necessary for him to have a detailed mechanical engineering knowledge, such as lift-engineering, etc. But for the full expression of his art, he must be able to build. This is not impossible, if one bears in mind the achievements of the Renaissance. Consider the dome of Florence Cathedral, designed by Brunelleschi, where the loads are resolved scientifically, and the structure finds its fullest expression in its final architectural form. And finally, the architect should be, above all, an artist.

Colonel G. T. Hurst (Durban): Mr. President-in-Chief: There are one or two

small questions I would like, through the Chair, to put to Mr. Howden. How can an architect, during the course of his pupillage, or even after, be expected to become a consulting engineer, a lift-engineer, an electrician, an air-conditioning engineer, a structural engineer, a reinforced concrete engineer? How can he, during the time he is learning his job, become proficient in those subjects?

Mr. R. Howden: I can only say they do so on the Continent.

Mr. H. J. Tanton (Port Elizabeth): Mr. President-in-Chief: I feel that the decadance of the profession is due not so much to commercialism as to the moral standards of the profession as a whole. I believe the greater part of this trouble and problem can be checked from within the profession, to a large extent, by people being absolutely honest with their fellow-men. I mean in practice. In theory, we have it, but nobody seems to make a conscientious effort to put things right.

I feel one of the greater difficulties in our way is that we have not got full recognition and protection under the Act: as a result, our problems become intensified by the unqualified men being allowed to prepare plans. We find these persons all over the country. A lot of them employ unqualified assistants, the majority of whom are under-paid, and we find them competing with the profession in attempting to prepare plans for these building companies. That is a serious evil for the profession.

I feel some effort should be made to co-operate with municipalities to obtain protection against the passing of some of these plans. I would like to refer, without any prejudice, to the swimming bath mentioned by the Mayor in his speech yesterday. With all due respect to the young man who prepared those plans, he is still trying to pass his Final Examination under the universities. In one way we are not protecting these young men: in this particular case he would not draw the fees which an architect should be entitled to.

I feel, as I have endeavoured to show, that the decadance we complain about is largely due to the lack of protection we get from the Act, which allows building companies to benefit from the people who are "pirating" our work. Possibly one direction in which we could rectify the trouble is by raising the salaries of some of these men, to protect them, or by making examples of certain cases where the profession is being exploited.

Professor L. W. Thornton-White (Cape Town): Mr. President-in-Chief: I should like to refer to Mr. Howden's statements. I do not think he has got his facts altogether clear. I do not think there is anything to fear from the foreigner. The man who comes to this country with a diploma from Delft, for example, which is a fully recognised diploma in Holland, has had six years' training. A Doctor of Architecture has had the best part of ten years' training. I do not think it is possible anywhere to get a doctorate under nine years.

There is nothing to stop a student of architecture, after five years' training here and obtaining a Degree in Architecture, spending an extra year in becoming proficient in the general question of building equipment. Even in his five years' training he gets a pretty high standard of engineering education; higher in this country than in any school in England, for example. So that I do not think we have anything to fear from the foreigner coming here with this pseudo-engineering knowledge—a real knowledge in very rare cases.



I feel that a part of the present confusion is due to engineering and architecture being completely misunderstood. For example, if we treat structural engineering as a skeleton which is to be trimmed with architectural trimmings, which are not an integral part of the scheme, then we are getting architecture into an entirely useless position. We are not teaching that sort of thing now; we are teaching architecture and structural engineering as an integral whole; architecture as a structural conception—not decorated by the columns and cornices and what-not, which have no structural reason. There is, especially in the minds of members who have got a little out of touch, perhaps, with the universities of the present day—I must be quite frank—a lack of knowledge about what we are doing. I hope, as one of the outcomes of this Congress, that many of the older members will deliberately come and pay visits to the universities and really find out what we are doing.

Mr. F. Owen Eaton (Port Elizabeth): Mr. President-in-Chief: One of the big dangers threatening the profession, and tending to eliminate the architect and quantity surveyor almost entirely, is the growth of these building companies. These companies are now in a position to finance the project from start to finish, and the tendency is for them to grow. We know they include an architect, quantity surveyor, structural engineer, a lawyer, and probably an accountant. Some of these companies are so well organised that they will put up a most attractive proposition: they will build the place for you, let it on lease, with the option of purchase, and so on. And these companies do not necessarily put up poor buildings, or not give value for money.

As I see things, that sort of development means a very real danger to our professions, because it means a tendency towards the employment of fewer architects and quantity surveyors.

Mr. J. Seaton Hodge (Johannesburg): Mr. President-in-Chief: Although the title of the paper only mentions architecture, I feel that, as quantity surveyors form a part of the profession as well, I should like the paper to be considered from the point of view of quantity surveying also.

First of all, I would like to say how much I appreciate the Central Council throwing their meetings open to the members of the profession who are not official delegates. I do not quite know what is the correct procedure as to how one can refer, in a meeting of this nature, to what transpired at the Central Council meeting; as to how much of it is regarded as private and confidential. I would like to have a ruling on that point.

The President-in-Chief: Just carry on, Mr. Hodge: if you go too far, I will correct you.

Mr. J. Seaton Hodge: I presume I can make some reference to some of the information we heard. Mr. Howden, for instance, has mentioned the point of view of the engineer. I want to mention the point of view of the quantity surveyor. I feel that engineers and quantity surveyors look at the architect in the same way. We want to help the architect all we can, but the architect does not do all he can to help us. In the few years I have been in practice, I have done my best to assist all the architects I have worked for. On the other hand, certain architects try to get out of their obligations when they have a quantity surveyor on the job, to a large extent,

Now in view of what took place at the Central Council meeting, some of us have been given the impression that certain architects do not care a snap of the fingers whether we are combining with them or not. That seemed to me a very extraordinary attitude, and one which I do not think can possibly promote confidence between architects and quantity surveyors.

I submit that we are vitally essential to each other. You can't get away from it. How far engineers are vitally connected with the architectural profession is for the architects themselves to decide. But architects have realised how quantity surveyors form part of their profession by agreeing to the quantity surveyor being recognised as a separate professional man. I understand that, on the question of "Clause 3 (c)," which will come up later on, the position of the engineers will be discussed. I do not want to overlap on Item 14 of the agenda, dealing with final accounts and so forth, but that really comes into this as well.

The question of architecture tending to become a decadent art is, in my opinion, very largely due to the reasons Mr. Howden has put forward. And are not quantity surveyors tending to become commercialised also? It seems that it is the younger members who take the initiative in bringing these problems forward. At the last Congress Mr. Norman Eaton and Mr. Grinker brought forward certain problems they saw, as young men; and I have done the same, as far as I was able, in our own Chapter, at one of our General Meetings, in an endeavour to see what was wrong with our own profession. And to-day we have another young man, Mr. Powers, doing pretty well the same thing. So apparently it is the younger men who most keenly want to tackle these problems.

Mr. Stewart mentioned yesterday that we should be very grateful to the older men who have established our profession. I cannot say how deeply, and sincerely, I feel the same way: we owe a tremendous amount to the older men who have put our profession on a good footing. (Applause.) But, on the other hand, it is a very great disappointment to the young man who has qualified himself fully, and does his work sincerely and honestly, if he does not get support in the profession. It is, I repeat, a very great disappointment; and the young man does not know what to do. He does not know whether he dare get up and say what he thinks; in some cases he is afraid to.

I know we have got unprofessional conduct regulations, but nothing seems to be done by the Central Council about enforcing them. Is it perhaps because they cannot? The result of this Congress will be, as you said, Mr. President-in-Chief, yesterday, that a better spirit will perhaps prevail later on in our professions because of the discussions here.

Now, in connection with quantity surveying, I don't want to go into details of why I consider quantity surveying may, to an extent, become commercialised as well, because that is a domestic matter for the Chapter.

But I would like to mention the extent to which quantity surveyors are allowing salaried members to be employed in builders' offices. I hope it will be clear from what I said yesterday that nobody more strongly advocates practical experience than I do, but I think there is a limit to the way in which we should allow our profession to be used by the builders. (Hear, hear.) I think that is something that has to be very seriously considered by the profession.

I would just like, in passing, to make a reference to Mr. Bjorkman's paper, which will be dealt with later. It may happen that final accounts will be prepared completely by builders. I only mention that as perhaps one aspect of the threatening decadence of our profession. These accounts will be submitted by qualified quantity surveyors in builders' offices; and we cannot say that they are wrong.



Another point I would like to bring forward, in reference to the decadence of the profession, is, what is the position of firms who open branch offices in different towns and allow these offices to be controlled by men who are not members of the Chapter or the Institute? I don't know whether there are many cases like that, but I have heard of one or two. Is that sort of thing going to promote confidence in our profession on the part of the public? I do not suggest that there is anything wrong with the ability of the people controlling those offices; in fact, it is quite possible that some of the men who may be controlling branch offices may know a lot more about the profession than some members. But is it in the best interests of the public, and of our professions, that work should be turned out, under the name of the quantity surveyor or architect concerned, who may be far away from the scene of operations, with no control over what takes place?

Mr. R. F. R. Day (Cape Town): Mr. President-in-Chief, Ladies and Gentlemen: Whilst I agree with the last speaker, to a very considerable extent—that there is a lot of room for improvement in both professions—I do not think the tendency should be encouraged to consider them as two different and thoroughly distinct professions. I feel if we could approach our difficulties in a better spirit, jointly, we would get very much further. I appreciate that there are quantity surveyors who do their job of work, but I feel that, under present conditions, 90 per cent. of the battle lies with the architect. It is for that reason I say that, if quantity surveyors would find some way of assisting us in combating our real difficulties, we would get very much further; and I can assure them that their efforts would be very much more appreciated.

In view of all that has been said, rightly, about the encroachment of our profession by building companies, etc., I feel that quantity surveyors do not sufficiently appreciate that it is we, as architects, who have to get the work, and maintain the ethics of the profession. As the quantity surveyors are, to a very large extent, dependent on us, I do feel we are entitled to much more co-operation. From that point of view I hope that the Central Council, through its propaganda medium, will succeed in finding some way of co-ordinating our joint efforts, and I can assure you the architectural profession would very sincerely appreciate it.

Mr. Sinclair spoke very ably on the decadence of art. Most of us, I am sure, feel the same way about it—or did. I say that because, although by no means an old man, I feel that one tends to view things much more broadly after some years in the rough and tumble of actual practice. I think we have all been through that phase. I am afraid it is a very difficult thing to say that art is actually decadent; to a large extent it is a matter of taste. It is a phase we are passing through; a transitional stage.

The Victorian era, for instance, that has been referred to, reflected in its art the life of the people. Art, literature, music, architecture, painting—all the arts must of necessity reflect the life of the people of their particular time. To-day, again, the machine age art is being reflected—and probably much more beautifully than when the motor car first came out. You remember the first, very ugly, mechanical contraptions.

Again, I feel that to-day art has been commercialised, as applied to mass construction. Take the motor car, the telephone, furniture, or even such a thing as female dress: there you have a reflection of the outlook of our time, which may be purely transitional. From that point of view I feel we should be a little more philosophic; we will not then feel quite so badly about it. The people who are handling these matters—the architect, the commercial artist, and the rest—are doing their job fairly sincerely. We must admit that there is good and bad in everything.

There are other contingencies, however, which must also be considered; and not the least amongst what I call "the other contingencies," which directly influence art, is the client. We must remember it is our job to serve the client. He is paying us. We cannot just hand in an idealist solution of his particular problem. That might not suit him. There I feel the architect must be something of a salesman; and the more powerful he is, and the more excellent his qualifications, the better the results must be. There is no use decrying the fact that one client insists on a particular style of residence, and another client, another style, which we might not like. It is our job to be versatile. There is no use saying: "That is not the honest, aesthetic solution of your problem." We have got to give the client what he wants, and we have got to be competent and able to do it properly. We must not allow it to be said that architects, old or young, are not capable of handling any particular style thoroughly well. Surely our primary object is to serve the public. I feel if we were to concentrate on that aspect of the problem, we would be a very much more popular profession than we are to-day, if we were to recognise the client's rights and needs, and consider them honestly and sincerely.

Reference has been made to the "octopus" system. That, I regret to say, is very serious. Perhaps the most serious aspect of this particular form of competition is that it is creeping into the industrial world as well as into the domestic world. If anything, it is probably more serious in the domestic world, because we all start our practice with domestic work. These people are buying up large estates, and in Cape Town particularly it constitutes a very serious form of competition with our younger members; they feel it very keenly, because they have to bear the full brunt of this competition.

It is particularly serious because of the new technique between the construction companies and the agents or brokers. The broker no longer has to waste his time taking clients round to various sites and talking to clients; he simply introduces the client direct to the construction company.

That type of commercialism is what we have got to combat—where professional work is being seriously and effectively diverted from what we consider the proper channel. I do not know how we are going to do it, but I hope the Central Council's propaganda campaign will to a very large extent help. As far as larger work is concerned, I do not think we have so much to worry about, because there are very few business people who would consider going into a large building venture without competitive prices, unless some excellent reason was put up. And that is where the specialist services of the architect is so important: the architect must be regarded as the man who safeguards the client's investment, as the consultant who, amongst other things, prepares the drawings and documents on which competitive prices can be obtained.

There is infinite scope for propaganda on these lines. That, I feel, is our best solution. We must face the position now and do something to combat what seems to be a world-wide tendency. And particularly should we be active in preventing the defacing of the beauty of our towns in what is a young and virile country.

Mr. A. H. Honikman (Cape Town): Mr. President-in-Chief, Ladies and Gentlemen: I do not think any of us can disapprove of the general tenour of the paper read to us this morning by Mr. Powers. Its very nature demands an attentive ear. None the less, the profession of architecture must keep abreast of the times. It cannot become—and we must prevent it from becoming—divorced from the highly commercialised world in which we live; and it is to be expected, therefore, that our profession, like most others, has adapted itself, or is in the course of adapting itself, to the prevailing conditions,



Mr. Powers, on page four of his paper, has asserted that, with the advent of commercialism into the profession, "It would appear that the modern architect becomes only responsible for the proper and convenient assembling of the various arts, upon which his designs are built up, and he thereby ceases to be the creator." I do not entirely agree with this statement, because no commercialism can deprive the architect of his main function—that of the planner, the co-ordinator of the various units or departments that go to make a building—as distinct from the co-ordination of the various arts, engineering and scientific features, that form parts of the building.

It is perfectly true, however, that commercialism has made certain inroads into the profession, to the detriment of the profession. These I briefly referred to yesterday, and I shall not dwell on them again. Suffice it to state that they are problems in themselves, and demand our consideration; but they are relatively small, and surely do not justify the assumption, or the fear, that architecture may become a decadent art.

Mr. W. Gordon McIntosh (Pretoria): Mr. President-in-Chief: I also would like to thank Mr. Powers for his paper, which has produced a very wide discussion, from which we ought to learn a lot. Listening to the various speakers, I do feel that we have something to do, ourselves. As the Vice-President-in-Chief mentioned, commercialism is a thing which is coming in rapidly: I am afraid it is far wider, and very much more powerful, than we really know.

While agreeing that it is something that we must adapt ourselves to, I do maintain that, as architects, we must not prostitute our profession. We are definitely confronted with a problem which we must consider from within. If world conditions have changed to such an extent as to bring this condition within our midst, then surely we must adjust ourselves, in the best way possible, to try and counteract it. It would be a most difficult problem to attempt to adjust these vast forces outside.

Mr. Owen Eaton and other speakers stressed the way in which certain building concerns have sprung up, and are tending to develop, the result of which is that the work of the architect, the work of the quantity surveyor, and the work of the engineer, for that matter, are being diverted. Now what is there in the services which these people render to the commercial world for those conditions to have sprung up at all? I feel we must answer that question to realise how we have to adjust ourselves.

That reminds me of the points mentioned by Mr. Howden—the various engineering problems to which we now have to adapt ourselves. Why shouldn't these engineering problems be considered from within the profession? There, again, Mr. Norman Eaton's big point of co-operation comes in. And, as Professor Thornton-White said, it is possible for the architect to begin to specialise in these branches. Surely our universities are now able to provide that post-graduate education, apart from pure architecture, which will allow our members to specialise in various branches of engineering?

And, strictly speaking, they are not branches of engineering: they are part of our duties, but they have become so wide and varied that we ourselves, I feel, should be able to establish, within the profession, specialists whom we could employ. And if the question of fees on these other items is controlled within the profession, and if we have that co-operation which we all desire, I feel that is one way of meeting the problem.

In regard to smaller works—houses and so on—I do not wish to enlarge upon Professor Pearse's theme of the Small House Bureau, which has been established, or is in the process of being established, in the Transvaal. We do hope, from the encouragement which we have received from outside sources, that this may help to overcome the difficulty in regard to housing

on a small scale. We all realise—although the trouble hits us younger people most severely—that this question of housing on a large scale is something entirely new, and that we must seriously tackle the problem. Professor Pearce brought back this idea from America, and we have tried to proceed with it: we have almost completed our preliminary regulations for the scheme.

We can understand that, in this involved housing question, where people now wish to have their own homes, they cannot all under these conditions pay full fees, but, spread over a number of schemes, the cost to the individual can be reduced and brought within his means. That is one way of helping. But I still feel that it is the question of professional co-operation which we must stress: we must tackle our problems from within.

Mr. D. S. Haddon (Johannesburg): Mr. President-in-Chief: There is just one point I would like to make. I think this discussion has been altogether too pessimistic. In brief, I feel that the architect, and architecture, can never die, because until the building exists in the brain of the architect none of these other problems can arise. (Applause.) There can be no engineering problem, no sanitation problem, no air-conditioning problem, until the first conception of the building itself exists in the brain of the architect. (Applause.)

For that reason, I think we are being far too pessimistic. We will win through to being the benefactors of humanity, in good town planning and good building, because of the architect's essential place in the nature of things.

Colonel G. T. Hurst (Durban): Mr. President-in-Chief, Ladies and Gentlemen: As one who has known Mr. Powers from his boyhood, I would like to congratulate him on his paper. It has been provocative, but the discussion has brought forward a number of helpful points. He has endeavoured to show us, to use a definition I have heard, "architecture is music; quantity surveying is a useful sound; and engineering is a necessary noise."

Mr. F. W. Powers (in reply): Mr. President-in-Chief, Ladies and Gentlemen: I realise that my paper is a provocative one, and, in view of the discussion we have had, I hope it has served its purpose. I had made quite a number of notes to reply to, but I think the other speakers have done that for me. Thank you all very much for the hearing you have given me, and the interest you have shown in my paper. (Applause.)

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# FINAL ACCOUNTS, ESTIMATES, PROVISIONAL SUMS, AND P.C. ITEMS.

B Y A X E L A . B J O R K M A N

Mr. President and Gentlemen,

Let me say from the outset of my remarks that I shall endeavour to deal with my subject from the viewpoint of better service to our clients. I feel that a tremendous lot of work passes our door because the service we render to the building public is not all it could or should be.

In order to attain this object I consider that the first big step to take is that of creating helpful propaganda within our two professions. Success in this way would result in a certain amount of constructive propaganda spreading outside the professions. I have chosen my subject in a genuine attempt to improve these matters.

I shall strive to be as brief as possible and to neglect the many side issues connected with the items I wish to discuss. Whether my presentation appears to be good, bad or indifferent is really not of such great importance, but what is important is that those in authority should do something concrete and constructive to remove some of the ills which I honestly believe are slowly but surely prejudicing our professions.

It is unfortunate that in my subsequent remarks I may seem to be attacking the methods and procedure of the architects, but you must forgive me since I am speaking as a quantity surveyor who believes that the first step in rectifying our troubles lies with the architects. While admitting that many things in the quantity surveyor's dominion can and require to be rectified, I feel that whatever we do is of little practical value without the lead coming from the architectural profession. Our profession has arisen because of theirs, and confusion in their profession reverts unpleasantly to ours.

## FINAL ESTIMATES

I shall deal with this item first since it is, in my opinion, the most important. Most of our troubles culminate with the preparation and settlement of the final account. It affects all the parties concerned, namely, the building owner, the architect, the quantity surveyor, the builder and the various sub-contractors. Yet somehow the subject never seems to be brought to a more definite method of procedure in every-day practice. I suggest the following are some of the causes of the complications

that arise in practically every building contract. I have at the same time suggested what, in my opinion, would be a way or ways of reducing the difficulties to a minimum if not in some cases resulting in the complete eradication of these evils.

(a) Preparation and Completion of Working Drawings.

The architect's work is at times not fully prepared and is often incomplete at the date of the signing of the contract or the commencement of building operations. Insufficient time may have been devoted to the preliminary preparations and subsequently the drawings are rushed out for the quantity surveyor's use, at times without dimensions and description.

It is argued that in these busy days there is very little time at the architect's disposal, but he should advise his clients that it is in their interests to have everything thought out and developed and completed before proceeding with the construction of a building project. The client should be advised that the quantity surveyor cannot do his work thoroughly unless the drawings are complete in every sense of the word. Time properly spent before the issue of working drawings and bills of quantities will be saved during and after the contract period by the architect, quantity surveyor and contractor.

I may say here, Gentlemen, I believe that the trouble does not always lie entirely with the client. In some cases the architect fails in his duty and obligation towards his client by rushing out the work with a minimum of preparation simply because he perhaps is understaffed or because he may accept more work than his facilities allow. No professional man should ever accept more commissions than he can fairly undertake to complete to the best of his ability.

(b) Specifications.

The lack of proper detailed specifications is one of the greatest causes of our troubles. Time and again we get contracts in which no specification has been issued either before or after the quantities are prepared and not even after the contract has been let. For my part I cannot see how the natural order of things can be changed, namely, sketch plans, then working drawings, then the specification, and finally the quantities. This is a sequence which, if disarranged, must lead to confusion. I am not one of those who advocates that the quantity surveyor should write the specification, as is often done. If the architect cannot write his own complete and detailed specification for any reason whatsoever then, if this work is passed on to the quantity surveyor, it should be done before the bills of quantities are prepared and not after. When the surveyor has finished the specification it should be submitted to the architect for his approval and if necessary to the client for his acceptance. The specification must agree with the working drawings, and the bills of quantities must represent the



fulfilment of both. I maintain that without a specification :

- (i) The building owner does not know what he is going to receive since a proper specification will tell him exactly what is prescribed to complete his building project, while the bills of quantities will tell him very little in this respect.
- (ii) The architect may have no satisfactory record of what is required or intended, and may at times be compelled to revert back to the client, quantity surveyor or contractor for information in this respect.
- (iii) The quantity surveyor is often left to use his own discretion and where information is lacking to "take something" that will cover the anticipated cost of what is likely to occur! The quantity surveyor is supposed to measure what the architect specifies and not what he thinks he wants. While on this subject, there is hardly any need for me to remind you that the architect is paid for writing a specification.
- (iv) The contractor and his foreman are also at a disadvantage without a specification. It means an unfair struggle from the very beginning. This struggle is even intensified where the architect subsequently issues a specification in conflict with the bills of quantities. In fact, this often proves to be one of the main sources of the complications that arise in many contracts.

It seems there is a tendency for the architect to pass the writing of the specification on to the quantity surveyor, and this move will not be rejected by the quantity surveying profession, provided the conditions, as outlined above, are rectified and a proper working basis arrived at which will prevent some of the troubles that now exist.

(c) Architect's Verbal Instructions During Preparation of Quantities.

My next point, namely, the verbal instruction, is a sore one with quantity surveyors. When preparing the bills we are given a great deal of information, regarding the requirements, verbally. Even if the architect cannot, for one reason or another, give the surveyor a specification, a great deal of argument and controversy could be avoided by the system of issuing instructions and information to the quantity surveyor in writing, either in detail or in the form of specification notes, or other form of information chart. The surveyors must strive to convince the architects of the value of "written instructions." While considering this matter there arises another from it. Architects or clients often make verbal or even written agreements with contractors, without referring to the quantity surveyor. The result is that it can and does happen that, had the items in question been dealt with by the quantity surveyor on schedule rates, the price would have been different—usually cheaper. I cannot understand this

inclination of some architects to ignore the quantity surveyor and the bills of quantities. Except in exceptional cases there is very little that cannot be settled by measurement and adjusted on the basis of the bills of quantities. After all, that is one of the reasons for having bills of quantities!

(d) Rough Detail Drawings.

Another source of trouble is that of the fairly common practice of issuing the quantity surveyor with rough, or incomplete, details. These details are often quite sufficiently advanced for the surveyor to obtain his measurements and information from, but their completion is left often until required during the course of the contract. It is then that they are at times redrawn, changed or otherwise developed without consulting the original details perhaps still in the quantity surveyor's plan file. The completed revised details are issued to the contractor, but the surveyor may hear nothing until the contractor complains of shortages and errors. If the new details create a saving, or are otherwise in the contractor's favour, he may or may not point out the difference. If he does not, he really cannot be blamed and, in any case, the onus is not on him to do so.

(e) Amended Drawings.

In extension of what I have said in connection with details, it is necessary here to mention the practice of some architects who alter and amend their working drawings during the course of the preparation of the quantities, or while waiting for the delivery of tenders without notifying the quantity surveyor either at that time or subsequently, in the form of a variation order. No surveyor can object to these alterations whether they are made by the architect or desired by the client, but he certainly can object when no notice is given of such alterations.

I maintain it is the quantity surveyor's business to measure what he is told to measure and what has been authorised to be paid for, and it is not his business to act as a detective and pry around a building on hands and knees or up ladders and scaffolds looking for extras or omissions.

(a) Variation Orders.

I now come to what has developed into a "hardy annual," namely, the vital matter of "variation orders." I am confident that every quantity surveyor would welcome the advent of a proper system of issuing variation orders on all contracts. I think I am right when I say that there would be hardly a contractor who would not be literally overjoyed to undertake a contract under such conditions. The very questionable method of giving verbal instructions, often without even issuing a revised plan or detail where such is necessary, is probably the biggest cause of complaint.

It has been said that the builders should insist on variation orders for every item, and that they should



refuse to carry out the work until they get this authority. Individually they are helpless in this matter, but an agreement between the bodies concerned can fairly easily be made effective. For some reason or other the architects, on the whole, seem to be reluctant to issue variation orders to the builder and quantity surveyor, not because of their dislike of, or disbelief in, the use of same, but because of an unnecessary hesitation in using their authority and the fear of the client blaming them for ordering "extras." If the architects will not accept this responsibility then who is to accept it?

(g) Issue to Quantity Surveyor of New or Revised Drawings.

This last point brings me to another matter, already partly dealt with under sub-heading (e) of this item. I refer to the custom of issuing the new, revised or amended plans or details, to the contractor or his foreman without, at the same time, issuing a duplicate copy to the quantity surveyor. If the quantity surveyor is to complete his final account within a reasonable time after the completion of the contract, it is necessary for him to receive such revised or new drawings at the time they are given to the contractor, and not after the contract is completed.

(h) Contract Drawings.

Gentlemen, I now come to what in my opinion would be one of the easiest and yet best methods of preventing disputes over variations, and one which would tend to reduce the number of variations. I suggest it should be made a compulsory condition of the contract that the builder must be supplied with a duplicate copy of the drawings supplied to the quantity surveyor for the purpose of preparing the bills of quantities. This duplicate set must be verified and signed by the quantity surveyor, stating that the drawings agree in every respect with his own set. These drawings should be given to the contractor at the signing of the contract. The position would then arise that upon receipt of every subsequent "working" drawing or detail, the contractor or his foreman would be in a position to compare the drawings and see immediately whether or not a variation was involved. If in the case of extras only it was pointed out to the architect that an "extra" was involved, we would see some reduction in the number of variations.

(i) Co-operation between the Professions.

I shall now end my discussion on the matter of final accounts, and I suppose there is no need to state that the main trouble, as I see it, is lack of co-operation between the two professions. What I have said, if you accept it as an honest review of the position, should have convinced you on this point. But besides co-operation between our professions, it is necessary for co-operation with the builders. We cannot progress without a mutual understanding with the contractors. I venture to say that upon the

success of our attempts to create a better understanding between the three bodies, participating in what I regard as the greatest industry in the world, depends the future of both our professions and the building industry. If only some of the faults that exist, as I have outlined above, were removed or rectified we would make considerable progress and we would discover that a great deal of the buildings owners', architects', quantity surveyors' and builders' difficulties would disappear.

## E S T I M A T E S

Gentlemen, I have discussed the matters surrounding final accounts somewhat at length because of the vital matters affected by this subject. I shall not keep you long on the next two items. They do, however, warrant a certain amount of serious consideration. I shall deal with the question of estimates first. The all too frequent discrepancies between original estimates and final cost is a very serious matter and requires investigation. I tabulate for brevity some of the causes which I consider create this weakness in our professions :

- (a) The quantity surveyor's lack of method in keeping proper records of the various types and classes of building projects. In the case of the "cube system" of making approximate estimates, the whole method is based on a knowledge of the conditions and costs of previous similar schemes which have been erected. Unless a proper method of keeping the records of these previous contracts is maintained by the quantity surveyor his "cube" estimate becomes a mere guess or shot in the dark.
- (b) Lack of information at the time of preparing preliminary estimates and incomplete or vague sketch plans, often to a small scale and not always drawn to scale, create another source of inaccuracy in estimating. The architect may be unable to give sufficient details or information to the quantity surveyor to enable him to make a reasonably accurate estimate when at the sketch plan stage. The surveyor should not be held to estimates of this nature and the client should be advised accordingly.
- (c) The subsequent development and expansion of the planning, etc., when drawn to a larger scale or prepared for working drawings without further estimates being made, is an unforgivable error. Before the quantities are prepared the surveyor should make a revised estimate, if his original estimate was made from sketch or other incomplete plans. If the figures vary to any great extent the architect must be advised before the quantities are prepared. When the drawings are enlarged and details prepared it often happens that a great change takes place in the types and development of "finishings" generally, such as panelling, doors, mural ornamentation, enrichments and fittings.



When the preliminary estimate is given it should state as briefly as possible exactly what has been allowed for various items and also, if possible, for what items the estimate does not include if any ambiguity exists.

- (d) Finally, after the quantity surveyor has completed his bill, he should price it through at current rates and see if the total agrees with his previous last estimate. This priced bill estimate should form the final check estimate upon which he should expect to give some definite reliance. If the figure at that stage is too high for the client there is still time to do something about it instead of discovering the position during the course, or at the end of the contract, to everyone's dismay. We constantly hear of complaints from the Provincial authorities, and from private owners, because of faulty estimating. The solution of this problem is not a very difficult one, and I firmly believe that with proper attention to the matter it could be almost completely eradicated.

#### PROVISIONAL SUMS AND P.C. ITEMS

I now come to the last of my items for discussion. During the last few years there has grown an ever-increasing tendency to cover more items than are really necessary in bills of quantities by provisional sums and P.C. items, instead of measured and detailed quantities. I think that any surveyor who knows his work and who conscientiously tries to carry out the duties of his profession will agree with me when I say there is very little, if anything, which cannot be measured and described sufficiently well to be priced by an experienced contractor. I submit that all of the following items are capable of measurement and should be measured in detail for insertion in the bills of quantities :

- (a) Steel windows and doors; (b) Steel reinforcement; (c) Steel structural work; (d) Steel or other fire escapes; (e) Iron or other balustradings; (f) Wood block or others types of wood floorings; (g) Doors of all types and makes; (h) Marble and similar finishings; (i) Sanitary fittings; (j) Hot and cold water supplies; (k) Fire services; (l) Gas supplies; (m) Patent finishings or construction; (n) Shop fronts and heating ducts.

Yet, Gentlemen, if you look through the average bill of quantities you will find that, in some cases nearly all, and in other cases all of the above items are put in as provisional sums, and in the case of items like doors, wood block floors, asphalt coverings, etc., P.C. amounts are inserted in the description of the item even where the quantity is given, creating in effect more provisional sums.

To my mind the whole question depends on the ability of the architect to supply the quantity surveyor with proper detailed drawings of the various items. I consider the system of provisional sums and P.C. items to be a pernicious one, and one to be discouraged as much as possible. I

need hardly tell you here what the Master Builders think of it. As far as the client is concerned, I honestly think it is not in his favour, despite the fact that some people argue that it is advantageous to the client. I maintain that, in honest open competition, the contractors are in a position to get keener and fairer prices for specialists' work than are the architects. The contractor, in any case, is forced by the conditions of his contract to take the full responsibility for these sub-contracts, and he should, therefore, have the privilege of pricing all such items when submitting his tender.

I take this opportunity of stating very emphatically that this "provisional sums" question has been the main cause of the rumours of disintegration that are breathed abroad concerning our two professions, and concerning also the Association of Master Builders. A warning must be given that herein lies the greatest danger to ourselves and the Master Builders. The arrival of the specialist cannot, nor need be, prevented, but on large contracts it is essential to have one control, one central organisation, one responsible person, and these things vest in the contractor.

This matter is also connected with the lump-sum or cost-plus-profit contract which looms ahead. I am quite convinced that, properly developed, it is possible to obtain methods of measuring and describing any of the abovementioned items for insertion in the bills, and which would prevent anything but the desired class and type of material going into the building. The Public Works Department succeed in doing this, together with the assistance of the "sample to be seen at, etc." system, and it should be a reasonably easy matter for private architects and surveyors to do the same thing.

I say once again that if the provisional sum system obtaining to-day is not quickly stifled it will swing back like a boomerang and hit the professions and the Master Builders a serious blow.

#### G E N E R A L L Y

This brings me to the end of my three principal subjects for discussion. Before closing my remarks I would like to take this opportunity of mentioning one or two matters of general interest. The work of the two professions, while closely linked, requires to be carried out by separate professions if progress is to be maintained. Architecture and quantity surveying are each in themselves "full-time" jobs, and cannot be done properly by one person or firm. Both professions have an unlimited scope for advancement, and to combine the professions would be a retrogressive step.

In this connection I must censure those surveyors who join architects' offices either on a salary basis or in partnership. Such cases retard the evolution of both professions. Until the quantity surveying profession stands one hundred per cent. on its own legs it will not progress as it should.

The two professions must welcome every opportunity to improve their relationship with the Master



Builders. Co-operation with the builders is as important as that between the professions. The whole system, as it at present exists, depends to a large extent upon its acceptances by the builders generally. We must endeavour at all times to give attention to the suggestions of the builders. They, after all, are the people with the practical experience, and their troubles are, in many cases, ours as well.

I have spoken on these lines with a vision of the future before me. I believe in evolution, and this makes me have faith in the evolution of our professions and the evolution of the great building industry, which has always indicated, and always will indicate, the progress of man.

With these remarks I close my paper, and thank you for a patient and attentive hearing.

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## DISCUSSION ON MR. BJORKMAN'S PAPER

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The President-in-Chief, I would like to thank Mr. Bjorkman for his very clear paper. I know he has been an interested listener to our deliberations during the past few days : it must have made him very happy to feel that we, as a Council, have definitely tackled one or two of the outstanding items in this paper. The paper is now open for discussion.

Mr. W. Gordon McIntosh (Pretoria) : I would like to congratulate Mr. Bjorkman on the concise and clear way in which he has put his points to us architects. Perhaps it is too much to have hoped that these difficulties could have been put to a meeting such as this by an architect, and not by a quantity surveyor ; possibly it requires someone outside the profession to see these points more clearly than those within.

In regard to many of the points raised, he has struck the nail on the head. While I do not entirely agree with him on one or two points, I feel the paper as a whole is well worth considering carefully. I feel that architects, perhaps in their rush of work, have not given full consideration to the initial preparation of their work ; and that, again, has probably led to many of the quantity surveyors' difficulties. At the same time I think it has probably increased the architects' own difficulties ; particularly when it comes to supervision. I feel it is far easier for the architect to supervise his work if his drawings and specifications have been prepared at the right time.

I agree with Mr. Bjorkman when he says that the quantity surveyor should not write a specification. I cannot see any reason at all why the architect should not write his own specification. The procedure which has apparently been adopted in certain cases is, I feel, one which should be deplored.

Mr. Bjorkman has taken exceedingly great pains to present his case, and he has done so very clearly ; and I feel that if architects would pay careful attention to some of the points made, they would improve their own work at the same time.

Mr. Ernest M. Powers (Durban) : I also would like to congratulate Mr. Bjorkman on his excellent paper. The first portion of it has caused me considerable misgiving ; in fact I wish to condole with him on the architects because of whose shortcomings apparently this paper had to be written. I am really astounded to hear that members of my own profession leave the writing of the specification to the quantity surveyor. I have never known of an architect submitting drawings to a quantity surveyor without a written specification.

I am sorry that the architectural profession is to be involved because of reference to "certain architects." But I can assure you, Sir, that it is a great surprise to me to learn that "certain architects" do not supply information asked for. I fully appreciate that the author of this paper is sincere in his complaints, and I hope the matter will be gone into very carefully by means of a joint meeting of the two professions.

With regard to provisional sums being included in bills of quantities—a point I have discussed on the Central Council—I quite agree that the number of provisional sums should be reduced to a minimum ; but I do not entirely agree with the items that have been mentioned. I do not agree because of very painful experiences in that respect. The author says, "I



maintain that, in honest open competition the contractors are in a position to get keener and fairer prices of specialists' work than are the architects."

The expression "keener and fairer prices" is the cause of the whole trouble. It is these "very keen prices" that contractors get from specialists, or so-called specialists, that are the cause of many of the architects' troubles.

If an architect wants a certain thing, and he knows that that article can only be supplied by first class firms—if he obtains estimates from those firms, and puts in a provisional sum, the architect gets what he wants, and what he expects to get. But in cases where a contractor is keen to get the job, and you get these "keen prices" we have found that the manufacturer cannot produce to the standard required; and when these things come on the job the trouble starts. I could quote a number of instances in actual practice. The sum and substance of it is that if you want a good article, you have to pay for it; if you accept a cheap price, you usually get what you pay for.

With the rest of the paper I am heartily in agreement.

Mr. W. A. McKechnie (Johannesburg): Mr. President-in-Chief, I also would like to congratulate Mr. Bjorkman on his excellent paper. The difficulties referred to by Mr. Bjorkman are experienced by a number of quantity surveyors in their daily practice. As mentioned by you, Mr. President-in-Chief, the Central Council has already discussed most of the items dealt with by Mr. Bjorkman, and if a serious attempt was made to rectify these difficulties it would do a great deal to bring about a better understanding between the two professions.

Mr. R. Howden (Johannesburg): Mr. President-in-Chief, I think most members are aware that I am one of those architects who believes in the two professions being entirely different and separate, but at the same time I cannot altogether agree that the system adopted has been the most successful one.

Mr. Bjorkman states, "If the architect cannot write his own complete and detailed specification for any reason whatsoever, then, if this work is passed on to the quantity surveyor, it should be done before the bills of quantities are prepared, and not after." Then, on page 11, "In this connection I must censure those surveyors who join architects' offices either on a salary basis or in partnership."

Now in 1900 I was in Sir Herbert Baker's office, and I never saw a more ideal arrangement than existed at that time. Mr. Baker (as he was at that time) imported a quantity surveyor, who took off the quantities; and this quantity surveyor—who is well known throughout the country—contended that the proper time to write the specification was after the quantities were taken out, and not before. He never wrote a specification until after he had taken his quantities out. And this quantity surveyor was in the office of Mr. Baker not only doing quantities, but writing specifications; he did all the variations, he wrote the certificates, and so forth.

Now, although that is in opposition to the present system—the system that I advocate to-day—we can't get away from the fact that it was a unique and a most satisfactory arrangement. I submit you have got a similar arrangement in the P.W.D., whose organisation, to my mind, is as near to perfection as is humanly possible. You have got your designing department, draughtsmen's department, consultants—from reinforced concrete down to drainage, and everything else; you have got your specification writer, and you have got your quantity surveyors, all practically on one floor. And from what I know of them, they are continually in each other's offices, consulting each other.

That is only an instance, on a much larger scale, of the system that I found in Mr. Baker's office. It is remarkable that the younger men in the quantity surveying profession to-day have got it into their heads that there is only one right way—their way. I can assure Mr. Bjorkman that the system in Mr. Baker's office was, to my mind, infinitely better than the system that is adopted to-day.

Another point I am keen on is specified bills of quantities. I see you smile, Mr. Chairman, but I am still keen on it. Quantity surveyors will persist that the only way is to have a properly written specification before they take out their quantities; but I submit it is much easier for a quantity surveyor to do without a specification altogether. It is much easier for the clerk of works; much easier for the builder; much easier for everybody concerned, to have no specification whatever.

I am in favour of specified bills of quantities, with a description attached to a particular item specifying where it is going. Why all the voluminous descriptions that you find in a modern quantity surveyor's bill of quantities?

I don't see that the specification helps at all: Quantity surveyors can argue with me as much as they like, but if I were a quantity surveyor I should infinitely prefer taking off quantities from draft specification notes than I would from an architect's specification. To go through an architect's specification you have to fumble through page after page to find out where a particular item is, and what it means; and no two architects write the same specification in the same terms.

I am convinced that it is much easier for a quantity surveyor to do a specified bill of quantities without a specification at all, than to demand these voluminous specifications from the architect. I am not contending that the system of architects having a quantity surveyor in their office is the correct system, but at the same time there is the other side to the question, which I have endeavoured to point out.

Mr. F. Williamson (Johannesburg): Mr. President-in-Chief, while I also would like to congratulate Mr. Bjorkman on his paper, I feel he has produced the ideal case for the quantity surveyor. I have never known a better case put up, but from an every-day practical point of view, I am afraid it is Utopian. I almost wish some architect would write a similar paper on the ideal conditions under which an architect should work—if such exist.

If the architect could only do what Mr. Bjorkman has asked him to do, and if these conditions could prevail, then the quantity surveyor's would be one of the most delightful jobs in life: he should be capable of handling a £100,000 job every month, without any qualms. But the architect, on the other hand must perforce struggle with his client long before the building has come into being; during the progress of the work; and for possibly many months afterwards.

I am afraid there one or two rather important points in Mr. Bjorkman's paper which are contradictory. While I, as an architect, naturally accept certain of the trouncings he has handed over to the architects, as being reasonably correct, at the same time I find it very difficult to reconcile the remarks he makes under "Generally," to the effect that, in his opinion, the two professions should be entirely separate. I am afraid I cannot agree with Mr. Howden in his remarks on that point. I personally am of the opinion that the ideal conditions are that the architect and quantity surveyor should be in the closest possible touch during the early stages of any building project. I think architect and quantity surveyor whenever possible should be appointed simultaneously, and that, in the client's interest, there should be intimate daily contact. One frequently finds that the quantity surveyor, having got out his bill, has little or nothing to do with the job for many months, or until handed information by the architect in order to settle up the job.



I feel that procedure is wrong; more particularly so to-day. I feel that in many ways the old system of "architect and quantity surveyor" had many advantages over the system that obtains now. I do not at all agree with Mr. Bjorkman on this matter of partnerships. I personally believe—and in saying this, I do not mean to be rude—that the correct position for a quantity surveyor is on a stool in the architect's office, working cheek by jowl with him. Under those conditions only could the client expect to get the best services from both professions.

Things may not be all they should be between the two professions; there may be cleavage somewhere. And when one finds a man of Mr. Bjorkman's keenness and thoroughness, expressing himself as he does under the item "Generally" here, I feel one has to look for the reason. Unfortunately, I am entirely in disagreement with him on many of those points. On the one basic point, however, I am with him: I personally would like to see a much closer co-operation as between architect and quantity surveyor; and in saying that, I feel that quantity surveyors are possibly to blame in trying to dissociate themselves and their profession from that of the architect. I feel that, in the interests of our clients, the architect should insist on the fullest service being given by the quantity surveyor—in the early sketch stage, right through the progress of the work, and to the final completion. From that point of view, I would urge a much closer co-operation between the two professions.

Mr. J. Seaton Hodge (Johannesburg): Mr. President-in-Chief, I had not intended to speak on this paper. I agree largely with what Mr. Williamson says, and Mr. Howden. I agree with a lot Mr. Bjorkman says, as well, and I wish everything could be done as put down here. Further, I agree with what Mr. Howden said, that the system used in the Public Works Department is the ideal one. I wish we could have that; but my own experience in practice does not lead me to believe that it is really practicable.

Judging by my own practice, it is not the custom of private architects to give the quantity surveyor a specification. I am not complaining for one moment. I feel, with Mr. Howden, that I don't need to be spoon-fed with a specification to do my work. I don't think it is necessary at all. I think what we should do is what Mr. Williamson says: work together as closely as possible right through the whole of the job.

I do not agree that the professions should be combined. I still maintain that we should have our separate identity. I do not think it is really an economic proposition for a quantity surveyor to work on a salaried basis in an architect's office. That is not the best solution to the difficulty at all. The older firms who are in the habit of preparing their own bills of quantities will, of course, continue to do so, but that system is, I feel sure, as far as the younger firms are concerned, largely dying out. I think an architect who has a sufficiently large practice to be able to keep three or four quantity surveyors in continuous employment, is certainly running his practice in the best way by employing quantity surveyors. I happen to have assisted one or two firms who worked on that basis, and although I am an independent practising surveyor myself, I can see the advantages attaching to that system for very big firms of architects. But not all architects have such enormous practices. We must consider the architects who have smaller practices. The quantity surveyor can perhaps employ four or five assistants and do the work of a dozen different architects—of the smaller architects, we will say—and he can get the work done for the architects very much quicker than they could, if they chose to employ one quantity surveyor themselves.

I feel specified bills of quantities are largely the solution. In my own practice that is what I adopt. I have found that is the most practicable way out. Writing a specification after bills of quantities are done—that is a bluff and a waste of time. The correct thing is to specify those bills of quantities.

Sometimes it is very hard indeed to find the time to put in the specified notes before the actual bills are finished. I have found it a terrific strain to get those extra few days in order to get the specified notes in. It is really a very difficult thing because the architect and owner are usually at that stage in a tremendous hurry for the bills of quantities; and I have found that in some cases it has been impossible to actually get the specified notes in, especially with complicated types of jobs, and a separate list has been issued containing the specified notes.

I have been told that that system is employed in Cape Town. I feel, as Mr. Howden says, that specified bills of quantities will help our troubles a great deal.

I would like to ask for a little more co-operation from the architects during the course of the job. Mr. Williamson mentioned that, when the quantity surveyor has finished his bills of quantities, he has nothing more to do with the job until the final account is prepared. That is true, and that is the unfortunate thing about the whole position. That is where the lack of co-operation exists between the two professions. If only the quantity surveyor was consulted during the course of the job; if only the architect would come and ask us about the variations, we would not have all this trouble we are having with final accounts.

The builders are making representations about the final accounts, and they have gone so far as to suggest that our fees should be with-held; in fact at the last Builders' Congress, as most of you will know, one of the leading builders in the country—I spent three years working for that particular builder—stated that he considered it was a grave mistake for the quantity surveyor to be paid his full fees when the bills of quantities were completed; they should be with-held until the final account had been settled.

I maintain that that attitude is not really correct. It is not altogether the quantity surveyor's fault that final accounts are held up. We are not given information during the course of the job. I think the remedy lies in the direction of more co-operation with us on the part of architects.

Mr. H. J. Tanton (Port Elizabeth): Mr. President-in-Chief, I would like to defend my profession on this question of writing specifications. I maintain a well-drawn up set of drawings is all that a quantity surveyor needs, barring the initial items of a specification; and therefore I do not think they can claim, as a profession, that the architect rather "lets them down."

If I may speak as an architect "without portfolio," as it were, but having had experience in several London offices, and in South Africa, I think a good deal of the trouble lies with University-trained students who may have an inadequate appreciation of detailed working drawings. Apparently they send off 1/8th scale drawings to the quantity surveyor, and then they come back to the poor fellow in the office who is an external student, who has to do the particular detail in relation to the quantity surveyor's interpretation of what the architect might have in mind.

I feel we should start working out our full-size and half-inch details before we ever get to working drawings—although I realise it is not always possible. I also realise that a good deal of the trouble arises from the client himself, who is in a terrible hurry for the delivery of the goods. But isn't it also our fault for not being outspoken with clients? We are inclined to pander to them, instead of telling them that the job cannot be done properly if it is rushed.

On the difficult question of P.C. sums, we also, in this part of the country, have a number of problems—which I would like to go into detail about; but



I hope it will be possible for the profession to settle this matter with the master builders.

Mr. Arthur Wood (Cape Town): Mr. Chairman, I have been in the quantity surveying profession for 25 years, but I never saw a specification until I came to South Africa. Personally, I detest them. I think they are a waste of time. I much prefer to go to my client and discuss the thing with him in the early stages of the job, as suggested by Mr. Williamson. You learn what is at the back of his brains, if he has any. If he hasn't, it's unlucky. But generally speaking, you find they have something at the back of their heads.

I am convinced that tabulated notes and a chart are infinitely preferable. I can tell you of a typical experience a little while ago, with an excellent specification: the foreman would not look at the specification; he preferred to look at the quantities. In my opinion a specification is nothing more than padded padding; the system of tabulated notes and charts is infinitely preferable.

Mr. T. Moore (Pretoria): Mr. President-in-Chief, I also wish to congratulate my colleague, Mr. Bjorkman, on a very well-thought-out paper. On the other hand, I have to disagree, very vigorously, with what Mr. Hodge said.

On the question of specifications, whilst in practice by myself, irrespective of a partnership, I only once received a specification for the work I was doing. In every other case I had to write the specification after preparing the quantities.

Mr. D. S. Haddon (Johannesburg): Mr. President-in-Chief, I would like to move that this discussion be closed. I move that we leave this discussion and think this paper over.

On the Central Council I have had a great deal to say on this very question: I have not said very much at this Congress because I think we are developing an amicable spirit. I want to say here that the quantity surveyors and architects must meet in the near future—at least the leaders of the professions—and come to finality on these difficult matters of practice. It almost appears that every individual architect, and every individual quantity surveyor, has a totally different idea of how a practice should be conducted in a commonsense way.

I just want to make these remarks in order to bring the discussion to a close, because I feel that no further good can be attained now, and we may only become bitter in our discussions. (Applause.)

Mr. Axel A. Bjorkman (in reply): Mr. President-in-Chief, Ladies and Gentlemen: I am sorry my paper has produced so many hornet's nests. I did not come here with the intention of making any enemies; my paper was not written in any spirit of antagonism. I simply sat down one day and wrote what I felt, honestly, of my experiences, and of the experiences I know other quantity surveyors have had. Despite the denials of some of my good architect friends, these things have happened, and we have come here to face the facts,

When I first looked over my paper, I did feel a bit anxious lest architects would perhaps think I was criticising their work too severely, and perhaps their profession. But I did it as a quantity surveyor, honestly. I am not blaming architects entirely: I blame the quantity surveyors just as much. They have allowed these things to grow.

My point was that the first step must come from the architects; that we can only follow, because our profession follows theirs in every way. What I am after is the good that will come from the co-operation which we are all agreed is so necessary. (Hear, hear.) It seems in some cases the cap has fitted. I spoke candidly; my statements are frank; and I hoped to provoke a healthy discussion.

I cannot reply to you all, but there are one or two points I would like to deal with. First of all, I very much appreciate what Mr. McIntosh, as an architect, said. Then, in reply to Mr. Powers, he apparently thinks I must have met some terrible architects. Well, this paper must not be taken as a reflection on any architects with whom I have had dealings. It is not a personal attack on anybody that I have met in practice. I have written about things that happen to various quantity surveyors. It is because these things happen that I say, "Let us get rid of them!"

Then Mr. Powers does not agree in regard to provisional sums. I am sorry, because I am very strong on that point. My firm does quantities for three bodies, the Johannesburg Municipality, the Transvaal Provincial Administration, and the Public Works Department, and we have very few provisional sums. That difficulty can be got over. The P.W.D., for instance, get over it: why can't private architects and quantity surveyors? On that point I would like to say that I feel there is a good deal in Mr. Norman Eaton's suggestion of a central building in which we could have samples of everything that architects want. I think the answer to Mr. Powers' point is that there is nothing that an architect cannot get on a job if he describes it.

Then in reply to Mr. Howden: mine was a quantity surveyor's opinion. I am afraid his wasn't. I don't want to go into the differences between young men and old men except to say that there is a progress of time. Things change, and we change with them. Are we to be influenced, to-day, by what happened many years ago? I think anybody can introduce a make shift: I think that is all it comes to. I hope we have passed that stage and are progressing to a proper basis of working for both professions, for the benefit of both. We have to work together. I must go to architects' offices, and get information and advice, and make suggestions and assist, and all that sort of thing. I am not denying that. But I disagree that the one must be in the other's office; I feel that that results in certain things being done which would not be done if both were independent. I say we must be on our own legs; the architects must be on theirs, and we on ours, and we must work together; but not in the somewhat unfortunate way Mr. Howden suggested. He referred to the P.W.D. methods. They are good methods. Why can't we have the same methods? It is by no means impossible to bring these things into practice, especially if Mr. Norman Eaton's suggestion can be brought to actuality.

Then there is one very big point I want to deal with: I seem to have raised a hornet's nest in connection with the word "specification." When I speak of "specification" I mean "information." It is information that I am asking for, as a quantity surveyor, which I say is not always available. I am not after the old-fashioned "specification," full of padding; I am after information as to what he and his client want. The architect is interpreting his client's requirements to the best of his professional ability, and that is what I want. I don't want to have to guess; I don't want "the usual," because it may not turn out right.

With regard to Mr. Williamson's remark about "Utopia," he seemed terribly surprised about what I have outlined in my paper, that such things should be



happening. I don't think it is an Utopia at all. And with regard to his astounding statement that, if we had the conditions which I have outlined in my paper, a quantity surveyor could get through a hundred thousand pounds' worth of work a month, I can only say it seems to me Mr. Williamson does not know what takes place in a quantity surveyor's office. The P.W.D. can't do it, in spite of the admission that their system is so good.

Finally with regard to the question of specified bills of quantities, I maintain in big jobs you simply cannot give decent specified bills of quantities. It becomes too unwieldy. With the small jobs you can. But that is not the way out. We should have either a brief specification or a tabulated list or chart, giving all the various finishings, etc. We don't want to guess: it is the guess that causes the trouble with the final accounts. (Applause.)

Mr. Norman Eaton (Pretoria): Mr. President-in-Chief, I am sorry that the discussion on this rather important matter has apparently been stopped, before it was found out whether Congress had anything more to say. I should have liked to have spoken on this paper.

The President-in-Chief: I am sorry you raise that point at this late stage, Mr. Eaton. However, as most of the items under discussion must be considered by the Central Council, Mr. Eaton will certainly have his opportunity there. In view of the lateness of the hour, and the fact that we still have several items on the agenda, I am sorry that Mr. Eaton won't have an opportunity of expressing himself in public.



B. Lightfoot

H. H. McWilliams

F. Williamson

Mrs. & Mr.  
Bjorkman.

T. Moore.

Mrs. & Mr. Arthur Wood  
and Master Wood,

# ARCHITECTURAL EDUCATION AT NON-UNIVERSITY CENTRES

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B Y C . H . N . M E R R I F I E L D

Mr. C. H. N. Merrifield (Port Elizabeth): Mr. President-in-Chief, Ladies and Gentlemen: What I have to say to-night is not in the nature of a paper on this involved subject; it represents rather some thoughts which we have collected together with a view to promoting a fruitful discussion at the end of my remarks.

The problem of architectural education at non-university centres is one which we consider requires the immediate attention of the Institute and the sympathetic constructive collaboration of the universities.

In Port Elizabeth it is becoming increasingly apparent that, while the Act provides for the establishment of courses culminating in the M.I.A. qualifying examination for admission to the Institute, the existing machinery does not adequately meet the needs of the non-university centre.

It is not possible to deal comprehensively with the problem in detail here; this aspect can properly be left to the Standing Committee on Architectural Education.

What we are concerned with here are the principles which should govern the organization of such local facilities as are available and the examination of students resident in centres lacking the full university course.

The essential objective should, we suggest, be the achievement of a standard of training for these external students reasonably comparable with that to which his more fortunate counterpart resident at a university or in a university town may attain.

This must be achieved if the profession of architecture in South Africa and the M.I.A. qualification or certificate for M.I.A. registration is to attain the significance and respect it is intended to hold for the public, and justify, by a high standard of training, the rights and privileges it confers.

Under the present system this is not possible.

The existing facilities are so inconsistent—that is, between the two classes—that, while it is possible for the external student to pass the qualifying examination, it is open to very grave doubt whether he is really adequately equipped to justly claim the right of practice he acquires by doing so.

From experience here the present system works in the following way. There exist two purely architectural



evening classes held under the aegis of the technical college. They are architectural design and history of architecture. For the remaining subjects the student has to attend classes in the technology department for such tuition as is available. These have no architectural bias, the courses being framed to suit the National Technical Certificate syllabus for building construction, theory of structure, geometrical drawing, etc.; the sanitary inspector's examination for drainage, sanitation and hygiene, etc. Ground not covered by these courses, or subjects for which there are no classes in the college, are covered by private study. The reason for this is, of course, that the number of students is so small that a complete or specialized course in all subjects cannot be provided by the technical college.

It must be remembered that all these classes are held at night, and therefore the student has very little leisure to cover the preparation and reading of which he stands in need to amplify and complete the tuition he receives.

In the circumstances a very detailed and comprehensive syllabus, giving a list of recommended text books, a course of reading, and general instruction as to the scope of the course, is essential.

The unfortunate student, however keen at the commencement of his studies, finding his path beset with so many difficulties and lacking knowledgeable oversight, either falls by the wayside—in some cases a happy consummation; goes to a university as a result of advice from those of us who are sufficiently cognisant of the position to realise this to be the ideal solution; or, lacking the necessary means, degenerates into a student of past examination papers, with gargantuan architectural meals in short and intensive bursts culminating in the examination, and, last but not least, a violent attack of mental indigestion during which his mind eliminates a mass of unassimilated and chaotic facts.

It is in the cause of this latter class that we submit the problem for your consideration. From the viewpoint of examination results—that all-too-frequent criterion—no doubt all would appear to be well; but if nothing is done to improve the facilities or examination procedure, it must ultimately have very serious results upon the standard of statutory qualification recognised in this country. Our aim should surely be to shape a course which will not only gradually improve the opportunities of non-university students but will, for this class, remove so far as possible—in common with the modern university system—the disadvantages and abuse to which the practice of determining a candidate's qualifications solely by examination is subject.

Now with regard to the opportunities. This, of course, with the need for financial subsidy, is primarily a matter for the centres concerned. I do not think we can look to the universities for assistance in this respect. I do not think we have any claim upon the Institute. It is purely a domestic matter—a



very vital one—but one which, frankly, I can see no real solution to; I can see a certain distance along the road, but I think a great deal of co-operative effort is necessary before we can solve this problem. If any of you are able to suggest ways and means of coping with this lack of financial backing, as it were, we shall be very glad to listen to you in the subsequent discussion.

Unfortunately at the moment no similar scheme of collaboration is possible between the technical colleges and universities, such as that existing between the University of the Witwatersrand and the Natal University College; and the small numbers of students, apart from other difficulties, would seem to preclude this for a long period. No doubt the time is coming when some of these obstacles will disappear, but we have to deal with the immediate future.

Another aspect which deserves the serious consideration of the profession is the establishment of a strong scholarship fund to assist the promising student of slender means to a university education. This we consider should be the settled policy of the Institute, not only as a domestic matter, but through its members seeking to enlist the sympathy of public-spirited citizens in this worthy cause.

With regard to the present, we urge the immediate necessity for amplifying the syllabus in careful detail, as I have already suggested, and the introduction of a preliminary test for students desiring to write an examination.

Firstly, we suggest they should be required to submit their note books and studio work for certain subjects as evidence that they have covered the prescribed course of study, with possibly an oral test to follow conducted by local examiners. For design they should submit either (a) a prescribed minimum of subjects which they have completed during the year, or (b) an equivalent number of testimonies of study. Possibly, as alternatives, these requirements would meet the needs of all cases. But this matter of students remote from university centres resolves itself, I think, into two classes: those who have some facilities, and those who have none at all. For those who are remotely situated, the immediate difficulties in their path are many, and I think the "Testimonies of Study" would have to be applied.

Only if he satisfies the authority of his fitness in these preliminaries should he be admitted to the examination.

This procedure, we consider, has much to commend it. The student knows definitely what is expected of him and also has some objective in the course of study he has to traverse. There can be no short-circuiting. It would, moreover, materially improve the attitude of mind in which the student approached his task. It would remove the examination obsession as the end to be achieved, above all

other considerations, and make for an appreciation of the real purpose of his labours: that he may become a worthy member of his profession, practising with assurance that art to which his certificate entitles him.

This, very briefly, is a statement of the problem and a general indication of the direction in which we think a solution should be sought. And we sincerely hope that from the ensuing discussion substantial progress will be made toward meeting the needs of the non-university centres. (Applause.)

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## DISCUSSION ON ARCHITECTURAL EDUCATION AT NON-UNIVERSITY CENTRES

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Professor Thornton-White (Cape Town): Mr. President-in-Chief: Perhaps it will facilitate the discussion if I say, at the outset, that during the last two days I have been talking this matter over with Mr. Merrifield, and we have arrived at a constructive suggestion, on which we mutually agree, which will form a possible basis of work for the future.

Unfortunately, owing to difficulties of time and space, I am here without my notes and papers; but I will try and summarise the matter briefly. The real difficulty, in a centre such as Port Elizabeth, is to achieve a constructive means of application which is not a mere "swotting" for examinations. The same difficulty used to exist in university centres. We have got over this difficulty in university centres by having as few examination papers as possible. In place of examination papers, as a major part of the training, we have an inspection of the student's complete works for one year. That presupposes that the whole of a student's work during a year is carefully planned to lead him through a definite, progressive series of architectural experiences.

To give an example: We will see that he has the opportunity of designing and constructing—preparing working drawings and so forth—for a building for one man; a building for one family; a building for a group of families; and so on, through each phase of architectural work. At Cape Town we have this fairly carefully worked out for some 14 or 15 major experiences of that sort, which a student must go through in his five years of training.

As we have this already worked out, the suggestion—which has met with Mr. Merrifield's approval, and his colleagues'—is that we should issue these programmes of work not only to our own students, but also to the students in non-university centres such as Port Elizabeth.

There were initial difficulties in this idea, because I had to go to my Faculty in Cape Town and ask their permission for this to be done. We found immediately that there is no constitutional means of this suggested collaboration between a university centre and a non-University centre. Pressing the matter, I got as far as Cape Town agreeing that its Professor of Architecture, in a private capacity, should be free to make what arrangements he thought necessary with a non-university centre.

The effect of that agreement—a sort of "gentleman's agreement"—has been that we can now assist a non-university centre very simply and easily. Our suggestion, then, is that a detailed syllabus for the purely lecture subjects should be delivered to Port Elizabeth. They will then have not only examples of examination papers, but details of how we in a university centre cover the ground.

In relation to the examination papers part of the training, which is the lesser half of the training, there is no difficulty whatsoever. In relation to the studio work, that is, the working out of problems of design, and transferring those problems into full-size drawings and details, there is a difficulty. That difficulty can be got over by the university centre, at the same time as it furnishes programmes for studio work to its own students, also issuing them to the non-university centres. Then there is the subsequent examination by both internal and external examiners. Every student has his whole year's work examined by two internal and external examiners.

We suggest that the Certificate Examination in Design for non-university students, such as at Port Elizabeth, should be on exactly the same footing. Having to do these programmes of work, the Port Elizabeth students will have gone through the same practical experiences on the drawing board as the internal students. They should therefore be examined in exactly the same way. We give an oral examination in Cape Town on the year's work. I should think there will be no difficulty at all in delegating that part of the examination to the local architects in Port Elizabeth.

Port Elizabeth will then send to the university centre the whole of the year's work. It will then be officially examined, and the student will pass or fail according to the merit of the work.

This is a very workable scheme, and, I think, will both meet the wishes of Port Elizabeth and will certainly not transgress any university rules and regulations. I also think that it does not contravene, in any single particular, the spirit and letter of the Institute's regulations for the examination of external students. In other words, we have found a workable means of starting, on Tuesday next, a close collaboration between the University of Cape Town and the Technical College in Port Elizabeth.

So much for the academic side of the question. Mr. Merrifield, in his excellent introduction to the subject, mentioned the question of finance. I think that must be a local matter. I cannot see any possible means of financial assistance from the universities. The University of Cape Town is, as a matter of fact, and out of sympathy for the students, stretching itself—I have forgotten the word I wanted—rather a lot; but we are doing it entirely in the interests of the students. The responsibility is put, fairly skilfully, on to me, personally, and I am quite willing to assume the responsibility and see the thing through.

I think we can try this scheme out for a year, and perhaps report on the working, satisfactory or otherwise, of the scheme to the Standing Committee on Education. At the end of the year we shall have a very definite idea of whether the details of the scheme are workable or not.

To summarise the whole thing: nothing is altered in the Certificate Examination regulations. We do not alter them in any way whatsoever. Both Institute and universities trust their Departments of Architecture to conduct this examination. The only thing we are altering is the form of one examination. I think we can all agree that the new form is a much better one than the old.

Perhaps if I could describe what the old one was, and also what the new one suggested is, it would make the matter clear. The examination in question is the examination in design. Under the older system the examination for design, for example, of first year students, consisted of one paper: a small subject to be worked under examination conditions, in six hours. And that was all. Under the new scheme the examination will consist of the inspection by four architects—two members of the University staff, and two members of a Local Committee of Architects—of the whole of a first year student's year's work, constituting probably a dozen or more papers. In other words, it is a real test, not only of the student's ability, but an assurance that the student has gone through the experience of working out, during his year, a number of papers.

The new system is not a new system in Europe. It is a system that has been adopted by every single School of Architecture in the United Kingdom. It is a system which has the very fullest blessing of the R.I.B.A. I can see no difficulty at all in putting this system into operation on Tuesday next. (Prolonged applause.)

Mr. B. St. C. Lightfoot: Mr. President-in-Chief: While feeling that Professor Thornton-White has solved one problem—the problem of examining students in a centre like Port Elizabeth—the whole object of Mr. Merrifield's paper, as I see it, is to solve the problem of training the students, which, I beg to submit, Professor Thornton-White has not done.

I may sound like a renegade, because I am a university man myself, but I feel that we in this country are tending to suffer from "university-itis." There are bound to be a number of people, not only to-day, but in future years, who cannot afford to go to any university. It might be arranged, as was suggested, to have some bursaries—I don't know whether the Institute could afford one or two per annum; but you will still leave out a number of students who are unable to be trained or examined in that way.

As I see it, the one problem we have got to solve is whether we are closing our profession to people who cannot afford to go to a university, plus a few per annum to whom we can afford to give a bursary, or whether we are going to have some other method of training, not only in the outlying districts, but in university centres as well.

I submit that to-day still, in England—and I wish to make myself quite clear, that university training is the ideal: I am not attacking the universities at all; but still in England to-day you can qualify for the R.I.B.A. without ever seeing the door of any university or any recognised School of Architecture. And some of the greatest architects in the world to-day never saw the front door—or the back door—of a university. Have we any right coolly to say those men are no good? Yet to-day they could not obtain or reach the standard they have reached unless they went to a university.

I think we should still retain, even in university centres, some method, whether by "testimonies" or otherwise, such as is still run by the R.I.B.A., so that those who cannot afford university training can still qualify. And if the universities cannot take over that examination, then I would like to see the Standing Committee take it over. I feel that if a student can prove to any Board of Examiners that he is qualified to be an architect, or a quantity surveyor, we have no right, as a professional body, to dictate otherwise.

Apparently that is all that can be done in Port Elizabeth, at the moment, because finance comes into it. Professor Thornton-White, as I said before, has given us an idea of how to examine these students; but the only way to teach them is through the generosity of the qualified and practising members of both professions in Port Elizabeth to-day. By "generosity" I do not mean financial aid, but I mean giving up a great deal of their own time and in assisting to prepare some school or place where these students can come to work.

If they are merely told that, at the end of the year, if they produce a certain number of design subjects for the University of Cape Town, they will be examined and judged on those—that is of no assistance to these poor students, because there is no incentive to work, and there is little or no guidance. The only guidance and assistance they can get is through the time that their principals, as architects or quantity surveyors, are willing to give up to teaching them. And as most offices are busy in the day, it will all have to be, as I see it, night work. If they are willing to do that, I think that could be solved, and Professor Thornton-White has given us an assurance that the University of Cape Town can carry out those examinations for them. On that basis I think, if they can help to educate the students here, we can certainly arrange in Cape Town to examine them.

Having said that, I would just like to close by repeating, again, that even in centres where we have universities we should still have some other method of training and qualifying students for both professions. (Applause.)



Professor Thornton-White (Cape Town): Mr. President-in-Chief: May I indulge in a second effort? I was speaking previously entirely of the local problem of architectural education in Port Elizabeth. Mr. Lightfoot has, quite rightly, introduced the subject in its broader field. I referred to the broader subject in my paper on Tuesday morning, and I still hope that the Central Council will discuss the broader subject of architectural education in this country, in some considerable detail.

This evening I referred to the provision of programmes of work for Port Elizabeth. I did so in the full knowledge that the local staff—Mr. Merrifield and Mr. Tanton—were prepared to carry out the work suggested in those programmes. At the same time, the “Certificate” students in Cape Town will have exactly the same facilities. This is not a private arrangement between the University of Cape Town and the Technical College in Port Elizabeth; it is a principle which can be applied throughout the whole Union, if necessary. It is applied already to the external “Certificate” students in Cape Town—students who need not come near either the front or the back door of the university—students who take the external examinations.

Students, knowing that these facilities are there for them to take advantage of, are coming up, in what hours of the week they can spare, to take the amount of education their limited time allows.

This raises another point—the whole question of part-time education in such a centre as Cape Town. It is a point that I have been working hard on for the last two years. It is a point which came to a head only last week, when the Special Committee of the University appointed to consider this question thought they were going to come to final conclusions. The final conclusions which I hoped would come were defeated in a way entirely unexpected to myself. One member of the Committee said: “How many part-time students tried to register—or how many candidates tried to become part-time students in the University in the last registration period in March?” I had all the figures there. There were about 60 whole-time students, and only one candidate who wanted part-time education. The reply of that particular member of the Committee was: “Why are we wasting our time?”

That was rather a blow, because, having worked on a part-time scheme for two years, to be suddenly let down, as it were, by the candidates themselves, was a little ironical, to say the least.

I do not know how far the profession can help us in this matter, but I gathered from the profession that there is a demand for part-time education, yet, when I sit in my office the whole day, waiting for candidates to register, only one man comes along. And, of course, we immediately register him and give him what he wants.

So much for the general question of part-time education. I am beginning to think that the whole question of the “part-time student” and the “poor man’s son” is being rather over-done. I believe we have to get much closer statistics before we can take any further step. I would suggest that the Central Council should consider the possibility of getting some sort of statistics as to how many people at present in offices, or likely to be in offices, do require some degree of part-time education. Nobody knows yet what the possible field for external candidate education is. We cannot do it. We cannot send a man round to all the offices in the Union, to make a census of possible candidates. But I think perhaps the Central Council can initiate that census. At present we only have this one applicant as our only definite figure.

The President-in-Chief: Are there any other speakers, before I call upon Mr. Merrifield to reply? If not, I would like to say—although I felt that

the discussion on this particular subject could go on for some days—that what we have heard to-night has, at any rate, got the Local Committee here over its first difficulty. The points raised by the various speakers will, of course, receive the attention of the Central Council and the Standing Committee, in due course.

Mr. D. S. Haddon (Johannesburg): Mr. President-in-Chief: I think it is only due to Mr. Merrifield to record our thanks for his paper, and particularly for bringing to the notice of the Central Council the difficulties that exist in these local centres. Accordingly, I have much pleasure in proposing a hearty vote of thanks to him. (Carried, with acclamation.)

Mr. C. H. N. Merrifield (Port Elizabeth, in reply): Mr. President-in-Chief: I should just like to say how much we appreciate the efforts of Professor Thornton-White to help us out of this very difficult position in which we have found ourselves during the last few years. It is most encouraging to feel that the universities are prepared to concede so much help to these non-university centres. I fully realise the difficulties, and that is why I have a very sincere admiration of Professor Thornton-White's efforts.

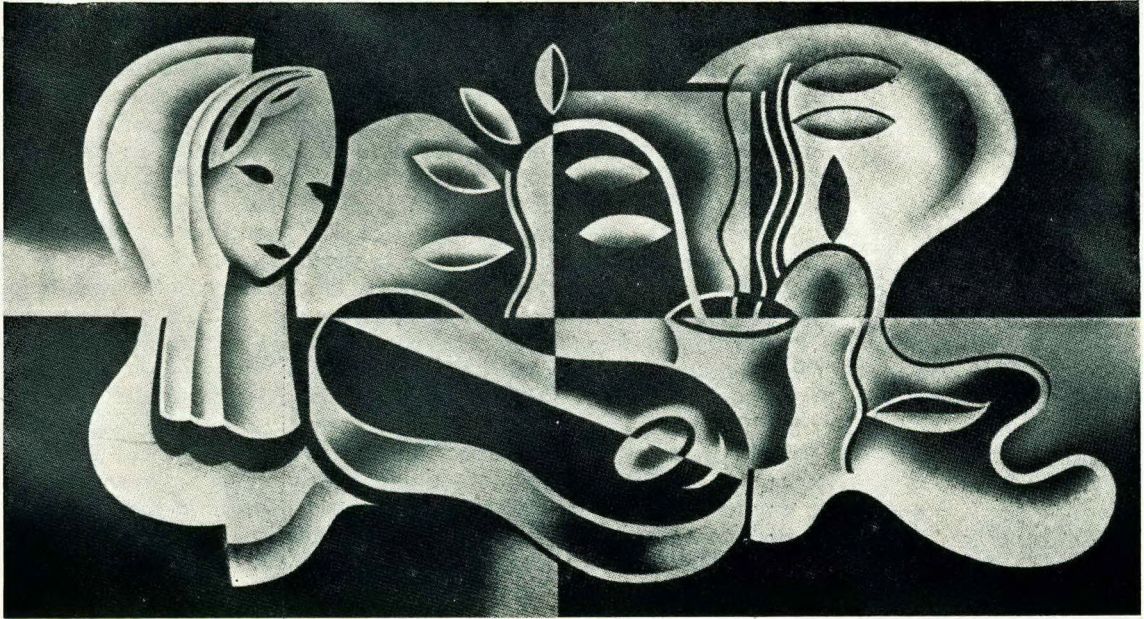
We realise, from the discussion this evening, that even a partial solution of this problem does involve a serious and material contribution by the local practising architect. Poor Tanton and I can't possibly hope to cope with the whole thing; we shall have to rely on other architects to give a helping hand.

I would like to assure Mr. Lightfoot that we do not lose sight of the student who has no facilities at all. We do feel that, with this new spirit of friendly co-operation which seems to be emanating from the universities, the help which the university can afford to even a student in a remote district, perhaps without any facilities whatever, will be very material. Perhaps in the course of time the external student will become extinct, but I think we must always bear in mind the necessity of leaving the door open to such students as are debarred from obtaining the fullest measure of training by attending a university, to achieve it by some other means.

I would like to thank you very sincerely for this opportunity of putting our case to you, and for your cordial response to it.

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DECORATIVE PANEL OF BLACK GLASS BY SIGMUND POLLITZER  
REPRODUCED FROM THE STUDIO

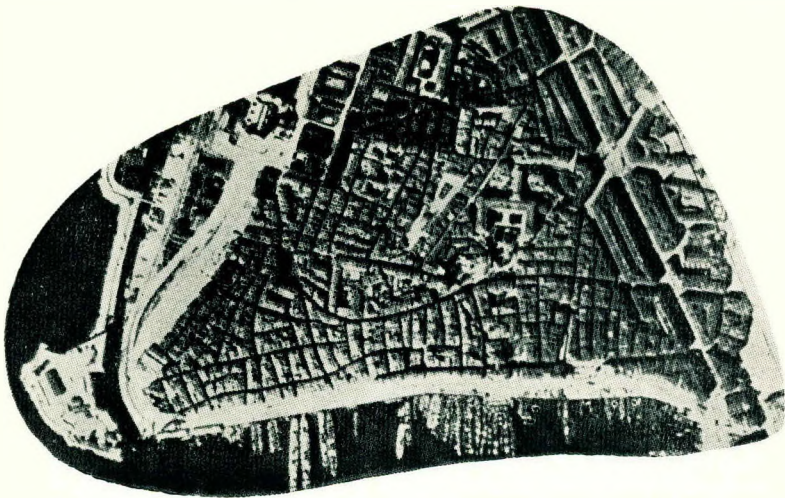


# CONTEMPORARY JOURNALS

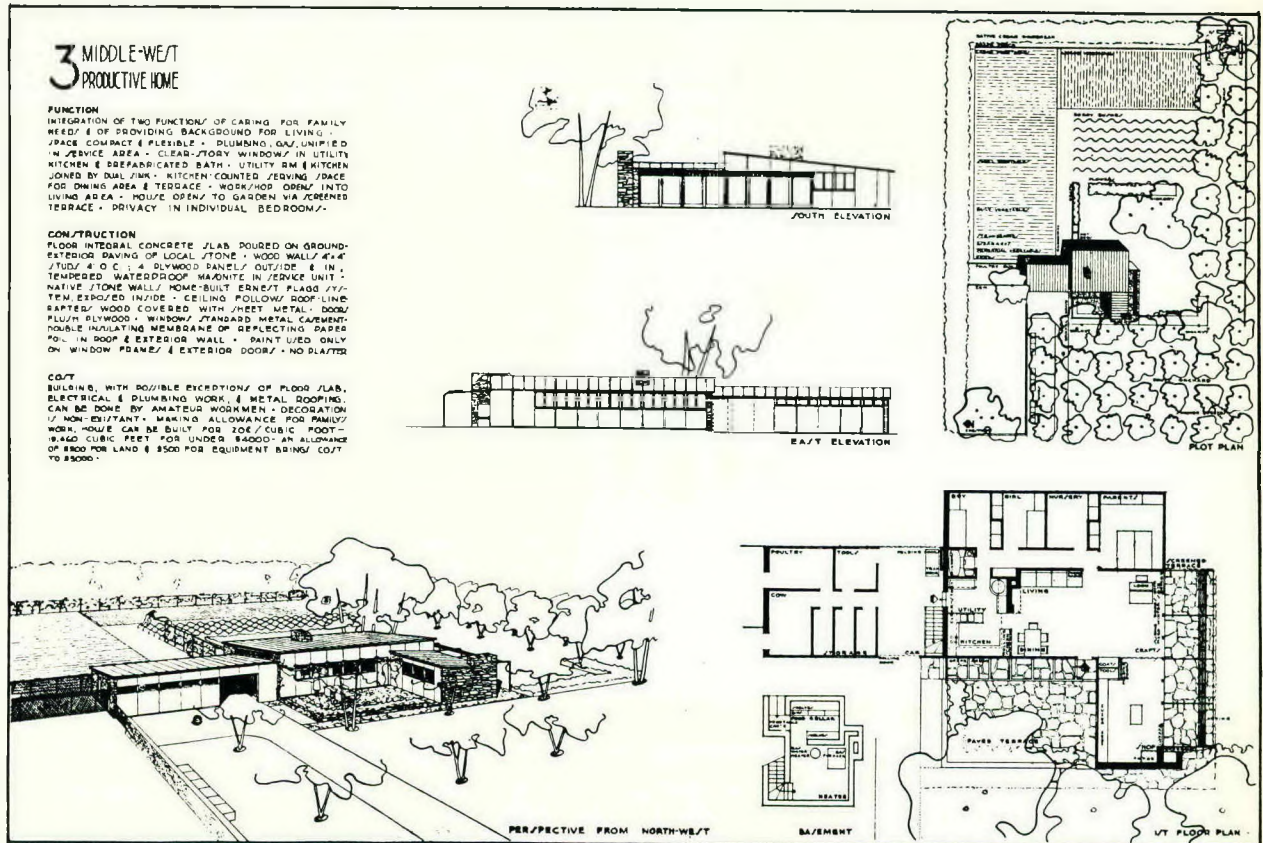
L'ARCHITECTURE D'AUJOURD'HUI Paris,

March, 1939.

The whole issue is given up to a survey of applied urbanism during the past twenty years in France and North Africa. No critical commentary is offered but an enormous number of photographs, diagrams and plans for development and controlled extension is collected in this issue. In the accompanying notes the following statement is made "If the development plans of many large cities are noticeable for their absence, it is because they have none, either due to the opposition of private interests or to the vague hope that their technical services by a day-to-day policy will be able to make up for the absence of the services of a qualified urbanist." Under the heading "THE UTOPIAS AND REALITIES OF URBANISM" it is suggested that the urbanists "are usually called to cure sick cities," and further "Urbanists should, then, if they wish their splendid profession to prosper, keep their dream projects for their personal use only, and apply themselves in all cases of real urbanism to finding reasonable solutions which can possibly be carried out as to money, as to time, as to space." The air-views of European cities which we commonly see to-day (and in this number of *l'Architecture d'Aujourd'hui* the view of part of Marseilles p. 24) force us to believe that only drastic reconstitution by means of "dream projects" will provide living conditions compatible with the state of technical, hygienic, and material equipment available to-day. The metaphor of the sick city is an apt one, but, the plea (on economic grounds) of patchwork surgery is only a very slight extension of the idea of a day-to-day policy of partial amelioration. The town that has become diseased must be examined as a whole, but it is the continued restatement of the problem as a whole that has given rise to the belief that the "Contemporary City" is only a dream of the future. The synoptic vision of le Corbusier has enabled him to analyse and state in practical terms the true constituents of the city, but apparently such Utopian (or classical) completeness lies beyond the comprehension of "prudent, methodical, capable and realistic directors."



A SECTION OF MARSEILLES



## PENCIL POINTS.

May and June, 1939.

An interesting set of competitive drawings for "Garden Homes" within commuting distance of an urban centre appears in the May issue. This competition was sponsored by four allied organizations (The Homeland Foundation, "Free America," The Independence Foundation and the School of Living).

The standards of general planning show a marked improvement on those of past years, and there is a significant freedom from the formula "safety in tradition." One scheme by a student of architecture is illustrated above.

The June number of Pencil Points has an article by T. F. Hamlin on the work of Sven Markelius the Swedish architect. Probably his best known work is the Concert Hall, at Hälsingborg, discussed and illustrated by Mr. Hamlin. Markelius more recently was responsible for the Swedish Pavilion at the New York World's Fair of which photographs and a plan are given.

One is grateful to the writer for gathering this material into a single paper (the Concert Hall was fully illustrated some years ago in the "Architectural Review") but it is difficult to agree with his comments on "eccentricity." The "almost wilful eccentricities" that he sees in Asplund's Stockholm Exhibition of 1930, and the "wayward" treatment of Markelius' Concert Hall vestibule are perhaps more deliberate than he imagines, and their idiomatic significance cannot be quickly computed from the standpoint of parallels in the United States. The complexity of the Propylaea at Athens, for example, is "eccentric" by comparison with the Parthenon, but its function of spatial transition necessitated "a departure from the obvious." Too long adherence to the obvious (when the obvious is an accretion of uncritically



accepted ideas) has been largely responsible for the sterility of American public building. The Swedish Pavilion at New York shows the lightness in general handling of the elements that Asplund so brilliantly established in 1930, but the plan does not attain the same degree of lyrical constructivism that characterised the Restaurant and Transport pavilions at Stockholm.



THE SWEDISH PAVILION



MURAL PAINTING  
BY OZENFANT

## THE ARCHITECTURAL FORUM.

May, 1939.

"Plus," the supplement periodically incorporated with the Forum, appears for the third time in this issue and consists of a stimulating group of articles. "Upon Beautiful Forms" by Ozenfant. "The Sunila Factory and Community" by Alvar Aalto, in Finland, "A Satellite town for industrial workers" by Sartoris and Terragni, and "Painting with Light" by L. Moholy-Nagy.

Amadée Ozenfant, who is now in England, was the founder of the Purism movement in Painting with le Corbusier, in 1918, and with the latter wrote *La Peinture Moderne* a brilliant work that included within its scope an estimate of such contemporaries as Juan Gris, Picasso, Léger, Derain, Braque, etc. Ozenfant's *Foundations of Modern Art* (Rodker, London, 1931) a complex survey that lacks the incisiveness and clarity of le Corbusier's writing displays nevertheless a sensitive mind and a questing intellect. Ozenfant appears to be painting very little at present and he does not seem to have moved far from the standpoint of a limited subjective classicism which he initially shared with le Corbusier under the banner of Purism. Le Corbusier has developed a free, vigorous, and to the traditionally orientated, startling technique which has a strongly anthropomorphic impulse. The pale colours and gentle rhythms that still occupy Ozenfant have given place, in his case, to a powerful and even violent polychromy, and an idiom that is at one and the same time intensely personal and widely extroverted. As far as one can judge at this distance Ozenfant stands for a static, isolated "purity" which shows a strong preoccupation with classical motifs and with the shapes established in domestic tradition such as those of vases, jugs and cups. Le Corbusier on the other hand has foresworn the limpid and limited, and in his large output of painting there is a vital demonstration of current activity translated into the pattern of the painter's medium. The ingredients of his work pour in from the outside world, he himself plays the dual role of a sensitive instrument of perception,



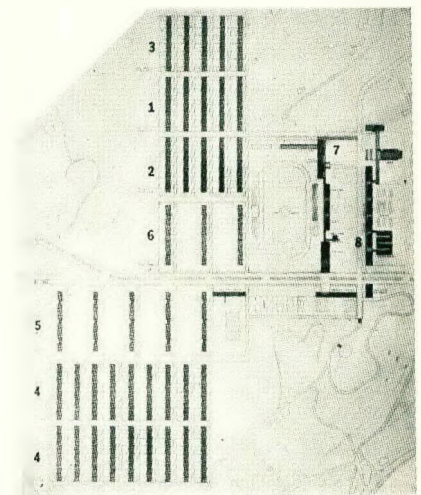
and a converting, co-ordinating, exponent of the forces that impinge upon him. Ozenfant's pronouncements in the Forum take the form of mild polemic, and although it is refreshing to see in illustration the shared quality of beauty in the egg, Freyssinet's hangar at Orly, a Greek amphora, an Ionic capital, a Bronze Age Cycladic sculpture, a Brancusi abstraction and a mural painting by Ozenfant, the statement of "a generative theme form" lacks starting point and direction. That Ozenfant feels acutely there can be no doubt, but the terms of his exposition leave us in doubt of the quality of his perception.

Alvar Aalto's Sanatorium is well known to architects, and his inspired articulation of elements in this fine building is a triumphant demonstration of the rationale underlying significant building of to-day. Plus illustrates (with a very short note) his new buildings for the Sunila pulp mill on the island of Poytinen in the South of Finland. The factory group is on the island of Poytinen and the whole of the housing for managers engineers and workers is on the mainland, where baths, shopping centre, etc., are provided. The scheme is an excellent lesson in freedom and co-ordination and the housing shows an easy congress with the natural surroundings.

The satellite town of Rebbio provides (on the outskirts of Como) for 1,429 housing units of two and three rooms with "community hall, theatre, church, kindergarten, elementary and vocational school, a stadium, swimming pool, hospital and shopping centre which will also serve the neighbouring communities."

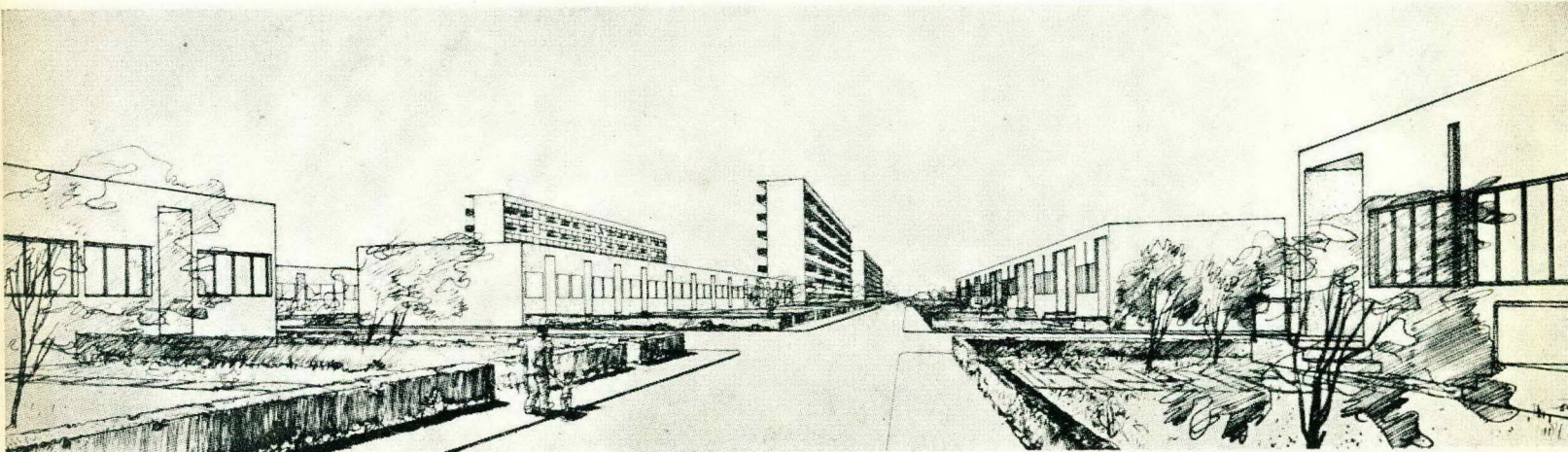
The architects are Sartoris and Terragni and the scheme is now under construction. The two-room and three-room accommodation is arranged in narrow blocks of uniform length of one, two and six stories height. The low units have a distance of 71 feet between rows, the six storey units 170 feet. Each unit has a private garden 36 feet deep.

The scheme as a whole is spacious and formal, while the planning of individual units is straightforward and comparatively conventional. Such a project, approaching completion, is not without interest to us in South Africa where magnificent surroundings, healthy climate and general amenity entitle the worker to a physical existence that would embrace such an endowment. In actuality the small South African town and the de-centralized suburb of the larger cities present a straggling, wasteful growth that negatives such advantages of climate and prospect as may exist, and stifles within its own amorphousness all possibility of organic development. The essential geometry that has always been the touchstone of great architecture, and which provides the necessary visual scale and stability for man in his adjustment to natural surroundings is discounted too easily by those who would provide a "picturesque" background for life. Without measure and defined space, without formal continuity in the plan shape, there must be visual chaos and destruction of the plastic significance of trees, mountains and sky. The cult of the picturesque by merging building with landscape challenges the very meaning of architecture and degrades it into the realm



General Plan of the section under construction: 1, one-story buildings with two-room units. 2, one-story with three-room units. 3, two-story buildings with two-room units. 4, two-story with three-room units. 5, six-story buildings with two-room units. 6, six-story with three-room units. 7, school. 8, shopping centre. Below: Perspective.

REBBIO: ARCHITECTS SARTORIS AND TERRAGNI





of makeshift. The perspective of the Rebbio scheme by Sartoris and Terragni shows an architecture that does not merge. It affirms rather the necessity for order in the scheme of living. The treatment of the buildings is confident and there is a bold understanding of the meaning of surface.

The recognition of the work of contemporary architects by entrusting them with large scale planning marks a great advance in "official" architecture. Giuseppe Terragni as an exponent of the "new vision" in architecture has already made a considerable contribution in the field of domestic building. The collective economy of the Rebbio scheme has necessitated a simplified aesthetic, but in isolated demonstrations Terragni has shown himself a sensitive constructor of space on the super-practical plane. In the first issue of "Valori Primordiali," published last year, there appeared (in addition to two houses, a block of flats, and a school, all recently built in or near Como), a project for a lakeside villa that attains a high degree of classic constructivism, and that embodies and extends the precepts established by the post-war masters of the movement. It may be possible to illustrate and discuss this scheme in a later issue.

Readers of Moholy-Nagy's recently published book "The New Vision" (which originally appeared some years ago in the Bauhaus series under the general editorship of Walter Gropius) will be familiar with his general thesis on form, light, and space in architecture. In his present article he discusses the means and limitations of manual painting, and analyses the methods of the Florentine and Venetian painters of the 14th and 15th centuries, of Rubens, Seurat, Signac, Cézanne and van Gogh. Prejudice will not admit "machine painting" as yet, but photography has already broken the first barriers of resistance, and Moholy-Nagy shows by means of an interesting group of photographs the role of light as a controlling and integrating factor in the creation of a new vocabulary of "art" forms.

His researches apply no less to the field of architecture, and in the study of the phenomena of light and colour we recognise the legitimate extension of the work of the 19th century pioneers of modern painting, of the Cubists, of the Constructivists and of the "De Stijl" group in Holland as it impinged on the problems of architecture.

Moholy-Nagy is convinced that "The work of the future lies with the light engineer who is collecting the elements of a genuine creation," and that "Great technical problems will be solved when the intuition of the artists will direct the research of engineers and technicians."

REX MARTIENSSEN.



CONSTRUCTION  
BY MOHOLY-NAGY



# L I O N      A M O N G      S H E E P

B Y      A N T H O N Y      A D A M S O N

When we arrived the lion was in the basement. Those that remained upstairs were not the intellectuals and they chatted and drank sensually. He had been taken down to the bar because it was the hostess' modernistic room and as we arrived there we interrupted a monologue on bricks. "Take one," he was saying, "hold it in your hand. Feel it. Keep it by you. Live with it. Then and only then . . ."

"Excuse me, Mr. Wright, this is Mr. er . . ." I gave my name. "He is an architect, too." The lion turned slowly and looked. After a long moment he pursed his eyes into a most effective shape. "When Greek meets Greek," he said, "neither of them bring gifts." I opened my mouth hoping for a bon mot, but it did not come and I sat down unobtrusively on a steel chair.

"But, Mr. Wright," said a woman, continuing the conversation we had interrupted, "how can you live with a brick? I know what a brick is perfectly well." "Do you?" he asked. "Your house should be a part of you. If you have a brick house, each brick is a part of you. Have you ever thought of that?" There were gasps. She hadn't. Someone said something about gall stones. He shrugged his shoulders gracefully.

"What do you think of this house, Mr. Wright?" "Is this a house?" he asked blandly, hoping, perhaps, that it was not his hostess who had asked him. "Quite an iconoclast, isn't he?" my neighbour whispered to me. "I would like you to see my house," said a man. "Part of it is log, one of the oldest houses in the district, nothing very worthwhile about it architecturally, you know—just simple and intimate, inside a bit of maple here and there." "Nothing that is intimate is quite worthless," he replied.

They gave him another whiskey and soda. My neighbour asked me if I had ever been to Tokio and for a moment it looked as if conversation might become general, but Mr. Wright began to talk about Architecture. I have never been to Tokio. He explained that true architecture grew from the inside out. This had been his dominating theory throughout his career. He said he had thought this had been his own original idea and we were to imagine his surprise when he read in the works of a Chinese philosopher with a long name that this man, too, had had this idea three thousand years before Christ. Had anyone read any of his works, perhaps his book on tea would be known to us? One intellectual said it was. We all looked at him. He said he had never finished it, quite.

Mr. Wright then told us what he thought about the classical orders. They were very, very wrong. He explained at some length how wrong they were. We sat stricken. Many architects, he told us, did not use the orders to-day. Some of the so-called modern architects, influenced perhaps by him, were building practically. But they had failed also. Their buildings were mechanical, not attuned to a basic human module, they were hard at their edges, they were hard in their souls. A building to be human must be friendly and personal, if it were friendly and personal inside, it must be friendly and personal outside. The curse of American, or as he preferred it "Usonian," arts to-day was eclecticism. He talked of his buildings and with delicate hands drew them for us in the air. As he sat weaving the air the musical timbre of his voice seemed to hypnotize us all. The hard mustard yellow of the walls seemed to fade into a more human wall of little limestone blocks, the blue concrete floor with its red and yellow motifs became tired and the chromium and linoleum bar vanished into friendly oaken shelves. A telephone mechanically jangled upstairs. But it did not interrupt us. We sat on in a faint aroma of peacock feathers.

"Telephone for Mr. Wright—wanted on long distance—New York." Mr. Wright left us and we came back to earth. Someone said they had been to Tokio and it looked like Hell. Did anyone read what Lewis Mumford had said about Wright and the New York World's Fair? No? Well, he had said that the Fair would be chiefly remembered for the fact that Frank Lloyd Wright had not been asked to design it. Had anyone been to either of his lectures at the Fine Arts Convention? Why had he not liked the hat of the poor woman on the platform? Had anyone heard of the hexagonal house he had built in California? Someone had heard that you slept in hexagonal beds and there were no chairs.

The sound of Mr. Wright's footsteps were heard on the stair that entered onto the bar. Conversation languished. He came in tapping his glasses. "Why should I come here?" he asked us. "People only come to my lectures because they hope I will say something startling. The papers always misquote me. I can never open my mouth without somebody making a fool of me. I have got better work to do than lecturing to school marms. That was a man then, on the phone, a rich man, an aristocrat, he wanted me to build him a house in Connecticut." He went on to say how odd it was that he had come to a Fine Arts Convention of Mid-Western States' teachers and that he got nothing for doing it. But he could not, he said, fail to go on preaching his gospel. Soon he was going to preach it in England. He had been offered a lecturing fellowship and was to give four lectures in any university he chose.

Someone told him that I had been to Oxford. He asked what university I thought would be the best for him. I said London and added that he might be interested in the new buildings there, the main tower of which . . . He said he liked Edinburgh. I went to Cambridge.

After a while Frank Lloyd Wright rose and progressed upstairs through solid eclecticism, past the two Goya etchings and the 17th century Mexican statuette on the stairs, past the gilt English mirror above the Italian ornaments on the living room mantel, past the copy of Schlieman's Mycenaean gold cup in the hall and out through the multi-panelled Spanish door to the earth outside. As he got into a car and slammed the door that I was trying to shut he gazed at the high skies and rolling tumbleweed of Colorado and an only half mute expression decorated his mobile features. "Why? Why do I go to parties like that?" I could have told him.

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*With acknowledgments to the Journal of the Royal Architectural Institute of Canada, November 1938.*



## PROFESSIONAL NOTES AND NEWS

THE FOLLOWING IS A LIST OF BRITISH STANDARD SPECIFICATIONS WHICH HAVE BEEN APPROVED BY THE SOUTH AFRICAN STANDARDS INSTITUTION AS SUITABLE FOR BUILDING WORK IN THIS COUNTRY.

- 12—1931. Portland Cement.
- 15—1936. Steel for bridges, etc., and general building construction.
- 61—1913. Copper tubes and their screw threads (primarily for domestic and similar work).
- 65—1937. Salt-glazed ware pipes including taper pipes bends and junctions.
- 78—1938. Cast iron pipes (vertically cast) for water, gas and sewage, and special castings for use therewith.
- 146—1932. Portland Blast-furnace cement.
- 143—1938. Malleable cast iron and cast copper alloy pipe fittings (screwed B.S.P. taper thread), for steam, water, gas and oil.
- 138—1935. Portable chemical fire extinguishers of the acid alkali type (excluding foam type).
- 187—1934. Sand-lime (calcium silicate) bricks.
- 268—1926. Switchgear cells and cubicles constructed of concrete or moulded stone.
- 402—1930. Clay or Marl plain roofing tiles.
- 416—1935. Cast iron spigot and socket soil waste ventilating and heavy rainwater pipes.
- 437—1933. Cast iron spigot and socket drain pipes.
- 449—1937. The use of structural steel in building.
- 455—1932. 5 in. and 6 in. steel eased mortice locks—dimensions of.
- 460—1932. Cast iron spigot and socket light rainwater pipes (cylindrical).
- 473—1932. Concrete plain roofing tiles.
- 476—1932. Fire-resistance, incombustibility and non-inflammability of building materials and structures—definitions for (including methods of test).
- 483—1933. Asbestos cement pressure pipes.
- 492—1933. Precast concrete partition slabs (solid).
- 493—1933. Cast iron airbricks and gratings (for use in brickwork).
- 497—1933. Cast iron manhole covers and frames (light).
- 504—1933. Drawn lead traps.
- 534—1934. Steel spigot and socket pipes and specials for water, gas and sewage.
- 538—1934. Metal arc welding as applied to steel structures.
- 539—1937. Dimensions of drain fittings, salt glazed ware and salt glazed glass (vitreous) enamelled fireclay.
- 540—1937. Salt glazed glass (vitreous) enamelled fireclay pipes including taper pipes bends and junctions.
- 550—1934. Concrete interlocking roofing tiles.
- 556—1934. Cement concrete cylindrical pipes and tubes (not reinforced).
- 567—1934. Asbestos cement spigot and socket flue pipes and fittings for gas-fired appliances, dimensions and workmanship of.
- 569—1934. Asbestos cement spigot and socket rainwater pipes, gutters and fittings, dimensions and workmanship of.
- 570—1935. Plug and socket connectors for gas-fired appliances.
- 602—1935. Lead pipes for other than chemical purposes.
- 606—1935. Plaited sash lines.
- 693—1936. Oxy-acetylene welding as applied to steel structures.

### S.A. STANDARDS.

- S.A. 3—1926. Lime.
- S.A. 8—1925. Water pipes and fittings.
- S.A. 14—1938. Building Bricks.

Pamphlets relating to most of the above are obtainable at Handel House Branch of Central News Agency, Ltd.

Mr. J. Seaton Hodge, M.C.Q.S., has returned into partnership with Mr. D. J. Beveridge, M.C.Q.S. The firm will be styled—Hodge and Beveridge, Quantity Surveyors, practising at St. Andrew's Building (Eighth Floor), Rissik Street, Johannesburg.

●  
The partnership formerly known as F. Davis Hickman & Partners, will, as from July 1st, 1939, be continued under the style of Hickman, Björkman & Rose Price.

Mr. T. J. H. Clark, B.Sc.(Q.S.), P.A.S.I., M.C.Q.S., has commenced practice on his own account at 77, Salisbury House, St. Andries Street, Johannesburg.

●  
Mr. J. H. Labuschagne, M.C.Q.S., has commenced practice on his own account at 303, Union Castle Buildings, Loveday Street, Johannesburg.

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For the information of members, the offices of the Pretoria Portland Cement Co. are now on the First Floor, Union Corporation Buildings, 74-78, Marshall Street, Johannesburg.

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***Journal of the SA Architectural Institute***

***PUBLISHER:***

University of the Witwatersrand, Johannesburg

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