

# Architecture Canada

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# Architecture Canada

July/August 1969 juillet/août  
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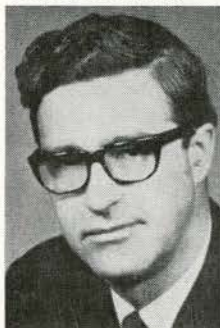
W. G. Leithead, (F), ARCA, Vancouver, was elected President of the Royal Architectural Institute of Canada for 1969-70 at the AIA-RAIC Joint Convention, Chicago, June 22-26. He succeeds Norman H. McMurrich, (F), of Toronto. Other officers elected were Gordon R. Arnott, (F), Regina, Vice-President; Harry Mayerovitch, (F), Montreal, Honorary Secretary and C. F. T. Rounthwaite, (F), Toronto, Honorary Treasurer. 1969 Councillors are: Alfred Chatwin, Saint John; John M. Dayton, (F), Vancouver; Allan F. Duffus, (F), Halifax; E. H. Grolle, Regina; A. H. Hanna, Winnipeg; Jean-Louis Lalonde, Montreal; F. Noseworthy, St. John's; E. Raines, (F), Calgary; J. G. Spence, (F), Toronto.

Mr Leithead, born in Yorkshire, England, has lived in Canada since 1929. He graduated from the Manitoba School of Architecture in 1948 and is now a senior partner in the Vancouver firm McCarter, Nairne & Partners. Mr Leithead has served on a number of civic committees in Vancouver – as Chairman of the Downtown Redevelopment Advisory Board of the Civic Design Panel, and as Chairman of the West Vancouver Advisory Planning Commission. He has been on the RAIC Council since 1963, is a past president of the Architectural Institute of British Columbia and of the Vancouver Board of Trade. Mr Leithead was author of the manual of street decorations, "Decorations '67", published in August 1967 as an RAIC centennial project.

W. G. Leithead, (F), ARCA, de Vancouver a été élu Président l'Institut Royal d'Architecture du Canada pour l'année 1969-1970 à l'occasion du Congrès conjoint de l'AIA/l'IRAC à Chicago et a ainsi succédé à Norman McMurrich, (F), de Toronto. D'autres officiers élus étaient Gordon R. Arnott (F), Vice-président, de Regina, Harry Mayerovitch (F), Secrétaire honoraire, de Montréal et C.F.T. Rounthwaite (F), Trésorier honoraire, de Toronto.



William G. Leithead



Gordon R. Arnott



Harry Mayerovitch



C. F. T. Rounthwaite



Norman H. McMurrich





**Raymond T. Affleck**

Mr Affleck, born in Penticton, B.C., was educated in Montreal and obtained his B.Arch from McGill in 1947. In 1955 he became a partner in the Montreal firm of Affleck, Desbarats, Dimakopoulos, Lebensold and Sise, now Affleck, Dimakopoulos and Lebensold. During 1954 he was Assistant Professor at McGill and subsequently a visiting professor at several other Canadian Schools. Mr Affleck is a member of the Royal Canadian Academy.



**Frederick S. Brodie**

Mr Brodie was born in Saskatchewan and educated in Vancouver where in 1939 he indentured as a student architect. He served for four years in the RCAF, then joined the firm of Thompson Berwick & Pratt. He became a partner in 1953 and chief of hospital design. He has served as chairman of the AIBC Vancouver Chapter and as a member of the AIBC Council and the Board of Examiners. He has for seven years been chairman of the Architects' Hospital Committee.



**John Andrews**

Mr Andrews, born and educated in Australia left in 1956 to attend Harvard where he obtained his Masters in Architecture. In 1958 he was a finalist and second prize winner in the Toronto City Hall competition and in 1967 he won a Massey Medal for his work on Scarborough College. In addition to practicing in Toronto Mr Andrews has been on the staff of the University of Toronto since 1962. He was Chairman of the Department of Architecture from 1967 to 1969.



**John S. Cauley**

Mr Cauley was born in Cobourg, Ontario. He served in the RCAF and was discharged in 1945 with the rank of Flying Officer. He received his B.Arch from U. of T. in 1950 and was in private practice in Toronto from 1952 to 1968 when he became a partner in the Hamilton firm of Prack and Prack. He was on the OAA Council from 1962-64 and has been on a number of OAA committees including the Ontario Interprovincial Liaison Committee of which he was chairman.



**Claude Beaulieu**

Montréalais, diplômé en Architecture et en Urbanisme à l'École des Beaux-Arts de Paris et membre de l'ordre des Architectes de France, membre de l'AAPQ et professeur à l'École d'Architecture de Montréal depuis 1949, M. Beaulieu a été successivement appelé à diverses fonctions y compris membre du comités architecturaux de la capitale nationale et de l'Expo '67. Il est directeur artistique de la revue *Vie des Arts* et directeur de la firme Beaulieu, Lambert, Tremblay.



**Howard D. Chapman**

Mr Chapman was born and educated in Toronto with two years spent in London at the Architectural Association School. He began practice in 1949 and formed a partnership in 1959 with Leonard Hurst. He has won several awards for architecture including two National Housing Design Awards. Mr Chapman has served on the OAA Registration Board and on a number of OAA and Toronto Chapter committees. He was on the RAIC Publications Board from 1951-1961.



**Donald M. Blenkhorne**

Mr Blenkhorne was born in Picton, N.S. and received his preliminary education there. After service in the RCAF from 1941 to 1945 he attended the U. of T. School of Architecture and on graduation joined the Toronto firm Shore & Moffat. He became a partner in 1962. Mr Blenkhorne has served on a number of OAA committees and in 1964-65 on the RAIC Council. He has been on the Federal Government BEAM Committee since 1965 and on the Ryerson Advisory Board since 1967.



**James Hamilton Christie**

Mr Christie, born and educated in Glasgow, joined the Winnipeg firm of Moody, Moore & Partners in 1954 and is currently a senior partner. He has been on the council of the Manitoba Association from 1966, and was president in 1968. Mr Christie has been active on municipal and provincial housing committees; in 1968 has been Chairman of the Housing and Urban Renewal Committee of the Community Welfare Planning Council and of the Manitoba Provincial Housing Committee.



**Robert E. Briggs**

Mr Briggs, of Toronto, gained his B.Arch from U. of T. in 1951. He was founding member in 1954 of the SFAC, and its president in 1959. Mr Briggs has served on many RAIC and OAA committees, and presently is chairman of the RAIC Legal Documents Committee. He also founded and is principal lecturer in a course on Specifications and Contracts at Ryerson Night School. He is a partner in the Toronto firm, Bregman & Hamann.



**Ian J. Davidson**

Mr Davidson was born in Toronto and educated there and at Royal Roads, Victoria. After studying at UBC (B.A. and graduate studies), he articulated with his father. He was elected to the AIBC Council in 1966 and has served on various committees including the RAIC Publications Board, and the Vancouver Civic Design Panel. He has received a number of awards for architecture including a Massey Medal. He is now with the firm of Gardiner, Thornton, Davidson, Garrett, Masson.



**Edwin Raines**

Welsh-born, Mr Raines graduated in architecture from the University of Manitoba in 1947 and remained there as a lecturer and to direct the Planning Research Centre until 1952. He is now a partner in the Calgary firm of Stevenson, Raines, Barrett, Hutton & Partners. He was a vice-chairman of the Cdn Housing Design Council and he is currently president of the Alberta Association and chairman of the Alberta School of Architecture Advisory Committee.

**Warren M. Smale**

Mr Smale, born in Windsor, Ont., served in the RCAF from 1942-46. He studied architecture at the University of Toronto and received his B.Arch in 1950. In 1952-53 he studied product design at the Illinois Institute of Technology. Mr Smale has had his own practice in Simcoe, Ont. since 1959 and has been very active in OAA and community activities. He was OAA President in 1966 and in 1968 was chairman of the RAIC committee on Education.

**John Gordon Spence**

Mr Spence, Toronto, apprenticed with the firm of Page & Steele after graduating from an architectural course at Toronto's Northern Vocational School in 1937. During the war he served with the RCAF. In 1946 he joined the firm of John B. Parkin & Associates and became a partner in 1962. Last March Mr Spence established his own consultancy practice. A member of OAA Council for four years he was OAA President in 1968. He is currently on the RAIC Council.

**Fernand Tremblay**

Né à Alma, Québec, M. Tremblay a obtenu son diplôme d'architecture "grande distinction" des Beaux-Arts de Montréal en 1955, où il a mérité la médaille de l'Irac et le troisième prix du concours national "Pilkington". En 1961 il a obtenu la médaille Massey pour l'église St-Raphael de Jonquière. Il est membre de la firme St-Gelais, Tremblay, Tremblay, Labbé depuis 1958 et Directeur de l'École d'Architecture de l'Université Laval depuis 1967.

**Frederick A. Walker**

Mr Walker was born in Ottawa and graduated from the Edinburgh School of Architecture. During the war he served as Squadron Leader in the RCAF and on discharge became General Manager of the Baie Comeau Company. He practiced architecture in Quebec City from 1949 to 1955. In 1966 he joined the Department of Public Works of the Province of Quebec as Advisor to the Minister.

convention was subjected to some flagellation, but not as much as it has been on other occasions. This kind of criticism of architects and architecture has been going on for so long now that many architects and others have been brainwashed into believing it. Is this one cause of student dissatisfaction today? Somewhere, somehow, there ought to start a movement to restore to the profession a sense of self-respect and make all this breast-beating old fashioned.

### The Public Needs a Champion

Very pertinent here are a few words from the address of retiring AIA President Kassabaum. It was time, he said, to give thought to leading society to the three dimensional setting for a better life. In a go-go, hurry-hurry, make-a-buck world, someone had to shout that there were other meanings in life — order, gentleness, delight and sensitivity and beauty in our physical environment. Someone had to shout for these things, and only to the degree that architects shout for the public's interest will architects be heard. This was a matter for individuals, not convention resolutions. "The public needs a champion, and this must be the motivation of the architect". If, through selfishness, timidity or blindness, architects left this void to be filled by insensitive land speculators, they would fail the public which they say they are so proud to serve. Billions of dollars are being spent on buildings. "It will be a terrible condemnation of all architects if, after all of the money and effort, our cities are worse places in which to live".

### The Need for Great Public Works

A direct approach to architects to improve the quality of public architecture was taken by the Assistant to the US President for Urban Affairs, Patrick Moynihan, in his keynote address to the convention. "The special requirement of the age of enormity is to create a public architecture of intimacy, one that brings people together in an experience of confidence and trust". He found that a steady deterioration in the quality of public buildings and spaces had been accompanied by a decline in the symbols of public unity and common purpose with which the citizen could identify and of which he could be proud. Good or bad architecture was not an option. It was a sign of the competence of government. The surest sign that architects and urban planners, sensing their limitations, but knowing and developing their strengths, had succeeded in improving the quality of public design "Will reside in the buildings and public places which we shall construct in our time and for which we will be remembered in history."

Dr Moynihan's remarks obviously were aimed just as much at legislators as they were at architects, and more than one Canadian must have wondered if it would be possible to borrow him from President Nixon for a while to express his views about the post-war architectural development of our National Capital, and to expose him to as



The members' General Meeting:

1 The officers, left to right, Harry Mayerovitch, W. G. Leithead, President McMurrich, Gordon Arnott and Executive Secretary Maurice Holdham

3 Mrs A. W. Cluff

4 Joseph Baker

5 Mel Michener

2 CMHC Vice President Ian MacLennan



many provincial governments, city councils, schools and library boards as possible.

There were, of course, a number of excellent speakers, including Canada's contribution of the 1969 Purves Memorial lecturer, Dr Hans Selye of Montreal, the internationally known authority on stress. Stress, Dr Selye told a large audience, was the salt of life. The trick was to learn to live with it and to enjoy it. Man needed a sense of belonging, or of place, and architects and planners needed to learn the tolerable limits of stress and avoid architecture and civic design creating situations which would exceed those limits.

The program included 12 workshops as well as addresses and group participation on the convention theme.

One of the most interesting and amusing of these, but not quite the way expected, was "A Tale of Two Cities", an urban design critique in which a team of AIA and a team of RAIC members studied respectively the cities of Montreal and Chicago. The two teams were given an afternoon at the convention to report their findings, the Canadian team, Guy Legault, Montreal, Arthur Erickson, Vancouver, and Clifford Wiens, Regina, being scheduled to appear first. After a 20-minute wait, someone explained that the Canadian team was having projector trouble; then without introduction of any kind, half a dozen actors from Chicago's Second City Troupe began a program of satirical blackout sketches about Chicago. This ended with an AIA officer reading a cryptic message from Messrs Legault, Erickson and Wiens, who were not seen or heard from in the flesh.

The AIA team presented their view of Montreal in film, slides, music and personal commentary.

After the pre-convention build-up for the civic design critique, the Canadians were a little red in the face until it dawned on some that the blackout skits were connected with the RAIC team's presentation. That evening a still mortified Cliff Wiens explained what had happened. Their presentation was to have begun with some slides, an "underground" film of the unveiling of Picasso's giant sculpture in Chicago's City Hall Square, and some commentary, all from the hall's projection booth, followed by

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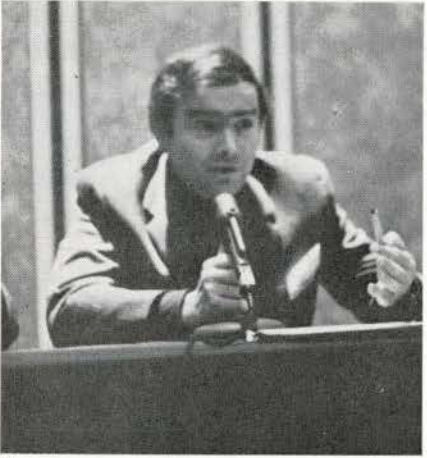
6 Workshop on Information Evaluation and Retrieval, Don Laplante, Department of Industry, Trade and Commerce, and, right, Gordon R. Arnott, moderator

7 Workshop on Construction Management, Panelist E. H. Zeidler

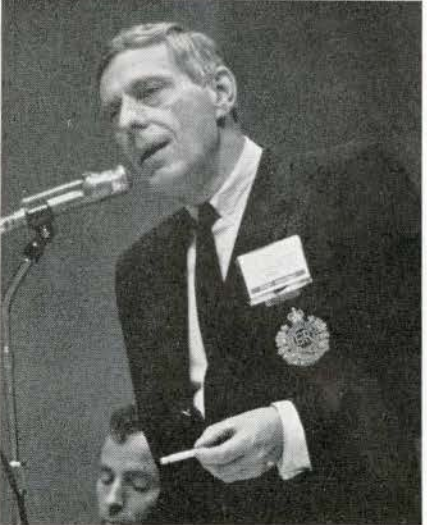
8 Workshop on Office Production Techniques, moderator C. F. T. Rounthwaite



6



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8

9 RAIC College of Fellows Convocation, N. H. McMurrich, left, assists Chancellor Peter Thornton to confer Honorary Fellowship upon AIA President George E. Kassabaum, FAIA

the satirical skits on the stage, which they had written, then hired and spent several days coaching the Second City Troupe to perform. Things began to go wrong when the Canadian team found they couldn't get in the slide projection booth. The AIA team had locked the door after setting up the machines for their own show. The film wasn't shown because the union wouldn't let the Canadians use their own projector for the job but couldn't provide union projection service. The projection booth connection to the hall's PA system wouldn't work, so the team wasn't able to explain the situation to the audience. In desperation they sent word to the actors to go on. And that was how the RAIC presentation was all loused up. The team didn't even get credit for the skits.

The social program was on an appropriate scale for such a gathering, and, on the whole, most successful and greatly enjoyed. The start of it – the McGraw-Hill Publishing Company party on the Sunday evening – was apparently not too auspicious. Thousands of people went by train to Arlington race track, stood in long queues in the grandstand to get a sausage roll and a drink, played the races a bit, then, in the rain, back to the train and Chicago. On a rainy evening it takes a long time to get a taxi in Chicago. Monday was the AIA investiture of new Fellows. The AIA has adopted some of the ceremony of the RAIC convocation, so the

investiture of 70 new Fellows, even if it took some time, was pleasant and dignified. This was followed by the AIA-RAIC Presidents' reception, a cocktail party which comfortably filled the vast main hall of the Field Museum of Natural History. In honor of the first joint convention, the Canadian Consulate General R. Douglas Sirrs, entertained AIA and RAIC officers at a small reception later in the evening.

The RAIC College of Fellows Convocation was on Tuesday. Three Honorary Fellows, the AIA President and two Past Presidents, and 25 Fellows were invested.

Wednesday evening was the Chicago Host Chapter Gala Party, the most enjoyable and in terms of scale (about 4,000 attended) the biggest social event of the convention. It began with a "spectacular" in the beautiful and historic Chicago auditorium. Introduced by a Royal Salute by the Pipes and Drums of Toronto's 48th Highlanders, specially imported for the convention, it was a re-enactment of parts of the opening program on December 10, 1889 with the Chicago Symphony Orchestra on the stage and Diva Mary Costa singing some of Adelina Patti's original program of 80 years before. From there the vast crowd, led by the Pipes and Drums of the 48th, marched the few blocks to Chicago's old Grand Central Station, where took place, in the concourse, on the plat-



9



10 At the reception for new AIA Fellows: President and Mrs N H McMurrich joined with the AIA President to welcome guests

11 Incoming President W G Leithead and Mrs. Leithead at the AIA Fellows' reception

forms and the tracks, the Great Train Shed Party.

Last event was the Annual Dinner, at which both new Institute Presidents were inducted. The RAIC had one award to make, the Annual Allied Arts Medal for 1969. It was given, in absentia, to Sculptor Ted Bieler of To.onto. (see page 23)

For the Canadians, more accustomed to the usual intimate, small scale annual assembly where everyone meets everyone else and most know each other, it was generally a stimulating and enjoyable, if at times wearing, experience. Many of the 194 who went contributed to the program and in every way the convention was a joint affair. If it was impersonal, so is any event on that scale, and if in a way it took on the nature of a three ring circus, that was because usually a number of different events were going on at the same time. Also, of course, there was a separate and well organized ladies' program, and two programs for children.

Main events were at the 1,000 room Palmer House, but competing for the delegates' attention in addition to the convention program itself, were 13 bus, boat or walking tours; and Chicago's Merchandise Mart sponsored programs for architects each day in support of the first national exposition of contract interior furnishings.

The convention building product exhibit, also at the Palmer House, drew an estimated 5,000 visitors. Outstanding among the exhibits was that sponsored by the Materials Branch of the Canadian Department of Industry, Trade and Commerce, in which 11 Canadian manufacturers displayed architectural products. The AIA gave it a special award of excellence — a gold plaque.

Would the RAIC like another joint convention with the AIA? While at Chicago, the Council adopted a motion by PQAA President Jean-Louis Lalonde to invite the AIA to a return engagement at Montreal in 1977. (Continued on page 14)



10



11



12 At the Great Train Shed Party of the Convention's Gala Night, l. to r., Mrs Zeidler, Mrs Strong, James E Searle, W A Strong, Mrs Searle and E H Zeidler

13 The prize-winning exhibit of the Canadian Department of Industry, Trade and Commerce



12



13

14 Pipes and drums of Toronto's 48th Highlanders led the march from Civic Auditorium to the railway station for the Great Train Shed Party

15 Mrs Robert Briggs and [16] Mrs W E Barnett helped to staff the Convention's Hospitality Centre

17 The Canadian exhibit was given a gold medal award for distinguished design. L. to r. are D G Laplante, Materials Branch, Department of Industry, Trade and Commerce, Ottawa; William Bachman, Convention Committee Chairman; John Carlson, Convention Manager; Marcel Biolley, Canadian Government Exhibition Commission project officer; and R D Sirrs, Senior Trade Commissioner and Acting Consul General for Canada in Chicago



14



15



16



17



The RAIC Members General Meeting Tuesday morning debated what architects could contribute towards one aspect of the housing problem. Present were 102 members, eight students, Mr. Robert D. Foster, FRIBA, chairman of the UK Architects Registration Board, some press representatives and one Chicago policeman, hung about with the implements of his trade, who had been sent to keep watch and ward in case dissident elements tried to disrupt the meeting. His services were not required for this purpose, but he did remove one (unprotesting) member from a packing case in the side aisle where he had perched for a comfortable and unobstructed view of the proceedings.

President McMurrich opened the session by reminding members that, under the newly adopted by-laws, the meeting had no power to transact business or pass resolutions which would be binding on the RAIC. This last was reduced to a matter of semantics when, punctuated by comments about illegal procedures, motions were moved, seconded, debated and voted upon. In the end the members were unable to come up with a specific answer to a specific question, at least they charged the incoming Council with the responsibility for doing so.

The specific question in essence, was: **What does the architectural profession suggest be done to improve the quality of public housing in Canada?**

It was posed by Hon. Robert Andras, the new Federal minister responsible for housing, when an RAIC delegation, led by President McMurrich, called on the Minister to ask what assistance the profession could contribute towards the Federal Government's task of finding a solution to the housing problem. The RAIC offer of assistance to the government was a follow-up to the Institute sponsored inter-disciplinary conference in the spring to examine and comment upon the report of the Hon. Paul Hellyer's Federal Task Force on Housing of last summer (see *Architecture Canada*, March 1969, for the conference report and recommendations).

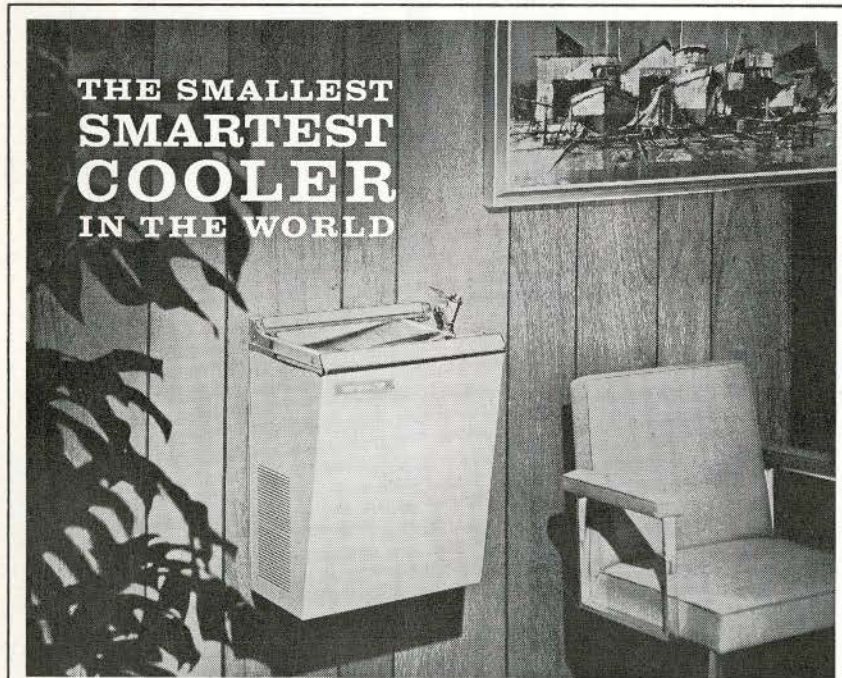
It was quickly apparent that the members were not in agreement on what the RAIC's advice to the Minister should be. Some felt that the profession should undertake special studies of the problem; (Jean-Louis Lalonde said that the PQAA already had decided to do a study of the housing situation in his province) others that the problem had been studied to death and what was needed now was action; some thought it was an interdisciplinary problem and there was nothing architects could do by themselves; others that architects and the

believing that they had not much to contribute, whereas in fact architects, individually and collectively had been making most effective contributions for some time. Among the speakers: George Masson, Windsor, said that the Canadian Conference on Housing sponsored by the Canadian Welfare Council, and with members from many disciplines, had completed a two year study and many answers already are available; no more research was needed in the immediate future. Mel Michener, Winnipeg, said that one of the major problems in public housing was the antiquated administrative structure, involving three levels of government, in which we work. Some operations of CMHC should be centralized and some regionalized, and CMHC should be asked to review relationships between Federal, Provincial and Municipal governments. CMHC Vice President Ian MacLennan replied that, under the law, decision on grants had to be made by the Privy Council and couldn't be decentralized. Alan Hanna, Winnipeg said that the only reply we can give is to outline a very specific process by which future projects can be designed.

After considerable discussion, A. W. Cluff, Toronto, offered a motion that this year be designated for study of the housing problem. Peter Dobush, Montreal, felt that we have had enough studies and that what was needed now was action. We should go to the Federal Government and say that we, as architects, felt that the time is here for action not just by architects but by all disciplines involved. We should study the information we have and take action right or wrong on housing. Mr Cluff then moved that "Recognizing the seriousness of the housing situation, it is the recommendation of the Assembly that this year be designated an action year in housing and that suitable recommendations be given to the provincial associations." E. H. Grolle, Regina, seconded. Harry Mayerovitch, Montreal, thought that the motion as put arose out of a feeling of pessimism which he did not share. In Westmount a lot of action was being taken on housing, led by architects. The facts of this action were immediate, long term and profound and affected fundamental attitudes toward urban renewal and association responsibility. To suggest making this an "action year" was therefore making a gimmick of something already well under way. He wanted a motion phrased in more positive terms.

After more discussion Mr Cluff withdrew his motion and Mr Mayerovitch proposed "That the growing awareness on the question of housing by architects should be further encouraged and that proper action in this field should be intensified". W. L. Goulding, Toronto, seconded. Mr Dobush then said that he didn't like Mr Mayerovitch's motion at all. "We are not

Concluded on page 60



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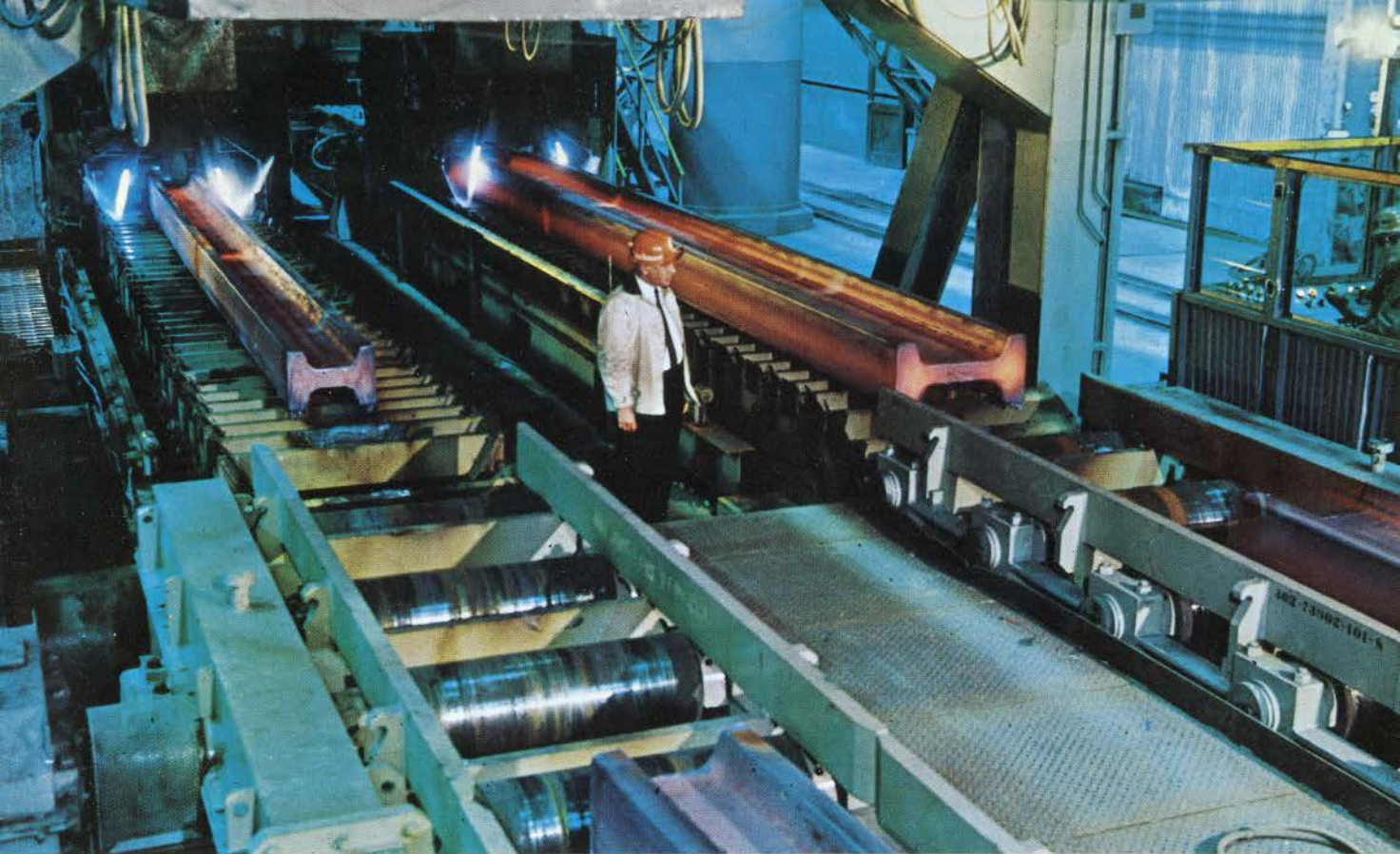
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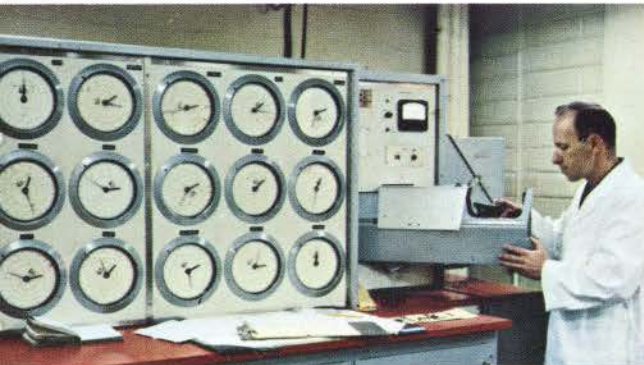
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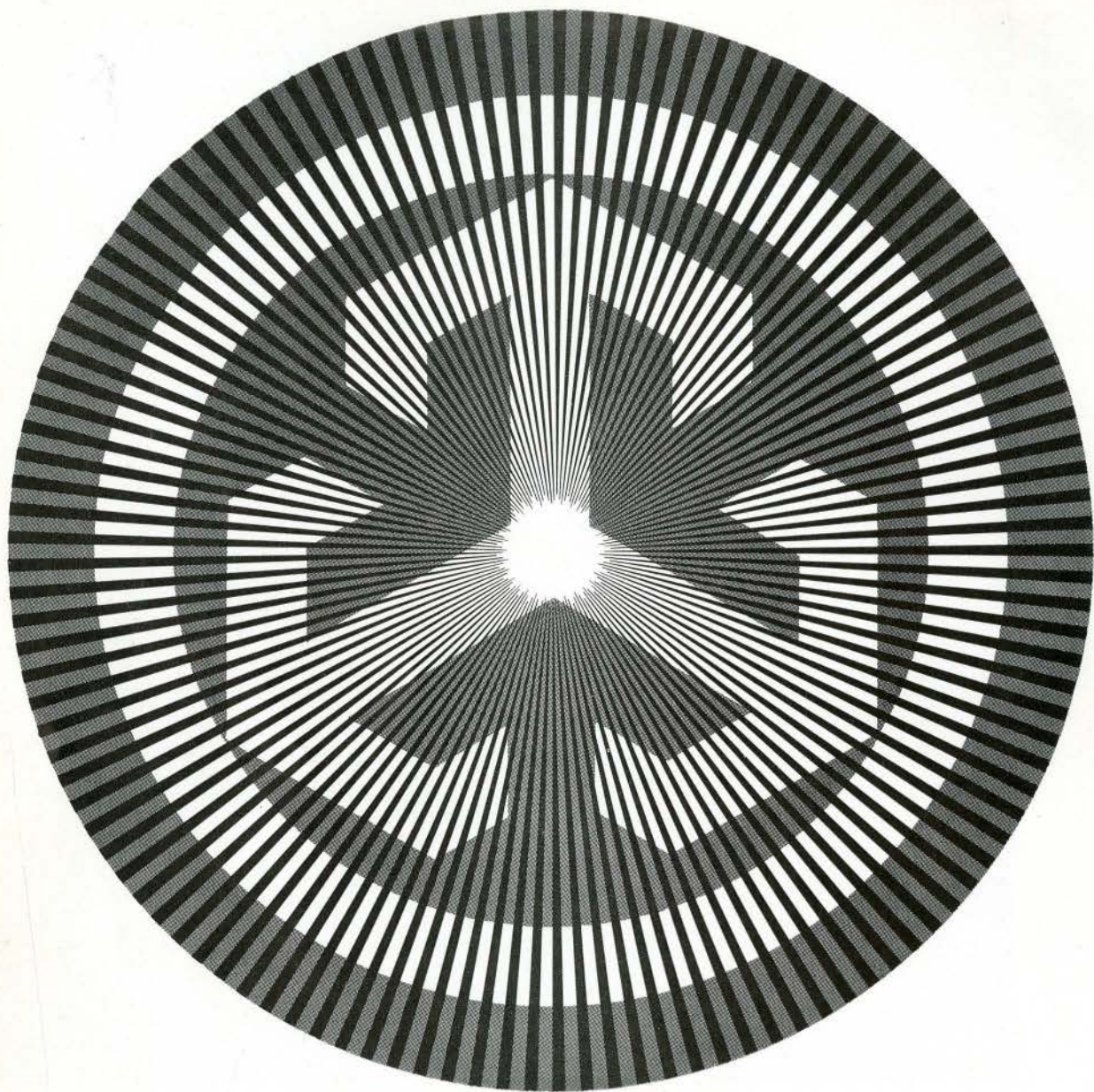
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### **New Working Tool for Architects**

The RAIC has published in two volumes an illustrated catalogue of Canadian artists working on an architectural scale. The "Allied Arts Catalogue" was designed to assist architects in the selection of artists for commissions but also gives an idea of the exciting Canadian art scene. Each volume devotes one page to an artist and gives detailed information on work illustrated plus the artist's biography and address. Volume 2 brings to 89 the total number of artists included. Both volumes are still available. Please turn to page 26 for order form and prices.





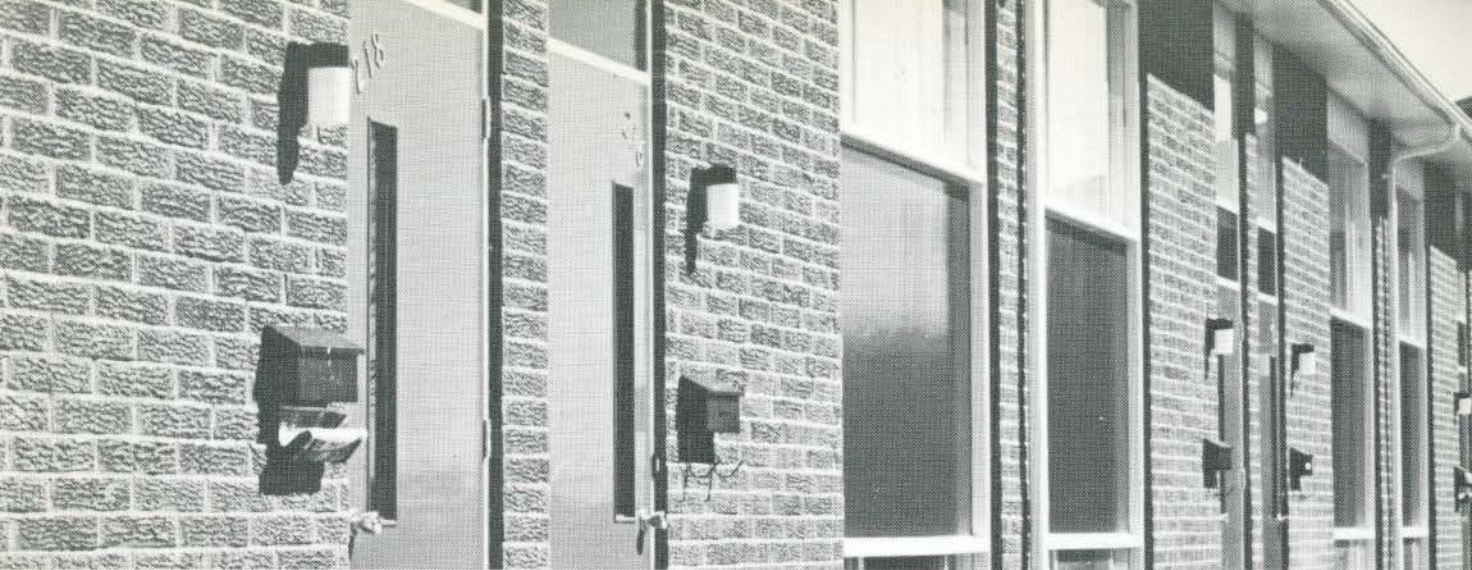
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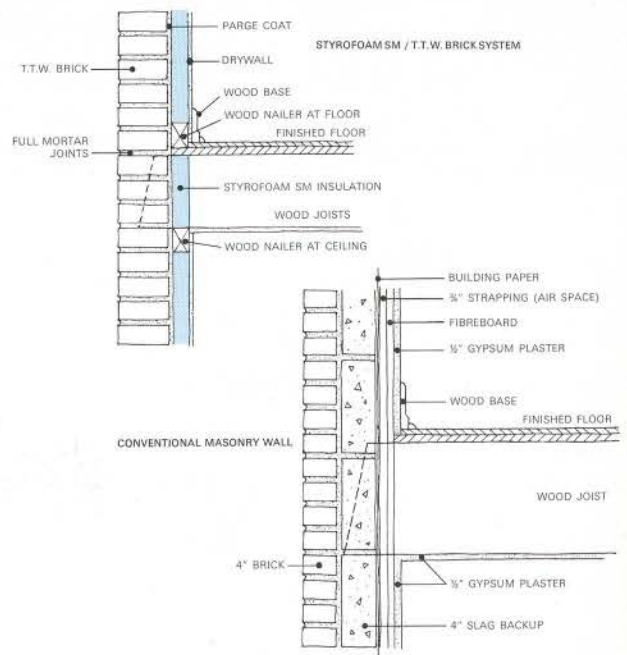
The wall system is simplicity itself: a single course of TTW brick, (conventional double course unit masonry could be used but with some loss in economy) with 1" or 2" thick boards of Styrofoam\* SM plastic foam insulation glued directly to the interior surface using Dow Mastic #7 (a high tack adhesive designed specifically for such applications), followed by gypsum wallboard, or panelling of your choice, also affixed with Dow Mastic #7.

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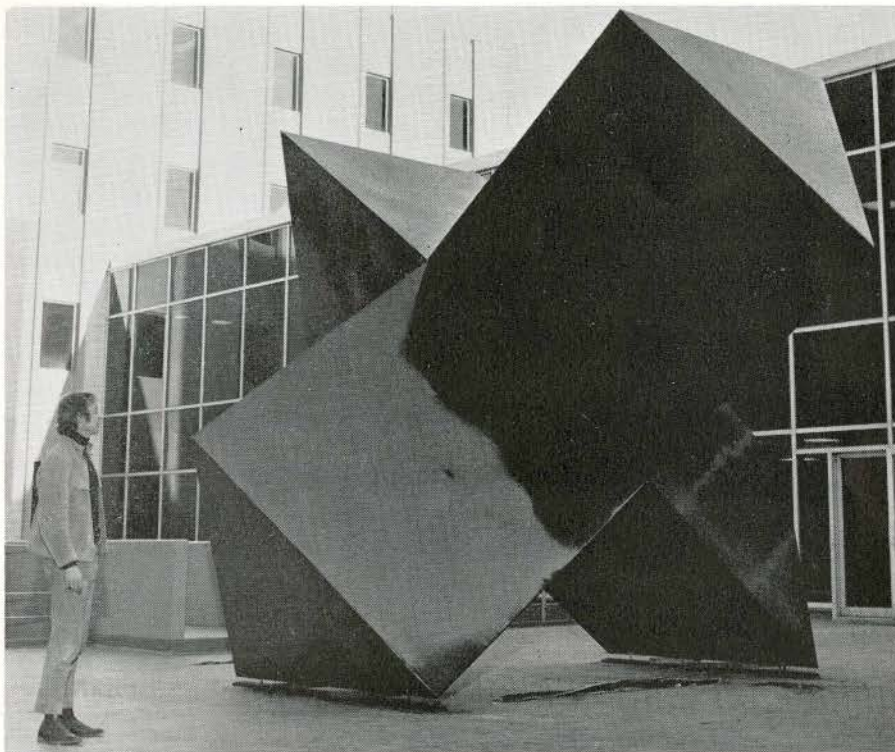
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# Art and the Campus



1 Michael Cooke with his sculpture "The Awakening" at McMaster University

Michael Cooke regarde son sculpture "Le Réveil" à McMaster



2 Kenneth Lochhead's 12' x 12' acrylic mural on canvas, at Winters College, York University. Architects Gordon S. Adamson & Associates, John B. Parkin Associates, Shore & Moffat

The following extract from an innocent memo sent out on January 6th, 1969 to universities caused not only the postponement of a series on Art and the Campus, but somewhat of a flutter in the dove-cote (if such a metaphor is acceptable for the rioting campus):

*We have the intention to publish a series in our Allied Art Section on 'Art for Architecture - the Campus' dealing with what universities are doing about: (a) integrating works of art with buildings, and (b) placing or acquiring fine art within the complex. We require 10 x 8 glossy photographs of art work indicating scale and environmental placing, plus close ups where necessary, and a statement of policy from someone responsible within the university.*

Slow reaction and requests for time for consideration before replying seemed to stem from points (a) and (b) and the request for a policy statement. In most cases it was re-

vealed that universities have very free wheeling (if indeed any at all) policies towards living art and its role on the campus. I dare say the interrelationship of departments became a new thing in finding appropriate desks upon which to place this innocent missive for some kind of action. As for the Fine Arts departments, where I expected to find interest in acquiring or relating living art to the campus environment, I found in most cases that they supplied only various courses unrelated to the dynamic world of contemporary art.

In the vital matter of building new universities this was most apparent. Vast sums of money are being spent throughout Canada in building over-large decentralized campuses. Although a general policy exists for the inclusion of works of art in the budgeting for public buildings no such policy exists or indeed is sought for in the building of what should be the most important areas of educational environment in this country.

If universities are not considered as leaders in aesthetic selection who should be regarded as such? Altogether college campuses are becoming equally sterile and arid environments as the most commercial complexes. However, there are signs of change. New committees with new attitudes are emerging (especially since this memo was tossed upon the sea of uncertainty).

This issue then presents a selection of photographs of pictorial interest. It is intended next issue to discuss some of the policies being employed in universities such as York and Waterloo and perhaps to set up some guidelines which may help other universities revamp their programs along more dynamic lines. It is also hoped that this column may cause an instant response from any of those universities who may have failed to receive our memorandum. Statements and photographs if sent immediately will be considered for publication. *Anita Aarons*



plaques de Tonnancour's plastic and aluminum triptych in the common wing of the Faculties of Law and Social Sciences, University of Montreal. Architects Beauvais et Lusignan

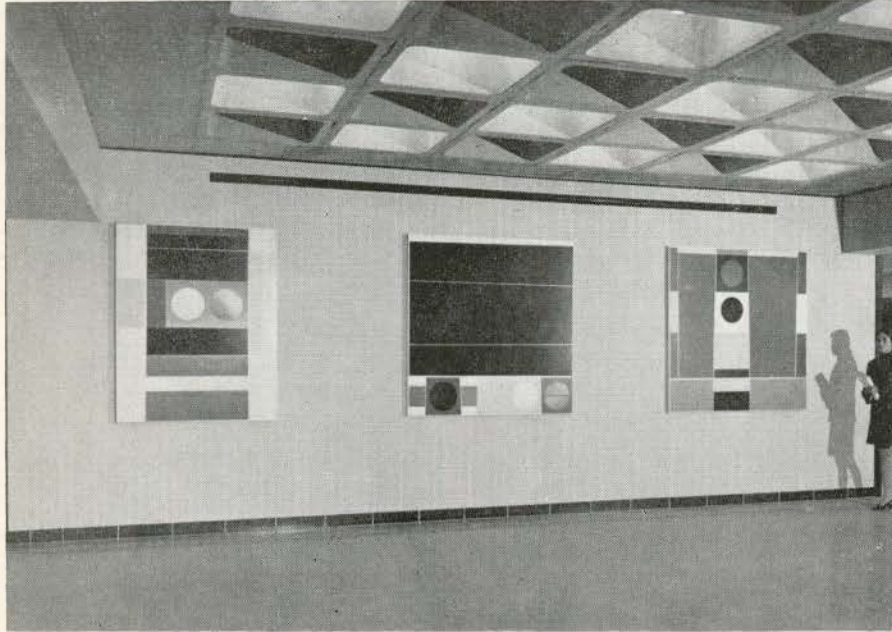
4 Mural by Jacques de Tonnancour in University of Montreal dining room. Architects Beauvais et Lusignan  
Murale de la salle à manger à l'Université de Montréal de Jacques de Tonnancour. Architectes Beauvais et Lusignan

5 Margaret Peterson's mosaic at McPherson Library, University of Victoria. Architects Siddall, Dennis & Associates  
Un ouvrage en mosaïque de Margret Peterson à la Bibliothèque McPherson, Université de Victoria. Architectes Siddall, Dennis & Associates

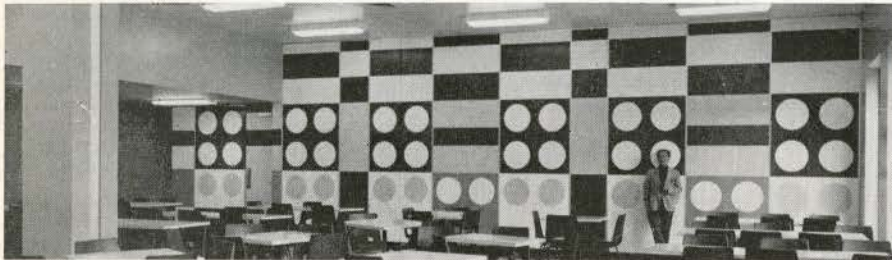
6 Aluminum sculpture "Star" by Leonhard Oesterle at Erindale College  
Sculpture d'aluminium "Étoile" de Leonhard Oesterle au Collège Erindale

7 Students at Erindale College with Andreas Dreinters' "pendulum"  
Ecoliers du Collège Erindale regardant "Le Pendule" de Andreas Dreinters

8 Gord Smith's 9' Cor-Ten steel sculpture at the Weldon Building, Dalhousie University. Architects Webber, Harrington & Weld  
Sculpture d'acier Cor-Ten, hauteur de 9', de Gord Smith à l'édifice Weldon, Université Dalhousie. Architects Webber, Harrington & Weld



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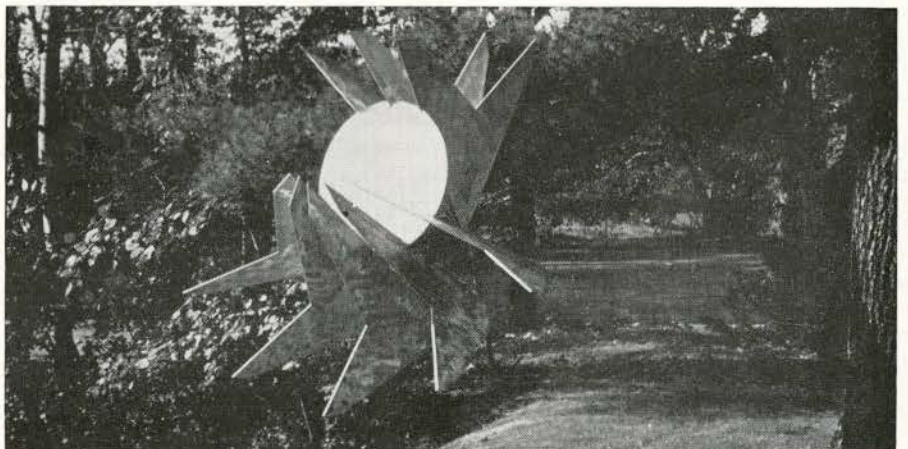
Dalhousie Gazette

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# RAIC Allied Arts Medallist, 1969

## Ted Bieler

It is most fortunate that at the AIA-RAIC Joint Convention in Chicago June 22-26, the RAIC Allied Arts medallist chosen should have been an artist who might well be regarded as tops on the international as well as on the Canadian scene. Ted Bieler, sculptor, is held in high esteem in Canada by both art connoisseurs and architects as well as his artist colleagues.

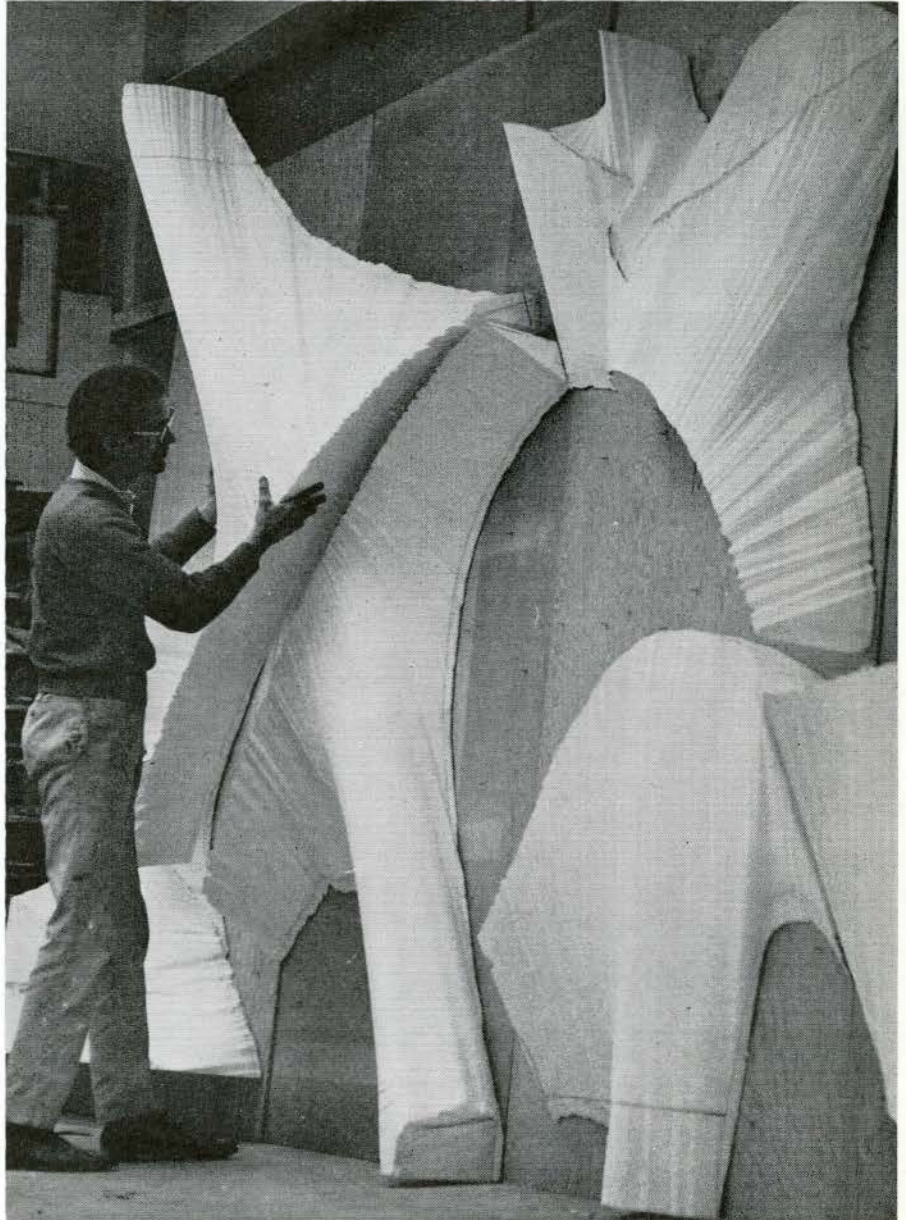
Born in Kingston Ontario in 1938, Mr Bieler has studied over a wide, rich and varied field. He studied sculpture under Ossip Zadkine, was apprenticed to tapestry designer Jean Lurcat, and attended the Slade School of Art, London. Finally after a short period of time at the School of Architecture of the University of Toronto, he took his B.A. in Fine Art at the Cranbrooke Academy of Fine Art.

As a sculptor, Bieler keeps abreast of contemporary thought in every way. It is in his most distinguished work as collaborator with architects that he fills a role which no other artist in Canada has been able to do so well. The success of his working relationships with architects has established valuable guidelines for others.

The quality of his thinking, his personal integrity and his interest in the social development of art have given him a place as a quiet, erudite spokesman for artists.

He prefers his native Canada as a field of operation. The best known examples of his collaborative works are to be seen at the Administration and News Building, Expo '67, in collaboration with Irving Grossman; Whitby Hospital, a current collaboration with Craig, Zeidler & Strong; and the Agnes Etherington Art Centre at Kingston, where he did a wall relief. He has also completed several free-standing sculptures, such as the commission for the Lakehead Terminal Airport, Fort William. Recently Mr Bieler has been invited to establish a new Department of Sculpture at York University which, in his hands, can hopefully be expected to be another fresh influence on the community.

Anita Aarons







1 (Top left) Avord Tower, Regina, Sask. 2 (Top right) Victoria Park Apartment Building, Halifax, N.S. 3 (Bottom) Fairway House, Cote St. Luc, Que.

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4 (Top) Applewood on the Park, Cooksville, Ont. 5 (Bottom left) Island Park Towers, Ottawa, Ont. 6 (Bottom right) Garneau Towers, Edmonton, Alta.

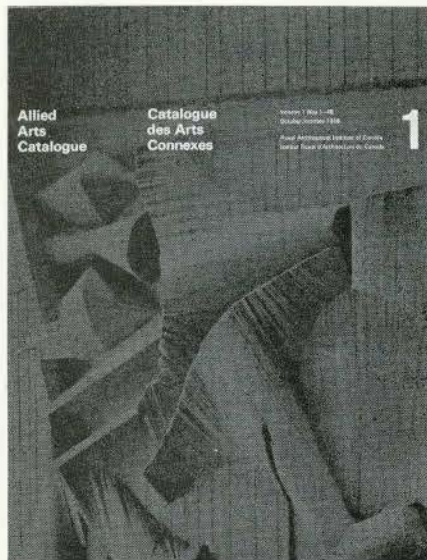
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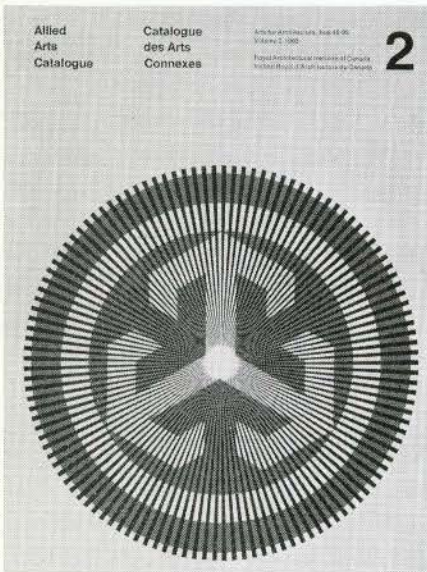
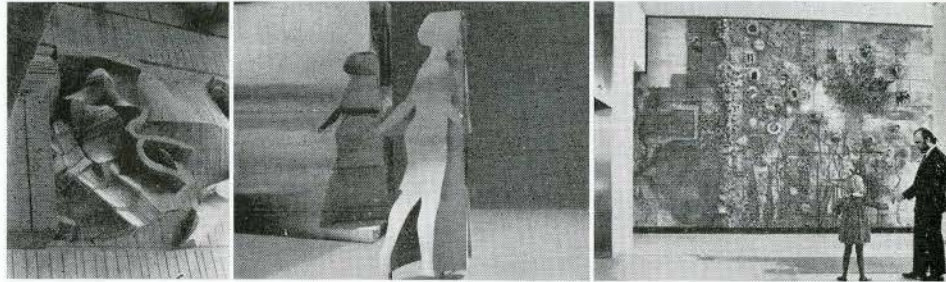
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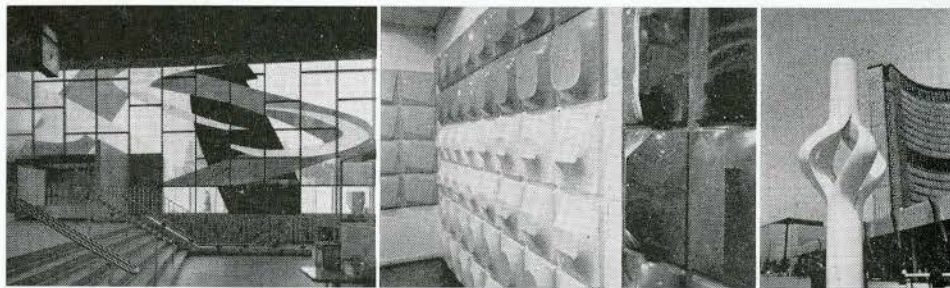
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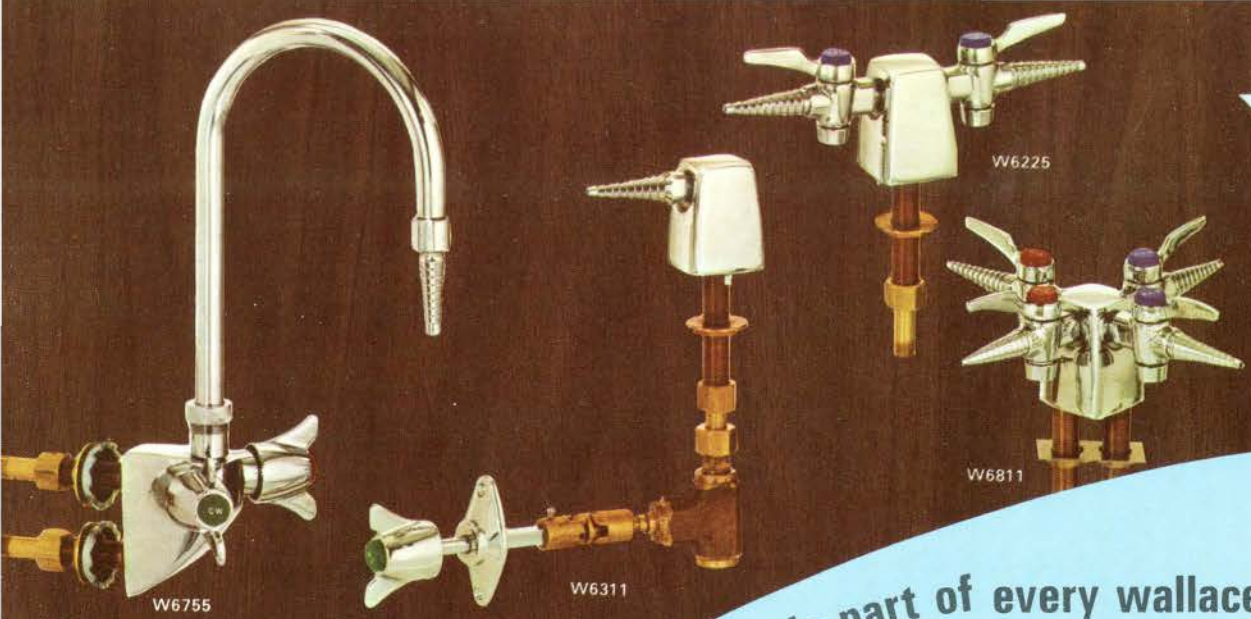
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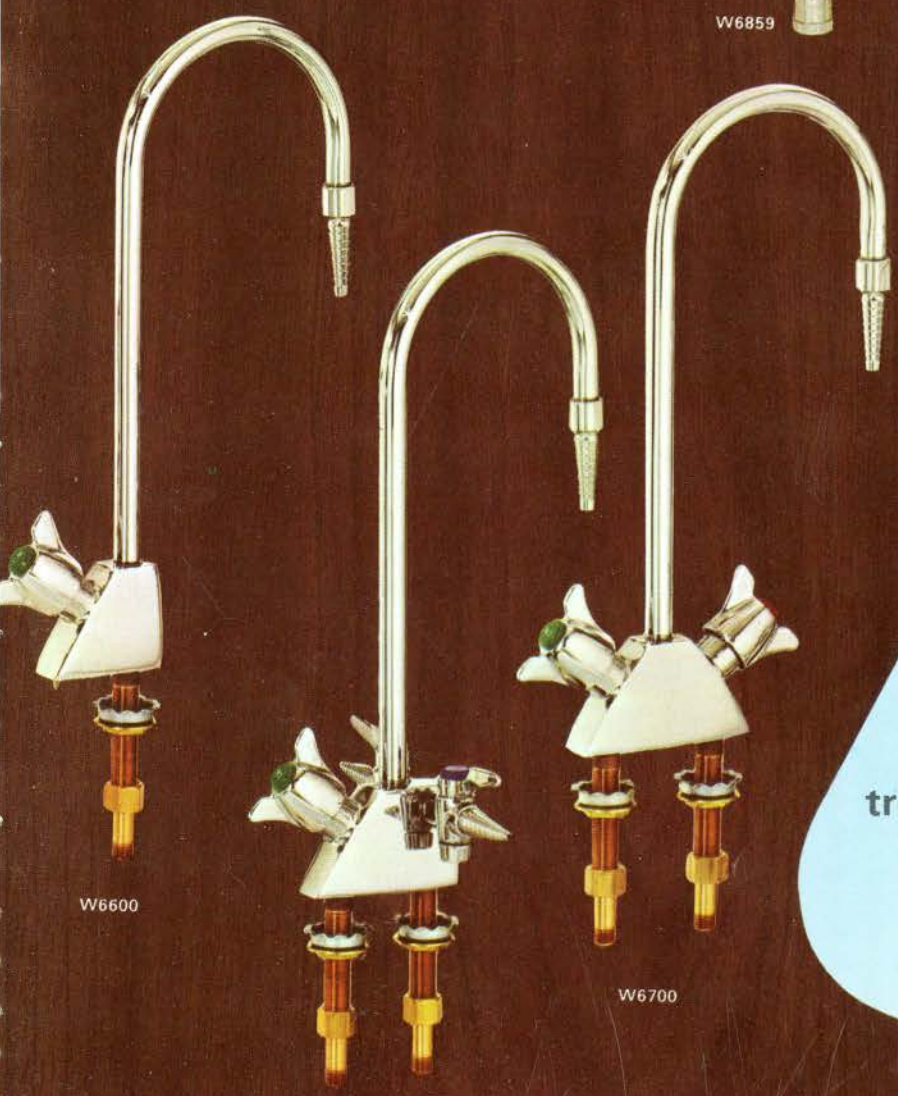
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**Page 34****L'Université et la Crise urbaine  
H. Niebuhr, Jr.**

En période de tranquillité la brèche entre la rhétorique et la réalité est tolérée mais lorsqu'une crise se présente la résolution prend place. Notre société américaine se trouve dans une période de crise en ce moment ou tous les citoyens demandent d'être mieux servis par les institutions urbaines. L'attention du gouvernement fédéral est attirée sur le besoin d'améliorer nos systèmes d'éducation, de santé publique, d'alimentation, de logement et ainsi de suite. L'université semble être la dernière institution à être remuée par cette résolution d'atteindre l'intégration de tous les services urbains. L'université doit servir plus étroitement la société dont elle fait partie et elle doit être une partie intégrale de l'ensemble social.

**Page 35****Usage multiple de la Multiversité  
T. J. Cartwright**

La société actuelle commence à percevoir la valeur d'un accroissement de connaissances utiles. Depuis 1965 le nombre d'américains en éducation (étudiants et professeurs) dépasse celui de la force ouvrière. L'université n'est plus seulement un centre de hautes études mais elle fait partie de la communauté et lui offre plusieurs services qui étaient réservés jadis aux habitants de la tour d'ivoire. Il ne s'agit pas seulement des services physiques mais aussi de la participation plus active de l'université aux problèmes sociaux, politiques et économiques. De plus en plus les professeurs sont appelés à donner conseils aux ministères du gouvernement et leurs subalternes sont obligés d'assister en enseignement. La complexité des programmes d'études nous force à réétudier l'organisation des départements ou disciplines qui s'entremêlent de plus en plus et deviennent presque inséparables.

**Page 36****Grandes Chances contre l'Elaboration de Plans utiles pour un Campus universitaire  
D. H. Scott**

Les centaines de millions que nous dépensons en constructions universitaires devraient apporter quelques innovations en architecture, mais au contraire, nous ne trouvons que des banalités, des projets mal exécutés et qui n'ont pas été étudiés en profondeur. Ce résultat tient de l'incertitude des budgets du gouvernement. Après avoir recommencé chaque projet plusieurs fois pour satisfaire des nouvelles conditions de financement, le projeteur perd un peu de son initiative. L'administration universitaire n'ayant pas encore adopté la technique moderne d'analyse l'établissement de l'interdépendance des données est impraticable et l'étude physique ne peut qu'être fait qu'en fonctions linéaires. Les universités sont mal équipées pour établir leurs Propres programmes d'études et cherchent trop souvent à en éviter la responsabilité en la mettant sur le dos de l'architecte ou du planificateur. Il faudrait que les comités de programmation soient mieux dirigés afin que l'architecte-planificateur puisse produire un plan directeur qui représente une exploitation dynamique plutôt qu'un diagramme borné de limitation physique. Un membre de faculté qui prend sa tâche sérieusement n'a vraisemblablement pas le temps de présider également sur un comité de construction. L'université, donc, devrait avoir un coordinateur indépendant qui tirerait avantage des services de l'architecte et des membres de facultés dès le début d'un projet sans charger ces derniers de responsabilités qui ne leurs sont pas dues.

**Page 40****Formule financière pour l'Exploitation du Capital d'un Campus universitaire  
H. Heldman**

Le Canada dépense plus de \$300 millions par an en construction universitaire, seize de plus qu'il y a dix ans. Il n'est plus praticable pour le gouvernement d'étudier les besoins financiers en fonction linéaire de chaque demande. Le financement par "formules" a donc été accepté. Les besoins pédagogiques établis par les universités sont traduits en superficies nettes nécessaires et un coefficient appliqué pour déterminer la

surface totale à laquelle une valeur en dollars est donnée pour chaque type de construction. Ceci permet aux universités de connaître à l'avance les crédits dont elles disposent et sert à la programmation du développement physique. Ce système est basé sur le principe que les critères ont été établis raisonnablement et qu'ils sont de valeurs à peu près constantes; mais puisqu'ils sont des forces dynamiques et que le gouvernement peut aussi changé de politique, le système n'est pas sans faute. Néanmoins, il sert de guide pratique et le planificateur astucieux en tire inspiration pour trouver les systèmes qui offriront le meilleur avantage dans les limites définies. Dans la planification et le design, ainsi que dans la gérance des ressources, l'orientation vers une perspective dynamique est renforcée.

**Page 41****Formules de Financement, Comment la Province d'Ontario aborde le Problème de la Planification des Universités  
E. E. Stewart**

La direction des programmes d'éducation est établie par la Commission des Affaires universitaires, le Ministère des Affaires universitaires et les Universités, représentées par le Comité des Présidents des Universités d'Ontario. Une politique est proposée par la Commission. Si elle est acceptée elle est administrée par le Ministère et elle sert à l'établissement d'un programme par le Comité des Présidents suivant le budget mis à sa disposition par le Ministère. Les ressources financières doivent être distribuées équitablement et les universités doivent ensuite agir avec indépendance autant que possible. Afin de traduire la somme budgétaire en terme de superficie utilisable une formule a été établie qui indique la valeur de chaque activité universitaire en dollars par pied carré et la superficie qui doit être allouée à chaque étudiant. Ce système de formules n'est pas impeccable. Les universités doivent être toujours en communication afin d'éviter un manque de coordination dans le développement d'un programme global pour la province. Cette méthode d'allouer des fonds est une façon dynamique de procéder qui semble être compatible avec le progrès dramatique de nos universités.



**Page 42**  
**CAMPUS. L'usage, en planification universitaire, de Maquettes simulatrices basées sur les calculs d'ordinateurs**  
**J. Levine**

Afin de permettre à l'université d'employer ses ressources dans la manière la plus efficace, une nouvelle méthodologie a été créée, connue sous le nom de CAMPUS. En 1965 la première maquette simulatrice d'une université a été commencée. Un système informatique collatéral a été inauguré sur lequel sont superposés les systèmes de planification et de financement. Le dernier modèle ajoute un système de plan directeur qui développe la maquette de base suivant les philosophies qui sont dictées à l'ordinateur. L'ordinateur fait l'analyse des demandes de programmes académiques, de membres de facultés, de l'administration, de superficies nécessaires et ainsi de suite et présente les résultats graphiquement. Il fait également l'analyse des besoins prévus à l'avenir et indique ainsi la direction à prendre. La maquette servira de laboratoire d'essais aux planificateurs et réduira le nombre de choix possibles dans la programmation de l'avenir de l'université.

**Page 46**  
**Point de Vue académique. Résultats satisfaisants à l'Université de Toronto**  
**R. R. McLaughlin**

La projection de plans pour un domaine universitaire n'est pas une nouvelle façon de procéder. Depuis bien longtemps, tant qu'une faculté est "vivante", elle demande le déplacement des bornes et doit augmenter ses ressources. Le planificateur doit interpréter ces besoins en fonction d'autres besoins universitaires et établir les priorités suivant le budget disponible. A l'Université de Toronto il y a toujours eu une bonne coopération des membres de facultés et des administrateurs et malgré le fait qu'autrefois chaque faculté avait tendance à s'isoler, aujourd'hui l'intégration se réalise et une architecture plus harmonieuse en est le résultat.

**Page 47**  
**Point de Vue d'un étudiant. Les étudiants devraient participer à la création de l'ambiance universitaire**  
**S. Langdon**

La "multiversité" offre à l'étudiant un certain pouvoir et beaucoup plus de libertés mais il ne joue toujours pas un rôle d'aucune conséquence dans la détermination de l'ambiance dans laquelle il doit vivre et étudier. Les directeurs semblent vouloir créer en l'étudiant un technicien qui servira le monde des affaires sans tenir compte des besoins du peuple qui vie tout autour de l'université. Les étudiants demandent "le pouvoir" pour parer à cette lacune afin de rendre l'université plus démocratique et de lui donner un sens de participation dans la communauté.

Une plus grande flexibilité dans l'architecture (cloisons amovibles etc.) permettrait à l'étudiant et à la faculté de changer l'ambiance et de participer d'une façon personnelle et moins passive. L'intégration des différentes disciplines et des aménités pour étudiants et les membres de facultés est essentielle pour atteindre une communauté où tous sont sur un pied d'égalité et pour ouvrir les portes de l'université à ceux qui ne sont pas étudiants mais qui ont droit quand même de bénéficier des services qu'offre l'université.

**Page 50**  
**Une Expérience à l'Université de Californie, Santa Cruz**  
**J. Esherick**

L'Université de Californie compte 93,000 étudiants sur neuf campus; Santa Cruz, le plus récent, est à 80 miles en bas de San Francisco. Conçu suivant les principes d'un plan directeur par John C. Warnecke et les architectes-conseils de son choix avec l'aide de l'architecte-paysagiste Thomas D. Church, le plan propose une structure différente de celle des autres domaines de l'U.C., et qui comprend 26 collèges chacun ayant sa hiérarchie de facultés. La moitié des étudiants habite sur place. Certaines fonctions sont centralisées, telles que les bibliothèques, laboratoires, etc. Les distances et les différences de niveaux qui séparent les collèges sont telles que même le système de transport le plus avancé ne pourrait pas les rapprocher et si on permet le stationnement de voitures suivant les normes américaines actuelles la situation deviendra insoutenable. Après la construction des deux premiers collèges il est évident qu'il va falloir un plan plus serré et qu'il faut accepter des parkings à étages. Le plan romantique et champêtre semble mal adapté aux besoins d'étudiants qui deviennent de plus en plus préoccupés de l'urbanisation.

**Page 52**  
**Premières Considérations dans la Planification universitaire. Définition très claire de l'Objétif d'un institut par la Méthode de Conseils coopératifs**  
**W. W. Small**

Avant de songer à dessiner le plan d'un campus il faut d'abord établir le programme académique et ceci en fonction du programme global pour toute la province. Quoique l'ambiance intime d'un collège semble désirable certaines aménités ne sont possibles que sur un grand campus inter-disciplinaire, (bibliothèques, équipement de laboratoires, etc.) et c'est ainsi que l'idée est venue de créer un domaine universitaire composé de plusieurs collèges avec plusieurs services en commun. Malgré l'intégration de certaines fonctions il est essentiel de conserver une délimitation de disciplines afin d'obtenir un programme académique bien équilibré. Le bon usage des espaces disponibles pour l'enseignement dépend du programme et de la durée des cours, de l'importance que l'on veut donner à certaines

spécialisations, et du rapport physique et esthétique des éléments de construction. L'objectif de l'université est établi par les gouverneurs, le Sénat, l'administration, les facultés, les départements et les individus – le personnel et les étudiants. L'administration doit s'assurer que l'influence de ceux qui ne veulent que leur agrandissement personnel ne l'emporte pas sur ceux qui se concernent plutôt de l'intérêt de l'institut en commun. Elle doit aussi se garder contre l'établissement de critère qui seraient trop rigides car la technique progressive d'aujourd'hui nécessite une flexibilité qui doit permettre l'adaptation aux demandes de demain.

**Page 53**  
**Toronto – Histoire de deux Universités. Un Traité sur les Cités universitaires résidentielles et sur la Planification des Campus**  
**H. Adelman**

L'étude de résidence pour étudiants est soit du type "laissez-faire" ou du type "technologique". Rochdale College qui devait être de conception révolutionnaire est devenu la quintessence de tout de ce qui est traditionnel. Plutôt que d'avoir créer un nouveau mode de vie, Rochdale engendre tous les modes existants. L'Université de York, au contraire, a voulu employer tous les moyens techniques pour créer une cité fonctionnelle, et répondant à toutes les normes sociologiques acceptables à notre société.

La relation des salles de classes aux dortoirs semble arbitraire et les quatre premiers collèges ont très peu d'individualité. Le plan directeur a conservé une unité superficielle dans le choix des matériaux et le style d'architecture mais il n'offre aucune tolérance pour la diversité ou le changement. Nous ne devons pas penser qu'il faut accepter soit un type ou l'autre; soit de s'évader complètement de l'autorité universitaire ou de s'y soumettre bêtement. L'université doit conserver son autorité mais elle doit aussi s'en servir pour diriger la formation de la responsabilité en l'étudiant. C'est ainsi qu'elle donnera l'occasion aux étudiants et aux membres des facultés de développer des méthodes constructives. La planification de cités universitaires devrait servir à ce but. Le planificateur doit trouver une solution qui donne un sens d'entité et d'organisation tout en incorporant la possibilité d'extensions qui pourront s'adapter aux technologies de l'avenir.



# Campus Planning and Architects

"The establishment of strategies for the development of a campus is an extremely complex process" says David Scott in an article in this issue, and "too many architects (and others) in Canada are eagerly seeking university master planning jobs when they are simply not qualified to carry them out." Is this a too-harsh criticism by a para-architectural consultant or a realistic clue to the cause of some near disastrous results we have seen in many new and newly developing campuses across the country? It's an important question for the profession, and this is an important issue dedicated to the topic of campus planning.

No substitute form of information intake is here offered. The articles must be read, and reading involves a time-commitment and a concentration-commitment too few architects are willing to make. Which in itself is a telling factor in the less-than-fruitful confrontation which occurs between academics and planners; students and administrations.

*Architecture Canada*, for this issue, becomes a forum in which spokesmen for all parties to the planning process are represented. The results are quite revealing. A student leader talks in a vaguely idealistic way of the threat of student action on the campus planning scene . . . "When students seek power in the planning process, they do it to make the university environment promote rather than prevent the building of a critical humane community which respects and serves the people around it." The Director of Planning at a large urban university sounds like a diplomat at the U.N. . . . "I have found academics very reasonable and cooperative in the difficult situations created" and, referring again to planning and planning results. . . "I think we have reason to be very pleased with the results that are emerging." A student from the same institution says. . . "By now even brilliant campus planners will have difficulty doing anything with [our university] but they'll have to try." A Vice President for Urban Affairs at a large US university reveals his acute awareness of urban social problems as they impinge on the university . . . "The days of preoccupation with physical institutional development are past, our neighbours now demand that we collaborate on dealing with the challenge of the interface, and on helping rebuild inner-city neighbourhoods as the trade-off for past transgressions and future cooperation."

The truth of the situation is that constructive communication between parties to the planning process is not

good. Architects, in particular, seem unwilling to break ranks and immerse themselves in related disciplines. Form-giving of itself is a hollow pastime and cannot help but be relegated to minor status in any total planning process. If the architect still wishes to maintain his former role as head, or coordinator, of the planning-building team, he must change his approach drastically.

A good deal of recent campus planning (and building) work that has been initiated by architects for universities across Canada borders on the irresponsible. Although it does not say so in as many words, David Scott's article articulates this point of view very effectively.

The first phase of the major program to increase facilities for higher education in this country (begun in the late fifties) has now passed. Some stock-taking is in order before the next phase gets too far under way. It is our hope that this issue will be a generator for some rethinking in the whole field of campus planning, particularly by the architectural profession.

**Evan H. Walker, Guest Editor**



# The University and the Urban Crisis

Herman Niebuhr, Jr.

*Dr Niebuhr is Associate Vice-President for Urban Affairs, Temple University, Philadelphia.*



In quiescent times, the gap between rhetoric and reality is fairly well tolerated. In periods of crisis illusions must be pushed aside so that resolution may take place. Almost every urban institution has had its moment of truth during the past decade as it has faced the accusation of non-performance by one or more of its constituencies. In American Society, the poor, the blacks and the students have gained the courage to point to the defects of the system. Despite a long list of accomplishments, we still do not, nor know how to, educate, provide adequate nutrition, offer equal health care, equal employment opportunity, minimally adequate housing, and a host of other essentials for all citizens. We are clearly at the point where all citizens have these expectations and are demanding that a highly technological society so perform.

## Universities Slow Runners in the Urban Race

The social policy of the United States, as mirrored in its legislation, has moved to face this challenge and is pushing and/or assisting urban institutions to adjust themselves accordingly (and creating additional need for Federal largesse in the process). Not surprisingly the pressure for assistance in institutional change, retraining of present personnel, and better education of the next generation has been building on the university. At the same time, a growing number of students have discovered that the universities, for all of their protestations, are part of the status quo, and are demanding a commitment to their view of the emerging new world. Even further, universities located in black neighborhoods are beginning to face the demand that they act as "good neighbors" making common cause on pressing for change and assisting in problem solution. It is somewhat a paradox that the university, which finds itself so successful in certain aspects is also perceived as the slowest runner in the urban race.

The very definition of a university, its structure, its processes, its linkages to its various constituencies, and its ethical position are in question. The Nineteenth

Century rhetoric is no longer adequate. Moreover, the inelegance of administrative and faculty response to recent student confrontations throughout the nation suggest that the "thinking machine" does not work well on its own problems.

Yet there is historical precedent that we can call upon: the land grant university served as a most useful change-mechanism during the American agricultural era. There is even more contemporary precedent when we consider all of the thinking and experience in rationalizing and harnessing all of the "natural" aspects of a society as we are doing by planning and legislation in economic, fiscal, resource development, health, and manpower areas. Yet, planning as a rational change-process comes late to higher education. As all facilities and campus planners know, educational and program planning in almost all universities is a shambles. Indeed, these same planners know, if they will not admit, that they make a fair number, if not most, educational decisions in their institutions!

## Broad Educational Plans First

It is obviously timely, if not too late, to generate planning processes within higher education which will review and renew the relatedness of the university to the larger society. Given the present complexity of North American universities, this requires a number of monitoring functions: the monitoring of each upcoming new generation for its special needs and characteristics, the monitoring of the larger social reality for early detection of emerging problems, shifting manpower requirements, and the monitoring of the ethical and value evolution present in a changing world. It also requires the generation of intellectual models which deal with the wholeness or comprehensiveness of urban society. While the social policy as seen in legislation already reflects this move to wholeness, universities are still on their fragmentation and differentiation tear, with almost no integrative mechanisms present. It also requires the acknowledgement of existing functional linkages between the various schools and colleges of a university and the variety of urban institutions, and then planning what those linkages ought to look like given some rational analysis. The

imperfect links between Colleges of Education and School Districts is an obvious example. It would also require the invention of new processes of education within a human development context. The role of direct experience and the adaptation of the new technologies are obvious examples.

## Campus Plans Afterwards

All of these new planning tasks precede facilities and campus planning activities. Indeed, if we acknowledge that we are at the beginning of a major reform epoch in higher education, we must also acknowledge less certainty about facilities and campus criteria than we've ever had in the past. Complex as all of these tasks are, they are further compounded by the fact that urban universities are located in neighborhoods which are now making additional claims on the institution. The days of preoccupation with physical institutional development alone are past, our neighbors now demand that we collaborate on dealing with the challenge of the interface, and on helping rebuild inner-city neighborhoods as the trade-off for past transgressions and future cooperation. Hence, facilities and campus planning must now be seen within the context of urban development. The fact that we have neither the planning technology nor the fiscal resources to participate very deeply is somehow beside the point.

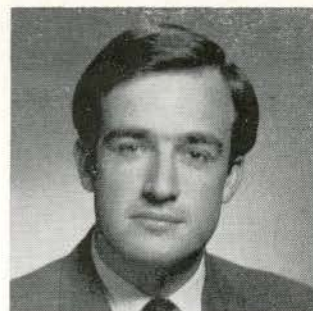
The parable of the Emperor and his lack of new clothes comes to mind. The embarrassment of royalty is always more devastating than for us common folks. Yet, one always depends on the excess of royal dignity to cope with the situation. The embarrassment of the university in 1969 as it gropes for a fig leaf or a palm frond is considerable. Whether there is an adequate reservoir of dignity to cope is still at issue. □



# The Multi-Use of the Multiversity

Timothy J. Cartwright

*Mr Cartwright has been a chargé d'enseignement sénior at the Institut d'Urbanisme of the Université de Montréal for the last year. He studied public administration at the doctoral level at Nuffield College, Oxford.*



Universities are quite obviously at a critical juncture in their history. In what turned out to be something of an ironic understatement, Clark Kerr introduced his Godkin Lectures at Harvard in 1963 with the declaration that, "although it is one of our oldest social institutions, the university today finds itself in a quite novel position in society . . ."<sup>1</sup> The university, according to Kerr, has turned into a multiversity. From being a single community it has become many communities, some overlapping with others but each with its own distinct interests. Broadly speaking, the new position of the university in society is due to one factor above all others, and that is the growing social demand for knowledge. Kerr went on to point out that: "The basic reality, for the university, is the widespread recognition that new knowledge is the most important factor in economic and social growth. We are just now perceiving that the university's invisible product, knowledge, may be the most powerful single element in our culture."<sup>2</sup>

It is difficult to measure precisely this growing social importance of knowledge. According to one estimate, the production, distribution and consumption of knowledge accounts for about 30 percent of the gross national product in the US, and its growth rate is about twice that of the rest of the economy<sup>3</sup>. Also in the US, it is reckoned that the size of the "learning force" (*ie*, all those in education, whether full-or part-time, on or off the job) has since 1965 exceeded the size of the labor force (*ie*, all those engaged in the production of goods and services).

## Exploit Opportunities to Alleviate Problems

This growing demand for knowledge has, then, quite naturally placed the university in "a novel position." It is no longer only an institute of higher learning. It has moved from a position close to the periphery of society to a position near or at the very center. The result has been both problems and opportunities — problems within the university of adjustment to its new role, opportunities outside to exploit its new potential for social good and intellectual advance. The most obvious problem is probably student unrest. Samuel Lubell has recently completed a survey of student

opinion which shows that the really critical issue on campus is not "student power" as such but the failure to meet "the expanding career needs of this numerous generation . . . and the new relationship that has become necessary between the university and the outside society"<sup>4</sup>. What Lubell is implying, I think, is that successful exploitation of the opportunities presented by the multiversity may help alleviate some of its problems as well. One such opportunity lies in developing the multiple uses of the university. By multiuse I refer not to physical plant but to the many uses of the knowledge capacity of the university. Principally this multi-use stems from the fact that universities now find themselves dealing increasingly directly with social, political and economic problems ranging from national defence through pollution control to mental health.

## Multi-Uses: Examples and Ramifications

Consider, first, this tendency for members of the academic community to be drawn more and more directly into doing research for or acting as consultants to government, business and industry. Few would maintain that academic expertise should not be made available to society; the difficulty is that this does place an additional demand on the time of the individual professor. Some adaptations have naturally been made to deal with this problem, including the emergence and development of the role of the graduate assistant or "academic subaltern", as he has been called<sup>5</sup>. But the problem is far from resolved, for this particular use of the university's knowledge has raised fundamental questions about the methods of teaching and the objects of research.

Consider, secondly, the number and role of the semi-independent institutes and centers which have been created within universities in the last few years — institutes which tend to focus on some particular use for or *application* of the knowledge of the university. My own Institut d'Urbanisme, for instance, was founded in 1961 at least partly because of a feeling that city and regional planning was so socially important as to deserve a distinct university institution. This is not to say that the organization of the university into a multitude of problem-oriented institutes is any more or less legitimate than that

based on the traditional division into departments based on disciplines. The point I am making is that multi-use of the university's knowledge capacity is forcing us to question traditional forms of organization.

I think there is a third point to make as well. There is no doubt that, by applying knowledge to improving the quality of life, we are in the position of being able to achieve more and more as the years go by. At least since the war-time Manhattan project, members of the university community have known — whether they like it or not and whether they feel morally responsible for it or not — that the knowledge they produce and distribute (or fail to produce and distribute) can have a definite impact on their environment. "Pure research" is, after all, an operational assumption; research always has some practical effects. An adjustment in the balance between knowledge for its own sake and knowledge for its social utility is taking place in the universities because as they move closer to the center of the social stage their effect on society becomes more profound and far-reaching. As Dr James Corry has said, "So, in one breath, the university has become a public service institution"<sup>6</sup>.

Universities have undergone this transition primarily, I think, because of the multi-use demands on their knowledge capacity. These new demands lie behind the current problems facing the university as well as its potential for contributing to the social good. Perhaps more remarkable than the evolution of the university itself, however, is the relatively little attention that has been given to the question of how the university can systematically adapt to its new role. As this essay has tried to show, there are at least two fundamental aspects to this problem, one related to function, the other to form: (1) the better integration of the advancement of knowledge *per se* (through research and teaching) and its applications to the problems of society, and (2) the better organization of the multiversity (including its departments and disciplines) to enable it to respond to its multi-uses. These are broad, complicated issues which may never be completely resolved, but they cannot be ignored. Such questions are fundamental to the successful exploitation by the university of the new role it seems to have acquired. □ See footnotes page 70.



# The Odds Against Excellence

David H. Scott

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The development or major extension of a university campus is an enormously challenging assignment for all concerned. In terms of goals and stature of the client, the significance of the undertaking, and the complexity of the micro-urban planning task involved, this type of opportunity is virtually unique. Hundreds of millions of dollars are being spent in Canada on the construction of university buildings, and the result should have been an explosion of exciting and imaginative solutions, carefully and consistently executed, subtly educating students to better standards of design. Instead we see many routine plans, superficially thought out and inconsistently executed. The exceptions are few and far between.

Why should this be so? The factors I consider to be important range from overall government policy to seemingly minor organizational matters. Each factor individually has the power to reduce the chances for excellence. Collectively, they make the odds against excellence prohibitive.

## Some Pitfalls and Guidelines

1. Those involved in planning must be able to make reasonably reliable assumptions about the funds which will be made available, and the criteria which will be applied by the funding body (in Canada, the provincial government). To whatever degree these are unpredictable, then to that degree the planning process becomes futile. After repeated scrapping or extensive modification of programs due to erroneous guesses as to what government will do, disillusionment sets in and support for rational, comprehensive, long-range planning becomes lukewarm.

2. University administrative structures are generally still somewhere in the 1930's as to the adoption of contemporary analytical techniques. Whereas private and government sectors have generally adopted the systems approach, feed-back communication channels, simulation, and other essential attributes of comprehensive planning, most universities still stick with a linear approach: first academic planning; then financial restraints; then physical planning. If a university has recognized the interdependency of all its parts and the need to analyze optional methods of meeting its

goals to the extent of establishing an institutional research function, then this function itself is frequently emasculated by being set into a traditional organizational matrix. The result is that the physical planning function is usually starved for meaningful inputs about the institution as a whole — its goals and its strategies to meet them. Planning thus is vulnerable to constant mind-changing due to lack of analysis of fundamentals. Physical planners have the right to expect that university administration will do its part in providing a useful framework of objectives, policies, educational criteria.

3. Too many architects (and others) in Canada are eagerly seeking university master planning jobs when they are simply not qualified to carry them out. Their approach is often superficial, and their solutions simplistic. The establishment of strategies for the development of a campus is an extremely complex process requiring many types of specialized knowledge, all carefully orchestrated. Universities often compound the problem by expecting their consultants, architects or planners to take on responsibilities they themselves should assume.

4. Many universities have an unsatisfactory internal organization structure for physical planning and plant. If responsibility for master planning, project programming, project design, and construction supervision is compartmentalized, then the consultant may be thrust into the ludicrous role of internal coordinator for the university. Then the chance for effective use of a consultant really becomes small. Many universities are committee-oriented to an unbelievable degree, with the committees being badly run for good measure. This general situation is a consultant's nightmare and a guarantee of ineffective planning.

5. Every university pays lip service to a desire for a physical environment of high conceptual quality. Unfortunately, a consistent interpretation of what this means, and how to achieve it, seldom exists throughout the decision-making structure. Occasionally it does not even exist amongst the university's planning staff, who turn over all that aesthetic jazz to the architects.

6. All too frequently, the Master Plan is seen as a carefully drawn diagram on the wall rather than as a flexible body of policies, studies, analyses, and designs. The traditional "Master Plan" drawing should simply be a summary of the current implications of these documents. If master planning is not seen as an on-going, indefinite, continually refining process, then adequate budget provisions for this process will not be made and the plan will peter out through obsolescence.

7. If no provision is made for a monitoring body to ensure continuity and consistency in the implementation of the plan, then the original objectives are likely to be largely lost as a result of short-term tinkering. A monitoring body should be in a position to enter into dialogue with additional participants such as newly retained architects.

8. This may seem too obvious to mention, but the best laid plans, and the most competent organizational structure, will come to nothing if unsuitable designers are chosen to execute individual projects. Architects should be evaluated on competence, compatibility, and sensitivity.

9. Universities have a curious habit of appointing faculty members as chairmen of building committees. I know of no equivalent example, outside of the political world, of expecting an individual to carry out a complex professional task for which none of his qualifications suit him. Certainly these eventual users of the building should be represented, to ensure that their carefully identified and analysed needs are met. The committee chairman should however, be the university official best qualified to coordinate all aspects of programming, design, and construction.

10. Another curious habit is the carrying out of the programming for a project without the architect's participation. This is probably the most critical phase of any project, and the one most commonly done badly. To eliminate the contribution of the architect at this initial stage is to cripple him and to settle for less than should be expected in exchange for his fees. □



# University of Alberta

## Long Range Development Plan

A. J. Diamond and Barton Myers, Planners

### Planning Process

The long range development plan was not intended to be an inflexible document but to be a working plan for the university and its Campus Development Office, setting down only principles of physical organization. It structures common elements such as movement systems, distributes the required services, e.g., food and trucking services, in a rational manner, and demonstrates how best academic and non-academic affinities might be satisfied.

A critical path was used to guide the planners in setting out the planning process. One of the first tasks was the identification of University policies in a number of areas. Another was the analysis of previous consultants' work.

### Goals and Objectives

In the absence of articulated goals, two documents were prepared on which to base planning. The first, *Institutional Goals and Objectives*, is substantially findings of the task force on goals and objectives at Temple University, Philadelphia. These findings were used as a means of focussing attention on the issues now facing urban universities in general.

The second document, *Planning Goals and Objectives*, was prepared after consultation with members of the faculty, staff and students of the University of Alberta, plus analyses of previous work done by consultants to the University, and the contribution of consultants to the long range planners. Below is a summarized list of these planning goals and objectives.

"1. Buildings will no longer be built without regard to the possible ways in which they can contribute to the overall campus plan.

"2. A mix of uses is accepted – e.g., housing will not be relegated to a 'suburban' or peripheral location, but will be in the heart of the campus.

"3. Wherever possible, climate-controlled access ways will be incorporated into building programs. In this way they need not, with careful forethought, cost any more than the set building budget.

"4. Access ways, or pedestrian streets, will incorporate other general requirements – food services, sitting space, locker rooms, or commercial-type facilities.

"5. The University will provide housing for as many as possible and a choice in loca-

tion, type and operation will be provided.

"6. Because the University sees itself as an institution of community benefit as well as an academic institution, access by the public to appropriate activities will be encouraged."

### The Long Range Plan (see diagram 6)

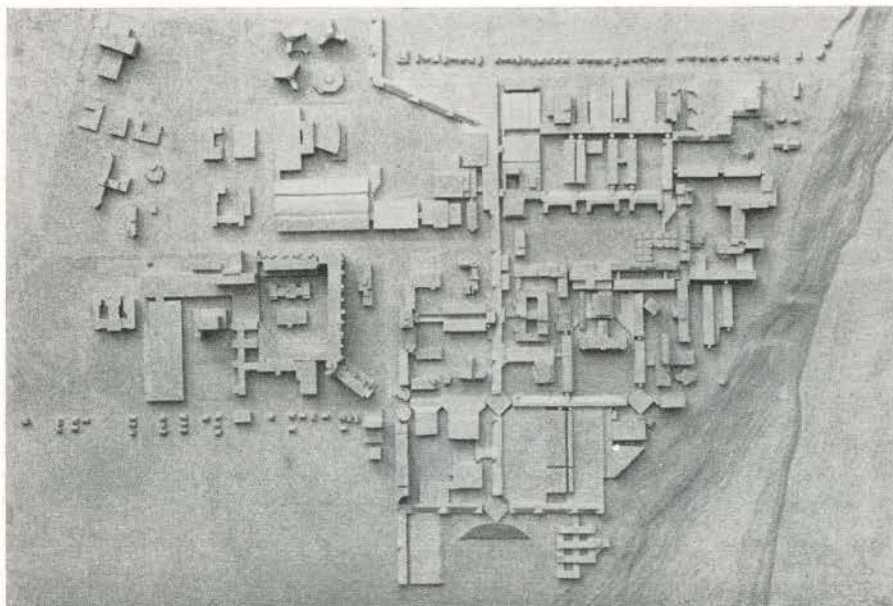
Encouragement is given to the use of public transportation systems, although the plan recognizes that the University in the future will be served primarily by the automobile. The mass rail transit stop is to be linked to the campus heart by a pedestrian street. Penetration into the campus of vehicular traffic is to be minimized, and when it does occur, grade separations between pedestrian and vehicles are to be made in heavily travelled areas and horizontal separations in lightly travelled areas. A loop system is used, *not* a restrictive ring-road.

Major parking structures are to be distributed on the western and eastern approaches. Grade separations are to be achieved by building over roadways, thus above-grade pedestrian easements would be incorporated into buildings which must, in any event, be constructed.

New buildings are to be located to satisfy required academic linkages and create climate-controlled access ways. General use and major teaching spaces are to be located on these access ways, making these spaces accessible to many. More private or particular spaces would be removed from the main circulation paths, creating a potential flexibility for the academic system, *i.e.*, making possible the grouping of disciplines as well as an organization by faculties.

The links are multipurpose in nature, achieving connections between academic areas, giving access to major teaching and library spaces and providing much needed general service space – food services, display, etc. The concept is to realize the university community by providing as many activities and facilities in mixed development on the campus as possible.

Housing is an important factor in creating a vital urban campus. Support facilities such as dining or recreation, located above or



1 Model, Long Range Development



2 Section of typical academic building showing the integration of future expansion  
 Coupe sur un bâtiment académique type indiquant l'incorporation d'extensions futures

3 Section of typical academic building. General space such as centrally scheduled classrooms are accessible from the pedestrian street and located no more than three floors either above or below this level. Private offices and other spaces are located above the general use spaces

Coupe sur un bâtiment académique type. Les salles de classes centrales sont accessibles directement de la rue des piétons soit au même niveau ou à pas plus de 3 étages au dessus ou en dessous de ce niveau. Les bureaux privés et toutes autres salles sont situés au dessus des secteurs à usage général

4 Demonstration section through the Faculty of Agriculture. Greenhouses form an appropriate Galleria over the street, integrating the pedestrian street and an academic building  
 Coupe pour démontrer la Faculté d'Agriculture. Les serres sont une galerie appropriée au dessus de la rue apportant un élément d'intégration de la rue des piétons à un bâtiment académique

5 Section through typical street showing separation of vehicular and pedestrian traffic, with housing over. On one side are general use spaces, or space for food services or concessions. Lounges may adjoin the pedestrian street with large windows on the other side  
 Coupe sur une rue type indiquant la séparation de la circulation véhiculaire et de piétons avec une couverture. Sur un côté se trouvent les espaces destinées à usage général, ou aux services alimentaires ou aux concessionnaires.

with the pedestrian street system, may be effectively used as links between resident and non-resident, undergraduate and graduate and even faculty and student. The plan also suggests that the mix of academic space and housing units, to make a larger scale college, be considered.

The report also suggests that the University, the city and the province might collaborate to their mutual benefit in the area around the Northern Alberta Jubilee Auditorium because of the accessibility of this location for conventions, sports and exhibition facilities, and in the way links to the community could be effected via the mass rail transit stop.

### Implementation

The following steps are outlined for the implementation of the plan:

"1. The utilization of Institutional Research as a valuable staff function to assess needs, test programs and evaluate alternate means.

"2. The refinement and further articulation of academic and institutional goals.

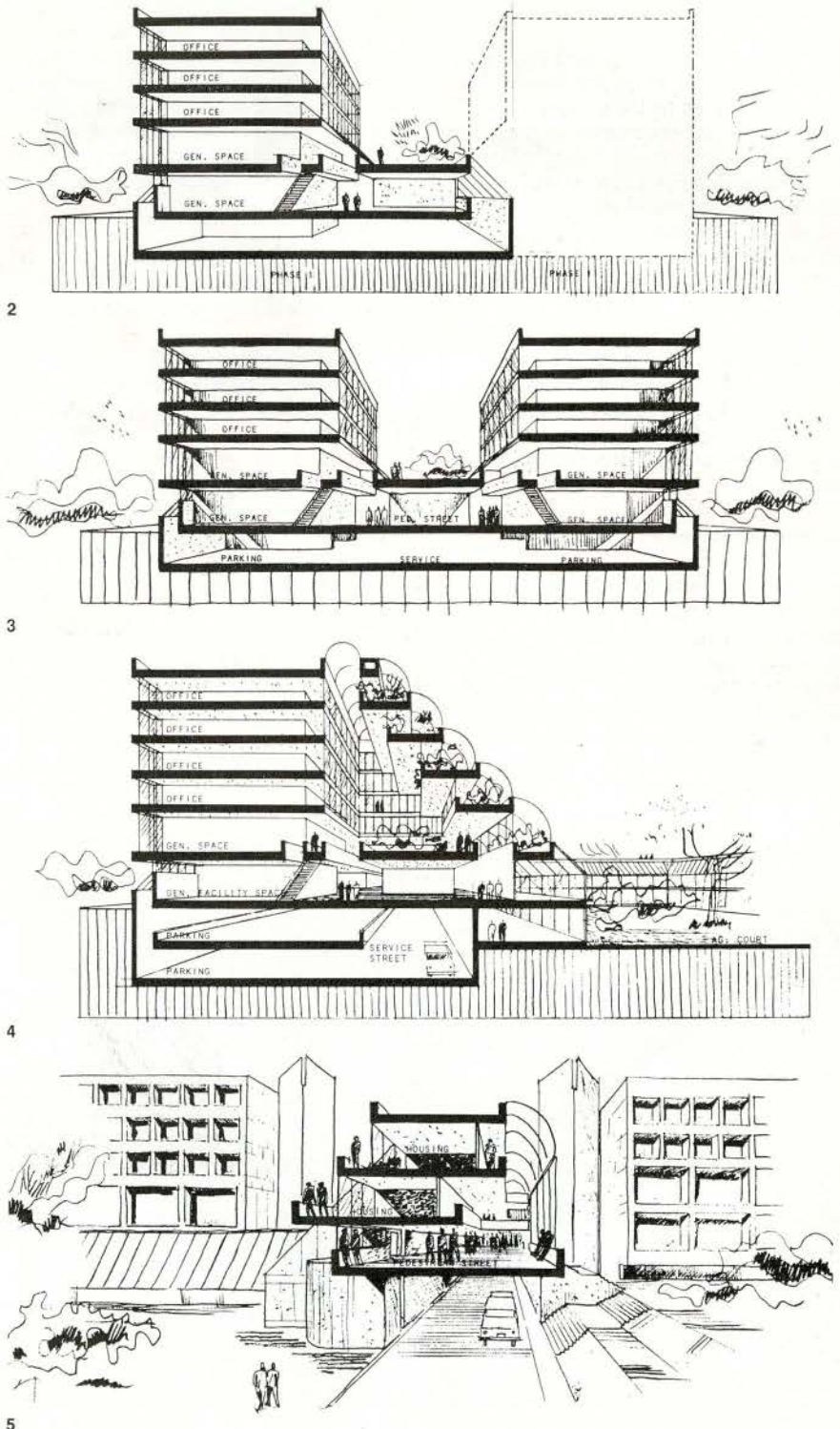
"3. The co-ordination, with the city, of traffic movement, in order that the city may make adequate provision of capital budget for the necessary upgrading of intersections and roads as they affect the University.

"4. The formation of detailed briefs for project architects and engineers, in order that the ground rules be made explicit and performance criteria be established.

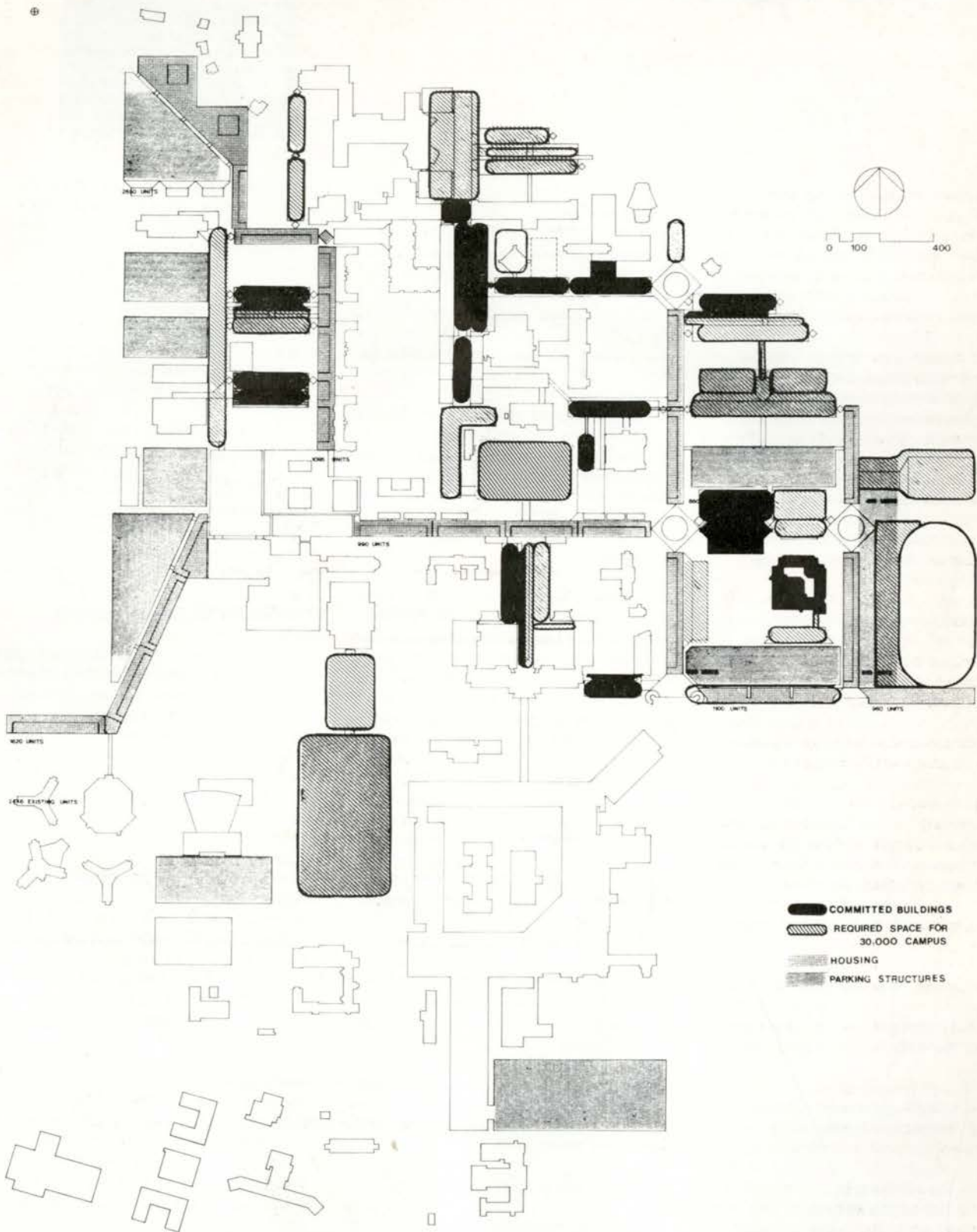
"5. The undertaking of cost and feasibility studies for the overall academic and building program.

"6. The undertaking of housing studies to determine the need and demand for the various forms of possible housing.

"7. The finding of means to implement the established policy on campus planning and development, which states that the quality of physical environment is held to be important; the appointment of outstanding architects and engineers costs no more and is the best way to realize this policy." □





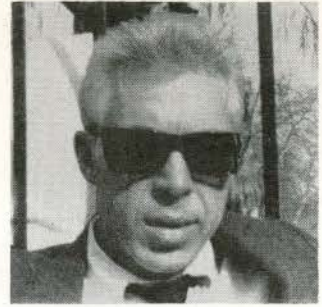




# Formula Financing for Campus Capital Development

Herbert Heldman

*Mr Heldman has directed major studies in urban and regional economic development, population growth and ecological patterns in Canada, the US and the Caribbean. He is president of the consultant firm of Taylor, Lieberfeld and Heldman Inc.*



Capital expenditures for colleges and universities in Canada now exceed \$300 million annually. During 1954-1964 there was a 16-fold increase and the upward trend continues. At the same time, the direct share of government in financing capital development has so expanded that public agencies have become, by now, the dominant source of capital funds. Governments, typically, have responded to their broadened role by establishing formal channels for the submission and review of capital budget requests and allocation of funds for supporting specific projects. However, sheer volume precludes retention of the increasingly unwieldy detailed appraisal and audit procedures which have been characteristic to date. New techniques must be adopted to replace the line item review of capital budget requests.

Formula financing of capital development is conceived as a solution to this problem. It is a technique for relating aggregate capital development requirements to a similarly comprehensive measure of need. The intent is threefold: 1 to establish a rational basis, easily comprehended by all participants, for determining the overall scale of support; 2. to provide a reasonable procedure for discriminating among competing institutions and projects in allocating limited resources; 3. to enable the universities to project probable support levels in temporal perspectives that are appropriate to capital planning cycles (even though actual commitments may still take the *form* of single year allocations).

Accomplishing these objectives requires a conceptual structure and mechanism that is simple but nonetheless attentive to appropriate control criteria. There are four main aspects.

First, the system requires long term projections of university activity levels. Usually these are expressed in terms of aggregate enrollments, although conceivably other measures of activity will be incorporated. A second requirement is that the system provide a reasonable and simple basis for converting from activity level measures, such as enrollment, to physical accommodation equivalents, such as assignable square footage. Typically, this involves the combination of physical planning criteria and activity data and takes the form of specifying

an allocation of assignable square feet per FTE student.

Third, the system requires a set of design effectiveness criteria for converting from assignable square footage requirements to reasonable gross square footage equivalents. This permits transformation of the accommodation requirement estimates to the operational mode of expression familiar to architects and others involved in the actual building process.

Finally, the dispensing agency and the user university ultimately are dealing with real dollars. Therefore, the system requires the establishment of cost criteria for converting from the GSF envelope to equivalent overall capital outlay needs.

## Advantages

First, formula financing allows universities to perceive the flow of support for capital expansion over longer periods of time than was previously the case. Allocations based upon single year requests and review entail the hazards of discontinuity. Capital development requires a continuing flow of funds, and any system which clarifies the pipeline nature of capital money flows holds out enormous advantages for universities. Second, the longer perspective allows for more reliable definition of need and permits the universities to work out the internal adjustments in physical plant accommodation patterns associated with implementing their operating programs at projected levels of activity.

Third, the universities can achieve more rational utilization of current operating income by allocating current operating fund support for individual programs at levels consistent with the possibilities for housing the activities associated with them.

Finally, the procedure should relieve the dispensing agency (government) of the need for detailed, project by project evaluations in isolation from a more comprehensive development perspective.

## Disadvantages of Formula Financing

For every benefit associated with capital development under formula financing there is a pitfall to be avoided. First, defining "reasonable" criteria in generally acceptable terms is difficult. Opinions vary widely between government and university as to the

quantitative values to be assigned to physical accommodation criteria, GSF/ASF ratios, unit cost criteria, etc. Nor is unanimity likely within the respective establishments of these two sets of participants.

Second, it is difficult to guarantee government support for long-term projects in a socio-political environment in which demands on the public purse vary unpredictably, sometimes quixotically. Yet universities must operate on the assumption of such support.

Third, it is essential that the "criteria" themselves be regarded as flexible over time. As our dynamic society grows in abundance and complexity, so do universities. Capital investment, as measured in terms of space and/or equipment per student, has been increasing steadily for many years. There is no reason to expect a reversal of this trend.

## Implications for Campus Planning

Viewed in the broad sense, formula financing of capital development will affect all participants in the campus planning process. What will be required of them? How can they respond? What kind of universities will emerge?

First, successful implementation of formula financing techniques will require perception and understanding of the accommodation and cost constraints by all concerned — planners, architects, construction program administrators, government watchdog committees, etc.

Second, formula financing is directed towards solving the problem of allocating limited resources among a variety of competing institutions. Within the university, the generalized allocation procedure associated with formula financing must be fortified by an analytical apparatus designed to discriminate among projects and campuses precisely in terms of the same issue.

Third, formula financing of capital development establishes broad constraints which generate a need for more imaginative, creative approaches in both space programming and design solutions for individual buildings. Finally, formula financing emphasizes the need for fully articulated campus plans that are integrated into comprehensive long-range academic and financial plans. In planning and design, as in the management of resources, the shift to a dynamic perspective is reinforced. □



# Using Formula Financing

## The Province of Ontario's Approach to Campus Planning

E. E. Stewart

*Mr Stewart is Deputy Minister of the Ontario Department of University Affairs.*

To understand the co-ordination of university planning in Ontario, one must have a general understanding of how the university system works at the provincial level. Generally it can be seen to be based on an approach which calls for shared responsibility and in which there are at least three major participants – the Committee on University Affairs, the Department of University Affairs and the Universities, usually represented by the Committee of Presidents of Universities of Ontario. In general, the Committee on University Affairs, which is the chief advisory body to the Government on matters of higher education, recommends general policy to the Minister of University Affairs, often as the result of joint studies undertaken with the Presidents. The Department, which provides support services to the Committee, as required, administers these policies after they have been accepted by Government and implemented. The universities, working within the general ground rules of such policy, determine the educational patterns that will be undertaken and the wisest use of the available financial resources in order to develop those patterns effectively. Increasingly many of the decisions related to such areas of concern must be undertaken on a co-operative basis among the universities so as to ensure effective rationalization of development.

Within this general pattern there are certain fundamental principles which we have tried to acknowledge and which are now generally accepted by most of the participating organizations:

- 1 There is a limit on the resources that can be made available for university operation and development.
- 2 Whatever the limit, funds should be distributed, and be seen to be distributed, on an equitable basis.
- 3 Once decisions as to allocations have been made, each university should be given the widest possible scope in the expenditure of those funds.
- 4 Basic decisions as to academic determinations are better made, if possible, by the universities themselves.

Applied to the physical development of our universities, the belief in these principles

has led us, almost inevitably, toward the development of a capital formula. This type of approach, which has proved most successful in regard to the distribution of operating funds since its inception in Ontario in 1967, is now in the final stages of development for capital allocations with a planned introduction for the next fiscal year.

### Capital Formula Structure

The formula structure now contemplated begins with an acknowledgement of space available within each institution as determined by a complete inventory. This inventory will then be related to established standards, (e.g. net square feet per student, with appropriate allowance for the different requirements of various programs), in order to determine the total space requirements of each institution during a given period of time, probably five years. The difference between total needs and the present inventory will reflect the new space required at each university and this will be translated into financial requirements through the application of a second standard measured in dollars per square feet.

Having arrived at such a measure of dollar needs, it is expected that universities, and not the Committee on University Affairs or the Department, will determine the exact form that such new space will take. Decisions, often very difficult ones, as to whether to proceed with academic facilities, faculty offices, student areas and/or general service requirements, will need to be made within the institution, on the basis of the best judgment of its members and subject to the cost parameters established as a result of the aforementioned objective criteria.

The formula approach is valid, of course, only in terms of new space. Additional considerations will have to be made in regard to site and utilities development, requirements for replacement, renovation and repairs and for special situations such as those which apply to the emergent universities.

### Role of University Affairs Committee

It should be stressed, however, that despite



their many strengths, formulae, either for operating or for capital, do not, in themselves, ensure effective coordination of effort among the various institutions. It is possible, for example, although not probable, that under a formula system all fourteen Provincially Assisted Universities might decide to proceed with new geology buildings (to take an example at random) at the same time, even though it is apparent that there is no need for so much expansion of this particular type in the province or nation. The formula provides some restraint, of course, in relating space provisions to enrolment. But obviously some further techniques to ensure effective coordination are required. Thus, for cases of this type, the Department, which is aware of individual university plans through regular submissions by each institution, would refer the problem to the Committee on University Affairs. The Committee, based on precedent, would ask the Committee of Presidents for its advice as to a solution to the problem. The situation can then be considered by the universities collectively and a suitable solution suggested. This pattern has been followed in the past as, for example, in respect of library development and there seems to be general agreement that it is an appropriate and effective means of handling such situations.

This, in relatively concise terms, and without emphasis on the considerable degree of discussion and exchange among all concerned that is required to make it work, is the present pattern of assuring the effective use of public resources in the development of university facilities within a provincial system. Since this is intended to be a dynamic approach, there is every likelihood that it will continue to change in future years. Given the fact that the formula approach is dramatically different than the methods that were employed for capital allocations five to ten years ago, there is every likelihood that our experience will lead us to new and, hopefully, better devices in the next decade and beyond. This is as it should be if we are to adjust adequately to a dramatically changing world in which the universities play such an important role. □



# CAMPUS

## The Use of Computer Based Simulation Models in University Planning

Jack B. Levine

*Mr Levine a pioneer developer of new systems for resource allocation planning has recently been associated with Stevenson & Kellogg Ltd. and the Systems Research Group.*

University planning and budgeting have traditionally been carried out in an informal and unsystematic fashion. Rules of thumb and personal persuasiveness have been the dominating factors. Under today's conditions of burgeoning enrolments and limited resources such an approach can no longer be afforded. A more formal methodology is needed to enable the university to use its resources as efficiently as possible. CAMPUS<sup>1</sup> (Comprehensive Analytical Methods of Planning in University Systems) is such a methodology.

### CAMPUS

CAMPUS began in 1965 as a computer simulation model of a university. In order to supply the model with much of the data that it required it became necessary to add an information system describing various aspects of the Institution. Organizational considerations about the means by which the model could be integrated into the budgetary process of the university led to the incorporation of a Planning Programming and Budgeting System into CAMPUS. Most recently a fourth component has been added – a Master Planning System that uses the model as the basic ingredient of the institution's long range physical plans. (See Figure 1)

CAMPUS was designed to meet two main objectives: a) to develop a structure which is a precise and unambiguous description of the university system similar to that which is provided by an engineering model that describes a physical system, and b) to provide a structure which is capable of generating the resource implications of various sets of programs and activities just as an engineering model can be used as a basis for prediction and design.

The CAMPUS models simulate university operations over a time period of any length. Loaded into a digital computer, the models accept descriptions of the university's structure, statements of the levels of various university programs, detailed specifications of basic activities which constitute the programs, and various policy and planning factors concerning utilization of staff, space and other resources. With these inputs, the models compute the resulting resource requirements. These requirements are displayed by several computer-prepared reports and graphs.

### Applications of CAMPUS 2, 3, 4, 5

CAMPUS was first developed and applied at the University of Toronto. The initial application was in the Faculty of Arts and Sci-



ence and it was then expanded to the rest of the core campus. In 1966 it was adapted to the planning problems of the Health Sciences Faculties and their affiliated teaching hospitals. It is presently being applied in Community Colleges, school boards, universities and Health Sciences Education Centers in Canada and the USA.

### Planning for New or Expanded Institutions

While efficient allocation of resources is a continuing problem, planning for it is most often precipitated when institutions are contemplating new or expanded facilities. These major capital decisions not only provide a plant that will have to be lived with for the next 50 years but also introduces an extensive set of constraints with respect to operating costs, operating policies, and educational policies. Rapidly evolving technology and educational techniques mean that capital mistakes are even more "expensive" today than ten years ago. Institutions will have to be able to adapt. But institutional adaptivity implies more than an ability to adjust educational programs quickly to changing needs. Administrators must also be able to assess the resource implications of these changes so that they can plan for them. Figure 2 outlines the way in which CAMPUS can be used in planning and programming new facilities.

### Summary

The ability to experiment with "alternative futures" should allow the planner to devise plans which are less sensitive to adverse turns of the wheel of fate. The simulation model can serve as a laboratory in which the university administration and the architect can test alternative policies before decisions are made. The experimental results of such testing will provide objective estimates of the resource implications of competing proposals. This information would be a healthy check on unsupported departmental proposals, and would bring about more careful planning at all levels. Better knowledge of the cost consequences of alternatives should improve decisions and reduce the number of unfortunate surprises in university planning.

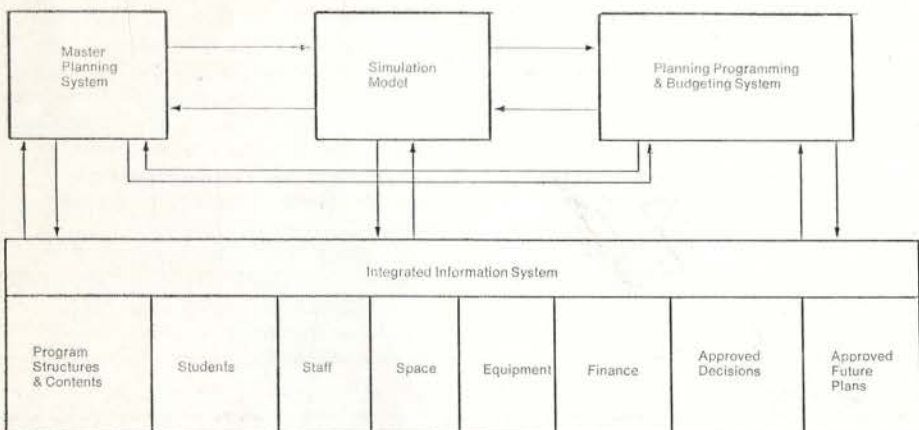


Fig. 1. Diagram illustrating the organization of CAMPUS (Comprehensive Analytical Methods of Planning in University Systems)



<sup>1</sup> Judy, R. W., and Levine, J. B.; *A New Tool for Educational Administrators*, University of Toronto Press, 1966.  
<sup>2</sup> Judy, R. W., Levine, J. B., and Wilson, R.; "Systems Analysis of Alternative Designs of a Faculty", a paper presented at the Organization for Economic Cooperation and Development meeting, Paris, 3-5 April, 1968.

<sup>3</sup> Levine, J. B.; "Application of the CAMPUS Simulation Models to the Major Planning Decisions of a Large University", a paper presented at the Second Conference on the Applications of Simulation, New York, December 2-3, 1968.  
<sup>4</sup> Levine, J. B.; *A University Planning and Budgeting System Incorporating a Micro-analytical Model of the Institution*, Unpublished Ph.D. dissertation, University of Toronto, 1969.  
<sup>5</sup> Levine, J. B. and Judy, R. W.; "The Integration of Simulation Models and Program Budgeting in University Planning and Administration", a paper presented at the Joint ORSA-TIMS Meeting, San Francisco, May, 1968.

Universities in the early growth stage stand to profit greatly from the use of simulation models. The range of decision variables is so broad and the importance of early decisions so great that the planners deserve all the assistance they can get. The design and

use of a simulation model in the formative stages of university planning may avoid costly errors and raise the returns from new educational investment.

It has been demonstrated by four years of

research and implementation that it is possible, with the present CAMPUS technology, to make pronounced improvements in the quality of decision-making in higher education, thus insuring more efficient utilization of the resources that universities have at their disposal. □

Stage	Techniques Used	University's Role	Architect's Role
1. Preliminary Review	Non-computerized analysis of broad aims and budgets to establish guidelines for the planning process.	Consider and evaluate the following: general objectives • general availability of funds (timing) • capital and operating budget constraints • addition to existing facilities or new buildings • simple or elaborate design, aesthetics.	Supply general cost and other information with respect to type and size of physical plant needed.
2. Planning	CAMPUS simulates the aggregate description of the expansion. Alternative plans are explored to achieve a desired and feasible set.	More specific definition of objectives: enrolments by major programs • level of research • general space indices • non-space requirements.	Assist university in developing planning ratios related to space.
3. Programming	CAMPUS simulates alternative means of programming the planning objectives and estimates, facilities and operating cost requirements. Alternative architectural designs are assessed for their ability to cope with possible future events. Operating and capital costs of various plans are evaluated and a few plans are selected after an iterative process.	Proposed alternative means of carrying out objectives with respect to: teaching method • possible innovations at some future time • administrative and staffing policies • performance criteria of space type needed.	Create preliminary schematic designs that can be costed and evaluated.
4. Initial Design	CAMPUS simulates the operation of the university under various programming arrangements and produces space relationship information showing the affinity of one space to another based on: student movement • staff movement • electro-mechanical support system • provision for expansion • load bearing needs • miscellaneous support systems.	Factors that affect the placement of space in three dimensions are considered: department that should be close • facilities that should be close • importance of minimum staff movement • importance of minimum student movement • possible expansion by department.	Weigh the results of the model's analysis, the university's desires, aesthetic and other design factors to create a space position plan and design.
5. Detailed Architectural Plans	CAMPUS develops a detailed set of operating and capital resources requirements for the plan that has been chosen.	Plans are reviewed and approved.	Detailed plans are prepared for letting construction contracts.
6. Construction		Overseeing	Supervision
7. Master Plan	Information in CAMPUS is updated and forms the basis for a master plan that incorporates academic and administrative plans but no specific building plans. The plan may be experimented with and updated as new situations arise.	The new directions that might be pursued by the institution are continuously evaluated and explored with the CAMPUS master plan incorporating the latest thinking of the university.	A general flow system for people and mechanical systems provides the architectural skeleton for the CAMPUS master plan but no detail beyond this is supplied for future changes. Changes made to CAMPUS, not architectural drawings. When decision is made to build steps 1 to 6 are repeated.

Fig. 2. Planning and Programming New Facilities with CAMPUS as the Master Plan



# Dalhousie University Master Plan

Evan H. Walker Consultants, Architects

Mechanical and Electrical Consultants:  
R. E. Crossey & Associates and Engineering  
Services Company Limited

Dalhousie University is housed on two campuses, in the residential southern end of the Halifax peninsula. The main campus lies on a slight rise at the head of a long formal boulevard axis. The main buildings are placed symmetrically about a courtyard which is the visual and activity focus of the university. The campuses are separated by a quarter mile of residential grid, with the boulevard linking the two.

## The Problem

The chief factors of concern in the formulation of the 50-million dollar development plan, apart from that of competition for funds, are:

A projected enrolment double the present figure of 4,000 within the next decade.

Limited space to expand, both on the existing campuses and in the surrounding urban area.

A lack of expropriation powers aggravated by consequently inflated property values in the vicinity.

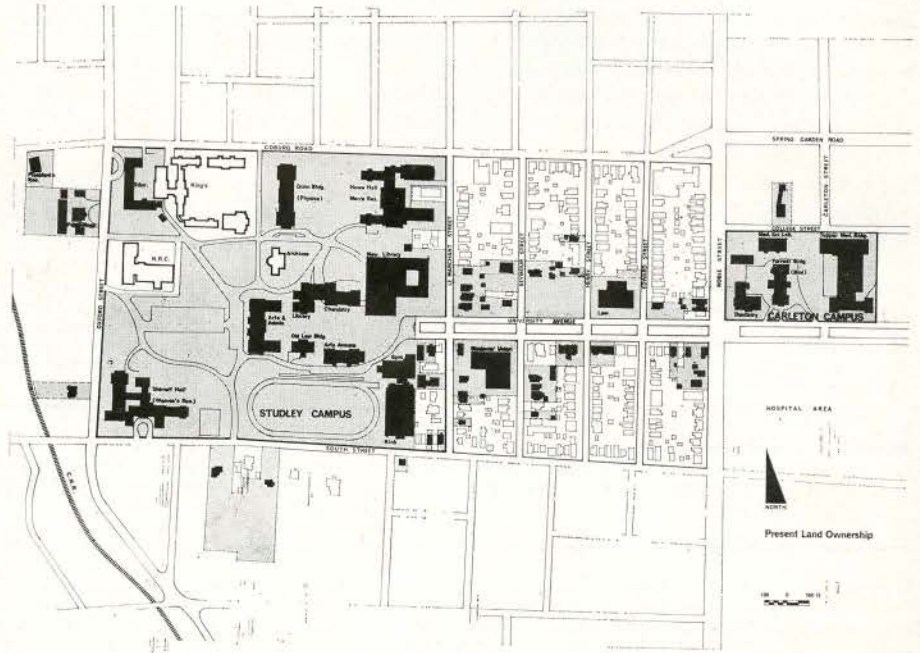
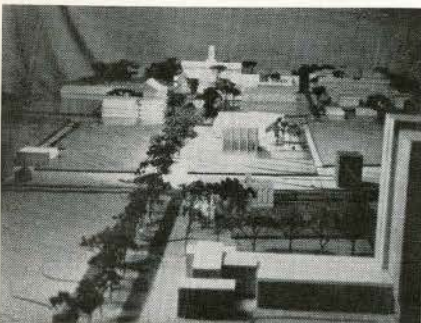
Building stock and recreational space, which even at present enrolment is overstrained.

A rapidly increasing student housing requirement coupled with a static and saturated rental market.

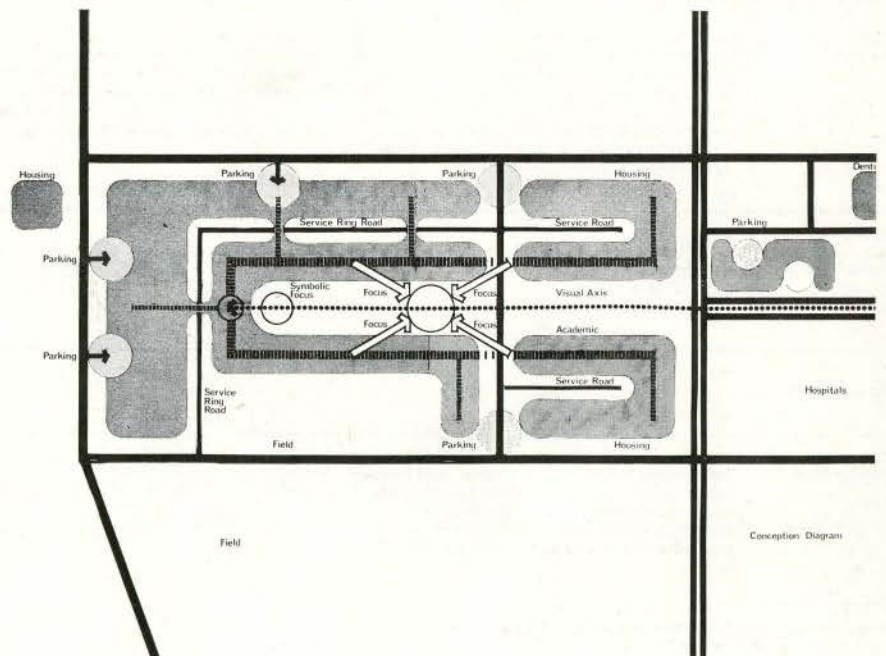
Separation of the main and medical campuses.

## Objectives

The major objectives of the plan are to achieve rational growth; increased density; unification of the two campuses; and a diverse but concentrated environment for working, living and recreation. Dispersal



1



2

1 Present land ownership. The university uses properties it has acquired for parking or academic purposes until sufficient are assembled in a block to make a development possible. Implementation along the boulevard open space spine has begun.

Terrain actuel. Acquisés séparément les propriétés servent au stationnement avant qu'un bloc se développe.

2 The Concept. New buildings housing heavy student uses move the activity center from the present "visual Focus" to a central position on campus. The existing traffic pattern is rationalized to absorb all non-essential vehicles at the perimeter and to make use of land space offered by existing streets and roads. The formal existing focus is maintained. Development is "hung" on a movement and utilities framework as changing needs dictate over time.

Concept. Nouveaux bâtiments déplaçant le centre visuel et voitures amenées à la périphérie suivant disposition de viabilités.



3 Parking, vehicular and pedestrian movement network. Each addition furthers the network with sheltered or enclosed pedestrian routes, as alternatives to walking in the open. The focus is in the area of the Library, the Student Union, the Arts Building, the Lecture Theatre Complex and the Athletics Center.  
Réseaux de circulation. Nouveaux passages couverts. Le centre est vers la bibliothèque, Faculté des Lettres, Union des Etudiants.

4 The utilities tunnel forms the development framework together with the movement network. The unimpeded boulevard is used for the initial spine.  
Le tunnel des canalisations et l'aménagement des voies de circulation devancent la construction.

was examined but rejected, except for such elements as student housing of apartment type.

### The Plan

#### Movement and Services Framework

The activities of the campus, housed in buildings or open space, are "hung" upon a framework system of movement, services and utilities. The framework is devised with activity generators along its length and breadth, to encourage movement, interest and integration of function on a day-night basis. Parking, for example, is situated so as to feed pedestrians through student housing to academic areas, and student activity centres are situated so as to reinforce academic areas.

#### Housing of Activities

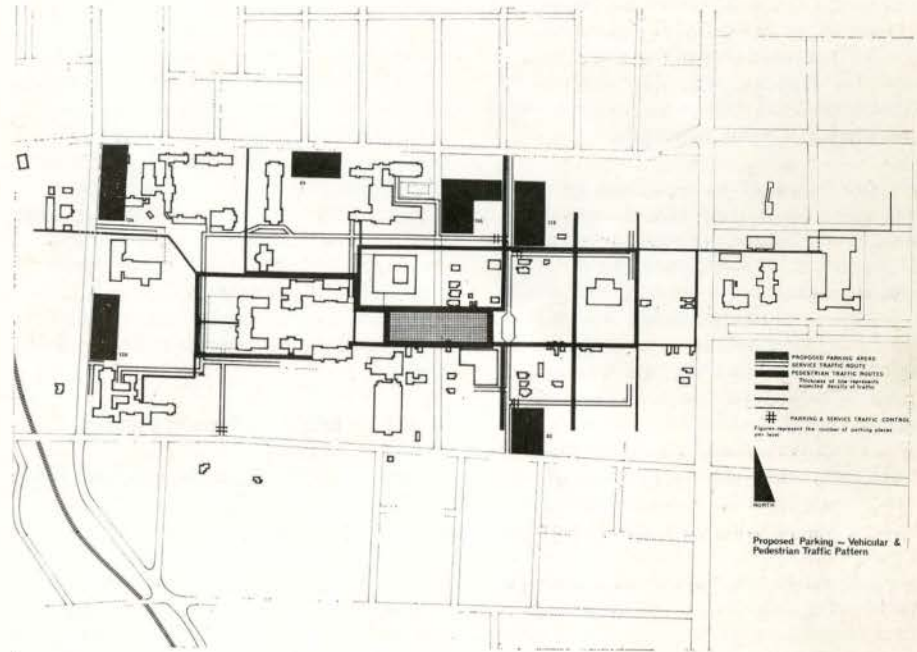
The plan is flexible and dynamic, monitored over time to meet change, so that it meets and continues to meet the needs of the university. Changes in projected enrolment, in patterns of land availability, in finances, in directions and methods of education, in the life-style of students, and in expropriation procedures are all probable.

There is minimal visualization of the form of finished buildings, and no attempt to straitjacket largely unknown future requirements in preconceived forms from a fixed point in time. The master plan is specific for immediate developments, and becomes progressively less so for phases farther in the future, until only general direction and intent are indicated.

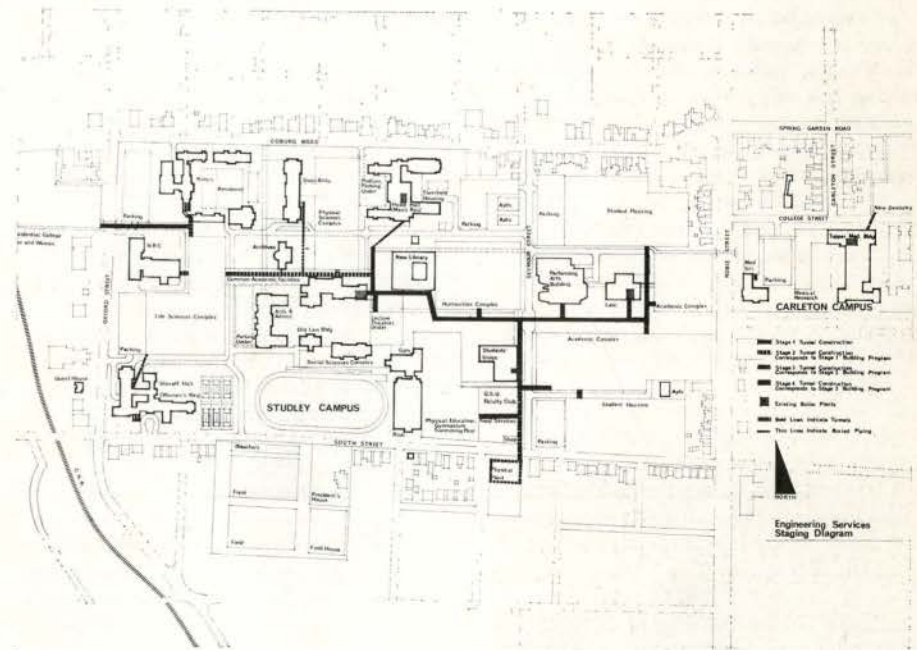
Each addition is programmed in depth at the time it is to be built, so that spaces and forms are appropriate to their use. The movement and services framework integrates their functions with those of the overall campus, while the framework itself is furthered by the addition.

The plan, implemented by many hands, should achieve a variety, a vitality and a logicity of environment difficult to obtain under closely controlled static conditions. Good architecture will be a cherry on the top.

Robert Garrard, Project Architect



3



4



# Academic Viewpoint

An Appraisal of Progress of the University of Toronto

Roland R. McLaughlin

*Dr McLaughlin, presently the Chairman of the Planning Division of the University of Toronto, has long been associated with that University. He was Dean of the Faculty of Applied Science and Engineering from 1954 to 1966.*

Because of the greatly accelerated growth of universities in the last few years attention has been focused on campus planning, almost as if it were a new phenomenon; yet it has always been with us and in some important aspects it has not changed.

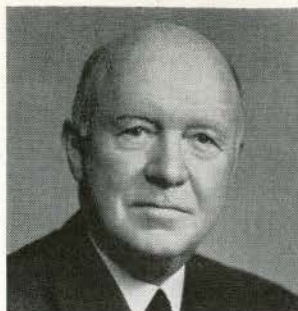
The pressure towards expansion, renovation and acquiring of new facilities arises at the department level. A professor or group of professors in the same discipline consider that their discipline is the most important in the whole range of human knowledge. It is right that this should be so for that attitude is the very core of a university. It follows automatically that a vigorously pursued course of study will tend to expand in obedience to the "law" that living organisms must grow or die — and I consider it wholly appropriate that a university be regarded as a very complex living organism. There comes a period, therefore, in the case of any discipline, when working conditions deteriorate towards the "intolerable", a compelling case can be made for expansion, and some action ought to be taken. With the many disciplines represented in a full-fledged university this process is a continuum of overlapping parts; and as I have never known a time when the capital available was equal to the legitimate demands upon it, it follows that very careful campus planning has always been a reality — and a harsh one. The very serious and difficult academic aspect of planning has always been to decide the order in which many clamant needs are to be met and whether in whole or in part. Despite the preoccupation with their own disciplines, referred to above, I have found academics very reasonable and cooperative in the difficult situations created. And in another direction as well. A university needs other than purely academic facilities and it can be argued that in supplying them from limited funds it is at the expense of the academic program. These other facilities tend to be delayed in favor of academic needs but when they do appear they are accepted by the academics as the necessities they are.

One aspect of the relatively rapid recent expansion, during which new land became

available, was the ability to make a much closer approximation to the ideal geographical relationship among the disciplines than had been the case in the necessarily somewhat hit-or-miss, or expedient, approach in the past. Study indicated that whereas, as one might expect, each department would have liked to be the centre of the smallest possible circle containing those activities most closely related to it, it was entirely realistic about making necessary adjustments in this respect. The traditional ten-minute break between classes is still a powerful academic factor in campus planning.

## U. of T. — Emerging Results Pleasing

Despite his highly specialist approach to his subject or perhaps because of it, the academic is generally a person of otherwise catholic interests, and architecture ranks high among them. On a campus such as this which is the antithesis of a one-style, one-building-material campus, there is plenty of opportunity for comment — and we get it. This lively interest is desirable. Sometimes, however, I feel that the more mordant criticisms overlook the fact that great efforts have been and are being made to develop a pleasing congeries of buildings. Readers of this journal know better than anyone that there is a limit far short of outright rejection beyond which the opinions of the "owners" with respect to architectural design may not and ought not to go; and that to a very large degree it is the responsibility of the individual architect to produce a building that harmonizes with the whole campus. There is no doubt that on almost all occasions economy is a real restraint. It is also true that this is a field where the aphorism "one man's meat is another man's poison" is especially apt; and, with the certainty of bringing upon myself the imprecations of my architect friends, I might even add that in general the only building an architect feels is free from the possibility of adverse criticism is one he has designed himself. Despite some ancient "horrors" which happily are disappearing, I think we have reason to be very pleased with the results that are emerging.



## University to Infiltrate Urban Periphery?

The academic overtones of a very large university in a very large urban centre do not at present produce the harmony that one could wish. For example, the traffic through the heart of what is becoming the expanded campus produces an effect detrimental and distracting to academic pursuits. The nature and cost of a solution to this crucial situation present a very serious problem. Apart from dealing with gross maladjustments such as the one just cited, however, there is a growing feeling that an urban university such as this need not seek to be a complete enclave but could with advantage to the surrounding city and to itself deliberately "infiltrate", *not* take over holus-bolus, the periphery with activities and necessities that are not centrally academic, but still a necessary part of the university scene. Some study has already been made of this approach. □



# A Student's View

Steven Langdon

*Mr Langdon is entering his fourth year of Political Economy at the University of Toronto. He was President of the Students' Administrative Council during the 1968-69 term.*

The Morningside Heights confrontation at Columbia University last spring was a most dramatic collision of "Student Power" with the campus planning activities of North American universities. As students have become aware of the impact of physical environment on university life, they have become anxious to shape that environment.

The student critique of the modern mass university centres on the passive role it gives the student – in decision-making and in education. The "multi-versity" gives the student freedom from control and much greater choice, but it does not give him power to actively participate in planning his university, what role it plays, or what happens in its classrooms. Instead, an impersonal hierarchy of administrators and senior faculty seems to shape the student's environment, his pattern of choices and his activity within these choices. And they seem to do this molding within the context of demands of the corporate world for employees who are well-trained in a technical sense and well-socialized to the norms and values of modern capitalist society.

## Universities Must Serve

This focus of attention in turn promotes neglect of the community around the university, and of the needs and demands of the men and women often living in poverty there. To them, the university becomes a middle-class slap in the face, an arrogant threat thinking only of its own expansion. Certainly it doesn't seem to serve them. The demand for student power comes from this critique. The movement seeks democratization of universities not just as an end in itself, but also as a means to other ends.

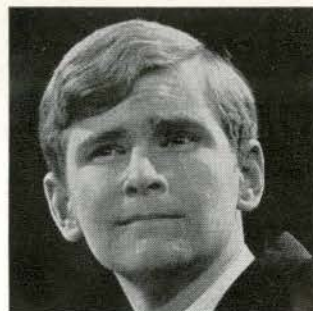
The same is true of campus planning. Student participation is necessary here also as a means to other ends – firstly, a better education. Academic buildings at the University of Toronto are centred around the mass lecture learning style. This style of education promotes passivity – small group seminars and discussions are the real locus for creative learning, but our physical structures do not permit this pattern of education. Educational reforms have

been made at Toronto this year, but recommended reliance on small groups has been prevented by the lack of seminar rooms. Clearly, one student aim will be to see that our concept of participatory education is reflected in campus planning decisions.

Related to this is a general criteria – flexibility. Multi-use space should become the norm within the university. Some elementary schools are experimenting with shifting partitions permitting large spaces or small rooms as desired and these too have to be used at the university level. Such flexibility will permit the physical structure to respond to changing concepts of, for example, education. It will also allow students and faculty to gain a sense of control over their environment.

## Need Sense of Community Within

Tied to flexibility is a second criteria – the creation of a sense of community within the university. This means three things. First, there should be an overall integration of the campus. Many universities have been built piece by piece with no view of the whole. Fragmentation has been the result, with little contact among different groups, resulting in suspicions and alienation from the place as a whole. By now even brilliant campus planners will have difficulty doing anything with, for example, the University of Toronto, but they'll have to try. Second, planning integration should include a large central meeting place; community feeling can develop out of mass meetings where university issues are raised and voted on. Finally, community demands an end to anachronistic physical details which emphasize inequality – such things as separate washrooms for faculty and students, exclusive faculty clubs, and so forth. An added consequence of these aims of participation and community, must be much greater openness in the planning process. Master plans of universities should become open documents subject to wide debate and decision within the whole community. All the talk of human community within the university, though, can be so much elitist froth, if the institution does not respect and serve the wider community around it. All the evidence from the United States indicates that this has certainly not been



the case there. US universities have acted as slum landlords, exploiting and then expropriating their, often black ghetto, neighbors. Canadian universities, as public institutions, have usually lacked the huge endowments which have financed many US activities. They have powers of expropriation, though, and particularly in urban areas this has made them a threat to the often fairly cohesive immigrant and ethnic communities around them. Also, when houses are expropriated, universities often do operate them as slum landlords, letting them run down since they are to be demolished eventually anyway.

To respect the community around it, then, the university should give up its expropriation power and eliminate itself as a threat by giving surrounding communities veto power over university development and expansion within their confines. And houses which are taken over should be kept in good repair as long as they are in use. Of course, anyone displaced by the university should be relocated without loss.

This is the negative side of community relations – respect for groups every bit as important as those in the university. The positive side must be service to such communities. The university must not exist like Isengard, the tower of Saruman in Tolkien's *Lord of the Rings*, haughty, dominating and somehow inviolate. Instead, it must be open to the surrounding community, providing facilities and activities for adults, recreational space and teaching for children. Faculty and students should provide community organizing help, language training, legal and medical aid, children's programs, and so on. And campus planning should shape the university to encourage such integration.

Campus planning, then, is crucial in shaping our lives at university and the role those universities play in Canadian society. When students seek power in the planning process, they do it to make the university environment promote rather than prevent the building of a critical humane community which respects and serves the people around it. Which, when you come down to it, is what Morningside Heights was really all about too. □



# University of Lethbridge

Development Plan for a New Campus

Erickson/Massey Architects

## Objectives of the Plan

The external objectives of the plan were to encourage communication between the university, the adjacent residential community and the city center; to link directly by attractive pedestrian walkways the green areas of the community and the university, to provide a continuity of green space and parkland from the community through the university to the river valley; to produce simple explicit building forms that will be most suitable for the prairies; to mass the buildings in such a way as to provide an interesting view of the university from east of the Oldman River; to arrange the buildings to take particular advantage of the views of the river, coulees, bridge and city; and to site buildings so that the retention and use of the coulees, as protected landscaped areas, is encouraged. As for internal objectives, the academic philosophy expressed was the desire to demonstrate by layout and physical plant the University's participation in the evolution of the modern university. It was felt that the plan should reflect the intent of the university to obtain as much value as possible from the interaction between various disciplines, within the limits of the academic objectives of each specific discipline. The plan should accommodate rapid and slow change in various disciplines either by the easy expansion of one department into another space, or by providing for suitable increments for building expansion. It was also felt that the potential of all spaces within the university should be analysed with the intention of maximizing the exchange of knowledge and ideas. And, wherever possible the pedestrian circulation should be simple, direct and under cover, but, in addition, it should be attractive to traverse the university by outside routes.

## Land Use

The academic area is placed in intimate contact with the river and the city, and in direct contact with all levels of the coulees, freeing the open flat areas for use as athletic fields, parking and expansion. Academic expansion would be to the north and south, with a large academic reserve to the south for the

location of related institutions expected in the future.

Student residences in the initial stages are to take the form of minimal rooms, arranged around common lounge and study space. Sheltered in the bottom of the coulees, these residences would have direct access to the central university space, so that all areas of the university become extensions of the students' private living space. Student services are at the main entrance to the university. Here are collected, in one building, all the rooms usually associated with a student centre, as well as counselling, health and employment services, the bursar and registrar. At the entrance are also lounges, eating facilities, perhaps a pub, the main theatre and meeting spaces. A recreation facility at the entrance to the university contains the athletic facilities. The gymnasium has direct access to the playing fields and the bleachers on the earth banks west of the main field. In keeping with the university's desire to provide a variety of student residential space, a Residential Complex containing apartment accommodation for students is located at the entrance court. Within this complex would also be found various commercial facilities associated with any university, as well as possibly a restaurant or coffee house. This residential centre is intended as part of a unique facility at the entrance to the university, available to the community but primarily a residential and service space for students.

## Circulation

The arrival point of the University is between the University Centre, Residential Complex and Recreation Complex. Buses and vehicles would load or discharge passengers here and would proceed through the activity sections of the university to the academic core. The main parking area is directly accessible from the entrance to the north. Further parking associated directly with the north and south blocks would be reached by the service roads at the east and south ends of the campus. Service and emergency access to the academic buildings is at north and south and via

access road along the west wing to the center of the academic area. External access is possible to all parts of the campus by means of walks around the edge of or down through the coulees, or over the roofs of the academic buildings. The pedestrian would also have complete covered and indoor access to all parts of the university through a main concourse level, varying only by two floors throughout the university. This concourse level gives access up or down one storey to all academic facilities except for the library, which is multi-storey.

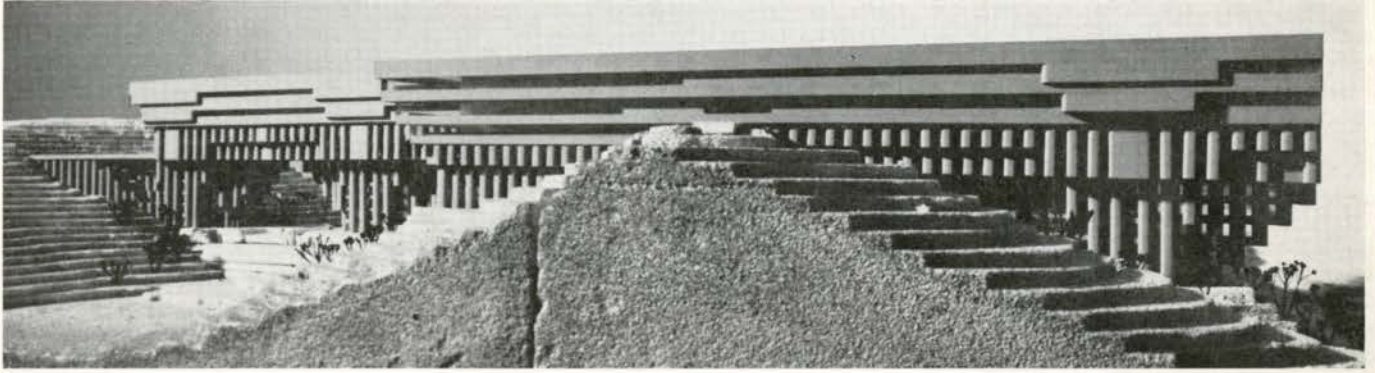
## Form and Massing

Academic space is contained in a linear multi-storey building crossing the two coulees that penetrate the central campus. The multi-storey space is built into coulees rather than up, so that the building mass remains low on the landscape. The primary objective is the achievement of an uninterrupted roof line, a strong horizontal, which by its very flatness contrasts with, and enhances the richness of contour of the coulees.

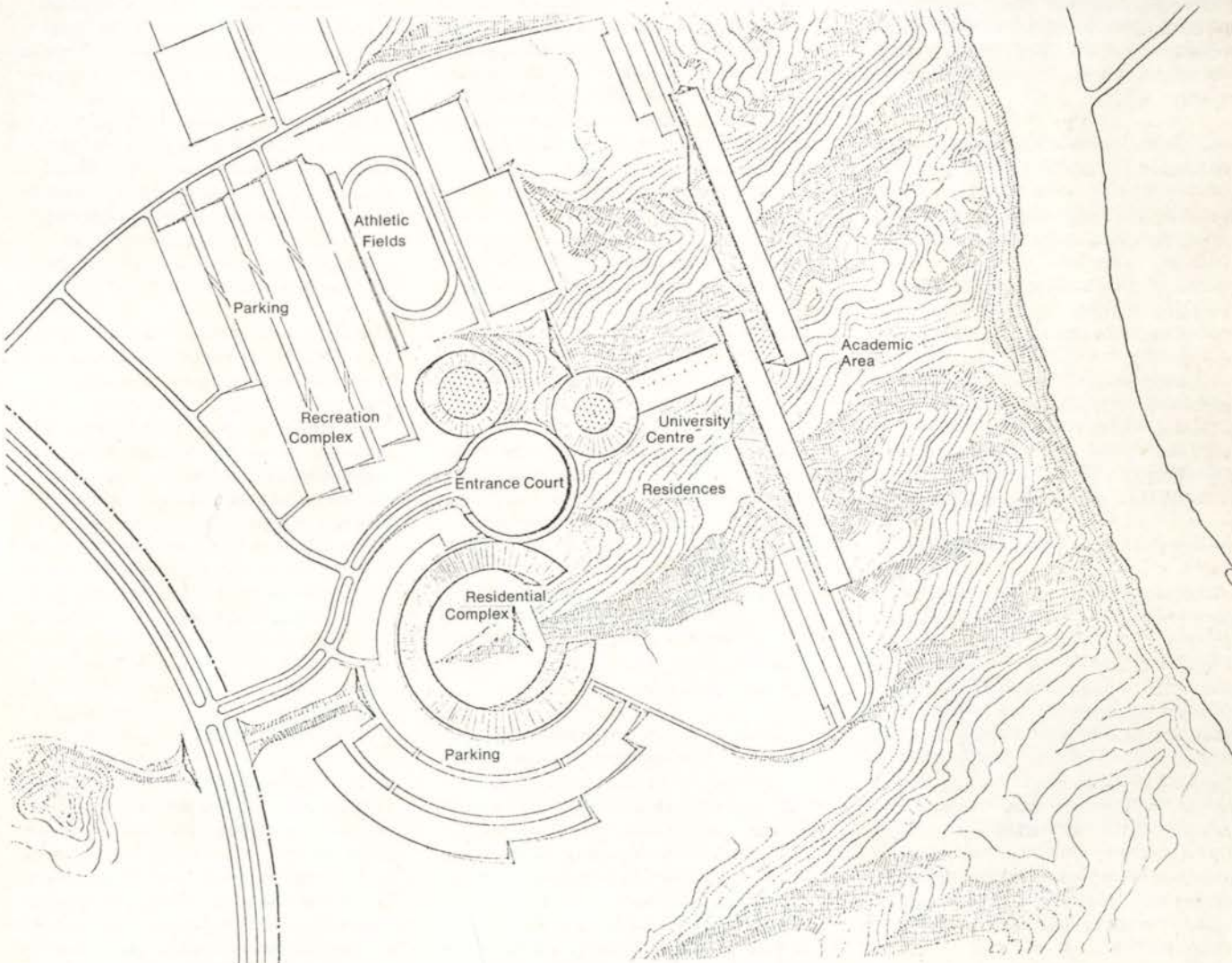
Residences are domestic in nature and should achieve a certain intimacy of scale in contrast with the academic space.

As a collecting point in the university and the center of student life, the University Centre has been massed into a single concentric building. The conical form reflects the angle of slope of the coulees, and suggests mass as against the linear aspect of the academic building. The Recreation Complex is contained within a similar form. In the Residential Complex the conical form was also adopted, but opened to the coulee which runs into its centre space. Here a protected courtyard is surrounded by shops and apartments. The upper levels of the university are left in a natural open field-like landscape treatment to maintain the concept of the prairie landscape. Playing fields will be terraced, and parking lots both terraced and bermed, so that the automobile is kept out of sight, and wind and drifting snow are controlled. The coulees adjacent to the academic area, however, will be planted to provide shelter and shaded relief from the exposure of the open fields. □





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# A Planned Campus

The University of California Santa Cruz Experiment

Joseph Esherick, FAIA

*Prof. Esherick practices architecture in San Francisco. He has been a professor of architecture at the UC Berkeley Campus since 1958.*

The University of California is, this year, one hundred years old; its oldest campus is at Berkeley. Today there are over 93,000 students on nine campuses, the two most recent being at Irvine, south of Los Angeles, and Santa Cruz, some eighty miles south of San Francisco.

The varying requirements of education in California have produced a natural diversity. Campuses have tended to develop individualities because of differences in faculty and students, and differences in general location or specific physical setting. Several have grown from field stations to general campuses; others have been planned developments, their location and mission determined only after long study of the resources and requirements of education in California.

U.C. Santa Cruz is one of the "planned" campuses. The need for a new Northern California campus was first publicly indicated in 1957 and in October of the same year the Regents authorized the establishment of a campus on "the south central coast." The Santa Cruz site was selected (in 1961). Shortly thereafter a skeleton academic staff was appointed to develop an academic plan and in February, 1962, John C. Warnecke was selected as Master Plan architect; he in turn nominated architects Ernest J. Kump, Anshen & Allen, and Theodore C. Bernardi, as consulting architects. The Regents also appointed, at this time, Thomas D. Church as landscape architect.

## A Departure from other U.C. Campuses

The academic plan called for a radical departure from the structure of other campuses of the University; the basic unit of planning was to be the residential college – but while the colleges would have specific academic orientations, the college faculties would not be organized along traditional departmental lines but would be primarily faculties of the particular college. Further, not all the students in a college would pursue the major emphasis of the college; about one half would have their major interests elsewhere. Educational experiment was to be encouraged and much latitude was to be left to individual colleges and their faculties.

While classes requiring laboratory or other special equipment would be in central buildings, most classes would be held within the various colleges – and the classes would be small. For the first two years of a student's stay he would have most of his classes within his own college; after that many of his classes would be in other colleges. The residential nature of the colleges was emphasized: over half the students would live in University provided housing – an unusually high proportion.

The academic plan, while brief, was explicit as to the general form of campus life. There is a glowing romantic character to the academic plan and there is a similar romantic character imbedded in the physical plan, completed by Warnecke in 1963. The plan shows sites for twenty-six residential colleges, plus professional schools (also residential), humanities, social science and science buildings, a University library, graduate student-faculty staff housing, a research center and a center for affiliated institutions. The residential colleges are loosely distributed around library and science and humanities buildings in the approximate center of the site. Professional schools, institutions, and research areas are outside this area, either down or up the slope toward the Pacific. Colleges are generally grouped in pairs; the shortest distance between pairs is about one thousand feet; the greatest distance about two miles. Add to the sheer distance the elevation that must be climbed and it is clear that if the plan is to be carried out exactly as proposed, even a sophisticated transit system coupled with an advanced communication system would have difficulty overcoming the separateness of the various elements – and any conventional American approach would lead to so many automobiles on the campus as to be intolerable.

To date four colleges have been built and two more are in the planning stages. Programming for the first colleges has been vague in some respects and rigid in others, rigid particularly with respect to the requirement (because of separate Federal and State funding) that student living quarters be separate from academic areas. While there is a distinct similarity in all the colleges built thus far, there is a clearly evident tendency toward greater compactness.



The most significant programmatic changes have been an augmentation of the budgets, elimination of the ban on parking structures and discarding the idea that pairs of colleges must be joined by the umbilicus of a common kitchen. Although early programmatic statements express a hope for a character derived from the academic emphasis of the college, none of the colleges thus far reflect in any explicit way such character, perhaps because the emphases themselves are so amorphous.

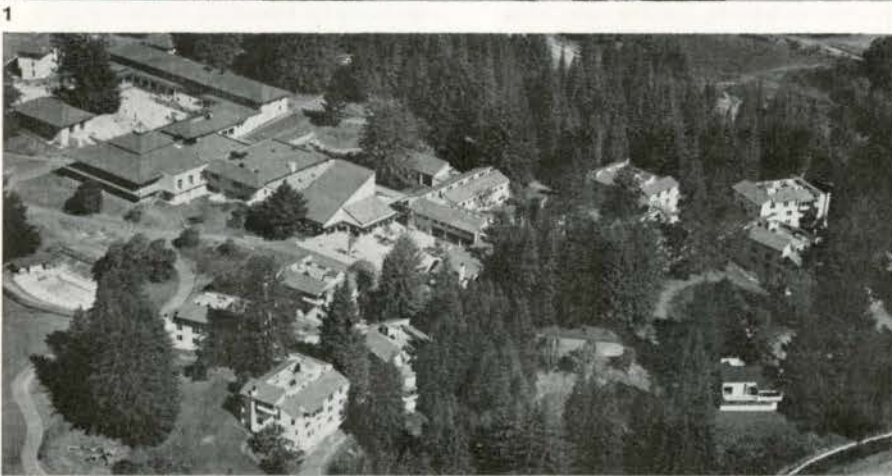
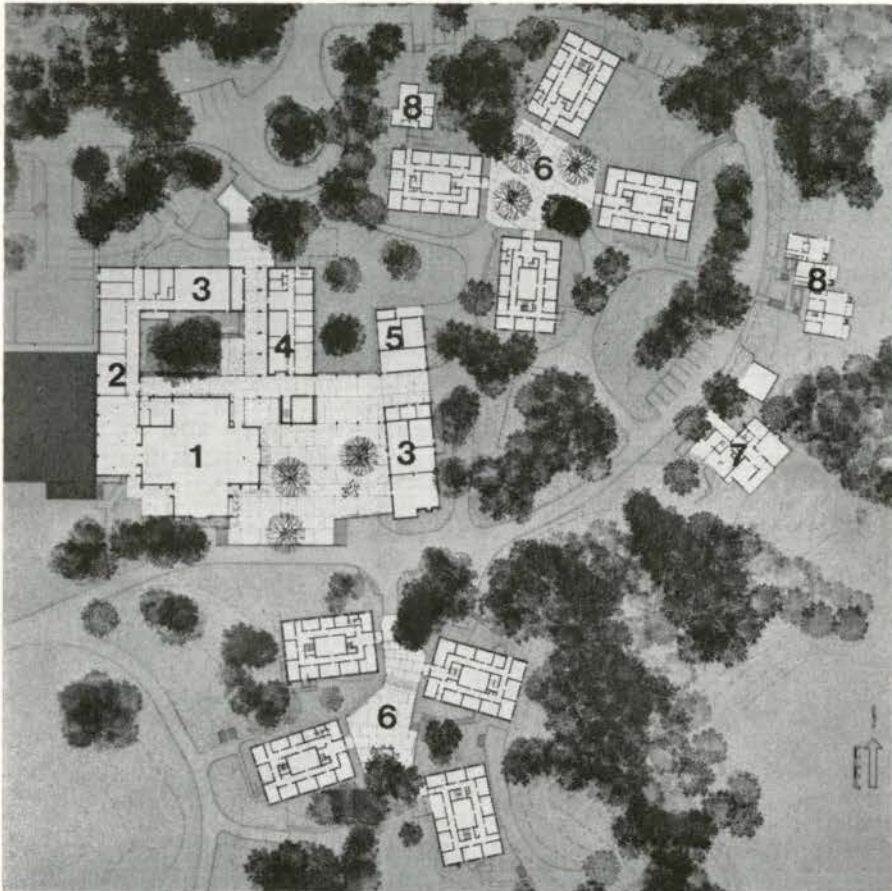
The part of the campus built to date, compared to the spread of the Master Plan, is relatively compact. Even so, "elephant trains" have had to be introduced to get students between major areas (much to the disgust of some of the students). The general feeling among University staff now responsible for planning appears to be that a more compact scheme will have to be developed. It will not be easy and it will be expensive if an uncompromising "save the redwoods" stance is taken, but it is clear that individual project architects – and landscape architects – will have to work in increasingly tighter, more confined areas.

U.C. Santa Cruz is an audacious and important experiment – important because we know so little about how to live with our natural environment. To some who regard the problems of urban life as the most important ones we face, U.C. Santa Cruz appears to be an anachronism or possibly a reflection of the desire of middle class America to drop out of the problems of urban life to live in a bucolic setting in the suburbs. As an educational experiment it is bound to have great influence even on the urban universities, if only because it must confront the issues of relevance at such distance from the crucial problems of our time. The early plans, beguiling, comfortable and secure, seem now wistful against the background of student concern today.

It is ironic that the values the Site Selection Committee must have seen in the beauty and isolation and tranquility of the Santa Cruz site today seem almost inappropriate to the pressing missions of the University. A less romantic approach to planning might have helped – and no doubt will help as the campus grows and begins to face problems more akin to our larger urban problems. □



- 1 Site Plan
- Plan de situation
- Legend
- 1 Dining
- 2 Seminar
- 3 Recreation
- 4 Administration
- 5 Classrooms
- 6 Student Residence Halls
- 7 Provost's House
- 8 Preceptors' Houses



Partridge



Homsey



Homsey



# The First Step

## Clear Institutional Objectives Determined by Cooperative Consultation

William W. Small

*Mr Small is Comptroller, Secretary of the Board of Governors and Vice-President in charge of Administration for York University.*



As universities have increased in size, belatedly there has been a growing recognition of the planning process, which is made up of an extensive system of interrelated and interdependent efforts. The following is written on the premise there is an important first step which precedes the technical aspects of campus planning, namely, the establishment of institutional objectives. Limitations of space permit only an outline of the objectives which have a bearing on the subsequent physical planning and the framework of the decision-making process.

### Objectives for Planning

The first objective must be the anticipated degree of institutional independence or cooperation with other universities. The nature of the university and the heavy cost of development and operation preclude planning in isolation. The range of the ultimate program will be influenced by estimates of need in relation to institutional plans elsewhere. Year-by-year implementation will be related to growth in other major universities. Individual emphasis and enthusiasm will always be important, but in this day and age the interdependence of units within the Ontario system will place a premium on cooperation.

Within this wider concept, the second objective will be to designate the enrolment and the scope of the university's academic program. While the small academic community has some distinct attractions, it has disadvantages which cannot be ignored. The current need for university places in Ontario suggests the impossibility of founding a sufficient number of small entities. Further, high academic standards place great emphasis on certain facilities which are virtually unattainable outside the framework of a large multi-faculty community.

Third, if we accept the large university as inevitable, we must consider the place of the individual within it and take steps to ensure that neither he nor his group interest will be dwarfed. A college system is one positive means of protecting the student and enhancing the educational environment for faculty members who find the smaller community more congenial.

Each college would be a unit providing facilities for seminar, office, dining, recreational and social activities for approximately 1,000 students and associated faculty and administrative staff, as well as residential accommodation for about 250 students. Under this system each undergraduate can identify closely with a relatively small group while enjoying the benefits of a strong campus-wide departmental organization. Fourth, a university establishes its reputation on the content and nature of its curriculum and the quality of its teaching and research programs. Each of these elements has a bearing on planning. The map of knowledge has always been wide and today its boundaries are even more extensive. This means that it is essential to establish clearly defined parameters to avoid too wide a range of courses, while at the same time developing sufficient scope for a balanced program. A further factor which must be determined before physical planning begins is the number of semesters per year during which regular academic programs will be conducted.

There is a tendency, under the pressure to maintain excellence in fields of specialization, to develop dynamic but isolated entities within the wider framework of the university. To discourage such understandable tendencies, positive steps need to be taken. A fifth objective would be, therefore, to require proximity and convenient access of facilities for closely related subjects and for disciplines where interchange is highly desirable.

A sixth objective must be to emphasize the close relationship between educational excellence and environmental excellence. It is important to recognize as an institutional goal the creation of a campus environment that favors learning and understanding and intellectual interchange. In addition, if the campus can provide pleasant living conditions, encourage a sense of belonging, and facilitate participation in a wide variety of activities this is worth every hour of planning time.

The enumeration of a number of important objectives which must be

determined before campus planning is initiated is a relatively simple task. Establishing and maintaining the framework within which the decision-making process may take place effectively is more difficult.

### Framework for Decision Making

First, there must always be a delicate balance between Presidential leadership and the influence of the many other elements which comprise the university community — Board, Senate, administration, faculties, departments, individual staff and students. I do not believe there are fundamentally different points of view held by each of these elements. There are, however, two kinds of people engaged in creation and maintenance of a university of high standing, namely, those interested in the growth and well-being of the institution, and those interested in personal aggrandizement and their own well-being. The various members of the community have representatives in each camp! The important thing is to encourage the cooperation of all adherents of the former point of view and reduce to a position of no influence those seeking the latter course. To do this, time and patience are required in ample measure but the enduring results fully warrant the effort.

Second, the key role should be played by an Academic Policy and Planning Committee responsible for examining and formulating both long- and short-term policy. Ideally, it should include all elements comprising the university, with a majority of faculty members. It should rely on a competent university technical staff, retaining its leadership by the intelligent establishment of the principles and priorities necessary to ensure positive institutional growth.

There is always danger of adopting rigid, entrenched ideas which ignore the inevitable changes demanded by time. Thus, while my remarks have laid emphasis on the need for clear objectives and precise plans, I would also draw attention to the need for sufficient flexibility to accommodate unforeseeable academic insights and developments. A University should, therefore, develop the capacity of self-analysis and self-criticism, and thereby enable it to remain responsive to the rapid change modern society demands. □



# A Tale of Two Universities

University Residences and Campus Planning, Toronto

## Howard Adelman

*Mr Adelman is an Assistant Professor of Philosophy at York University, and former Executive Director of Co-operative College Residences, Inc., a student-owned co-operative development company.*

Two distinct types of student residence planning currently in use can be easily distinguished, which I call "laissez-faire" and "technological planning". The essence of the former is captured in the phrase "do your own thing". The latter is characterized by deliberate and rationalized actions to reinforce standardized patterns in the quest for the "one best way" of solving student residence problems. Toronto has both.

The University of Toronto is characterized by a wide diversity of building styles, locations, sizes, legal administrations, fee structures, financing arrangements, rules systems, room layouts, parking provisions, and educational philosophies.

Since I was a principal participant in the development of several of these types, the most infamous of which is Rochdale College, it comes as a surprise (to me, especially) to recognize that Rochdale College, ostensibly the epitome of the revolution against the staid tradition of the University of Toronto, reveals itself upon examination as the quintessence of the University of Toronto planning tradition embodying diversity to the point of absurdity.

### Rochdale — a Parody of U. of T.

The corporate structures used in Rochdale's development included a publicly owned stock company, a privately owned company, a corporation owned co-operative development company, a local student owned co-operative company, the charitable educational corporation itself and a co-operatively owned private company for management. The facilities include dormitory, suite units with or without cooking, house units, economy and luxury apartments, floor units, a fraternity, and an Indian institute. The results are over sixty distinctive patterns of living, approximately 172 variations in fee schedule, and apparently an infinite number of routes to educational nirvana.

Not need but circumstances, not university goals but individualistic strivings, not a master plan but enslavement to tradition in the name of innovation created Rochdale College; and Rochdale College is but a parody of the University of Toronto.

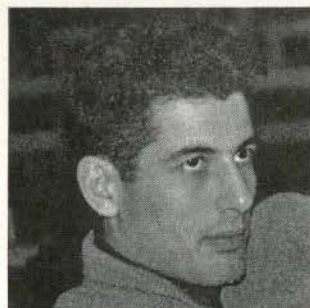
But there was another institution created

out of the bowels of the University of Toronto which did not travel the anti-liberal liberal path of the rebellious free university, but adapted the corporate ethic of the modern technological society. York University started afresh by moving its main campus to the northern border of Metro in the Borough of North York. This suburban campus is a model of planning of the ring road peripheral parking variety. The same zeal for functionality infects the residence planning.

### York — Semblance or Substance of Unity

York residences are conceived on the residential college plan, each residence housing 300 residents in similar styles of dormitory arrangements, and facilities for 700 non-resident members — faculty offices, seminar rooms and a grand dining hall. Four residences are clustered together on the principle that an institutional kitchen services 1,200 to 4,000 people for maximum efficiency. Though variable in their respective affectations, Founders, Vanier, McLaughlin and Winters Colleges are symbolic embodiments of corporate spiritual as well as financial generosity.

It is a well ordered plan. But the connection of residences to the service rooms is a shotgun marriage with little relation to the departmentally based academic program with an icing of interdisciplinary general education in the early years. The combination of academic and residential facilities appears arbitrary. The architectural unity of exterior materials and parallel styles adds to this semblance rather than substance of unity. York University has an organized unified plan to hide the fragmentation and division beneath. In the residential area where diversity of organization and function might be encouraged, the variation in structural styles merely divides the reduplications beneath. The unity is superficial where it should be substantial. The diversity in turn only disguises an underlying conformity. And to add to the fragmentation, this all encompassing plan entails that for the next 20 years, students and faculty will be crossing construction sites. For expansion will not take place by accretion without so much as accretion within. Expansion and growth are taken into account, but not diversity and change.



In the York University master plan, unity predominates over diversity, and the new corporate model arises in the name of the traditional residential college.

But we do not have to choose between the Scylla of "do your own thing" and the Charybdis of the "master plan", between diversity and unity. For planning can be facilitative not as a pre-determining agency nor as an agency of indeterminate action, but as a central seed for creative organic growth. Not anarchic diversity nor pre-determined repetitious unity but a plan which facilitates a variety of functions, life styles, and educational philosophies within an organic community is required.

The university cannot and should not take the stand — "if the university accepts responsibility, it requires authority" with its corollary — "avoid official involvement of the university for that means the imposition of authority and the stifling of initiative". Nor should the technological motto be adopted — "we have the means, therefore, it is up to us to achieve the ends". The university has the authority and should use it to facilitate the creation of student responsibility; the university has the means and should make them available for groups of students and faculty members to achieve a variety of constructive ends.

Authority and mastery should be used to foster responsibility not by the reaction of students in the production of parodies nor by their inaction in the reproduction of verities. Residence planning must facilitate both initiative and social responsibility by strengthening traditions which foster creativity through a range of conditions from intellectual withdrawal to community involvement.

The planner should not endeavour to create a rigid mold into which the ever changing needs of the university must be fitted; he should direct his planning in such a way as to make allowance for the unpredictable. While he should embody a sense of organization and completeness, he should plan so that changing architectural and ideological idioms may be included naturally. In this way the true nature of a university, its growth, expansion and progress may be given expression. □



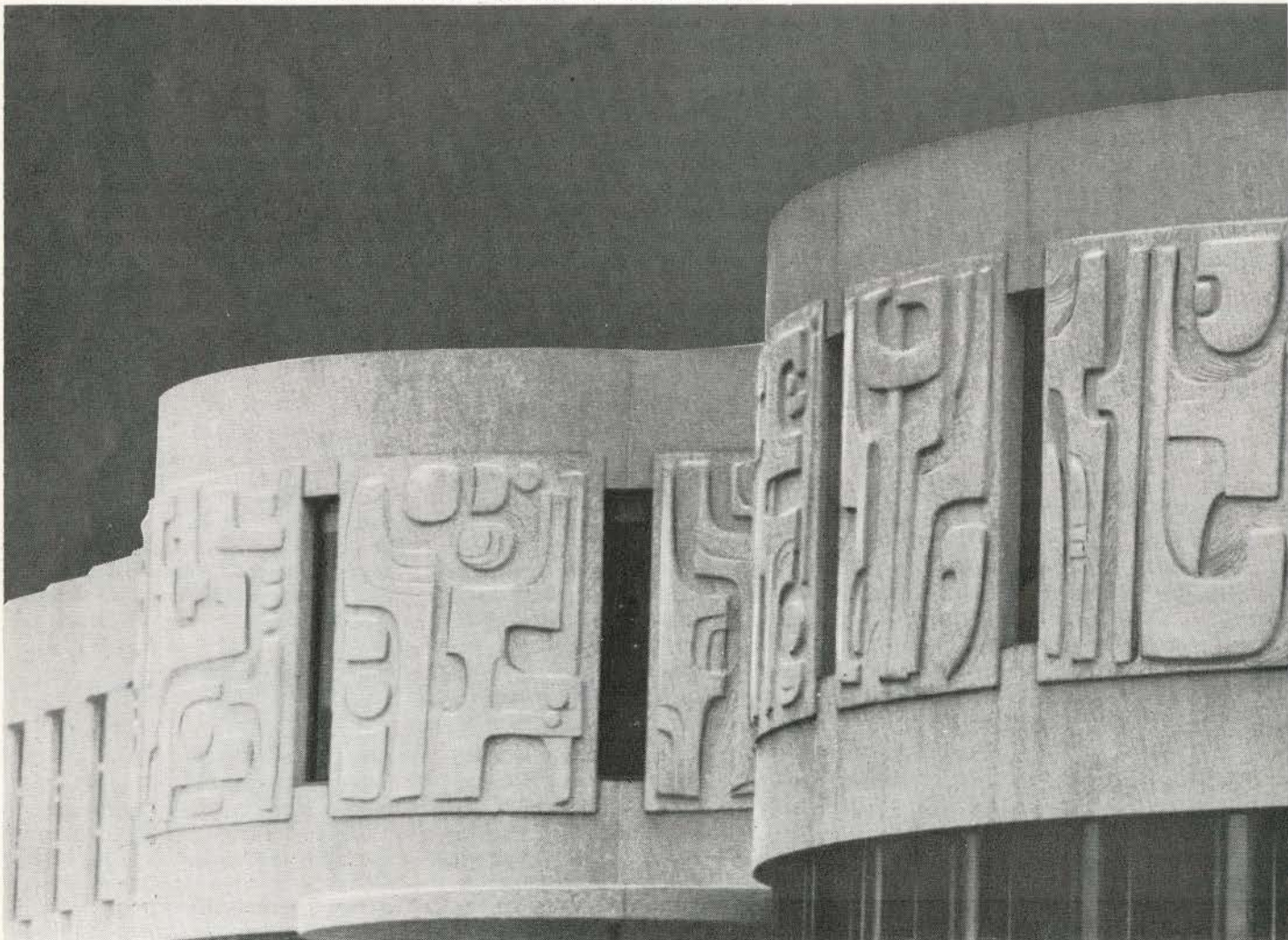
# Precast Sculpture Enriches Building

To achieve enrichment, free-form sculpture was added to repetitively cast curved wall panels. Working in carefully prepared wet cement from approved drawings, the sculptors then applied individual designs on each panel at the rate of two a day. The result is an original hand finished mural that is the focal point of the building.

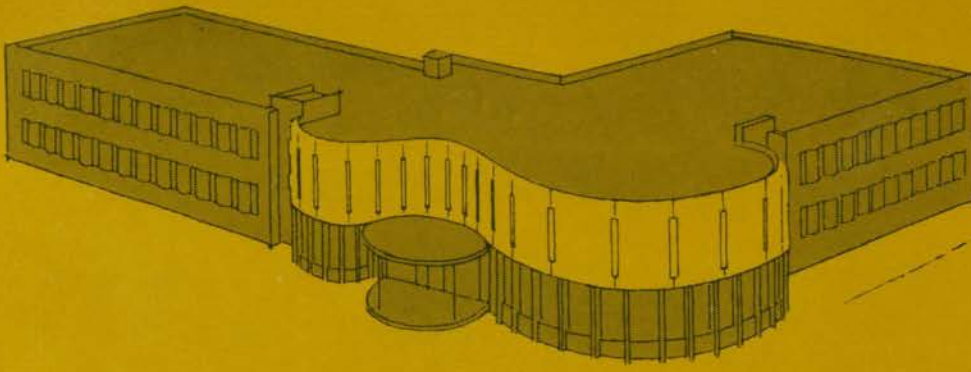
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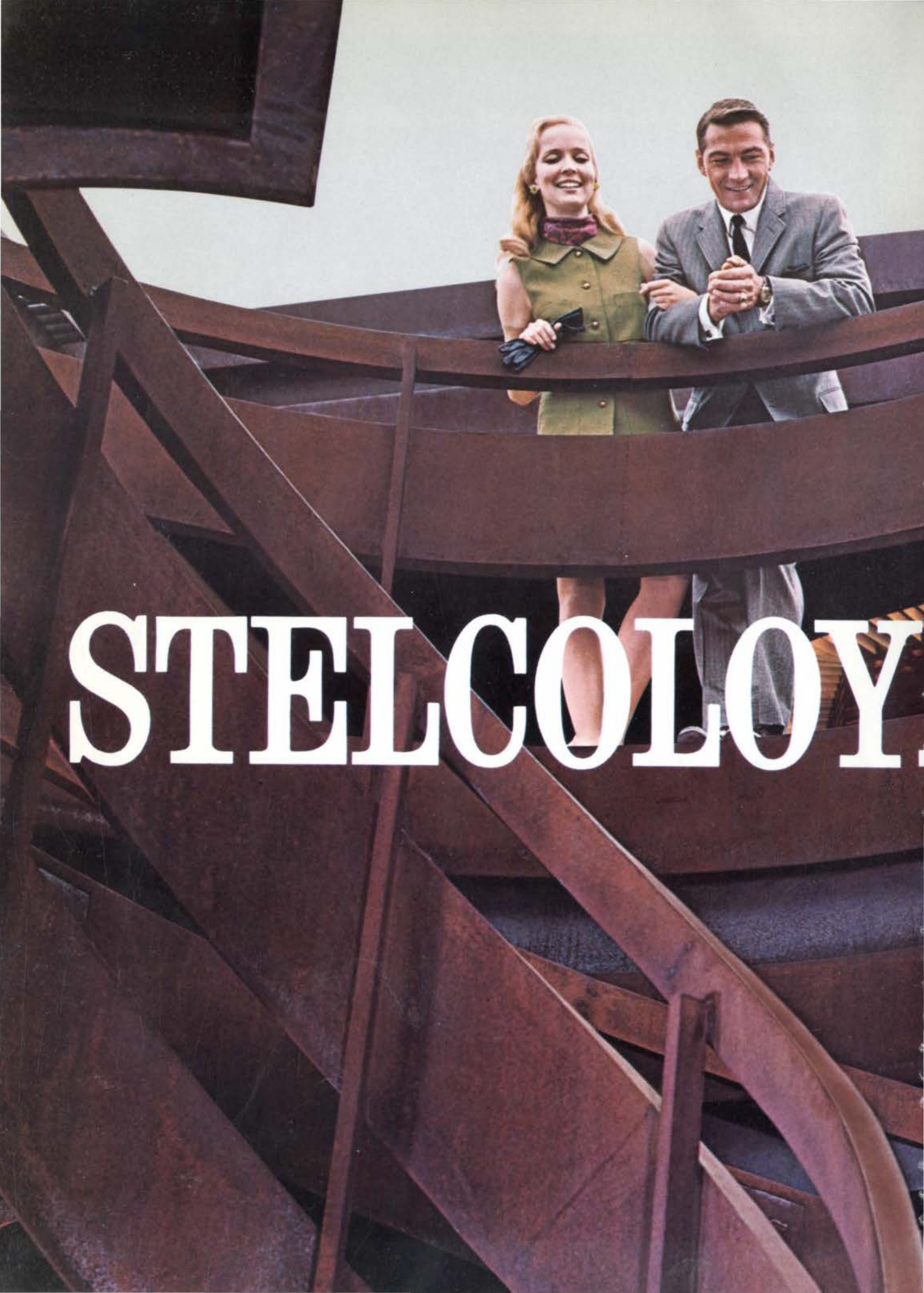


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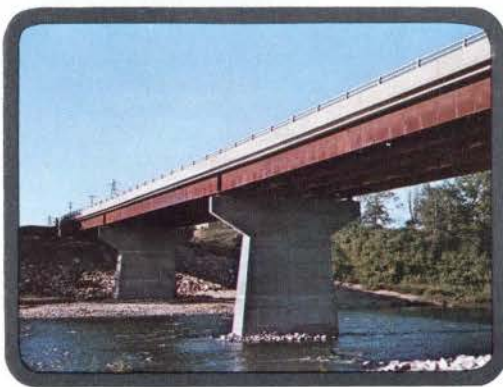
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fine fellows doing a fine job in the housing field who could do a lot better job given more information. It is not a housing project problem but a national problem involving a great many other things." George Hamman, Toronto, asked if we could benefit from the experience of Metro Toronto School Board which set up an advisory board to study the problem of school facilities, out of which grew Studies in Educational Facilities. The vote was taken and the motion carried 22 for, 19 against.

John Spence, Toronto, felt that the meeting should present a more strongly supported motion. He therefore moved that "This Assembly charge the new Council with obtaining a definitive answer to the Minister's statement before July." E. Raines, Calgary, seconded.

At this point several Canadian undergraduate students joined the meeting and Mr McMurrich invited them to comment. The first to speak said that, as a restless student, he would like to know when the RAIC was going to stop talking and draw up a plan of action, because while there are motions urging participation in planning activities, no definite course was being proposed.

Mr McMurrich explained that the Institute had already taken action. There had been an interview with the Minister in charge of housing, at which the profession had been asked to say what could be done about the quality of housing in Canada. That was what the last motion was about. The student replied that, at the student meeting the day before, the main conclusion was that the Canadian students did not really know what the RAIC was doing. There was a lack of communication and participation. "That" said Mr McMurrich "was the idea of having an official student delegation to this convention — to start serious communication and permit participation".

Gordon Arnott, Regina, felt that there was a Kafka-esque quality to the meeting. Addressing himself to Council members present, he said that all that we could do here was to obtain the opinions of those present and try to put forward an attack

on the whole problem of housing and urban planning that would be useful and give direction to members and firms.

Mr Mayerovitch rejoined the discussion with the comment that architects had been systematically brainwashed over the last few years that their contribution was minimal. Brainwashing came from clients and others dissatisfied with big buildings and other aspects of our society and architects have come to believe it themselves. "It astonishes me when a young student gets up and asks pessemistically 'what can we do'. The RAIC can do nothing" said Mr Mayerovitch. "Nothing is going to be done by an official body, it is going to be done by individuals. As to architects, we have special qualifications whose magnitude we tend to forget. It is because of these that sociologists are prepared to accept us as leaders of a team. By virtue of our training we have had a smattering of many of the problems which together constitute the total problem. Many other disciplines are more highly specialized and therefore get a more colored approach. Architects are more likely to have a total view and this is what we can contribute and should capitalize on."

Joseph Baker, Montreal, felt that Mr Cluff's earlier expressed concern about how best to present to the public the architect's interest in housing was totally unnecessary. To paraphrase Daniel Burnham's famous statement "make no little plans", he wanted to utter a heresy: "make no big plans" because what we were trying to do was to present to the public the fact that architects are concerned with the national crisis — a crisis that can be settled by many little plans. Mr Mayerovitch had in many ways pointed this out. "At the community level we can participate as citizens, rotarians and architects. At the provincial association level we can act in concert with other similar bodies such as engineers and landscape architects. There is no reason why this body, which really hasn't power, should try to define the stand of Canadian architects on housing. Housing did not happen this year. There have been many people involved for many years in one way and another. All we can do is quietly resolve that each of us will make

a bigger effort as individuals and firms to participate, not to make a better commission but because it — what houses us — is the most important part of our lives. We don't need a resolution." The meeting then approved Mr Spence's motion (with a preamble added by Mr Mayerovitch) as follows. "Be it resolved that since housing occupies a position of priority and urgency in our society that the RAIC accept an increasing responsibility in the debate on housing and the search for solutions and that the RAIC Council should be charged with increasing participation by architects at all levels in the search for solutions. It is moved that this Assembly charges the new Council with obtaining definite answers to the Minister's question before the end of July so that it can be issued".

#### **Tenth IUA World Congress at Buenos Aires in October**

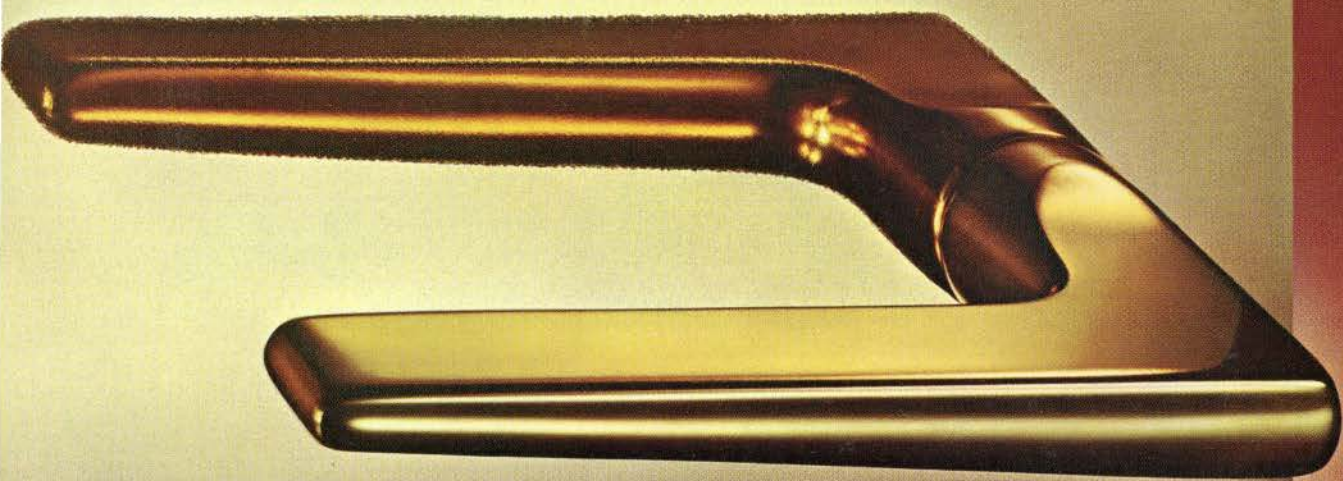
The Tenth World Congress of the International Union of Architects will take place at Buenos Aires, Argentina, from 19-25 October, 1969. The theme will be "Architecture as a Social Factor — Housing of Social Interest". A world meeting of town planners will follow from 27 to 29 October at Mar del Plata.

All members of the RAIC are invited to attend. Registration forms are available from Joseph Pettick (F), RAIC Representative to the IUA, 2236 College Ave., Regina, or from the official Congress travel agency, Treasure Tours, 1010 Ste. Catherines Street, Montreal 110. In addition to the official travel agency, we have been advised that group air travel plans are being made by C. S. Jarrett, MRAIC, Page & Steele, 2 St. Clair Ave. West, Toronto 7; and by Mrs. M. Eliasoph, wife of Montreal architect Milton Eliasoph, MRAIC, of 4950 Queen Mary Road.

#### **OAA Toronto Chapter**

John Warner Hoag is 1969-70 Chairman of the Toronto Chapter of the OAA. Other members of the Council are Macy DuBois, Past Chairman; Jerome Markson, Vice-Chairman, and Howard Chapman, J. Edward Sievenpiper, Alastair Grant and Michael Kopsa.





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Above: **John Labatt Ltd.**, Toronto, Ontario, Canada. Architect: Hicks, Marsh & McLean, London, Ontario. General Contractor: Ellis-Don Ltd., London, Ontario. Precast Producer: PRE-CON MURRAY LIMITED, Toronto, Ontario.

Below: **Medical Science Building**, University of Toronto, Ontario, Canada. Architects: Somerville, McMurrich & Oxley, Toronto, Ontario, and Govan, Kaminker, Langley, Keenleyside, Mellick, Devonshire, Wilson, Toronto, Ontario. Project Manager: Canadian Bechtel Ltd., Toronto, Ontario. Precast Producer: BEER PRECAST CONCRETE LTD., Scarborough, Ontario.





# Management Accounting for Architects

W. Schmidt

A new book published by the RIBA explaining a standard management accounting technique for use in architects' offices is discussed here by Mr Schmidt, chief accountant of a firm of quantity surveyors in Toronto.

One of the many problems every architect has to face is that of attempting to forecast his cash situation in the future. Although the accrual method of accounting gives the best guide to profitability of a firm at any given time, the architect has to pay his bills with cash, and unless he can be reasonably sure of his cash position well in advance he may find himself with insufficient funds one month to meet his expenses and no prior arrangement with his bank manager to cover the deficit.

Attempting to forecast the financial position of a firm is one of the functions of management, as is the budgeting of fees on individual projects so that the correct amount of time can be spent on each phase of the work, staff can be economically deployed, and each project can make a profit.

A book published last year by the RIBA\* gives a simple and straightforward system of forecasting the liquidity of an architectural practice, and budgeting and controlling project costs. It was prepared by a working group of architects with the assistance of a professional accountant, and the system it describes was subjected to extensive field trials by architectural practices of varying sizes before the book was published. The book is divided into three parts,

and explains with illustrations how the accounting forms which are an integral part of the system are completed and used. Included with the book are sets of blank forms for use with Parts 1 and 2.

Part 1 is concerned with an annual forecast of monthly cash income and expenditure with provision for review at the end of six months. To accomplish this, anticipated annual expenses are calculated under appropriate cost headings. Where they are recurring monthly expenses such as salaries or rent, a simple division by twelve gives the average monthly expenses. Isolated expenses such as staff bonuses or insurance premiums which only occur in certain months of the year are then added to the average expense for their appropriate

## Annual Summary of Budget

## Receipts and Payments

Year 1969 / \_\_\_\_\_

C

Payments	Month												Year's total		
	1	2	3	4	5	6	Half-year's total	7	8	9	10	11		12	
1. Technical salaries & fees	21,700	21,700	21,700	21,700	21,700	21,700	130,200	21,700	21,700	21,700	21,700	21,700	21,700	26,300	265,000
2. Administrative salaries	5,450	5,450	5,450	5,450	5,450	5,450	32,700	5,450	5,450	5,450	5,450	5,450	5,450	6,950	66,900
3. Accommodation	1,565	1,565	1,565	2,105	1,565	1,565	9,930	1,565	1,565	1,565	1,565	1,565	1,565	1,565	19,320
4. General & drawing office expenses	2,584	2,480	2,480	2,480	2,480	2,480	14,984	2,630	2,480	2,480	2,480	2,480	2,480	2,480	30,014
5. Welfare, education & training			75				75			45					120
6. Travelling & entertaining	1,080	1,080	1,080	1,230	1,080	1,080	6,630	1,255	1,080	1,080	1,080	1,080	1,080	1,080	13,285
7. Finance	150	150	795	150	150	150	1,545	150	150	150	150	150	150	150	2,445
<b>Sub-total (a)</b>	<b>32,529</b>	<b>32,425</b>	<b>33,145</b>	<b>33,115</b>	<b>32,425</b>	<b>32,425</b>	<b>196,064</b>	<b>32,750</b>	<b>32,425</b>	<b>32,470</b>	<b>32,425</b>	<b>32,425</b>	<b>32,425</b>	<b>38,525</b>	<b>397,084</b>
9. Capital expenditure															
10. Partners' drawings (included in 1 & 2 above)															
<b>Total (b)</b>	<b>32,529</b>	<b>32,425</b>	<b>33,145</b>	<b>33,115</b>	<b>32,425</b>	<b>32,425</b>	<b>196,064</b>	<b>32,750</b>	<b>32,425</b>	<b>32,470</b>	<b>32,425</b>	<b>32,425</b>	<b>32,425</b>	<b>38,525</b>	<b>397,084</b>
Receipts	1	2	3	4	5	6	Half-year's total	7	8	9	10	11	12	Year's total	
12. Fees (from form B-Annual)	34,300	27,650	38,400	37,900	28,350	31,300	197,900	33,100	41,400	34,850	32,500	33,900	26,450	400,100	
13. Recoverable expenses															
14. Other income															
<b>Sub-total (c)</b>	<b>34,300</b>	<b>27,650</b>	<b>38,400</b>	<b>37,900</b>	<b>28,350</b>	<b>31,300</b>	<b>197,900</b>	<b>33,100</b>	<b>41,400</b>	<b>34,850</b>	<b>32,500</b>	<b>33,900</b>	<b>26,450</b>	<b>400,100</b>	
15. Capital receipts															
<b>Total (d)</b>															
Summary	1	2	3	4	5	6	Half-year's total	7	8	9	10	11	12	Year's total	
Receipts (from Sub-total (c))	34,300	27,650	38,400	37,900	28,350	31,300	197,900	33,100	41,400	34,850	32,500	33,900	26,450	400,100	
Payments (from Sub-total (a))	32,529	32,425	33,145	33,115	32,425	32,425	196,064	32,750	32,425	32,470	32,425	32,425	32,425	397,084	
<b>Anticipated Surplus (Deficiency)</b>	<b>1,771</b>	<b>(4,775)</b>	<b>5,255</b>	<b>4,785</b>	<b>(4,075)</b>	<b>(1,125)</b>	<b>1,836</b>	<b>350</b>	<b>8,975</b>	<b>2,380</b>	<b>75</b>	<b>1,475</b>	<b>(12,075)</b>	<b>3,016</b>	

Note: The numerals shown in the 1st column of this form (excepting item 12) tally with the budgets made in Forms A.

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\* Management Accounting for the Architect, published by the Royal Institute of British Architects, 66 Portland Place, London W1 E 6-10-0



month, and the final result is a reasonably accurate forecast month by month for the coming year.

Similarly, anticipated monthly cash income for each project is entered onto an Annual Forecast sheet of Fees Receivable and totalled to show the expected total income for each month. Expenses and income are then forwarded to an Annual Summary of Budget as shown in figure 1. From this budget an annual liquidity forecast can be prepared, taking into account the bank balance at the beginning of the year and the effect that the surplus or deficiency at the end of each month will have on the balance.

A further refinement is to show the liquidity forecast on a graph, which serves two purposes. The liquidity forecast can be much more readily appreciated if it is shown in graphic form, and it can help in negotiations with the bank manager when the need for a loan can be demonstrated well in advance by the graph and its back-up material.

While Part 1 deals with an annual forecast, updated after six months, the forms in Part 2 are completed monthly. They are concerned with a review and forecast of fees on each project; a summary of bills received during the month and, in conjunction with a monthly liquidity forecast, provision for determining which bills should be paid and which should be held over until the following month; monthly updating of the liquidity graph; and a comparison of

actual income and expenditure with the budgeted amounts calculated under Part 1. Figure 2 shows the form which is used to review and forecast monthly the fees for each project. The same form is used for the complete year, the information on it being updated each month. The first two lines show the estimated building value and total fee for the project. The figures on these lines should only be changed if there is a revision to the construction cost of the project with a consequent revision to the fee. The next three lines show what has actually been received during the month, a running total of fees received, and the balance of fees outstanding. The figures on these lines are brought up to date each month. The shaded area below shows what fees are anticipated month by month and these can be compared with fees actually received and recorded in the upper part of the form. For example, until the end of month 4 it was anticipated that \$4,000 would be received in month 5 for this project. In fact, only \$3,000 was received (line 3 under column 5) but it was expected that the balance would arrive during month 7 and this was recorded against month 7 in the shaded area when updating was done in months 5 and 6. The form shown has now been completed to the end of month 7, with all the known figures entered in the upper part of the form, and the expected income of \$16,000 in month 8 and \$1,000 in months 10 and 11 and 12 shown in the shaded area. The purpose of Part 3 is to budget the time

available for individual projects by analyzing the hourly cost of technical staff, calculating the amount of fee available after consultants' fees and profit have been deducted from the total fee, and thence determining the number of hours which can be allocated to each phase of the work. Also incorporated in this part are weekly timesheets, a Job Time Record form so that budgeted time can be compared with actual time, and a Job Cost Record form so that actual costs can be recorded for each project.

A brief account such as this of a budgeting system tends to make it appear more complicated than it really is. In fact the system was designed for the smaller office where it might be operated by a competent bookkeeper or secretary, or even by one of the partners, and there is a lot to recommend the idea of a partner operating the system. Because it is outside the normal accounting and bookkeeping routines it does not interfere with them, but a partner who has to bring his cash forecasts up to date each month, and verify projected figures against actual figures, gains better understanding of his financial situation.

The system can also be used by the larger offices, either by accepting it completely or by adapting parts of it for incorporation into their own management accounting system. Like any other form of management control, however, to quote the preface to the book "it will be useless unless the information it yields is reviewed monthly and acted upon by the partners".

### Job Fees Record

#### Review and Forecast

Year 1969/

Job Factory & Office  
No. 150

F

Monthly review	1	2	3	4	5	6	7	8	9	10	11	12
Estimated building value	785,000	785,000	785,000	785,000	785,000	785,000	785,000	785,000				
Estimated total fee	31,500	31,500	31,500	31,500	31,500	31,500	31,500	31,500				
Cash received this month			4,000		3,000		1,000					
Total fees already drawn				4,000	4,000	7,000	7,000					
Balance undrawn at end of month*	31,500	31,500	27,500	27,500	24,500	24,500	23,500					
<b>Monthly forecast</b>	<b>Forecast fees to be received in shaded area below</b>											
Notes:	1											
	2											
	3	4,000	4,000	4,000								
	4											
	5	4,000	4,000	4,000	4,000	4,000						
	6											
	7						1,000	1,000				
	8	16,000	16,000	16,000	16,000	16,000	16,000	16,000				
	9											
	10	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
	11	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
	12	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000			
	Next year	4,500	4,500	4,500	4,500	4,500	4,500	4,500				
<b>Total</b> being balance undrawn at end of previous month*	31,500	31,500	31,500	27,500	27,500	24,500	24,500	23,500				
Transfer forecasts to Forms:	B.1	B.2	B.3	B.4	B.5	B.6	B.7	B.8	B.9	B.10	B.11	B.12

\*Note: The total forecast should be the same as the balance of fees undrawn at end of previous month.



# The Chicago Convention

## Chicago: An Ode

Grey. Vertical. Sprawling. Concrete.  
 From sterile glass to ghetto maze,  
 Wheeled Leviathan rattles his noisy way;  
 Above the ground he bites his tail  
 And screams in the dark below.  
 Black Tower of Babel with no top  
 Criss – crosses heavenward,  
 As Proteus' twin, concrete arms  
 Rise circularly from the oily sea  
 To grasp at chimney – belchéd clouds.  
 A precast concrete Eiffel hordes its wealth  
 In sterile, introverted space,  
 While gutters teem with fallen man.  
 Plush Valhalla halls abound  
 In tall hotels on every side,  
 Caviar and champagne all around –  
 While starving hordes of lost and poor  
 Search the slum for even a crumb.  
 Grey flannel heroes cajole for Bacchus  
 With shorthand concubines who type,  
 Their bleary eyes fail to see  
 The violent misery festering.  
 The insane Neroes fiddle on,  
 Laughing as a city burns.

While suburbia's humdrum kings  
 Sit sheltered in a Wright or Mies,  
 Black Panthers prowls the taut night  
 In cardboard jungles buried deep  
 In trash; humiliation; misery.  
 The emperors blue phalanx keeps the rule  
 With wooden arms, and lead;  
 They laud the message of peace and truth  
 From "Big Brother's Ministry of Love."  
 Adolf's shadow blankets all  
 To block the rising sun;  
 But in the broken glassèd maze  
 Black libidos cringe no more.  
 In final desperation they turn to strike –  
 Only to be kicked in the face  
 By blue enforcers of liberty, equality  
 and peace.

What if the destrudo overcomes?  
 What if the inferno explodes?  
 Will Phoenix arise from the ashes anew?

Peter Dandyk  
 University of Waterloo

Approximately 75 students from the nine Canadian schools of architecture attended the joint AIA-RAIC Convention in Chicago from June 22 to 26, 1969. Eighteen were there courtesy of the RAIC, whose president Norman McMurrich was somehow able to find the funds to make this possible. A large group from the University of Waterloo took advantage of the occasion to attend the Convention and to do an on-the-spot study of Chicago and its problems.

As has been mentioned elsewhere in this issue, the Convention was dominated by the American students. They challenged the members of the AIA to donate ten percent of their annual business incomes – an estimated \$15 million – to solving the nation's critical urban problems.

Canadian students did not participate in the ensuing debate, which continued throughout the week and ended with the AIA accepting the idea in principle. It was generally felt that the problems of urban America are not the most critical ones facing Canadians. The Convention was the first time that students from the nine schools had met together to discuss matters of common concern. There were a number of problems associated with this. For example, almost no one felt himself to be representative of his school or student body. Most seemed to have been nominated by their deans after the rest of the students had left for the summer. No one seemed to know why he had been chosen, although several held positions in their particular student organizations.

Obviously a great deal more needs to be done by way of preparation if the expense of sending students to a convention is to be justified. On the whole, though, a number of positive results were achieved. There was student representation at an RAIC Convention and students were able to take as full a part in its activities as were ordinary members of the Institute. This has not happened before.

A number of students had a meeting with W. G. Leithead, the incoming president of the RAIC, and were given some understanding of what the Institute is, how it works and what it can do. It is perhaps significant that

they were somewhat disillusioned at how little the national body can do, in contrast to the provincial associations. The very lack of program on the part of students may have a beneficial effect on the student assembly planned for the late fall of this year. Three students from the Université de Montréal, Pierre Laflamme, Gaetan Biancamano and Jean-Pierre Pelletier, brought with them to Chicago a paper directed at this very problem. They realized that if anything is to be accomplished in the fall someone will have to think about it beforehand. "Many problems have pushed us to having a national 'Colloquium' for architectural students in the fall of 1969. In the end, the most important of these is that of communication-information. Students in architectural schools throughout Canada never meet each other to discuss common problems and to exchange the ideas and ideals that we have. . . . The lack of communication between students is also clearly present between students' association and the RAIC. . . . We ask you, Is a national association the answer?" They go on to set out a three stage plan leading to the Colloquium itself.

This is not the time to discuss it further, but it remains to be seen if someone from among the students themselves will take the initiative for the fall meeting, or whether it will be left to the RAIC to make the necessary arrangements.

Students attending the Convention were invited to send us their comments for publication. Here are excerpts from those we have received.

### From Ken Lane of UBC:

"For most practicing architects, I doubt that attending conventions is worth the energy and money expended on them. For me, the chance to meet other Canadian students made it well worthwhile. At present, the only contacts between the schools are through the deans. I think each school . . . has a feeling of being all alone . . . while in fact the other schools are doing similar things and meeting similar problems. The fall meeting will hopefully make this clear. "Essentially, we English students have much to learn from the French students. They are confident that the profession has a radically different future, and that they themselves



W. G. Leithead, (F), 1969-70 RAIC President, discusses the role of the RAIC with University of Waterloo students (left to right) Bruce Robertson and Peter Dandyk.

W. G. Leithead, (F), Président de l'IRAC pour l'année 1969-70, et deux étudiants de l'Université de Waterloo (g. à d.) Bruce Robertson et Peter Dandyk, discutent le rôle de l'IRAC.



1  
have an important and radically different role in the shaping of their environment. Anglophone students seem more concerned, even obsessed, with convincing older architects that the profession will change radically, instead of expending the energy on fitting themselves for this future profession."

**From Allan E. Larden of the University of Waterloo**

"If the inclusion of student delegates at the joint AIA/RAIC Convention has marked the start of greater interaction between the architectural profession and students, it has been beneficial to both parties. Student participation and the continental aspect of the convention are, I hope, indicative of a desire for greater dynamism within the profession."

**Axel S. Mothes of McGill wrote not as a student of a particular school but merely as a person who may eventually become an architect:**

"We were thrown into a city divided by racial

strife. Certainly we had all read about it. We had discussed it and were disgusted by it, but we had not felt it. Now we cannot ignore it . . .

"Many of us came into contact with the RAIC for the first time in Chicago. We did not know what it was. Now we know, and we questioned its existence. It has no authority over our education, no authority over the provincial building codes, but it has a voice. We asked it to use this voice and become political if it must in order to do this. It has the power to speak out and make the Canadian population aware of its existence and its realization of the ills of our cities. Let it step on a few toes, let it offend people, let it not worry about who may be hurt by its public statements . . .

"In Chicago we felt quite often that architects have a hint of a masochistic nature. They seemed to enjoy being told by students that they had, on many occasions, failed. Maybe this is due to the fact that

the majority of them have not had any contact with students since leaving school. It is also the students' fault, because we never spoke to them. Now we have spoken to each other and it is up to both to keep the channels open. The practicing architect can contribute an enormous amount of technical skill and knowledge and, very important, experience. The student can provide limitless energy and fresh ideas . . . idealistic sometimes, but still concerned. The architectural profession as it is today will have to change, but it is up to both practicing architects and students to cooperate in effecting this change. . . . Give us the chance to work within the Institute, not against it,"  
A.G.



Advertisements for positions wanted or vacant, appointments, changes of address, registration notices, notices of practices including establishment or changes in partnership, etc., are published as notices free to the membership. Registrations

*The Architectural Institute of British Columbia, May, 1969:* Peter Charles Rayhed, B. Arch; T.M.B. Cattell, B.Arch; Richard Raymond Olsen, B.Arch; Peter Gerald Morley, A.A.Dipl; Karin Mannchen, B.Arch.

*The Ontario Association of Architects, May 1969:* K. H. Dubbeldam, B.Arch; A. N. MacGowan, B.Arch; Mrs. Christine Perks, B.Arch; Restored to membership, Maurice R. Lightowler

*The Alberta Association of Architects, May, 1969:* Orin I. Krivel, R. J. Andruchow, R. C. Anderson; April, 1969, Daniel Ezinga

**Practice Notes**

Ray Bradbury and Elizabeth Bradbury have commenced practice as architect and landscape architect at Hampton, New Brunswick. Telephone (506) 832-7541.

Effective August 1, 1969, Ronald E. Murphy, MRAIC and Norbert J. Schuller, MRAIC have formed a partnership under the name of Murphy and Schuller Architects, 775 Waterloo Street, London 11, Ontario, 433-5161. Man Taylor Muret Ltd., Landscape Architects and Site Planners, have moved their Calgary Office to 209-1039-17 Avenue S.W., Calgary 3, Alberta, 245-5791, and continue to practice at 200-75 Albert Street, Winnipeg 2, Manitoba, 942-0196.

**Positions Wanted**

Canadian architectural assistant, responsible for working drawings and supervision of draftsmen, 23 years experience in all types of projects, capable of complete project coordination, seeks to improve present position. Reply Box 161, *Architecture Canada*.

English architect, just completed Masters course at University College, London, is emigrating to Canada in October and seeks employment in architect's office. Age 23, some experience in own part-time office. Reply Michael Brod, 75 Gilling Court, Belsize Grove, London NW 3.

Indian architect seeks position as architectural assistant in Canada. Probationer member ARIBA, age 25, two years experience as

assistant architect in India and with Canadian firm in Malaysia. Present assignment working drawings, specification writing, perspective drawings. Special knowledge hospitals and churches. Reply G. A. Raj, 21/A Jalan Ang Seng Tiga, off Brickfields, Kuala Lumpur, Malaysia.

UK architect 19 years extensive experience of major and general work seeks to hear from Ontario architects in order to find a responsible and exacting position, this year if possible. Smaller practices preferred but would like a job which needs hard work and experience. Reply Alan Holwell, ARIBA, 49 Broadlands Ave., Chesham, Bucks.



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## Space, Time and Architecture, The Growth of a New Tradition

Sigfried Giedion  
Harvard University Press, Cambridge Mass,  
in Canada, Saunders of Toronto Ltd; 1967,  
897 pages, \$17.50

"I have attempted to establish, both by argument and by objective evidence, that in spite of the seeming confusion there is nevertheless a true, if hidden, unity, a secret synthesis, in our present civilization."

Since Giedion wrote those words in 1940 a lot has happened. A lot of building and a lot of research. Yet the book takes little account of either.

True, this latest edition has new material – Gropius in Athens, Mies in Mexico, Le Corbusier in Zürich, extra Aalto, chapters on Utzon, CIAM, "Changing Notions of the City", and a new introduction "Architecture of the 1960's: Hopes and Fears." But the omissions are glaring. This book must always remain incomplete, and this is the first of its two great faults.

The second fault is more serious. Research and critical writing since 1940 have brought fresh evidence to light and new theories to bear on the origins and nature of modern architecture. It is no longer possible to accept Giedion's basic thesis that *the seeds of this new architecture were planted at the moment when handwork gave place to industrialized production.*

Kaufmann's *Architecture in the Age of Reason* has shown that the seeds were already sown in the 18th century, and for aesthetic not technological reasons. Banham's *Theory and Design in the First Machine Age* has shown that those seeds grew the way they did for many reasons more powerful than technological ones. If truth be told, the great iron constructions of the 19th century only had a marginal influence on modern architecture.

Yet, with all its faults, and they are many, *Space, Time and Architecture* will be read long after other books are forgotten, for it seizes on "constituent" rather than "transitory" facts, it deals primarily with form and space, and above all it sees architecture as an ennobling manifestation of the spirit of man.

Giedion perceives fundamental things, such as, – *The interpenetration of artistic volition with the laws of matter is at the root of all artistic creation. It is methods of construction that have changed with time.*



George Balcombe

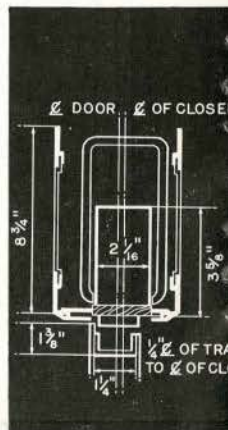


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- Steel Company of Canada Limited, The (p 28-29)
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**Footnote for page 35**

<sup>1</sup>Published as *The Uses of the University* (New York: Harper Torchbooks, 1966). One eye-witness interpretation of the events at Berkeley in 1964 is given in L. S. Feuer, *The Conflict of Generations* (New York: Basic Books, 1968).

<sup>2</sup>Kerr, *op cit.*, vii.

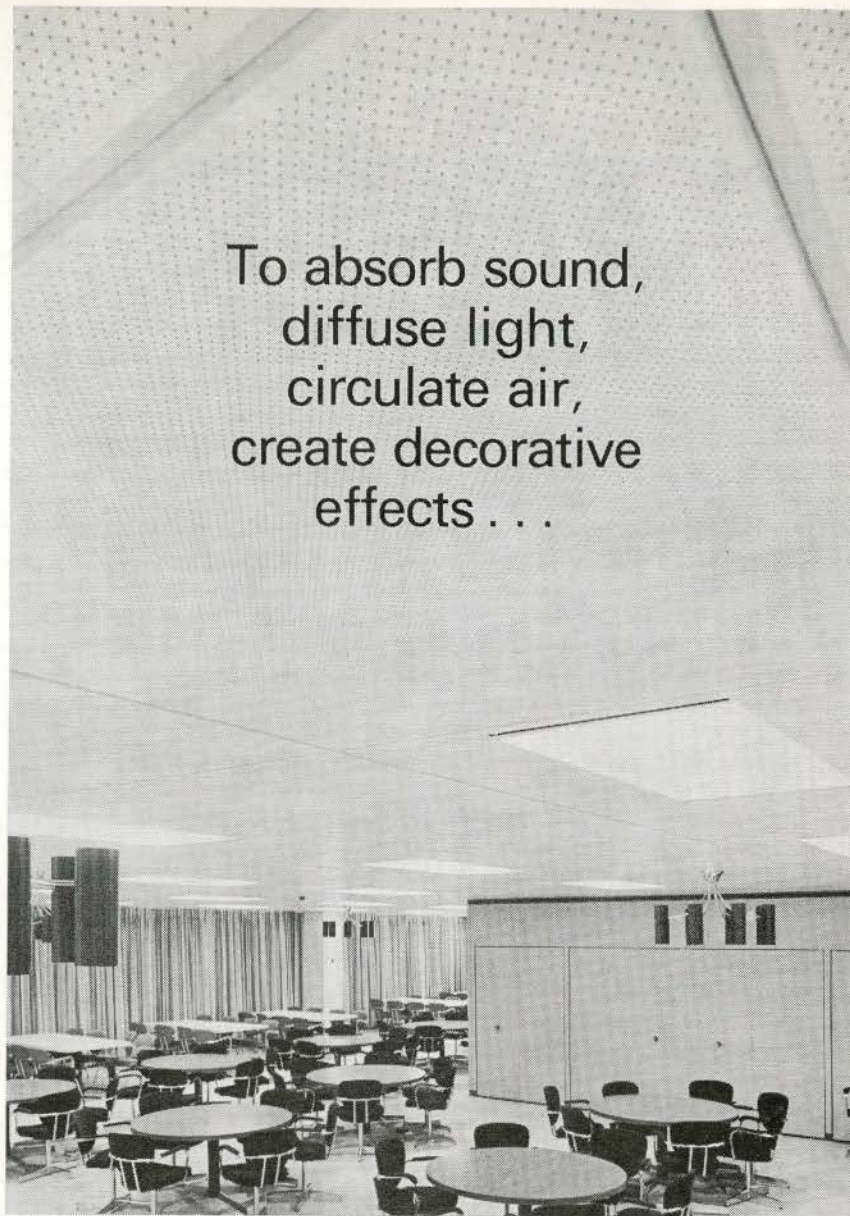
<sup>3</sup>Fritz Machlup, *The Production and Distribution of Knowledge in the United States* (Princeton University Press, 1962).

<sup>4</sup>Samuel Lubell, "That 'Generation Gap' ", *The Public Interest*, 13 (Fall 1968), p. 60.

<sup>5</sup>Robert Dubin and Frederic Beisse, "The Assistant: Academic Subaltern", *Administrative Science Quarterly*, 11.4 (March 1967), pp. 521-47. It is significant, I think, that even a university such as Oxford finds both a growing involvement of university people in outside work (not always for remuneration, it should be added) and simultaneously a growing willingness to allow post-graduate students to act as tutors for undergraduates.

<sup>6</sup>"The University and the Canadian Community", *Queen's Quarterly*, LXXIII.3 (Autumn 1966), pp. 301-10.

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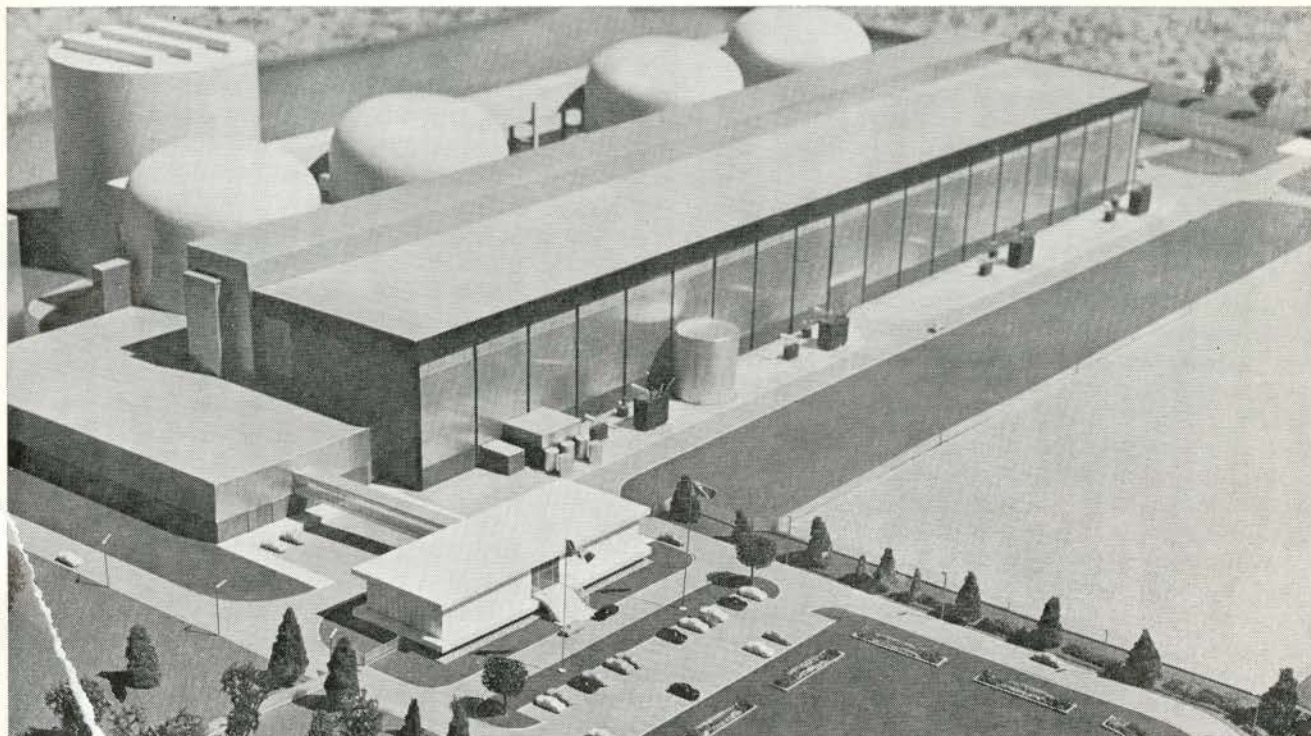
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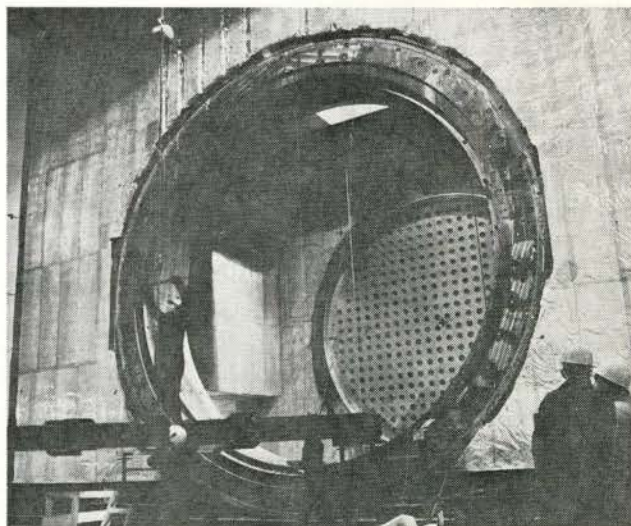
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