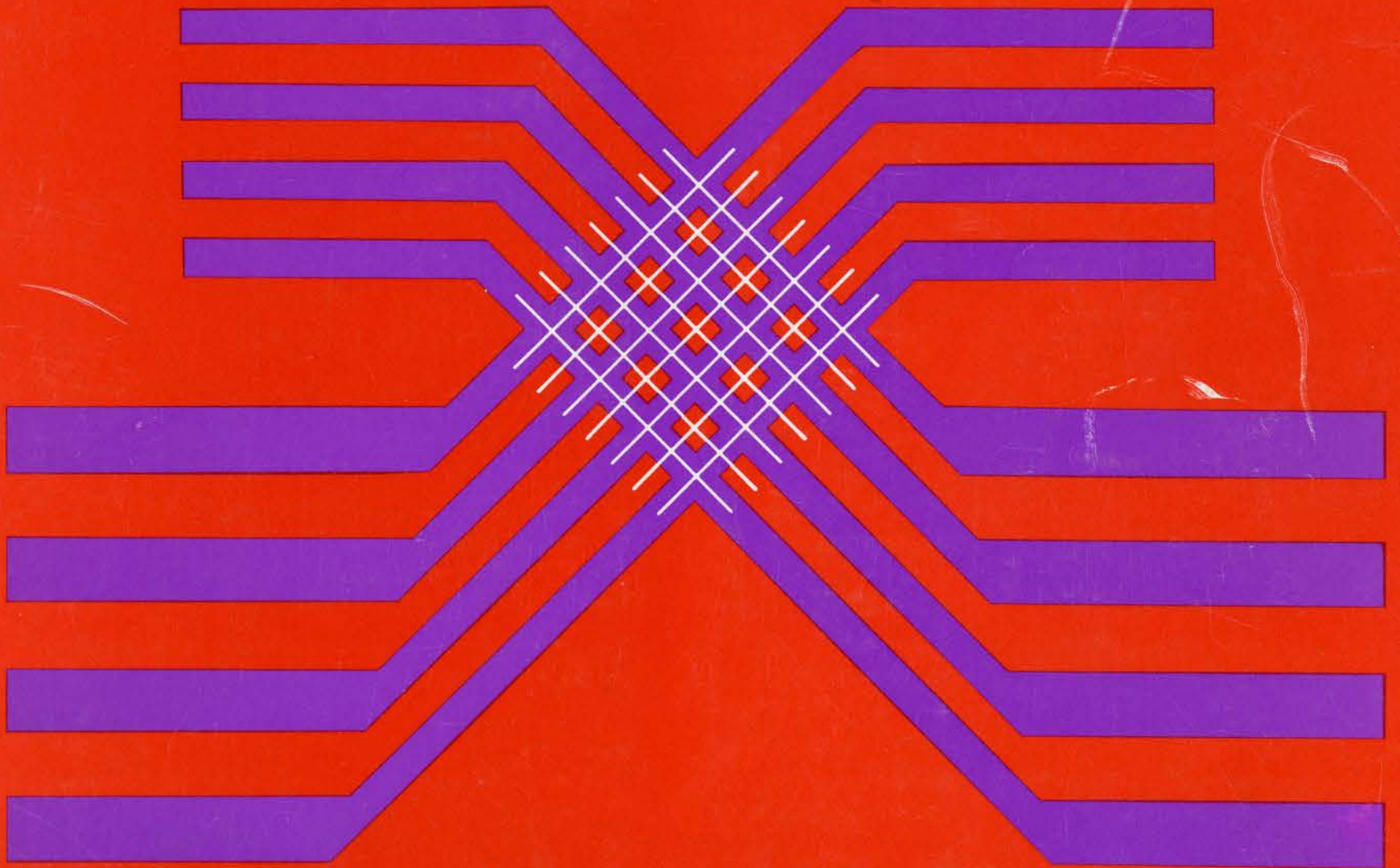


# Architecture Canada

December/Décembre 1968

Number/Numéro 12 Volume 45

Journal RAIC/La Revue de l'IRAC





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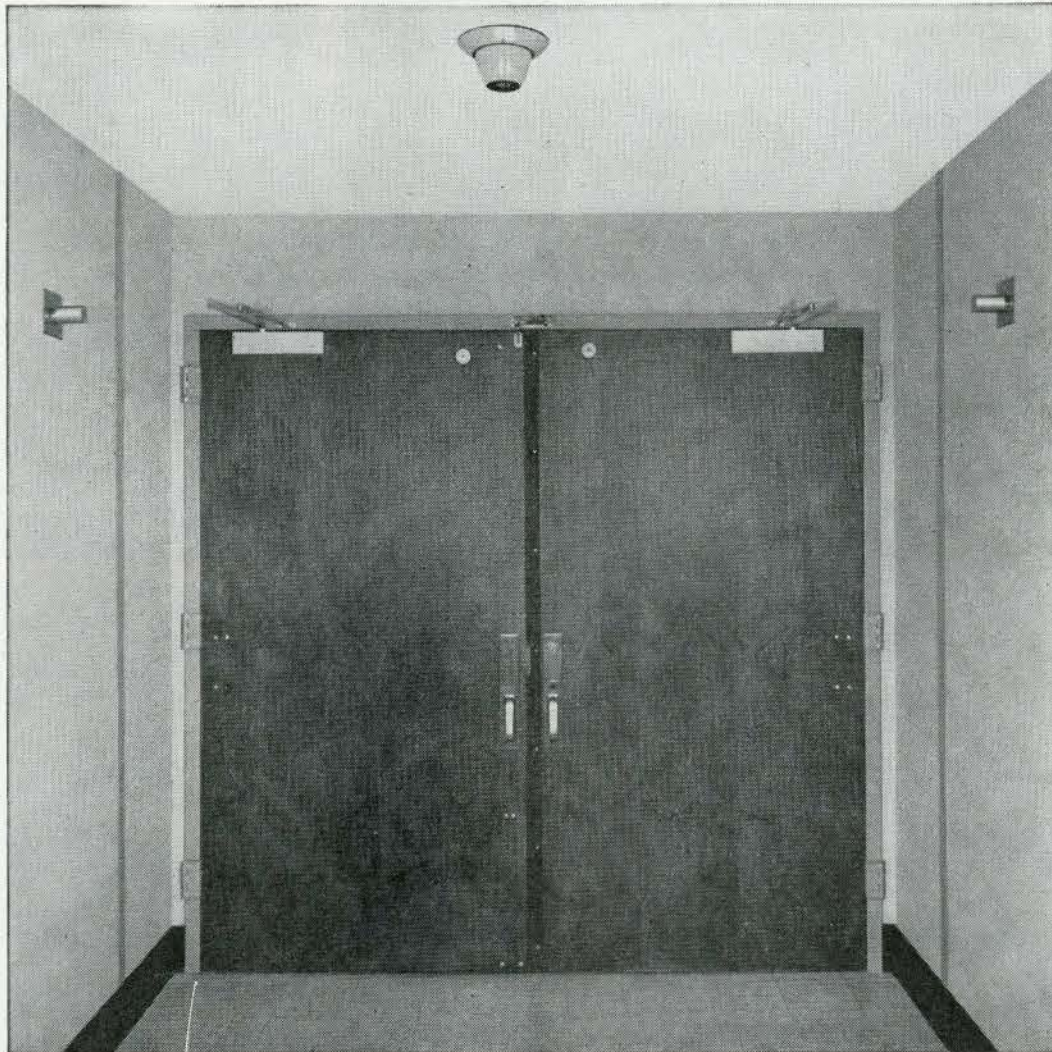
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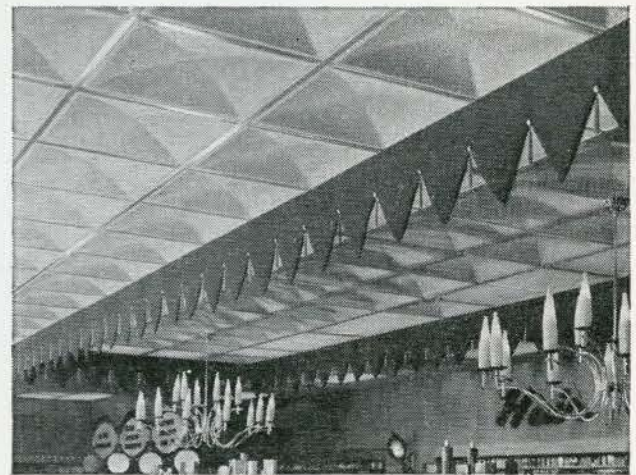
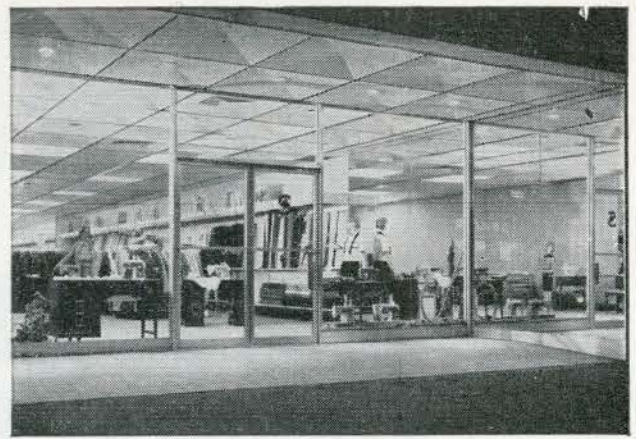
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**Competition for Turkish Development**

The UIA has approved a single stage international competition for architects and town planners for the development of the Antalya region as a tourist area. Prizes are, first, \$11,859; second, \$9,480; third, \$7,110 and fourth, \$4,740, and four mentions totalling \$9,480. Those wishing to register should apply before February 3rd to Turizm ve Tanıtma Bakanligi, Fiziksel Planlama Müdürlüğü, Gazi Mustafa Kemal Bulvari, No 33/8, Maltepe, Ankara, Turkey. The jury includes Prof. Percy Johnson-Marshall, (UK), G. Candilis and Michel Ecochard (France), Marc Saugey (Switzerland) and Giovanni Astengo (Italy).

**PQAA Admission Procedures for Non-Canadian Graduates**

*The Province of Quebec Association of Architects has revised its procedures for admitting graduates from other than Canadian Schools of Architecture. Previously, candidates underwent a repetition of the academic examination, which the PQAA felt, was neither a fair nor adequate test of the capacities of an individual who had graduated five or more years earlier. Now, after the candidate has met the mandatory requirements in academic background, curricula and experience, he appears before a jury of*



*At the OAA Seminar Journal Education in the building industry, left to right around table, OAA President John Spence; OAA Director of Professional Studies Stanley R. Kent and, addressing the seminar, D. E. Loney Assistant Superintendent, Curriculum, Ontario Department of Education.*

*experienced members of the PQAA for the professional competence examination, which is a requirement for Canadian and non-Canadian graduates alike. (See photo this page).*

**Formal Education in the Building Industry: the OAA Seminar**

The Ontario Association of Architects, like most professional bodies, is charged with a responsibility for education. It fulfills that

responsibility by: encouraging the extension of basic professional education (two new undergraduate schools, at Waterloo and Carleton, in the past three years); by conducting a registration course for prospective members; and by a program of continuing education for practitioners. It also encourages the training of technicians and technologists.

The proliferation of educational programs in secondary schools and in the colleges of applied arts and technology has resulted in some overlapping. The OAA therefore felt it would be useful to bring all concerned together in an attempt to clarify the curriculum of each area and the intended role of their graduates. The meeting, proposed by OAA Director of Professional Studies Stanley Kent, took place November 25 and, so far as is known, was the first of its kind. John Spence, OAA president, welcomed some 37 representatives of the various areas of education in the building industry, particularly those related to design, including the Ontario Department of Education Secondary School Branch, the Colleges of Applied Arts and Technology Branch; the colleges themselves, the universities, the contractor associations and the professional associations.

The information given by the different participants was both interesting and useful. Before 1960, fifty secondary schools had



*The Professional Competence Jury of the PQAA examines a candidate for registration: (left to right) Jean-Luc Poulin, Jean-Marie Roy, Hart Massey (F), Blanche Lemco van Ginkel, Jean-Louis Lalonde, Miss Lillian Ghattas, PQAA, Office Manager, Victor Prus, (F), Raymond Affleck, and the candidate*

programs in building technology. Now there are 200 schools with an enrollment of 100,000 students. Proposed changes in curriculum will provide a limited vocational competence, a learning competence for students wanting training in building and a personal development of the student towards establishing a set of values. Students from such secondary school programs would, initially, present some problems to the colleges of art and applied technology (the CAAT's) because they would not come from "slots". A development of student maturity to use resources and work independently would be sought, rather than fulfillment of a specific course content. Of 20 CAAT's with 30 campuses, four had three-year programs and 13 two-year programs in building technology. Because of "slotting" giving way to a broad technological spectrum, students were losing track of where they were going. This was demonstrated by the inconclusive aims and objectives of the proposed technologist and technicians association. Ryerson students were seeking a four year course to provide for greater study in construction management, technology, computer work, research, environmental and other support subjects, plus some courses in urban planning and landscape technology. In breaking out of the narrow slot of the architectural draftman, the students were uncertain at first where they would fit into the industry and of what industry organization they would be a part. Eighty five percent of the students had grade 13 certificates for university admission. Toronto would accept Ryerson graduates with high standing into the second year architecture course. Carleton and Waterloo accept on an individual basis.

#### CMHC 1969-70 Fellowships

Ninety new fellowships for the 1969-70 academic year are offered by CMHC for full-time graduate study in various fields of urban and regional affairs. 75 of the 90 are designated for study in Canadian Universities and 15 outside Canada. For application forms and information write to Administrator, Advisory Group, CMHC, Ottawa 7.

#### 1968 Peter Barott Awards

Twenty-three Awards of Excellence were given in the 1968 Peter Barott Awards for Excellence for Building Products Literature, conducted by the Canadian Joint Committee on Construction Materials of the RAIC, the ACEC and the CCA. A further 31 entries won Honorable Mentions. Members of the jury were J. Klassen, P.Eng., Chairman; D'Arcy G. Helmer (F), Mark P. Gillen, P.Eng., Ottawa; Henri P. Labelle; A. F. Wrenshall, Montreal and I. E. B. McBride, P.Eng., Edmonton. Award Winners, who are entitled to display a special "A" symbol on their entries, were:

*Catalogues:* Intergrated Lighting, Ltd, Montreal, "Oval-Lite Emergency Lighting"; Duron Co. Ltd, Montreal, "Plastic and Concrete Finishes"; Canadian Gypsum Co. Ltd.,

Toronto, *Architectural Reference File*"; E. L. Sauder Lumber Co. Ltd, Vancouver, "Elswood Windows"; Porcelain and Metal Products Ltd, Montreal, "Chalkboards/Tackboards"; Canadian Johns-Manville Co. Ltd, Port Credit, "Asebstos-Cement Building Materials"; Canadian Pittsburg Industries Ltd., Toronto, "Pittco Architectural Metal Details"; CEB Limited, Scarborough, "Service Modules"; Western Gypsum Ltd, Clarkson, "Drywall Systems"; Armstrong Cork Canada Ltd, Montreal, "Resilient Floors".

*Brochures and Leaflets:* Domtar Construction Materials Ltd, Montreal, "Domtar Ceiling Tiles and Panels"; Lake Ontario Cement Ltd, Toronto, "Lake Ontario Masonry Cement"; Natco Building Products Ltd, Toronto, "Jumbo Claytile"; Duron Company Ltd, Montreal, "Durazzo Epoxy Terrazzo

*Flooring*"; Aluminum Co. of Canada Ltd, Montreal, "Anolok".

*Installations and Maintenance Manuals:* Ontario Concrete Pipe Association, Downsview, "Installation Manual Architectural Tiles".

*Samples:* Frontenac Floor and Wall Tile, Kingston, "Architectural Tile"; British Columbia Lumber Manufacturers, Vancouver, "Pacific Coast Hemlock Clears and Mouldings, Specification Guide"; Duron Company Ltd, Montreal, "Plastic and Concrete Finishes".

*Publication Advertising:* Ontario Hydro, Toronto; Canada Cement Company Ltd, Montreal; LCN Closers of Canada Ltd, Port Credit.

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1  
UBC Faculty Club additions and alterations,  
by Erickson Massey

*Additions et modifications, Club des Mem-  
bres de Faculté, UBC, par Erikson Massey*

2  
Hauer residence, by Erickson Massey  
*Résidence Hauer, par Erickson Massey*

3  
Postal Station "D", by Ian J. Davidson and  
Daniel E. White  
*Bureau de Poste "D", par Ian J. Davidson et  
Daniel E. White*

4  
Acadia Park married student quarters, UBC,  
by Vladimir Plavsic and Associates  
*Parc Acadia, logements pour étudiants  
mariés, UBC, par Valdimir Plavsic and  
Associates*

### Vancouver Chapter 1968 Design Awards

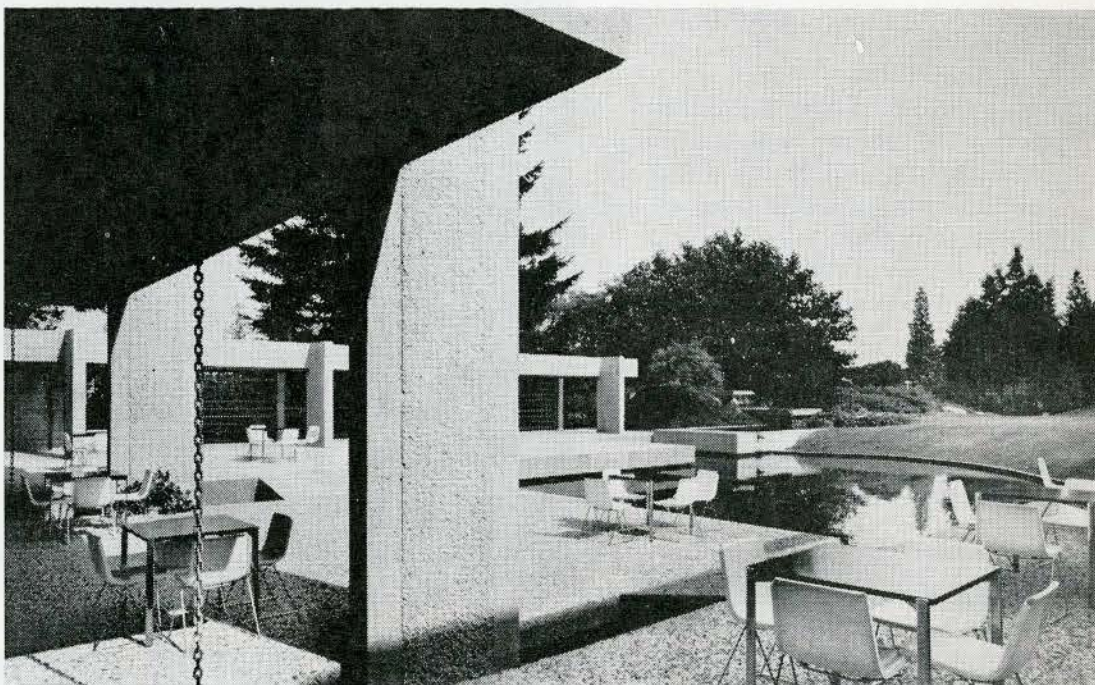
The Vancouver firm of Erickson Massey have won the two top Awards of Merit in the 1968 "Architect Designed Buildings of the Year" competition conducted by the Greater Vancouver Chapter of the Architectural Institute of British Columbia.

Commendation Awards were also made to: Ian J. Davidson and associate Daniel E. White for their Postal Station "D" at 2405 Pine St, Vancouver, "thoughtfully designed as a shell for a mundane but necessary activity and given additional elegance through a neat and aesthetically pleasing surrounding garden"; and to Vladimir Plavsic & Associates for Acadia Park married students quarters at UBC. The jury felt this project to be "well conceived as a living environment, the cluster of houses being attractive and rich in variety."

There were 25 entries in the competition and the judges were Ernest J. Kump, AIA of Palo Alto, Cal, Prof. Wolfgang Gerson of UBC School of Architecture, and Anne Rosenberg, Vancouver Sun art and architecture critic.

The general category Award of Merit went to Erickson Massey for their additions and alterations to the UBC Faculty Club which, said the jury, "soothes the visitor into a state of relaxation. The simple materials of rough concrete and wood were used with economy to enclose an open multi-use space that confronts and leads to a generous and sensitively reconstructed landscape. The transitions from the old to the new are affected with intelligence and a singular lack of fanfare."

Erickson Massey also won the Award of Merit in the residential category for the Hauer residence at 1247 Chartwell Place, West Vancouver. The jury found the house to be superbly related to its site, and "a finely honed, completely programmed 'trip' for the senses. Major 'standing furniture' is incorporated into the fabric of the residence." A strong color scheme uses terra cotta tile cedar, white carpets in the rooms and royal purple in the stairways.



1



2



3



4

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### RAIC Council Hears Progress Reports

Continuing progress with federal government authorities on fees, conditions of engagement and agreements was reported when RAIC Council met in Ottawa on November 29. Results of the discussions, which are of great importance to all members retained as consultants on government work, are expected to be announced in the New Year.

Council decided to refer to the College of Fellows the matter of identifying sources of financial support for architectural research. The RAIC Standing Committee on Research, under the chairmanship of S. Gitterman, will shortly be submitting its recommendations for institute activities in this field.

President Norman H. McMurrich suggested that the Presidents Consultative Committee (of the RAIC, the Association of Consulting Engineers and the Canadian Construction Association) be enlarged to include other groups who would have something to contribute, such as the Specification Writers Association. The Committee in fact, might, with advantage be extended to include both the government as well as the private sector to provide what is really needed – a national council for the construction industry.

After the Council meeting the President, accompanied by Henry Sears and Wilson A. Salter, DPS, met by invitation the Minister of Transport to discuss a possible RAIC contribution to the work of the Housing Task Force. As reported in the last Communiqué column, the President had written Mr Hellyer to say the RAIC did not propose to submit a brief, but had formed the nucleus of a committee, under the chairmanship of Henry Sears of Toronto, to offer assistance in the form of analysing briefs received which deal with the qualitative aspects of housing. Mr Hellyer, said the President, had no immediate task for the RAIC, with the exception, possibly, of comment on the draft of the white paper on Housing which is to be ready early in the new year. Following his conversation with the Minister, Mr McMurrich decided that the best course was to complete the formation of the committee on housing and urban affairs, and, in collaboration with related disciplines and professions, plan programs to investigate and report on experimental prototype developments on a regional basis. This, the President felt, would place the RAIC and its component associations in a good position to help in whatever program the government decides upon as a result of the national housing inquiry.

### Le Conseil de l'IRAC entend le Progrès des Démarches

A la réunion du Conseil de l'IRAC à Ottawa, le 29 novembre il a été rapporté qu'il y a un progrès continu dans les démarches auprès de l'administration fédérale au sujet du barème des honoraires, les conditions d'engagement et les accords. Les résultats des discussions qui sont d'une grande importance pour tous les membres engagés comme conseils par le gouvernement, seront annoncés au début de la Nouvelle Année.

Le Conseil a décidé de référer au Collège des Fellows, la manière d'identifier les sources du support financier sur les recherches architecturales. Sous la présidence de S. Gitterman, le Comité permanent sur les Recherches, soumettra bientôt ses recommandations afin d'instituer des activités dans ce domaine.

Le Président, Norman H. McMurrich, a suggéré que le Comité Consultatif des Présidents (de l'IRAC, l'Association des Ingénieurs Conseils et l'Association Canadienne de la Construction) soient agrandis afin d'y inclure d'autres groupes qui auraient quelque chose à offrir à sa contribution, telle que l'Association des Auteurs de Devis Descriptifs. En fait, le Comité pourrait avec avantage être agrandi afin d'y inclure le gouvernement aussi bien que le secteur privé, afin de procurer ce qui est réellement nécessaire – un conseil national pour l'industrie de la construction.

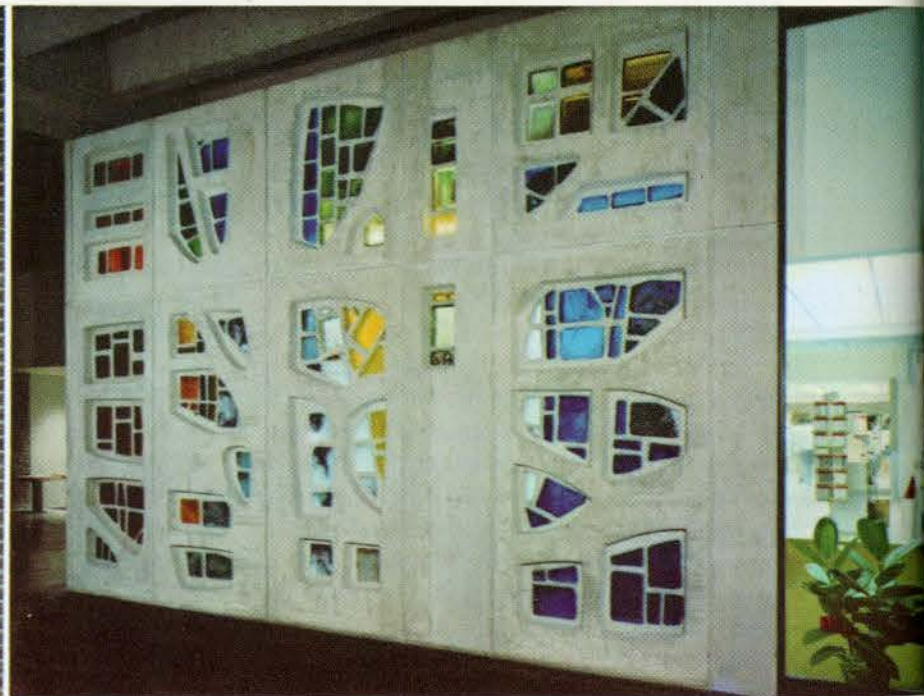
Après la réunion du Conseil le Président accompagné d'Henry Sears et Wilson A. Salter, DSP, sur l'invitation du Ministre du Transport, se sont réunis avec lui afin de discuter la contribution possible de l'IRAC au travail de l'Enquête sur l'Habitation. (Voir "Communiqué" octobre, page 13). M. Hellyer n'a pas trouvé de tâche immédiate pour l'IRAC, avec l'exception possible de commentaires sur le brouillon d'un livre blanc sur le Logement, qui sera présenté au début de la Nouvelle Année. Suivant sa conversation avec le ministre, M. McMurrich décidait que le meilleur moyen serait de compléter la formation du comité sur le logement et les affaires urbaines, et, en collaboration avec les disciplines et les professions s'y rapportant, les programmes d'études et un rapport sur les développements prototypes expérimentaux sur une base nationale. Le Président croit que ceci mettrait l'IRAC et ses associations constituantes dans une bonne position pour aider dans quelque soit le programme que le gouvernement détermine en résultat de l'Enquête du logement national.



The exterior of this mammoth trade centre in downtown Montreal features exposed aggregate concrete walls having a vertically fluted pattern.



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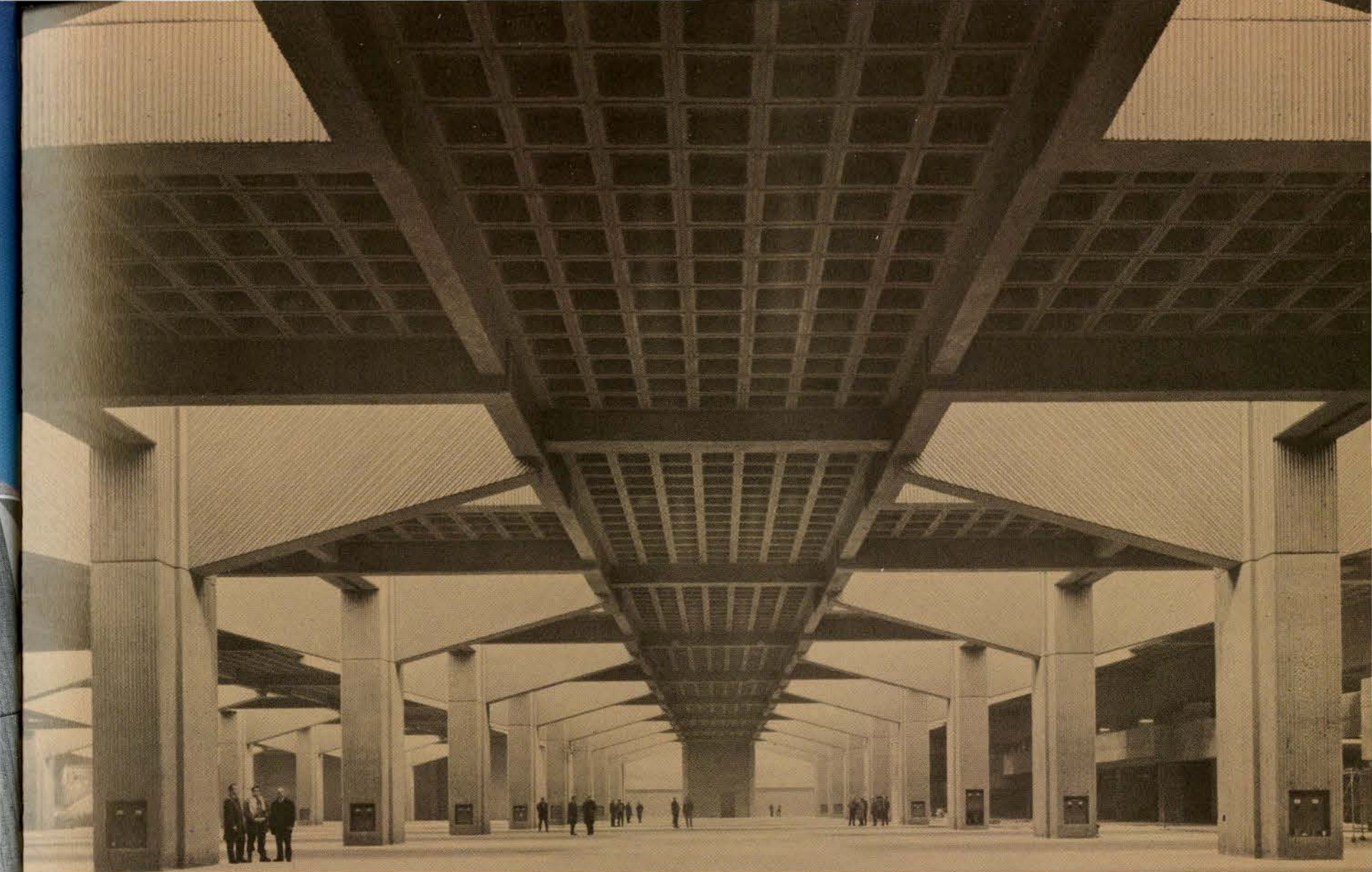
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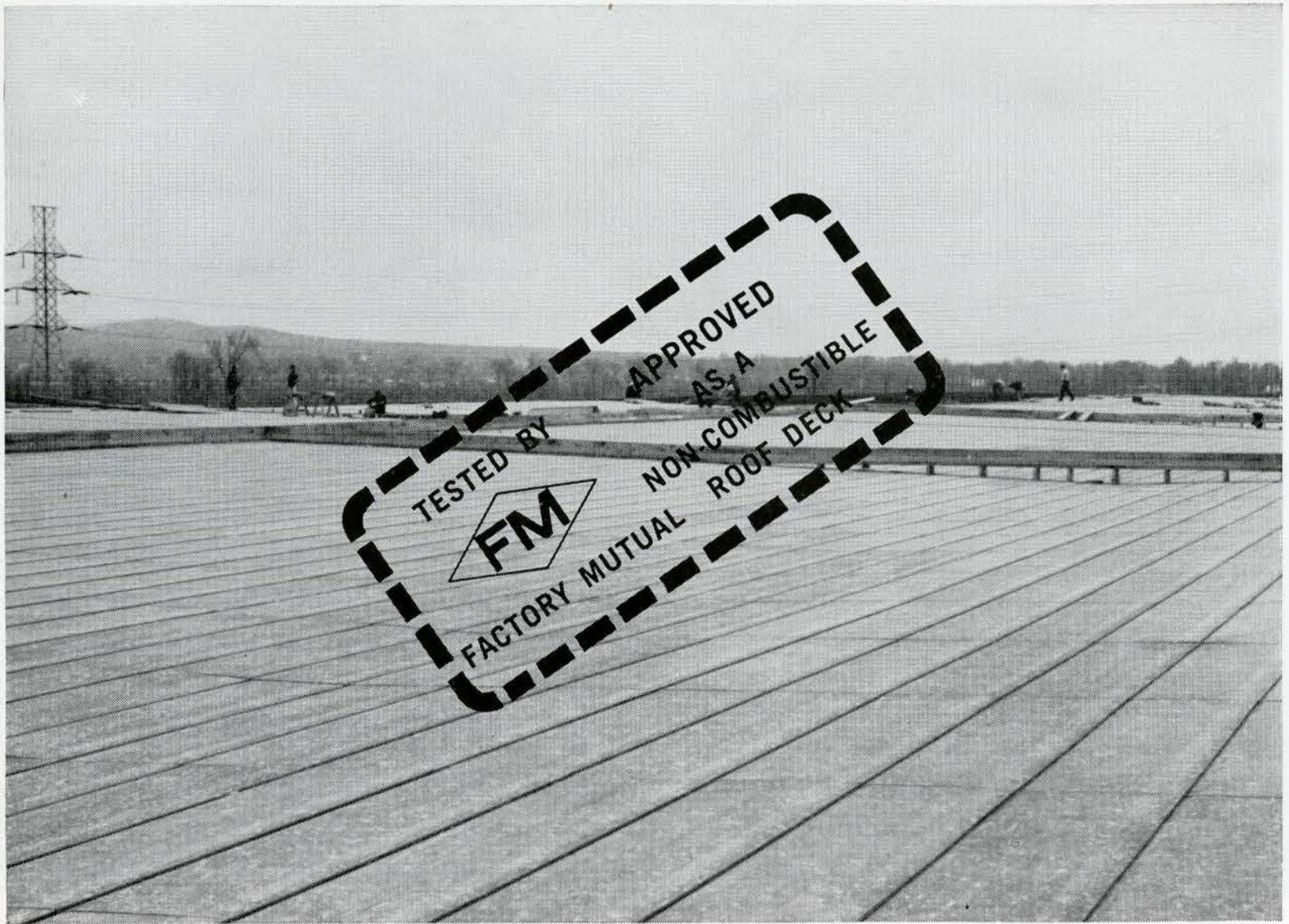
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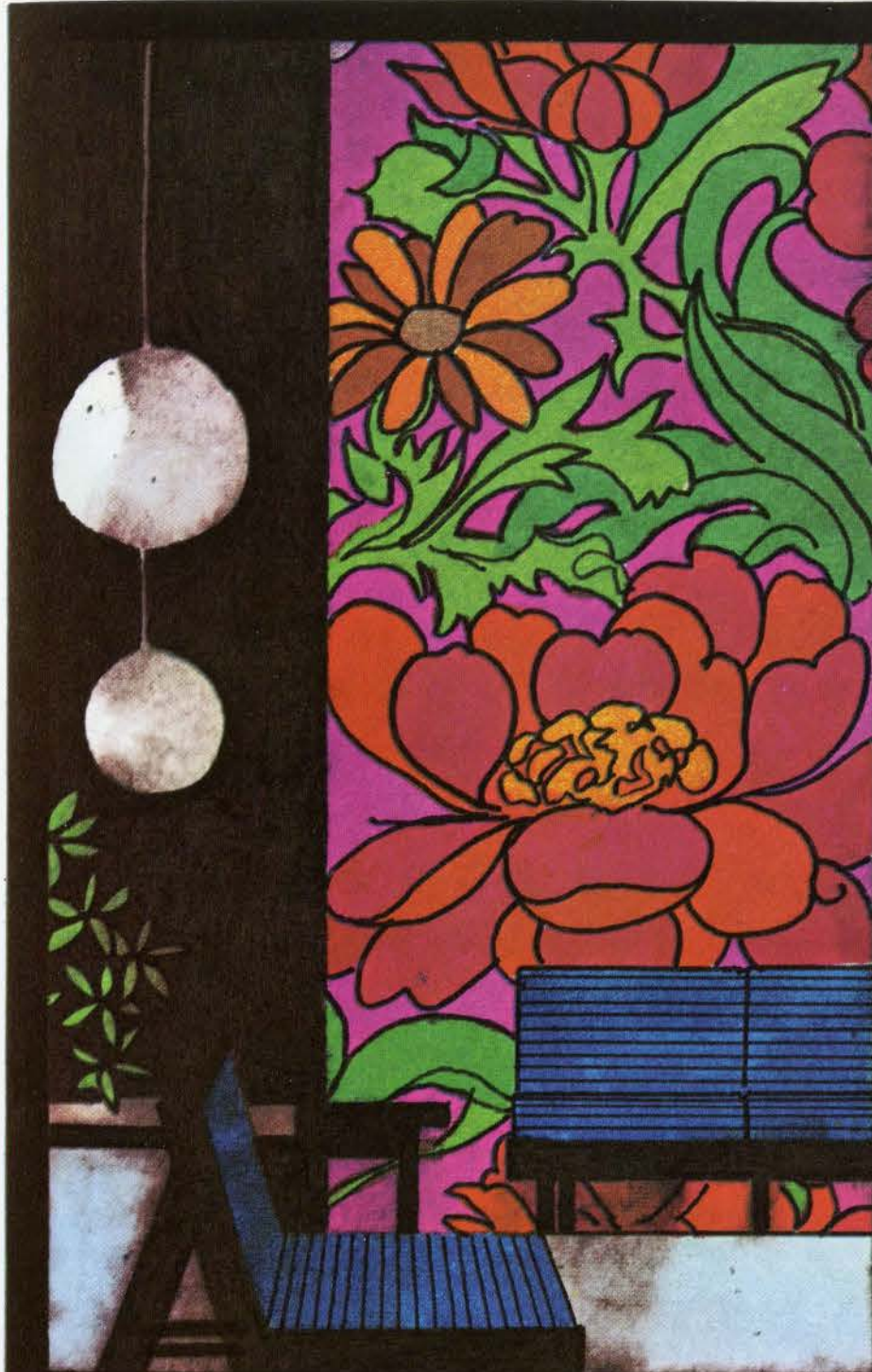
For roof spans up to 10' 0", specify ATLAS Asbestos-Cement Cavity Roof Decking.



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answer  
to moisture,  
movement  
and stress:**

## **PERMA-JOINT<sup>(TM)</sup> from Tremco**

The weatherproof joint on a horizontal traffic surface becomes a reality you can count on, with the new Tremco PERMA-JOINT sealant system.

PERMA-JOINT was developed by Tremco for joints in concrete decks, terraces, plazas, sidewalks, aprons, driveways and building perimeters.

Tremco field tests prove that PERMA-JOINT has greater life expectancy than most conventional horizontal joint sealants. This performance stems from its unique combination of excellent adhesion, extreme flexibility over a wide temperature range, superior ability to maintain a seal in dynamically moving joints and good abrasion and puncture resistance.

PERMA-JOINT is available in neutral stone and black colors. It passes Federal Specifications TT-S-00227c.

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# The Argument for new Dampa 10 linear ceiling system.

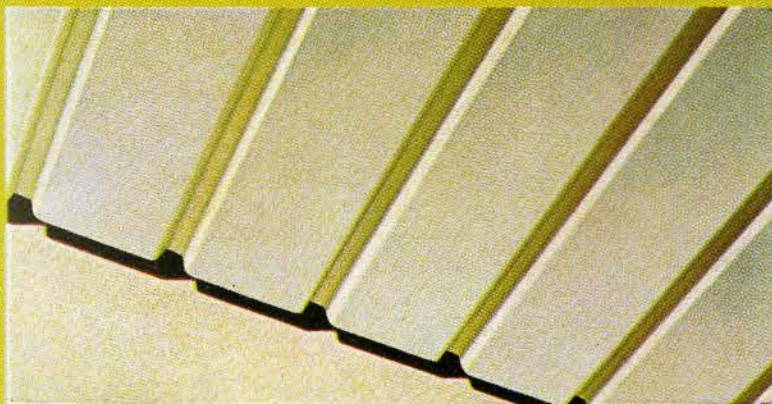
No gaps. No spaces. No way to look through and see unsightly plumbing fixtures. Because Dampa 10 strips overlap to provide a tightly fitted closed ceiling system. Yet there is complete plenum accessibility.

And it's non-progressive: the strips clip to special U-channels, spaced 4 feet apart.

What about acoustics? You can get high sound absorption with perforated Dampa 10. As a matter of fact, a range of noise reduction co-efficients are available from tests conducted at the National Research Council.

Are integrated ceilings your preference? No problem. Because Dampa 10 is made to a 4" modular width, and so are the lighting fixtures and air diffusers. And Dampa 10 is also available specially slotted for ventilated ceilings, where plenums are pressurized.

Domed ceilings. Compound curves. Mouldings. Inverted V-shaped ceilings. You name it and Dampa



There are no holes in it.

10 can handle it. Because Dampa 10 is a new alodized aluminum linear ceiling system that takes curves easily.

**The curves won't throw you.**



And its flexibility doesn't stop there. By itself, Dampa 10 creates distinctive architectural effects. It visibly widens corridors and it's suitable for ceiling, soffit or wall application. Interior and exterior. In combination with drywall, plaster, or ceiling tiles or panels, the design possibilities are limitless.

And you can design in colour, too. Because Dampa 10 is available with white baked-on enamel finish, plus ten other special colours.


And even that's not the whole story. If you'd like more information on Dampa 10, call your Domtar representative, or write to: Domtar Construction Materials Ltd., Suite 2210, 1 Place Ville Marie, Montreal 2, Quebec. We'll give you complete specifications. With

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**Why spend money to galvanize re-bars  
when you can't see them anyway!**



The practical answer is that it saves money. For instance, you won't need to pour extra concrete to protect them. For the 900-foot Manicouagan Bridge at Hauterive it means a projected saving of about 84 tons for a substantially lower dead load of deck.

The new McGill Library uses galvanized re-bars in pre-cast grey concrete sections for freedom from rust staining for many years to come.

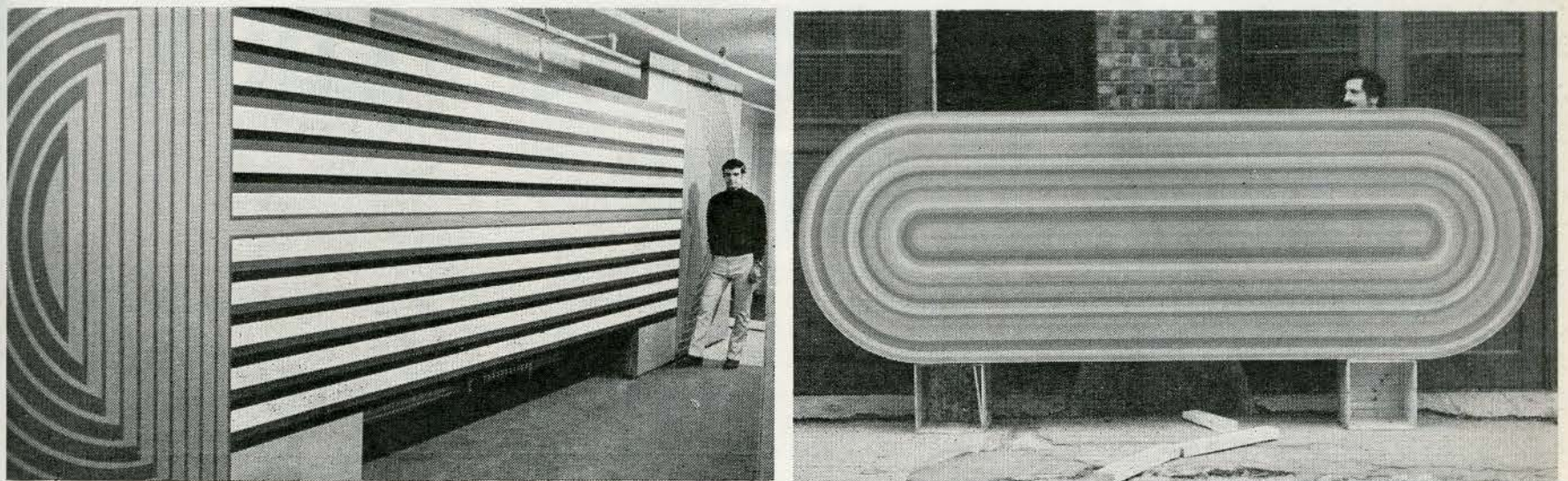
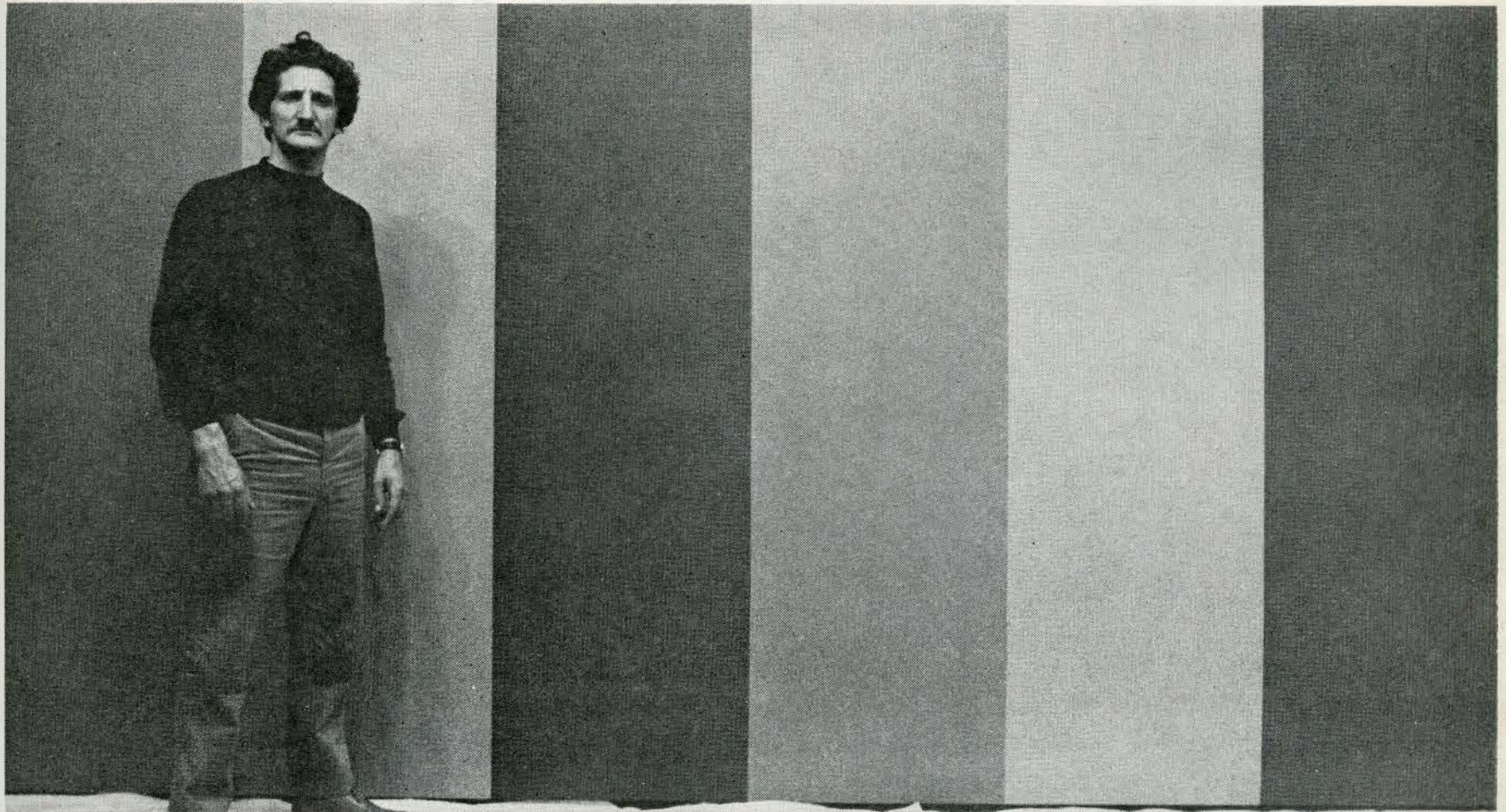
The use of galvanized re-bars means you can design significantly lighter structures, with assurance of long-term integrity of the re-bars and the appearance of the structure as far as rust is concerned.

Bond performance? Independent research test results prove equal or better bond performance for galvanized than for black re-bars.

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Artist and Architect 1968-69



Veritable avenues of optical canvases – Molinari (top), Tousseignant (right), Elliott (left)

**The Scene: Canada**

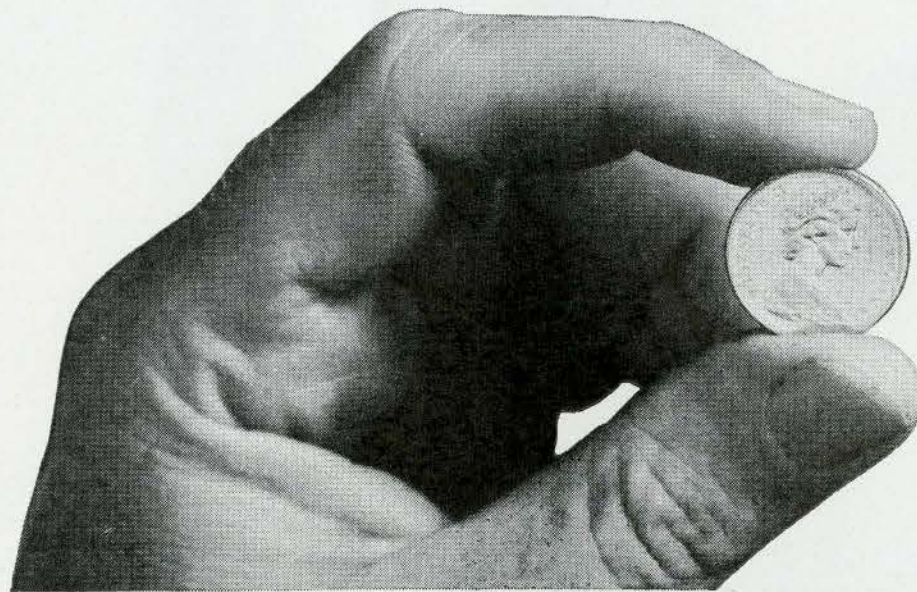
Since the mid-sixties, rapid development particularly in the matter of scale, has raised some pretty problems for both architects and artists. Quick changes, overcrowding, plus large population increases have blotted out any possibility of aesthetic relief from natural landscapes. Space is artificially articulated for what goes as "practical"

reasons. The appalling conglomeration of highways and closely packed architecture unrelieved, except for token consideration, by aesthetic excitement, has brought about open-voiced criticism of aesthetic leadership. Rightly or wrongly in a period where existentialist attitudes are paramount, (even architecturally), the architect will come out charged with a certain amount of poor stewardship.

**The Architect**

In the last few years the six-storied tenement has become a high-rise complex consisting of an assortment of verticals rising 13 to 50 stories creating monotonous canyons, draughty wind tunnels and arid plazas. The profession of architecture in being permissive to autocratic designing, within the protection of the group, is now faced with

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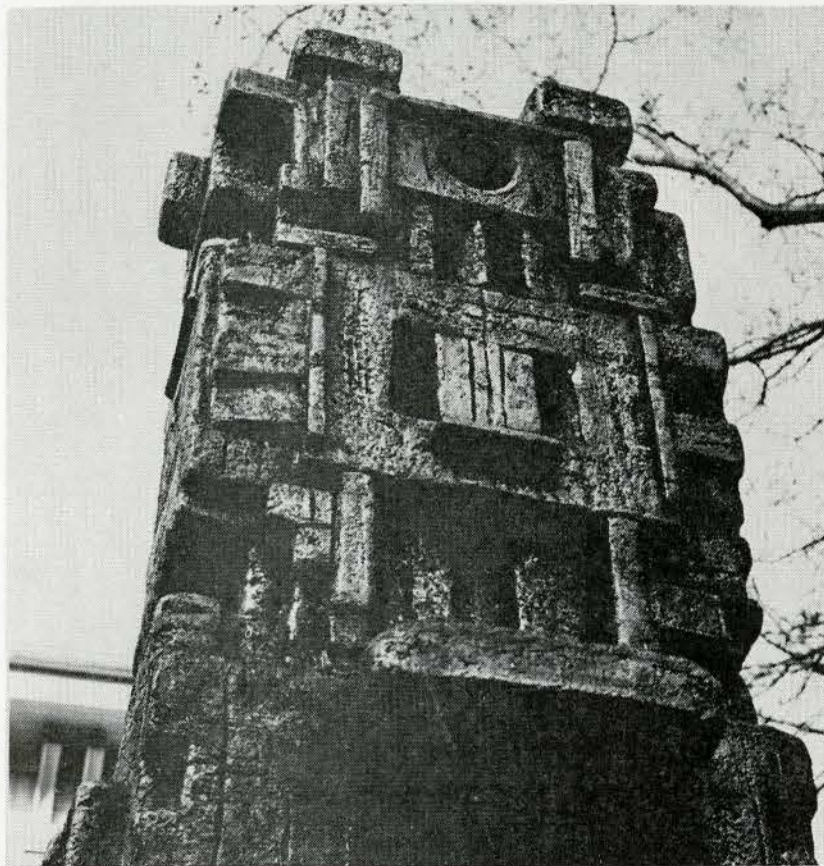
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4



5

group dilemmas. As aesthetic leaders architects must accept initiatives inviting group consultation, and give due attention to aesthetic as well as functional possibilities within complexes, or forever lose these initiatives to others. The consequence will be to suffer outside direction of their own profession as environmental designers. Proof or not of culpability will not excuse the architect from future responsibilities. The initiatives will pass to others if he declines.

#### The Artist

My complaint (*RAIC Journal, October 1965*) of a lack of confrontation in sculpture and painting for the scale of architecture can hardly be valid for 1968. The art of 1968 is the art of confrontation. As the scale in architecture has increased so has the scale in painting and sculpture. Drawing room table pieces have become monolithic towers of minimal statement whose gestural power is worthy of conjunctive placement alongside architectural form. The easel painting has moved to veritable avenues of optical canvases creating new aesthetic "landscapes" perambu'ating through every

available wall space until their complete involvement with the area has been achieved. Space is both commandeered and articulated by gigantic conceptual imagery. The artist's dilemma in this situation is not that of negligence to make a worthy aesthetic statement against all odds, but of his inability to control the allotment of environmental space at his disposal. He too, has lost as an individual. A certain amount of "group" pressures are necessary to make him effectual as an aesthetic leader also. Attempts by sympathetic entrepreneurs to record the artist's activity by showing mock-ups of the giants in plywoods, tightly corseted in the confines of gallery walls, (e.g. Tony Smith, Art Gallery of Ontario, November 1968) by the incongruity of the environments only strike an urgent note, to find available fitting space, and commission or purchase outright the "real" thing. Canada, at least has the space if not the will, the habit or the appetite to purchase large confrontations for some of those arid areas.

Canadian talent is in a mood of high productivity producing adequate sculpture and painting fit for the new environments –

the plaza square (Toronto Dominion Center?), the University Campus (Scarborough? Simon Fraser? etc.), shopping complexes and a thousand other environments lacking the final seal of our time . . . the conceptual statement of the creative artist.

#### Dilemma

In Canada at least, the dilemma really lies in the acceptance of leadership. Who will take the responsibility for the "hard sell" necessary for aesthetics. In particular the hidden sword of indifference will kill the active skill of contemporary Canadian painters and sculptors. Unless large new works find homes and owners, the artist producer will be forced to condemn his work to untimely cessation. In the death of a movement which would be a powerful antidote to urban aridness the architect-designer must reflect once again on lost initiatives. Will he pick up this initiative to fight for p'acement of art in architectural spaces or will he face the coming year of grace, 1969, crying out "Am I My Brother's Keeper"?

Anita Aarons





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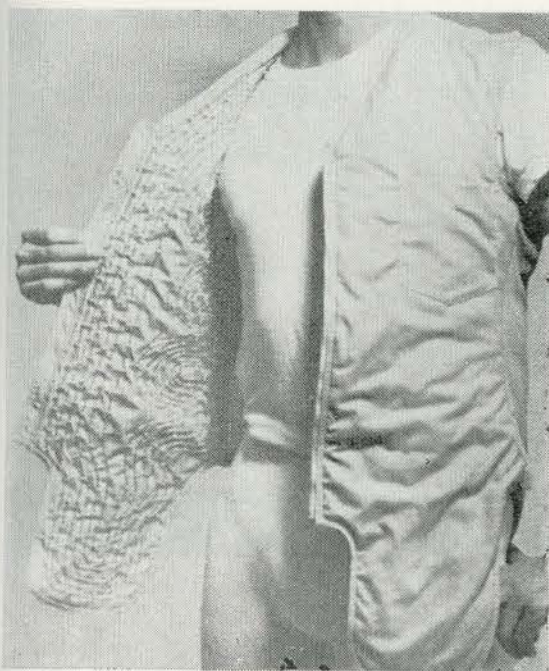
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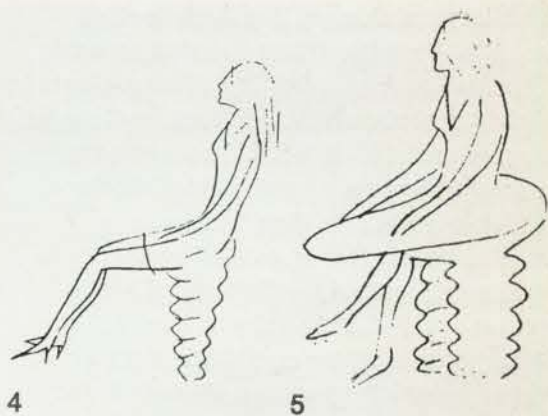


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The Museum of Contemporary Crafts of The American Craftsmen's Council has published a booklet on Body Covering – "in the beginning there was flax, cotton, wool, silk and the bast fibers. Vegetable and animal. For ten thousand years or more they have been harvested, plucked, shorn, collected, graded, cleaned, combed, felted, spun, twisted, plied, woven, knitted, netted and finished into usable materials . . . now, listen to the sounds of the new words: cellulosic, polynosic, polyamide polyester, acrylic, polypropylene, polyvinyl spandex. These are new fibres from the laboratory. They are man-made, extruded through spinnerettes in liquid or molten streams . . . They are controllable, uniform, predictable." The booklet is a display of results and potentials. It provides tremendous imaginative stimulation to the architect, from body covering to a larger environment of spacial enclosure, from cooling suits (1) and inflatable individual life raft garments (2) to a proposal for a garment with an inflatable tail to form a seat (4) even a proposal for a garment which inflates to form a combination seat and table (5). Among others are Rudi Gernreich's topless bathing suit (6), a sports suit including shoes (3), and the colortorium (7), which would change tint, textures, patterns, sound, odor by button.

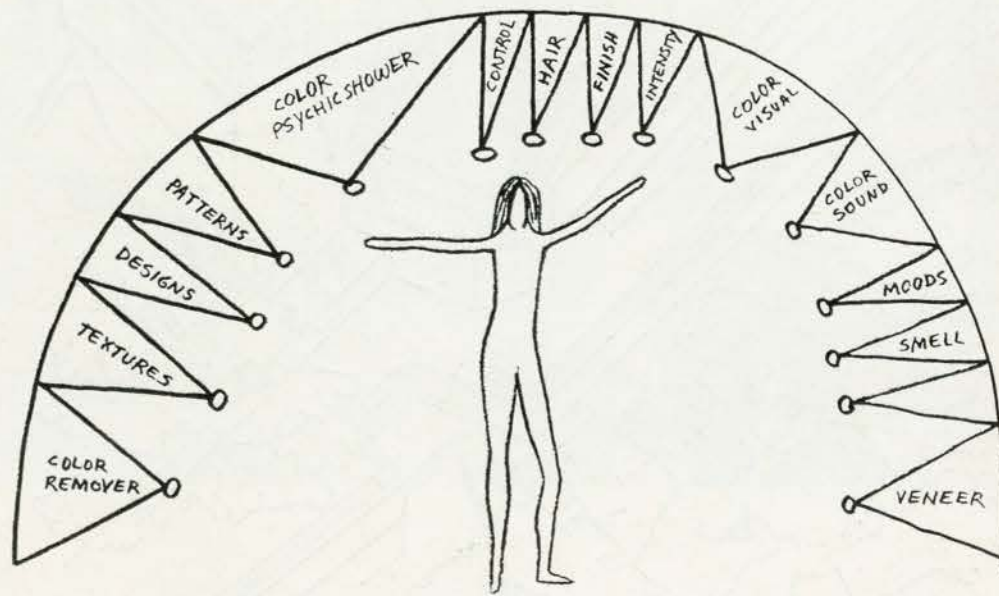


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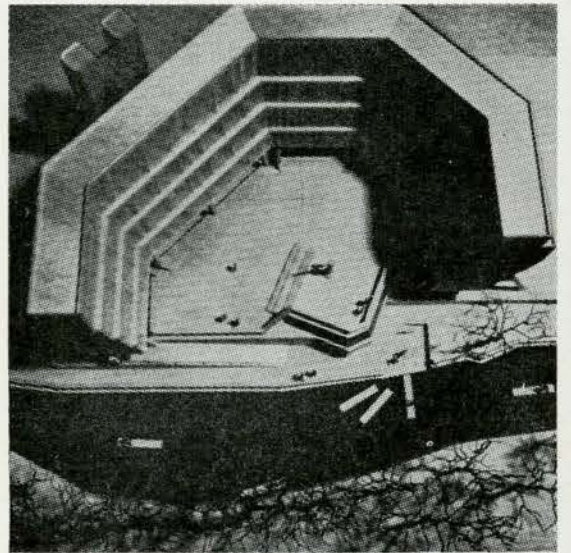
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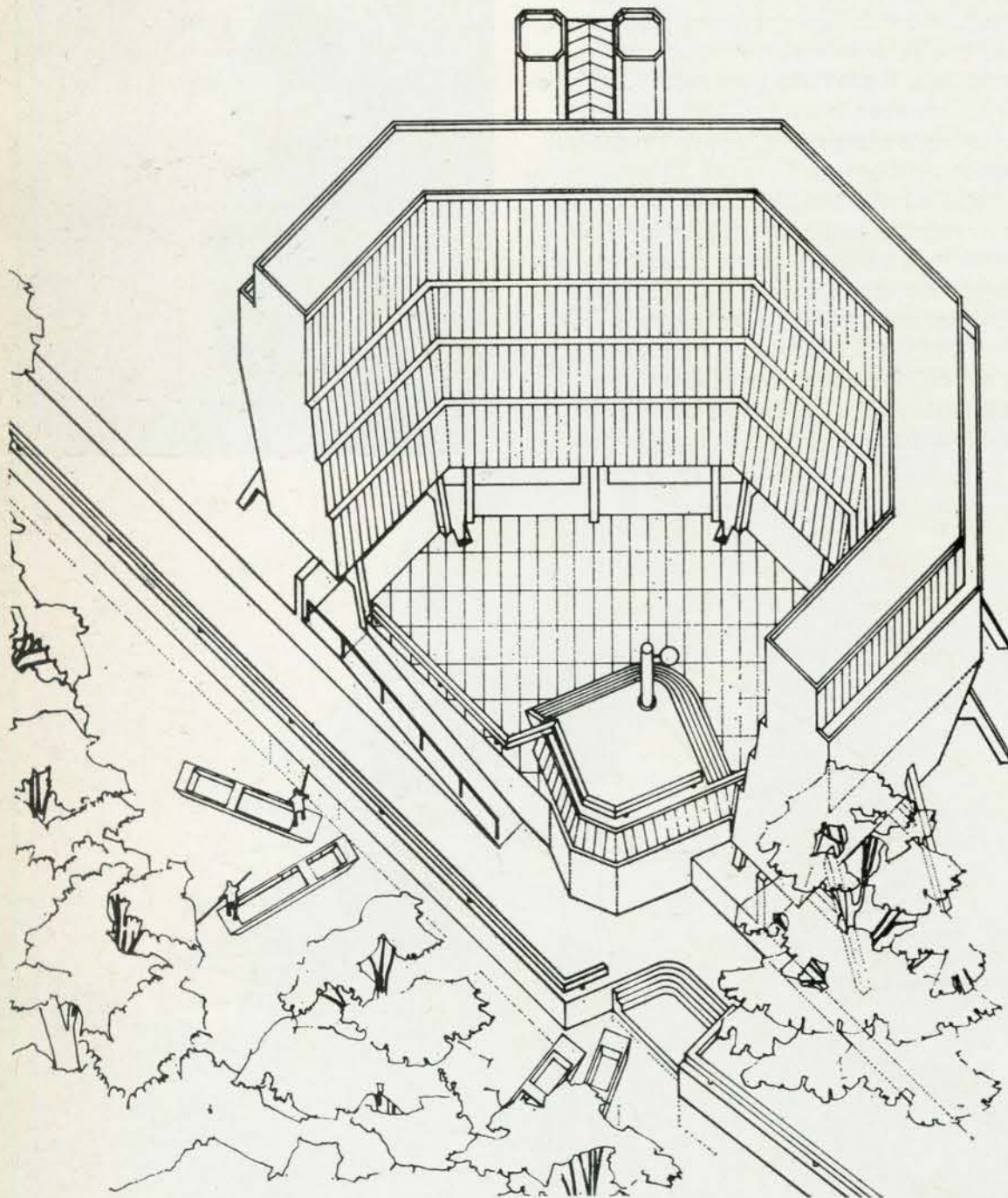
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*Architectural Design*, like *Architecture Canada* (April 1968) has devoted an issue (October) to James Stirling. New projects by Stirling, not shown in *Architecture Canada* are published (8, 9, 10, 11) as well as a superb color photograph of the interior of the History Faculty, Cambridge. Of equal interest is an article by Alvin Boyarsky, Dean of the College of Architecture and Art, University of Illinois, Chicago, who writes about Stirling's work. It is an astonishing review. Rare in those who write about contemporary architecture, Boyarsky combines acute perception about

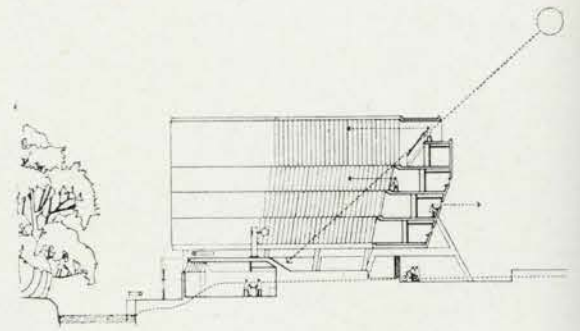
the condition in which architecture now stands, and a scholarly perspective of architectural development. He does not, as many critics are prone to do, interpret architecture from a special point of view – social, visual or technical. Nor does he provide a ponderous germanic, art-historical deliberation. We read his article with delight – a pleasure we hope Dean Boyarsky will continue to provide, as he has in this singular commentary, on Stirling in particular and architecture in general.  
A. J. D.



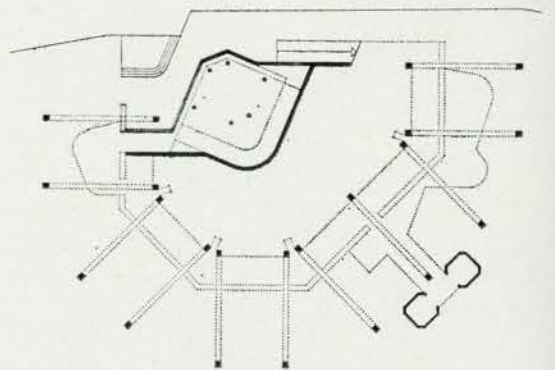
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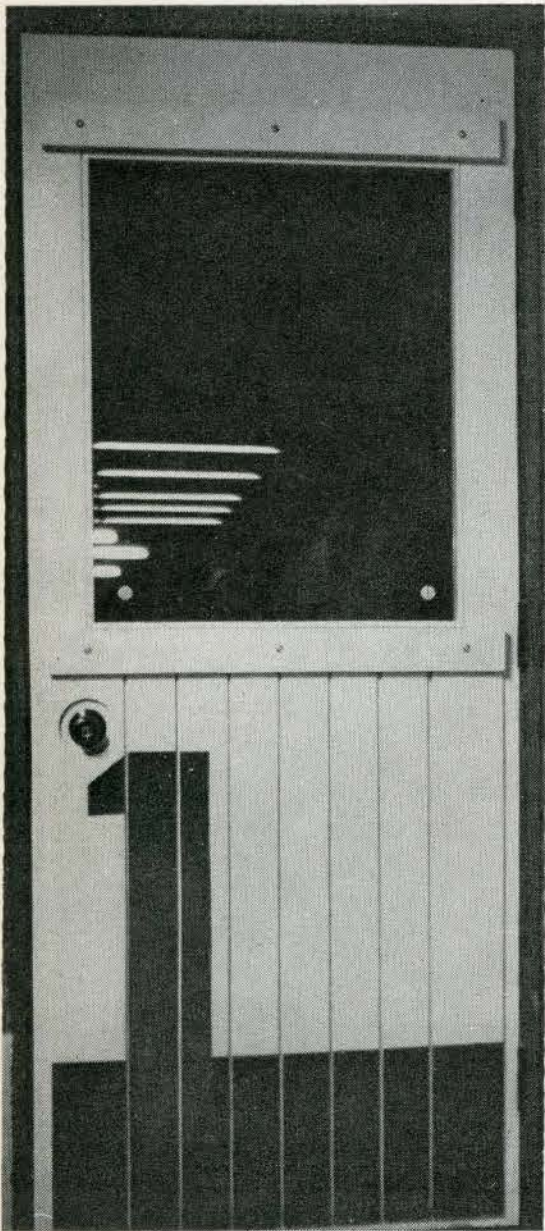


*Entrance, Mayland Heights Elementary  
School  
Entrée de l'Ecole Élémentaire Mayland  
Heights*

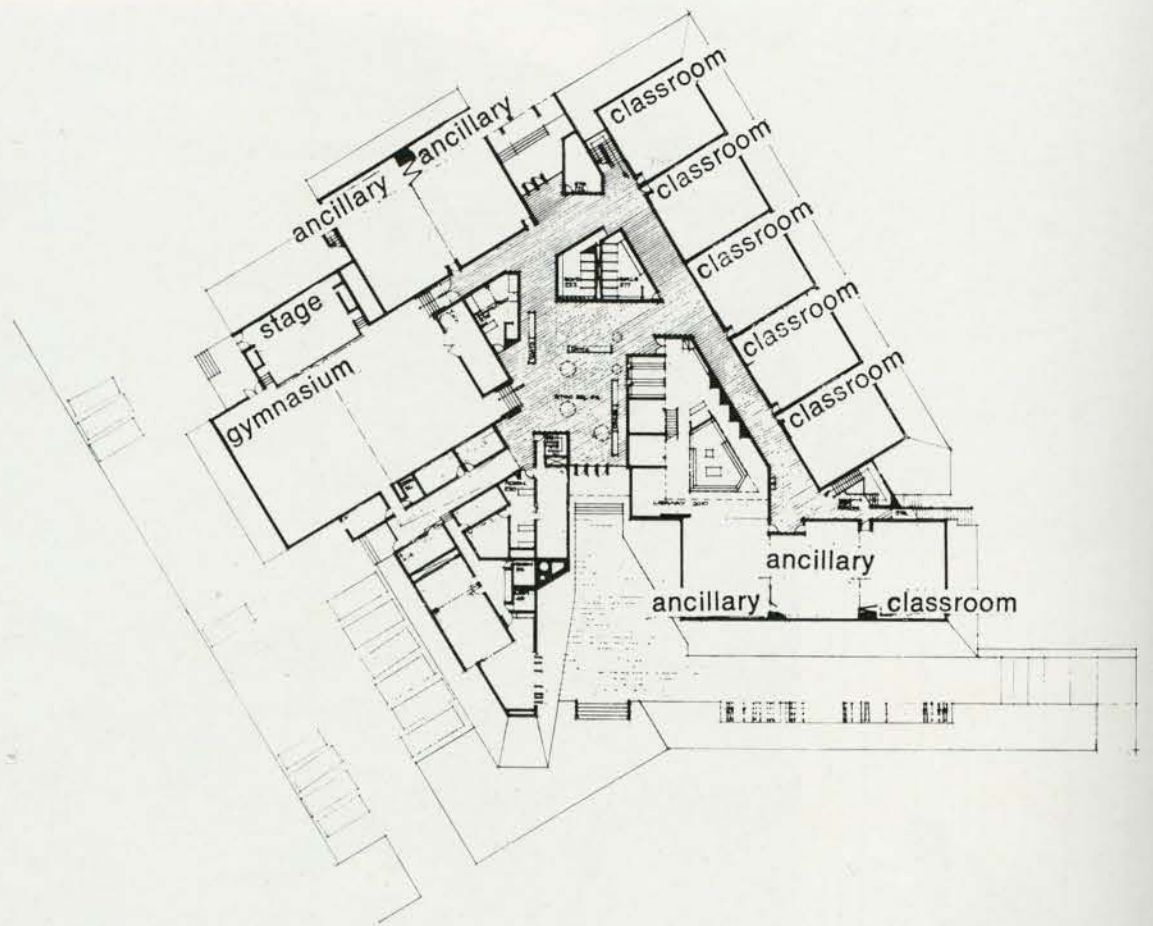
# Mayland Heights Elementary School

Gordon L. Atkins, Architect

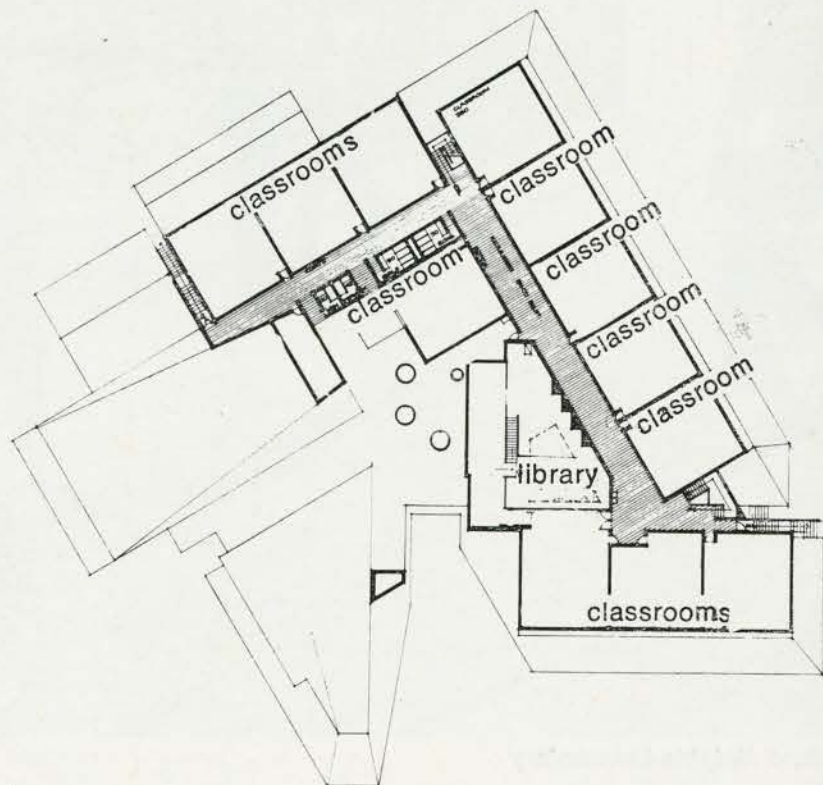
This 23 classroom elementary school is located on the same site as an existing junior high. An effort was made to orient all classrooms away from the direct sun except that of early morning. Strong cold, west winds controlled placement of all entrances. The main and child entrance is on the warm and protected south side.



Graphic symbol on classroom door  
Symbole graphique sur la porte d'une  
salle de classe



Ground floor plan  
Plan du rez-de-chaussée

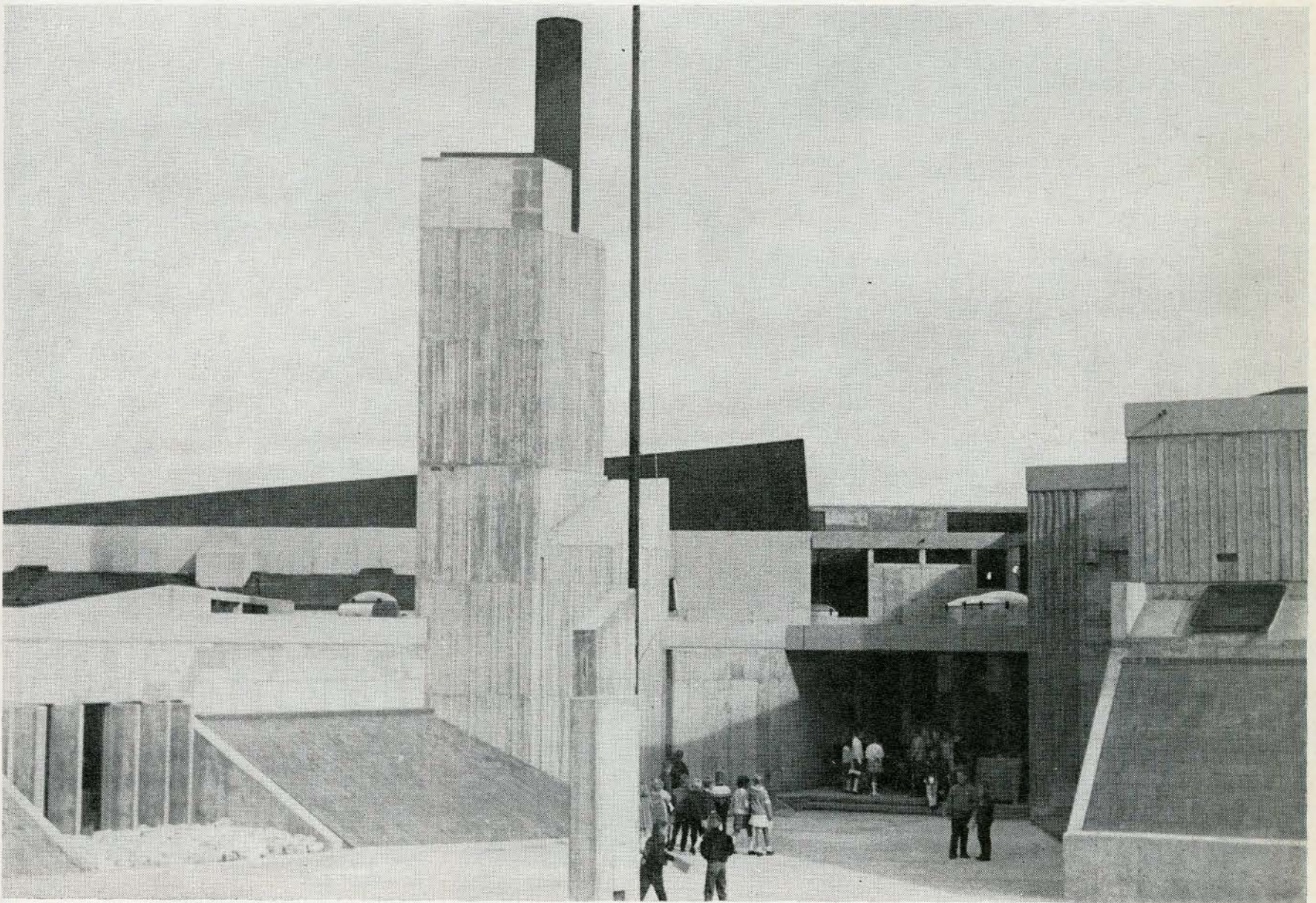


Second floor plan  
Plan du deuxième étage

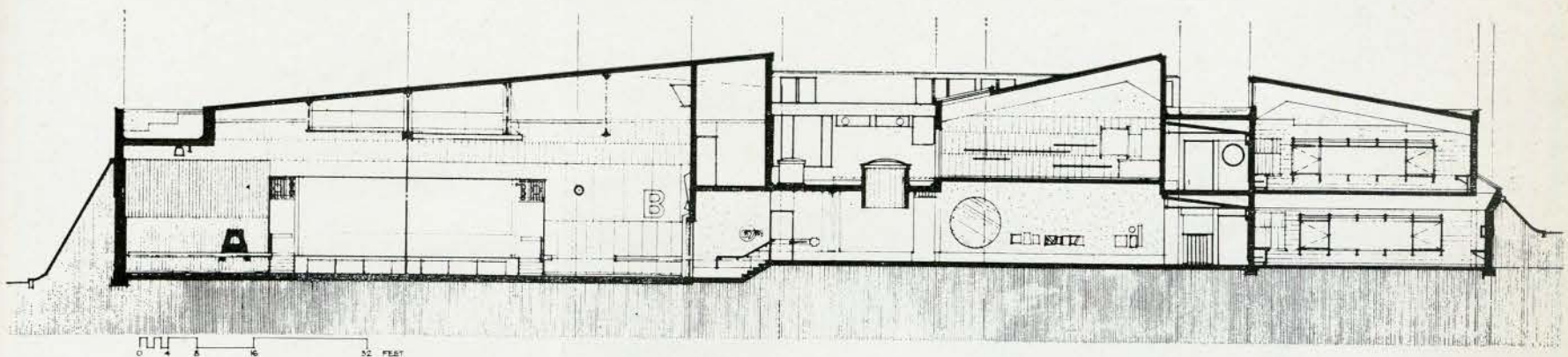
Basically, the plan is a shifted square, but because of berms, sloping roofs, alcoves and three off-angle walls, the building takes on visual complexity.

The entire building is of exposed concrete in rough and smooth texture occasionally brightened by large solid colored numbers or names. Suspended corridor ceilings and all trim are natural finished wood. Lower classrooms have been partially depressed with earth and brick berms providing an earth tie and necessary insulation. The \$70,000 saved in heating and ventilating costs by using earth insulation was used to provide many child oriented extras inside the building. Classrooms are skylit with sloped window strips and roof clerestory.

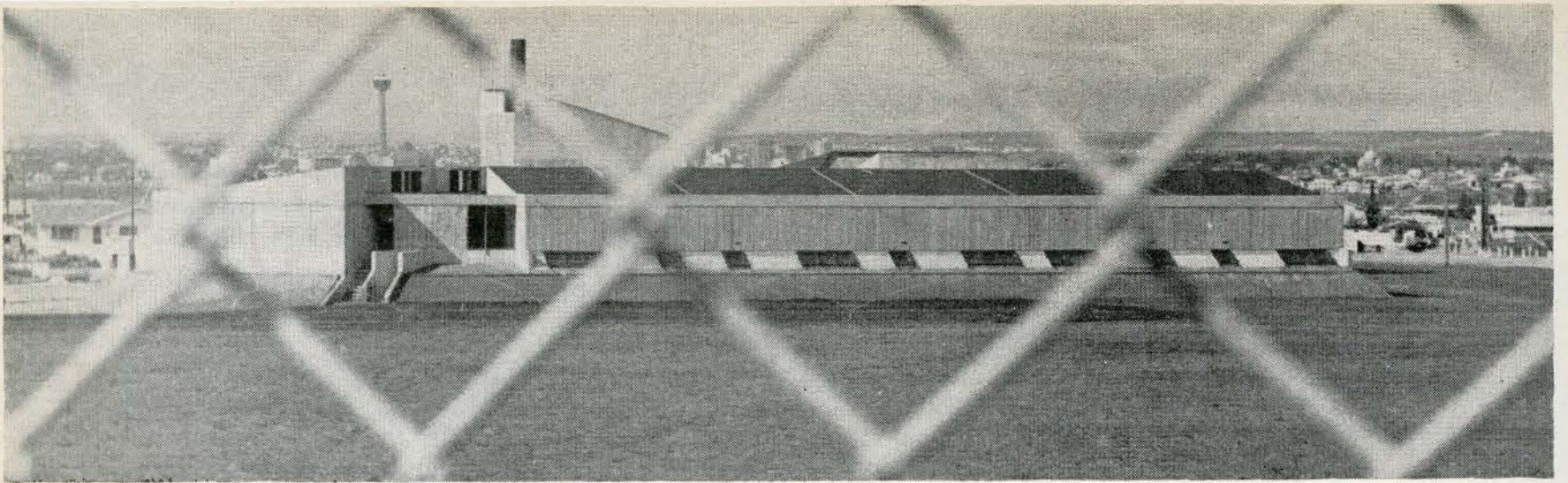
The corridor circulation was reduced to a minimum. Traffic radiates from a large entrance gathering place to all internal functions. The gym was depressed in order to decrease its apparent external scale. The 3,000 square foot library was intended and designed to be the core of the school – the symbolic “fountain of learning.”



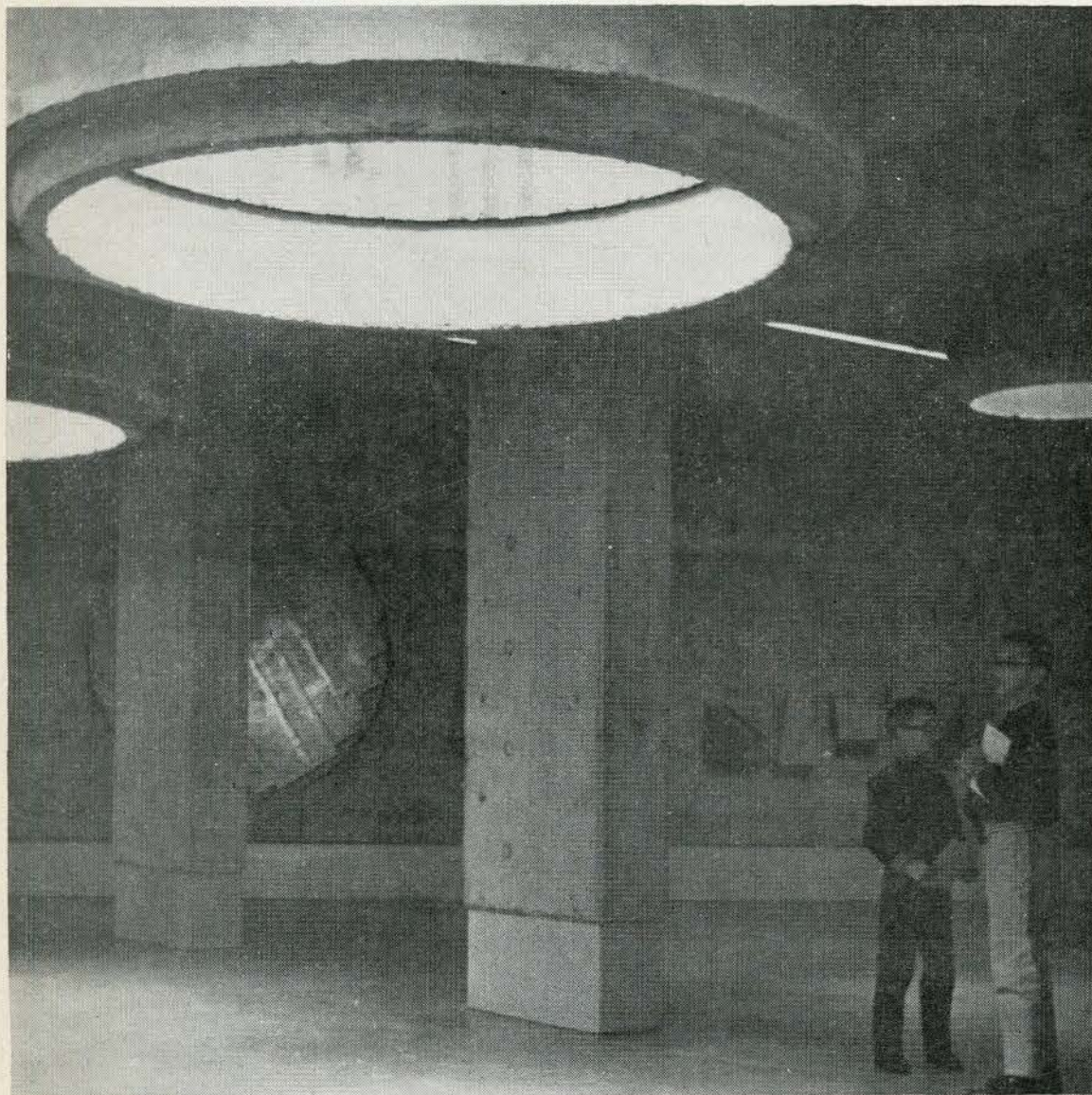
Entrance and administration  
Entrée et administration



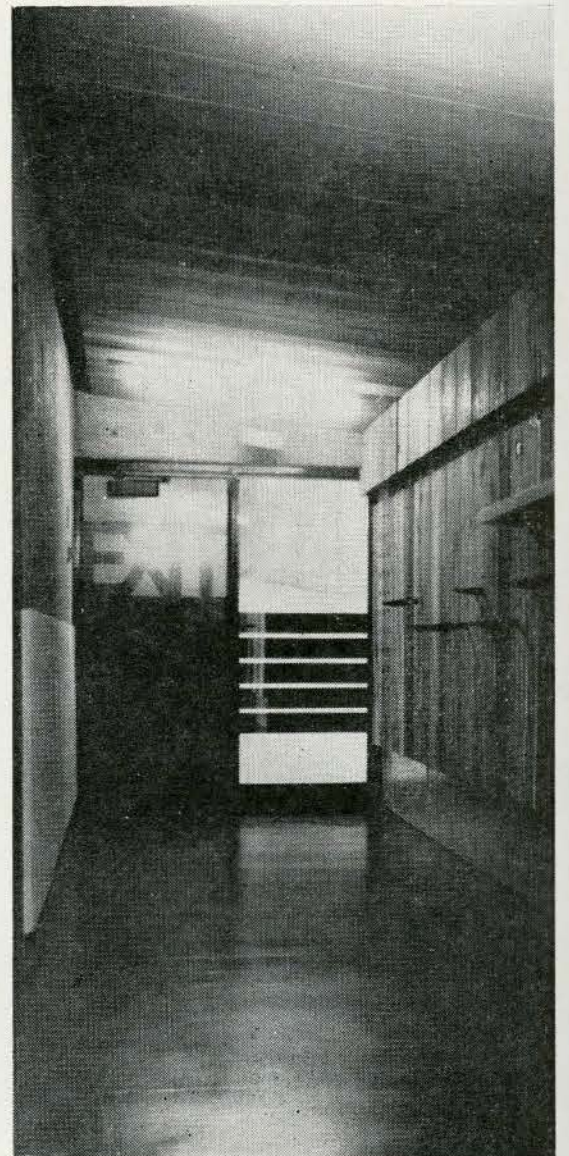
Section  
Coupe



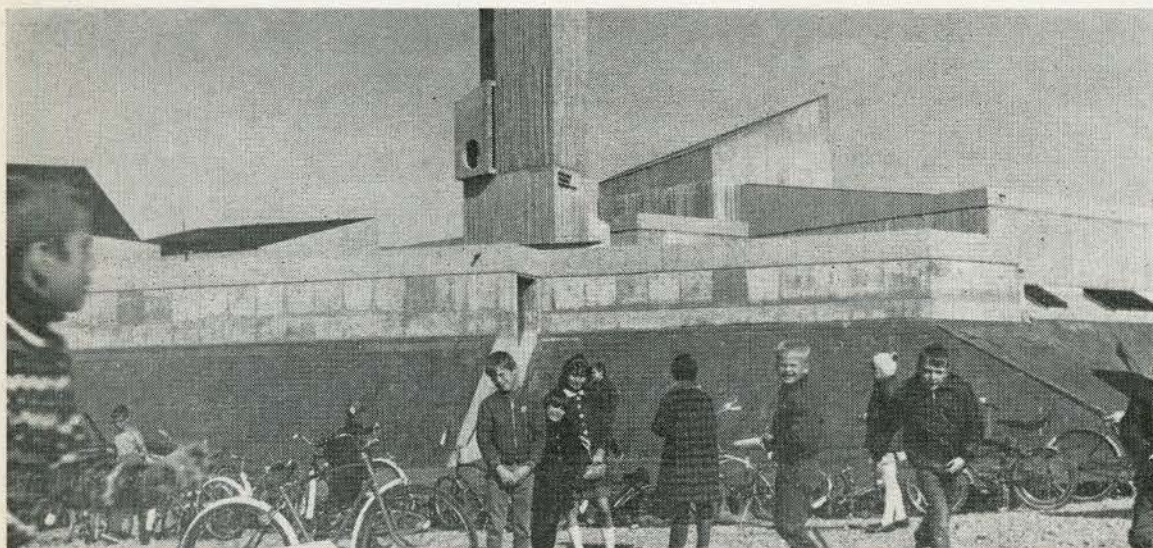
*View from east  
Vue de l'est*



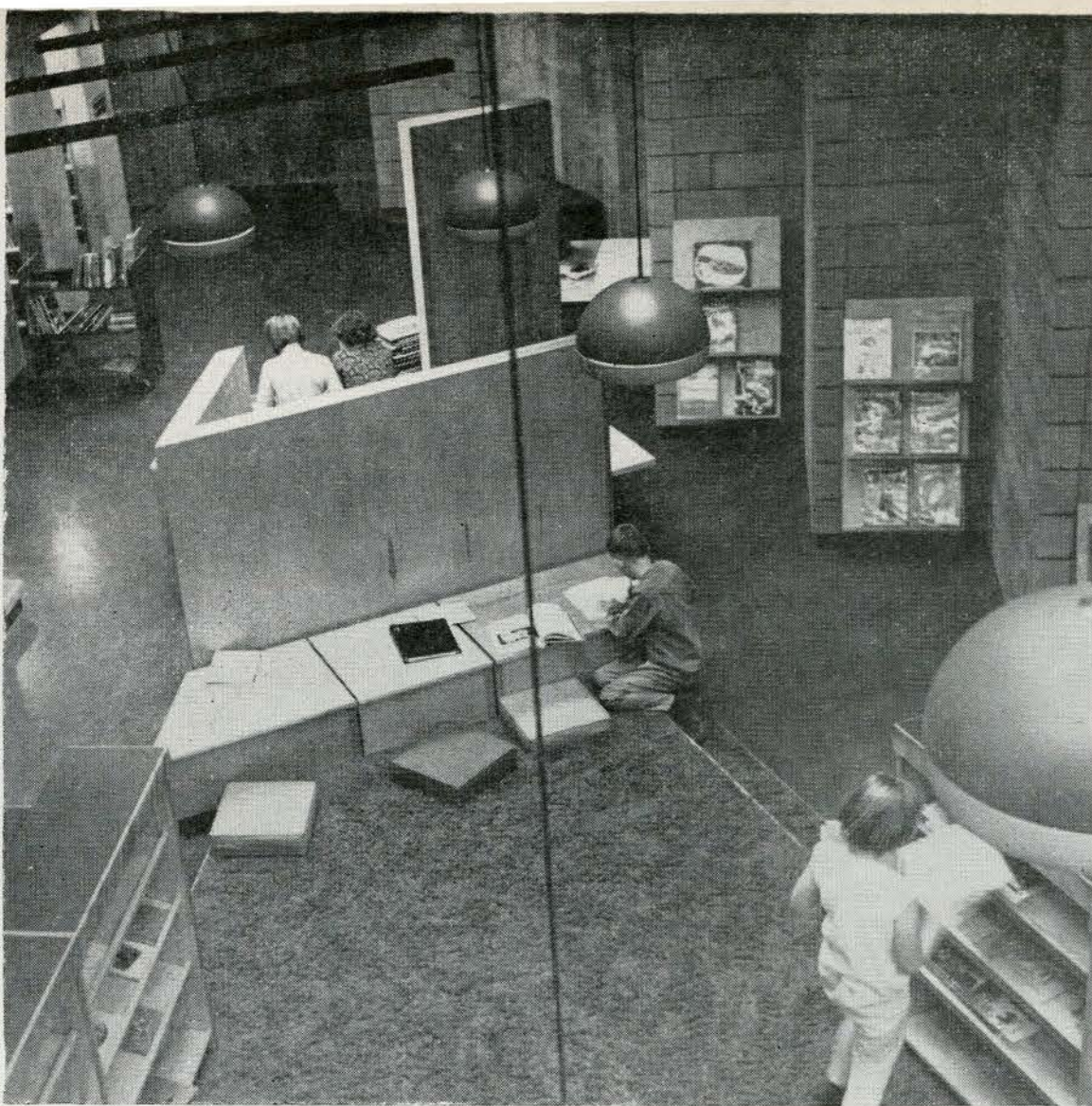
*Lobby under skylight  
Eclairage naturel du foyer*



*2nd floor exit  
Sortie du deuxième étage*



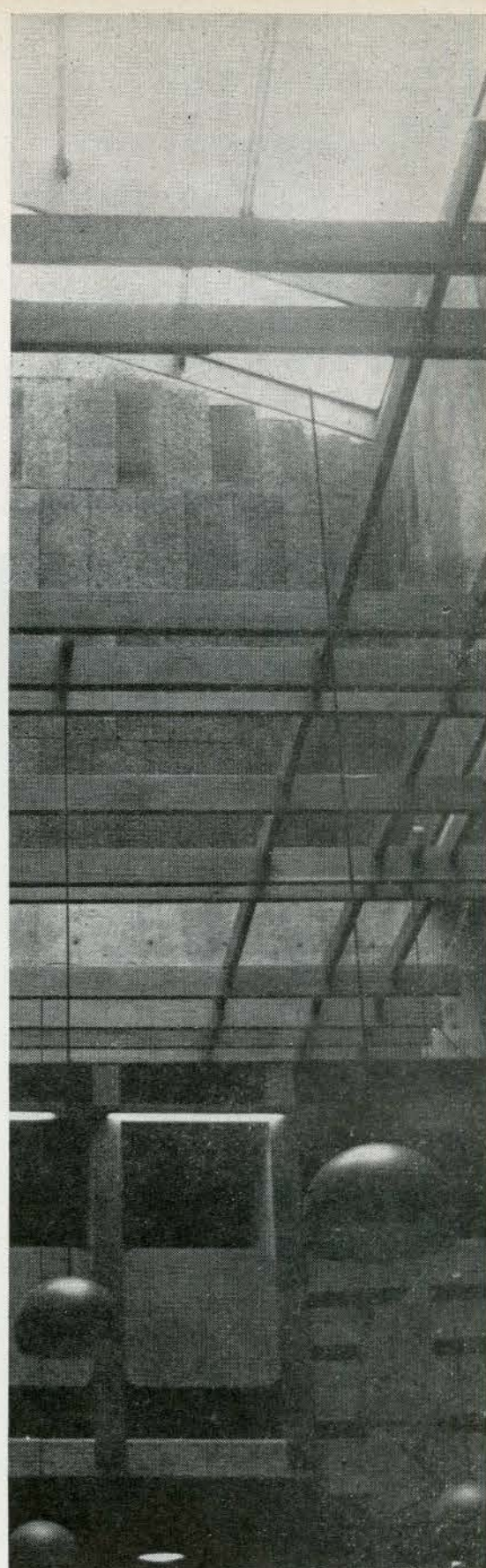
*Administration from west  
Administration vue de l'ouest*



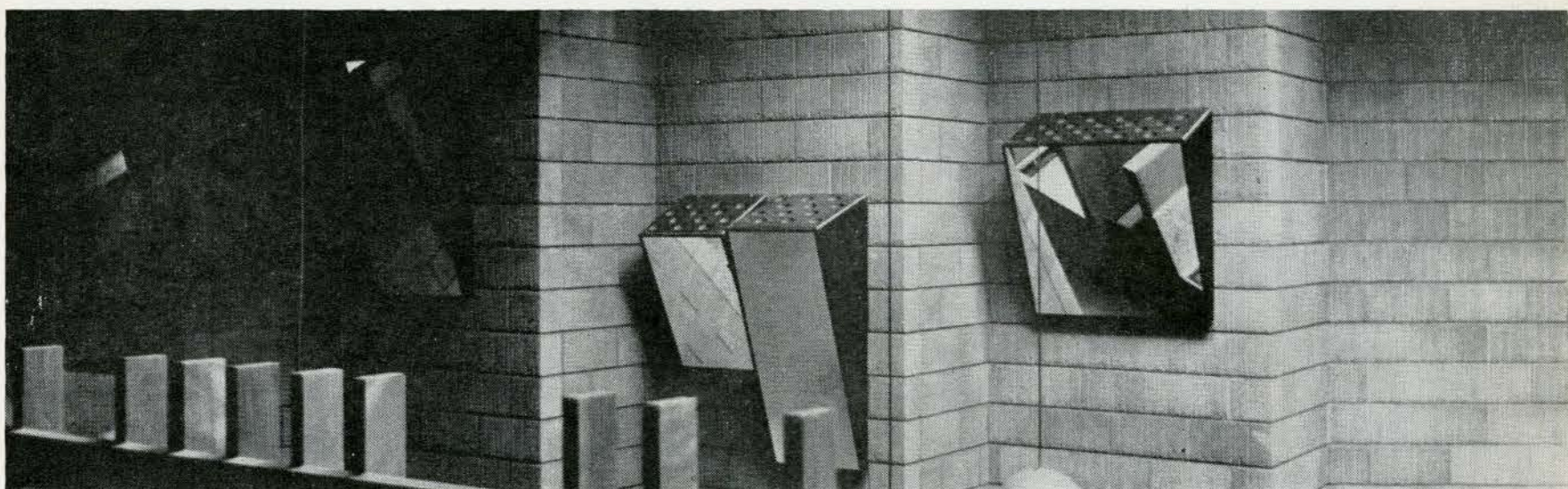
*Library, looking from mezzanine study  
carrels*  
*Bibliothèque, vue des pupitres de la  
mezzanine*



*Library reading-story area*  
*Secteur de lecture de la bibliothèque*



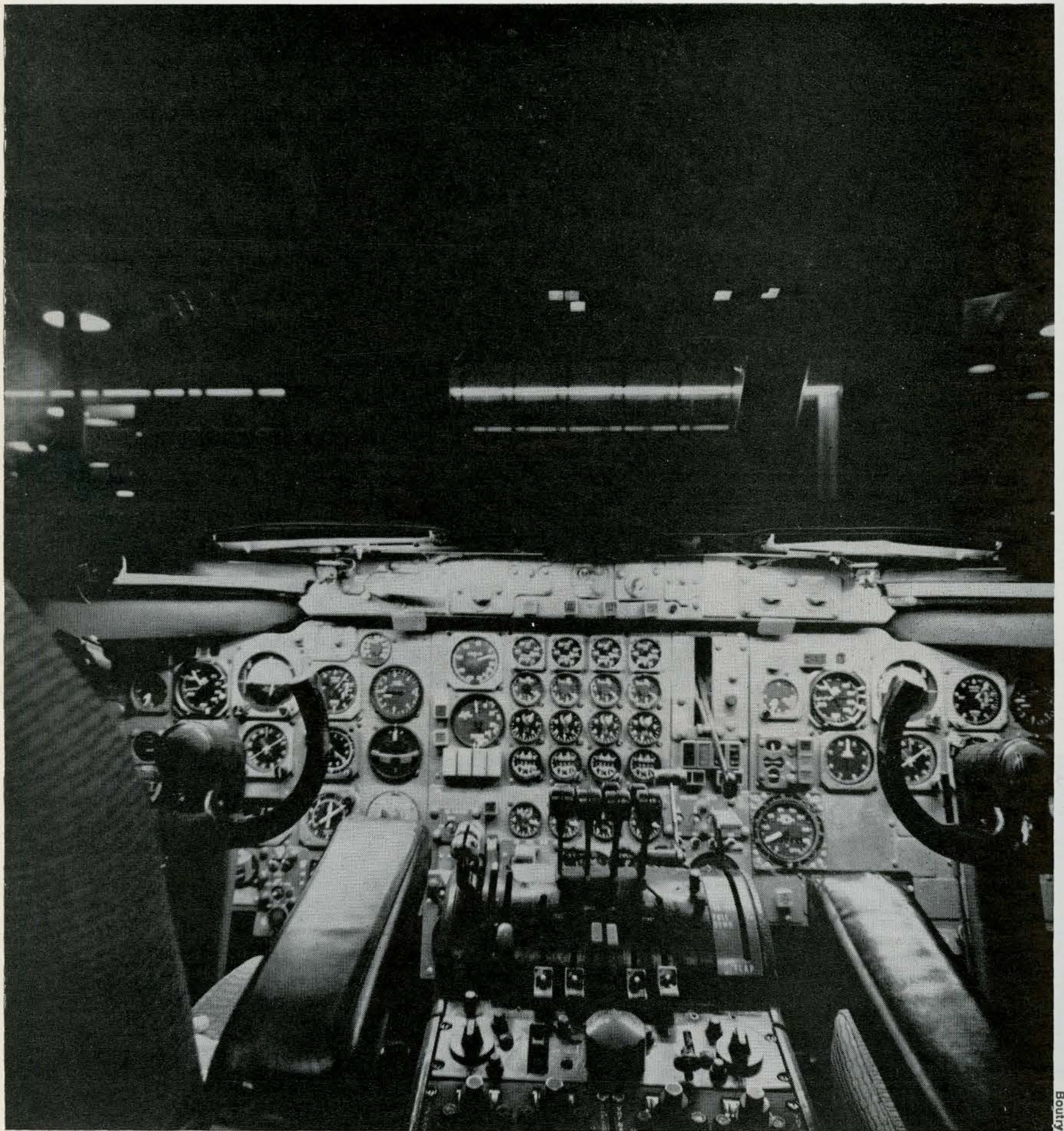
*Library skylight*  
*Verrière de la bibliothèque*



*Library mirrors from mezzanine*  
*Miroirs de la bibliothèque vue de la  
mezzanine*

# Air Terminal Building Vancouver International Airport

Thompson, Berwick and Pratt, Architects  
in collaboration with  
Phillips, Barratt and Partners, Consulting  
Engineers

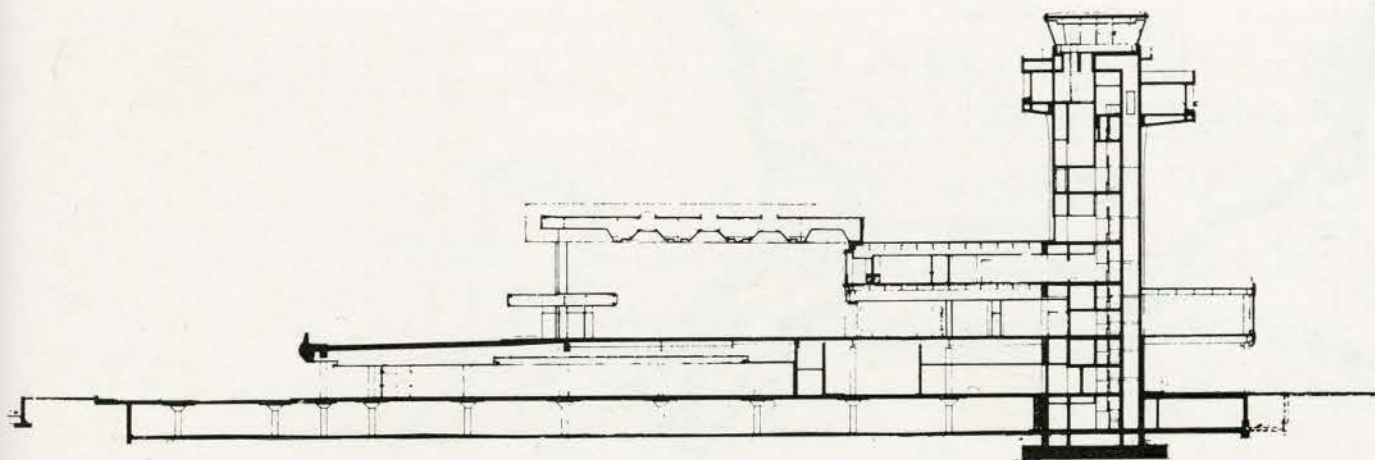
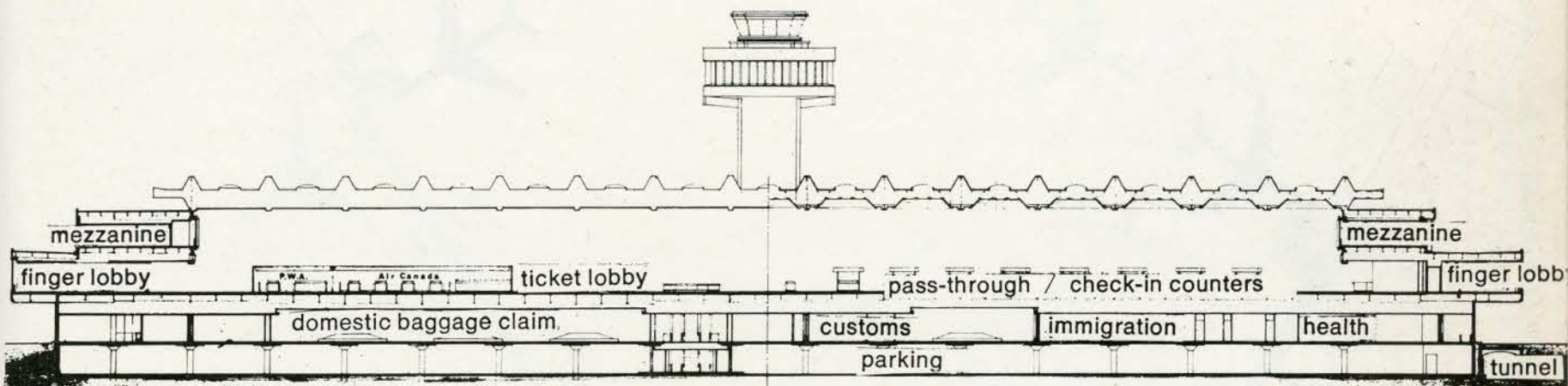
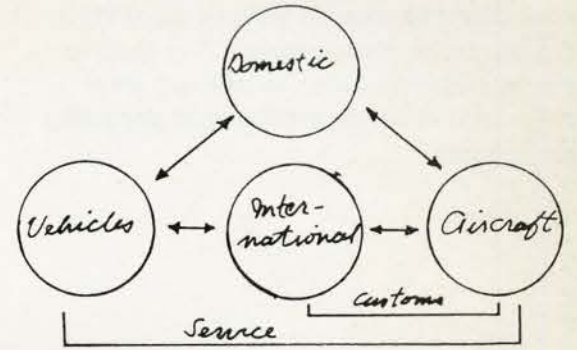


Boutry



The Vancouver Airport, located on Sea Island 12 miles from downtown, opened in 1931. In 1960 it was sold to the Department of Transport and plans were initiated for a new terminal building. Construction commenced in 1965, the facility was officially opened September 1968. By 1970 the Airport will be operating with two parallel main runways 11,000 feet long and two cross-wind runways. The facilities are designed to handle a projected load in 1978 of 1,000 passengers per hour, or two million people annually, with further expansion possible.

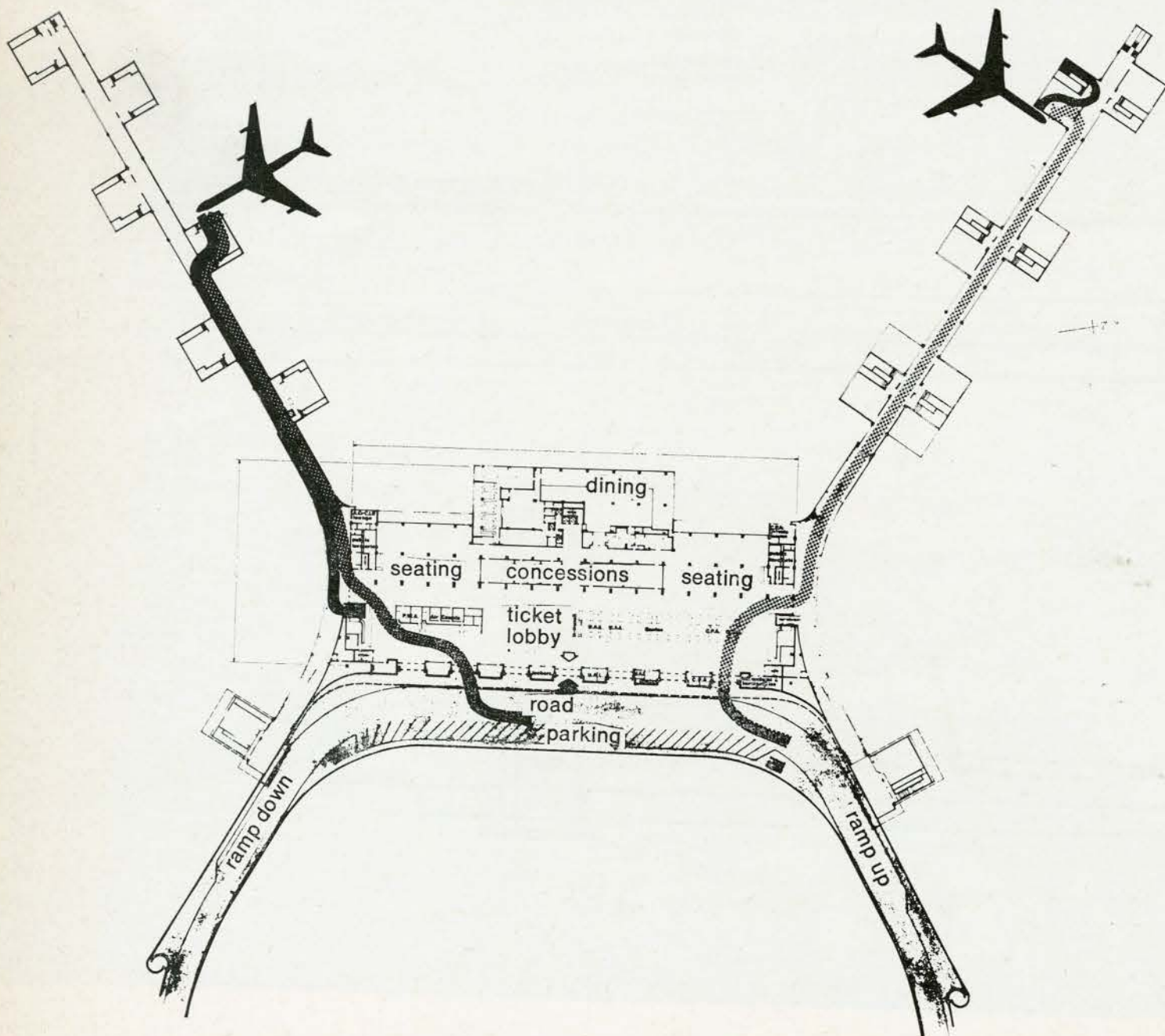
Vancouver's Airport had to be an international one, yet the size of the city did not allow the facilities to be duplicated for domestic and international operations. The major components relate in this manner:



Two major decisions concerning circulation were made early in the initial design phase. The first decision involved the use of "fingers" housing the boarding lounges and remote from the main terminal to load aircraft. The number of aircraft positions can then expand without requiring a change in the main terminal. The second decision involved the use of a two-level scheme to separate arriving and departing passengers.

A departing passenger enters the terminal on the upper level, checks at the appropriate counter and proceeds to a boarding lounge located in the "fingers" of the building - a maximum 600 foot walk away. A covered, telescoping ramp allows direct access from lounge to aircraft. Baggage is loaded at ground level, where facilities for servicing all aspects of the aircraft are also located at each aircraft position.

An arriving passenger leaves the aircraft, proceeds through the "finger" and descends to the lower level where he claims his luggage and leaves the terminal. The lower area is divided into domestic arrival and customs and immigration for international travellers.



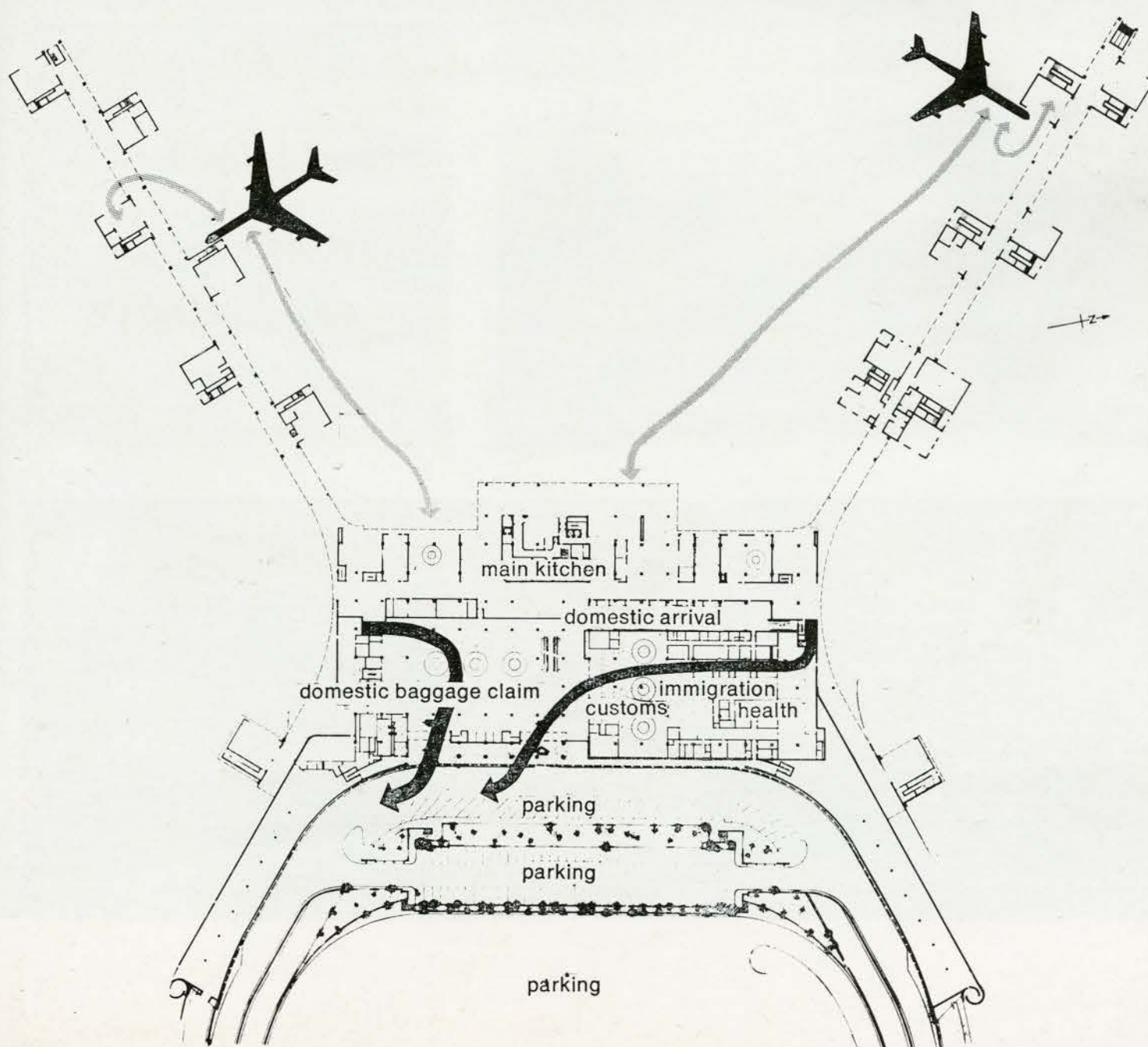
Lounges are located adjacent to, but not directly in, major circulation routes. A restaurant and bar, coffee shop, snack bar, gift shop, duty-free shop, observation decks, sleeping roomettes, nursery, barber shop and other services are provided.

One of the major design problems was the high water table and low load bearing soil conditions. The water table prevented any extensive underground parking or circulation. Additional parking would have to be of a multi-level type to keep walking distances to a minimum. The soil factor required 7,000 wooden piles, thirty to forty feet long.

The basic structure of the building is concrete. The majority of the exterior finish material is sand-blasted concrete, precast panels, or hand-packed Okanagan stone. Works by several artists have been integrated with the building.

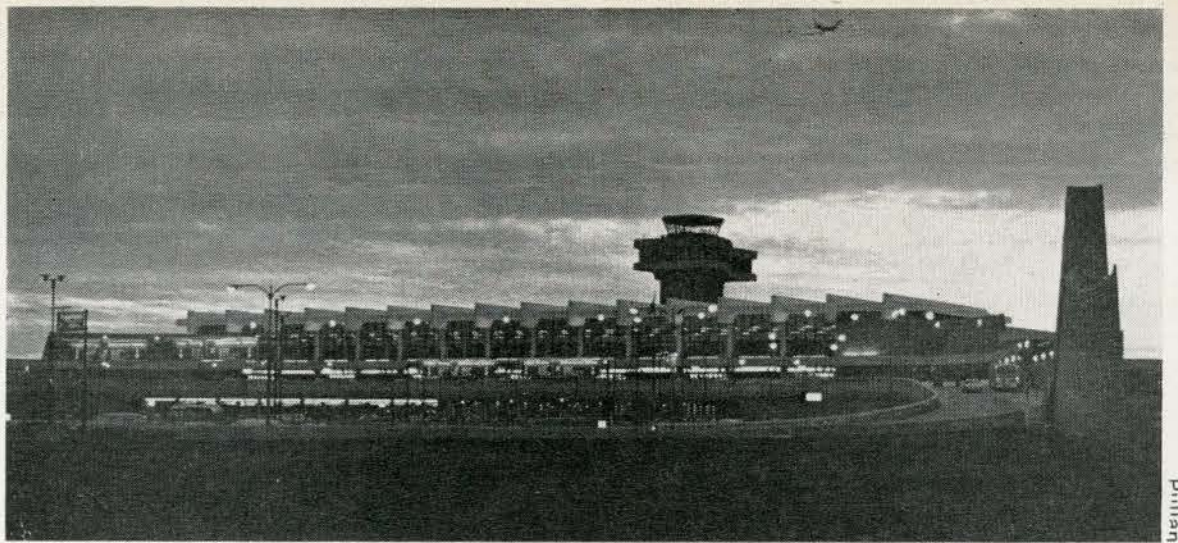


Dept of Transport





Dept of Transport



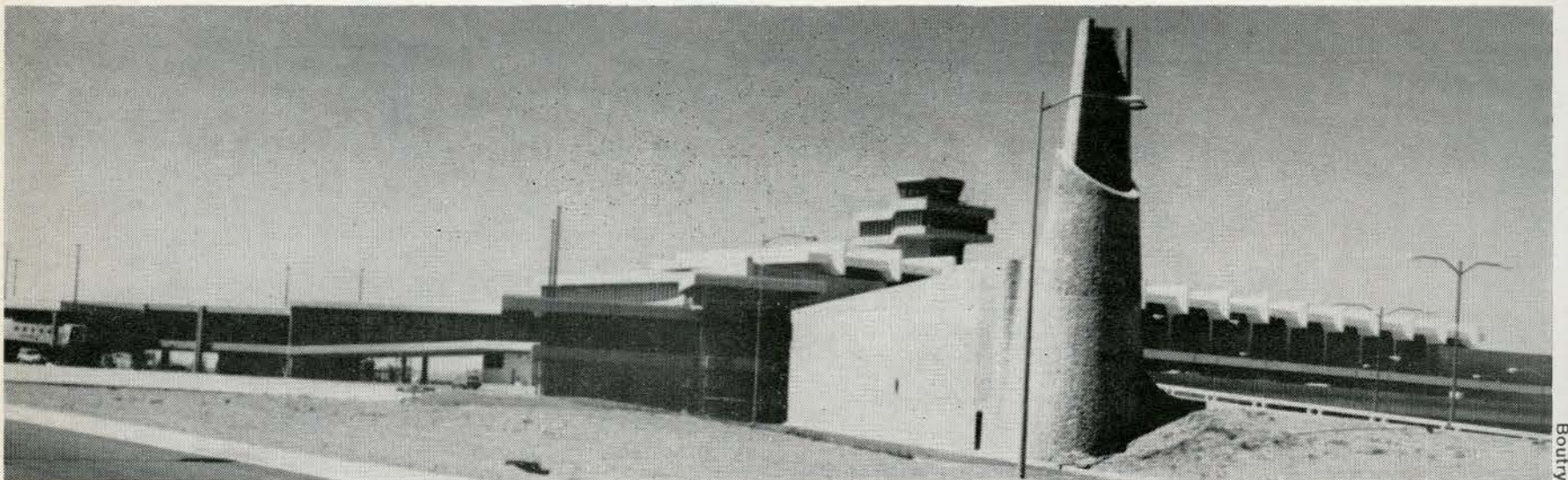
Pullian



Dept of Transport



Pullian



Boutry

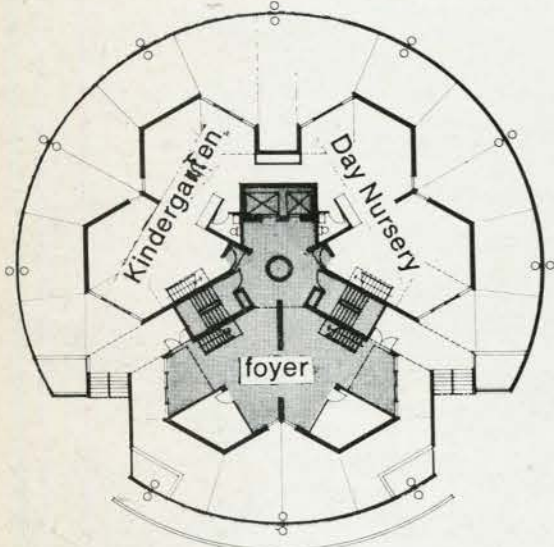
**Michener Park  
University of Alberta  
Married Student  
Housing**

*This first stage of this two-stage development comprises 299 dwellings on a sixteen acre site as follows: 197 two storey two bedroom row houses; four three storey apartments and "Vanier House" containing 42 suites and communal facilities for the entire project.*

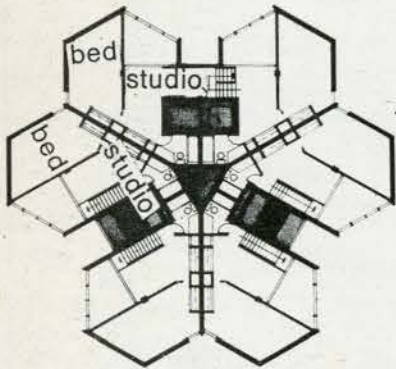
**Dennis and Freda O'Connor & Maltby,  
Architects**



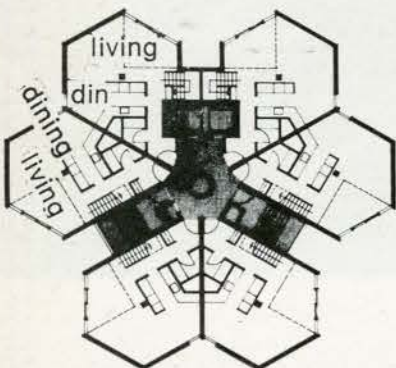
Vanier House consists of two-storey apartments each with a double bedroom, a studio bedroom and a bathroom at mezzanine level. Part of each living room is two storeys. Tenant recreation area and laundry facilities are located on the 17th floor penthouse. The main floor and second floor contain management office space, kindergarten and day nurseries and common room facilities for the entire project.



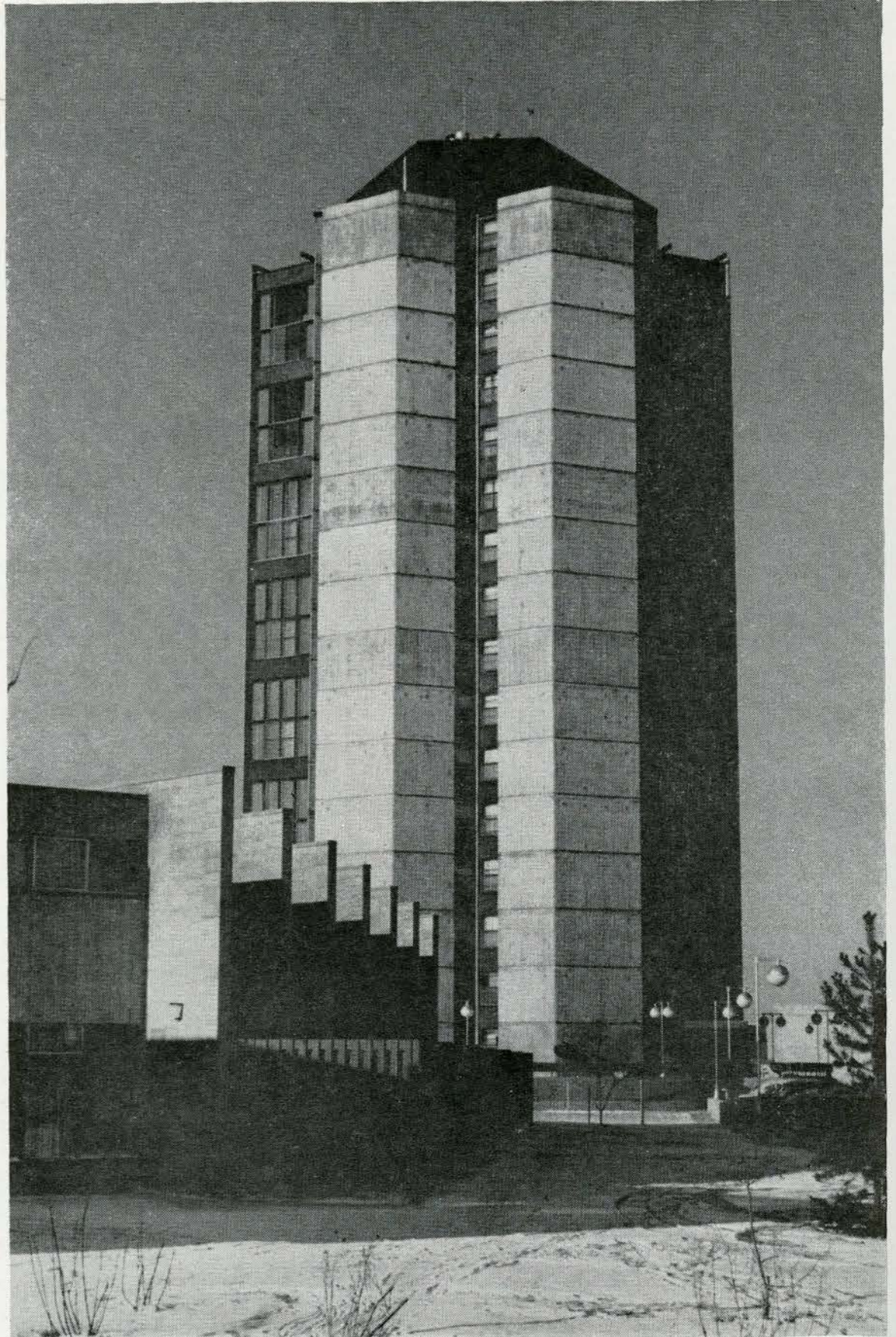
Vanier House, main floor  
Maison Vanier, premier étage



Vanier House, floors 3, 5, 7, 9, 11, 13, 15  
Maison Vanier, étages 3, 5, 7, 9, 11, 13, 15



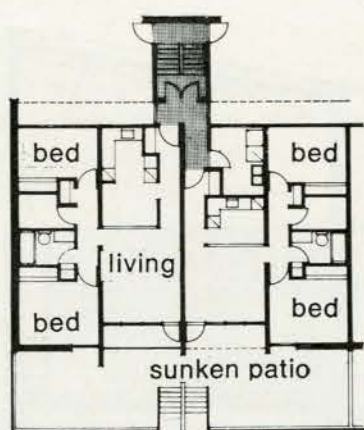
Vanier House, floors 4, 6, 8, 10, 12, 14, 16  
Maison Vanier, étages 4, 6, 8, 10, 12, 14, 16



The three storey apartments have accommodation at one level, service access from the road, balcony and/or landscaped courts access, cross ventilation, shared laundry facilities (one laundry room to each six suites), and hot water heating from adjacent mechanical rooms.

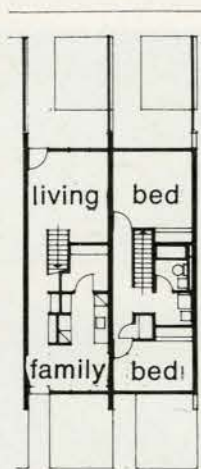
The two storey row houses are basically two types: a through unit and a staggered unit. Each house has patio access to landscaped courts and service access from the road, each has its own laundry facilities. Units are heated with individual warm air furnaces. Hot water is supplied from common mechanical rooms.

The total project, including roads, storm and sanitary sewers, underground power and gas distribution, fire protection, street lighting, parking, street signs, and preparation for (but not including) landscaping was \$4,500,000. Approximate cost for dwelling unit (including above) was \$15,000. Average size of dwelling unit 950 square feet.



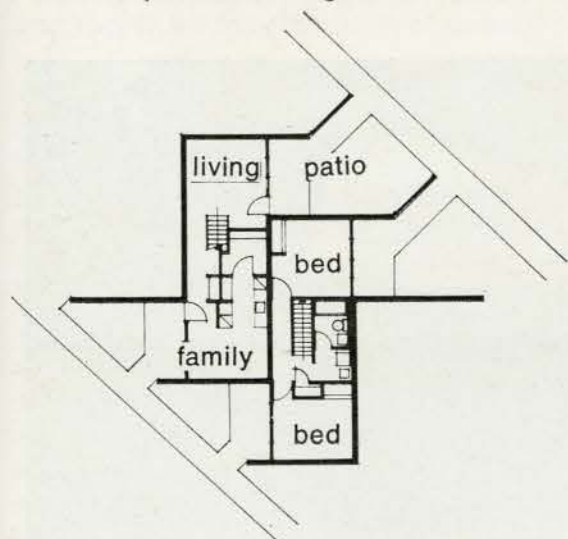
2nd & 3rd floor suites      lower floor suite

Three storey apartment  
Appartement à trois étages



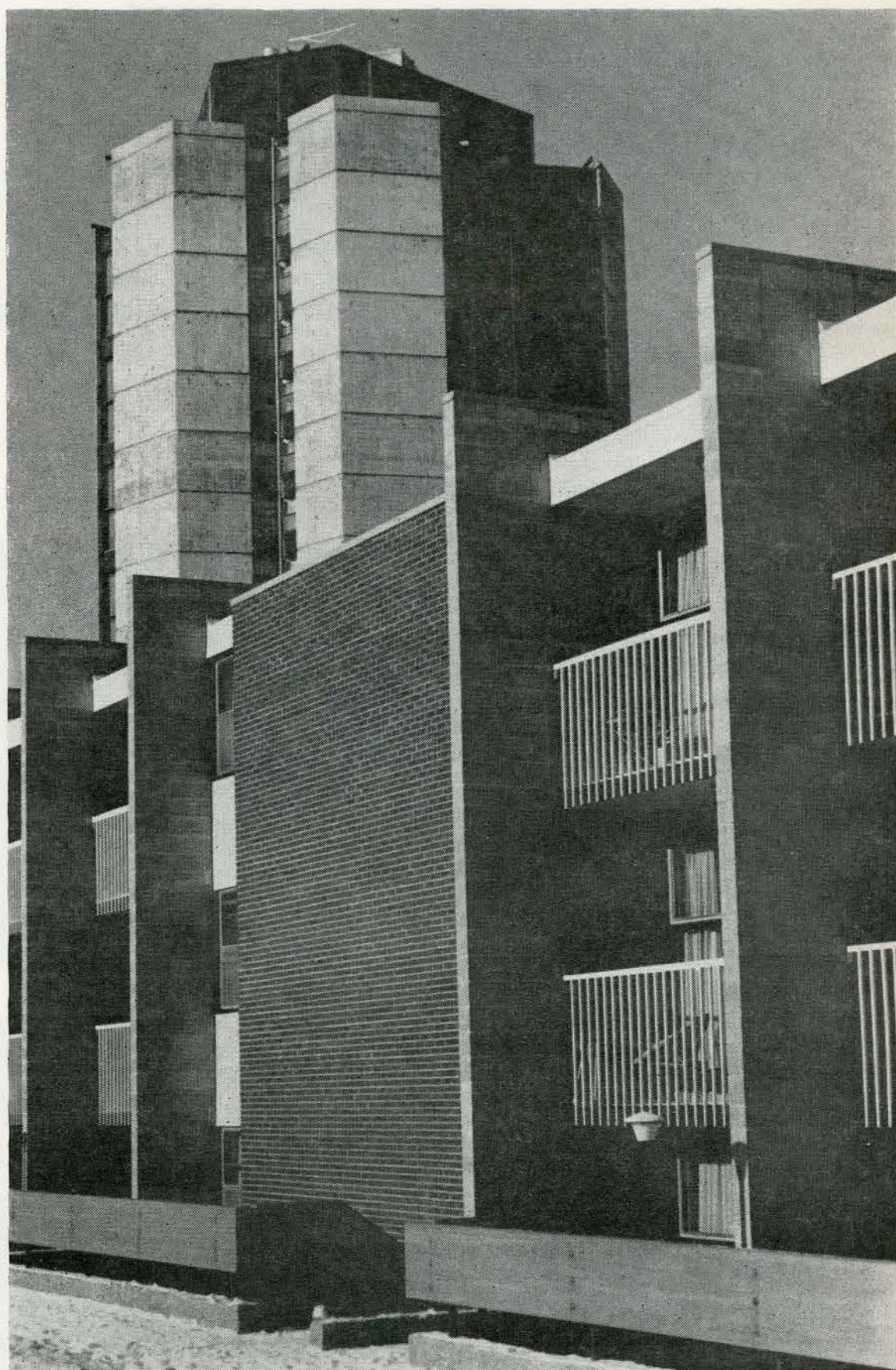
main floor    2nd floor

Two storey through house  
Maison simple à deux étages



main floor    2nd floor

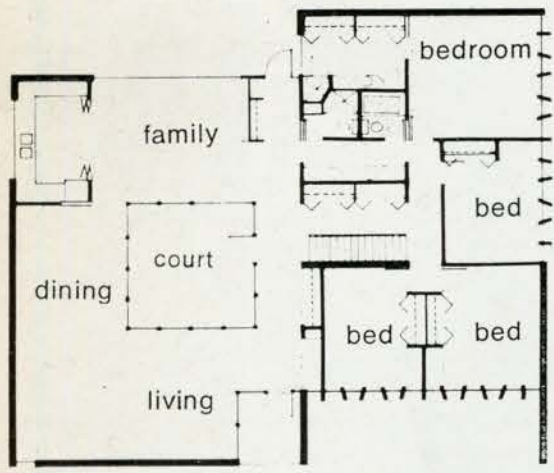
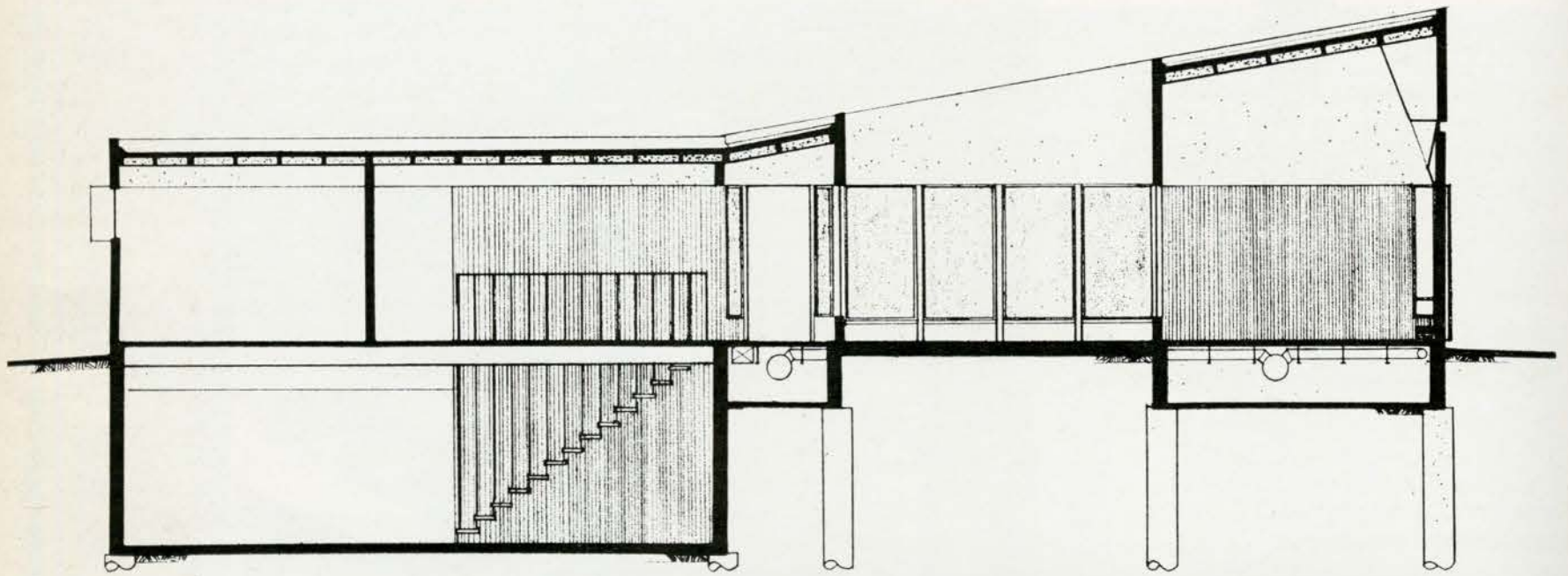
Two storey staggered house  
Maison décalée à deux étages



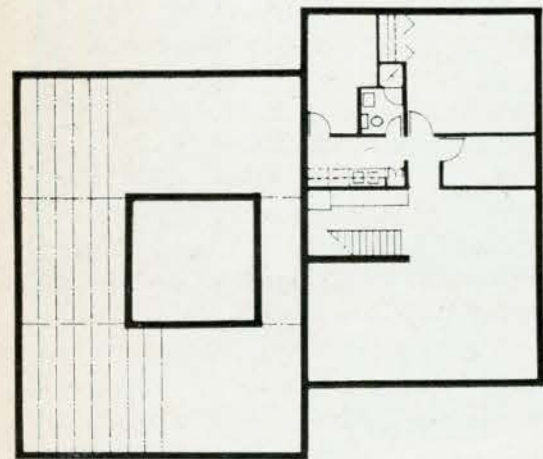
# Mida Residence Winnipeg, Manitoba

McFeetors, Tergeson, Sedun, Architects

The house completed in August 1965, is located on a 75' x 130' site. Other than the owners' wish for privacy in outdoor activity, the architects were given complete liberty in design. Materials were selected for their appearance, durability and ease of maintenance. Exterior materials are stucco, rough sawn oiled cedar. Interior materials are plaster and wood. Floor is slate and carpet. Lighting is to a large extent indirect fluorescent. Structure is concrete and steel joists to main floor, wood stud walls and stressed skin plywood panel roof assembly.



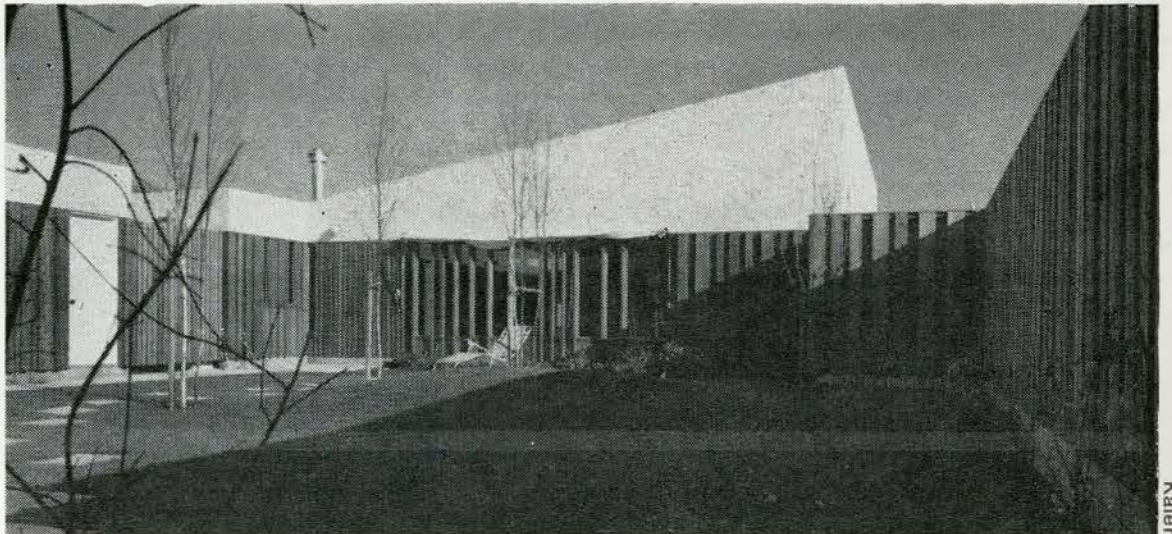
Ground floor  
Rez-de-chaussée



Basement  
Sous-sol



Kalen



Kalen



# Urban Space Systems as Living Form, Part 2

Anne Griswold Tyng

Part I of this three part article appeared in the November issue. The conclusion will be published next month.

## Proportion

Plato in his *Timaeus* said, "It is impossible to combine satisfactorily two things without a third one: we must have between them a correlating link. . . Such is the nature of proportion." The concept of proportion as a principle involved in the generating of forms was probably understood by the Egyptians, as suggested by the proportions of the Great Pyramid at Gizeh. (On its square base, each of its four faces is formed by two half Golden Rectangles with sides 1:1.618 and with its proportional vertical height as  $\sqrt{\phi}$ ) The Pythagorean concept of the Temple as a proportional link between man and the universe may have been based on the intuitive recognition of the biological roots of man-made forms and an unconscious motivation in attempts to relate the proportions of the human body to the proportions of buildings. Although the extraordinary properties of the Divine Proportion have, as implied by its names – The Golden Mean or Golden Section – an aura of mysticism and, through the centuries exercised something like the fascination of a mystery cult to such men as Campanus of Novara, Pacioli, Leonardo, Kepler, Zeysing, Moessel, Hambridge, Matila Ghyka and recently Le Corbusier, its *precise mathematical function* in regular three dimensional space as a *fundamental link between increase in scale and increase in complexity* should lift some of the veil of numinosity to reveal its solid significance for "metamorphology" (the term I suggest for the study of the transformation of forms).

With our specialization of knowledge, we have tended to separate symmetric form from asymmetric form, but it is the Divine Proportion ratio which unlocks the door between them and provides as easy flow from symmetry to asymmetry and back again. In addition to this function of relationship between the symmetric and asymmetric, this ratio acts as a precise and extremely flexible means of shifting scale, and gives dimensional meaning to the additive process of similarly proportioned forms at different scales. The unique property of a series of Divine Proportioned elements, in addition to being a summation

series in which each numerical value is the sum of the two preceding values, is that it is *the only summation series that always maintains an exact and consistent proportion*. The Fibonacci series (1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89 . . . ) was apparently rediscovered in 1202 by Leonard of Pisa (nicknamed Fibonacci) in his experiments with the breeding of rabbits and he found it to play a part in the principles of growth and reproduction. This series, in which each number is the sum of the two preceding numbers, is, I have found, actually *a sub-unit of the Divine Proportion, functioning as a link between whole and irrational numbers – a link between symmetric form and gnomonic form*. While lower numbers of the Fibonacci series have quite different proportions, it is well known that the higher numbers in the series come very close to the Divine Proportion without quite reaching it—  $89/55 = 1.61818 . . .$

In order to be meaningful to the maker of forms as a tool for "counting" in proportion, the Divine Proportion series, I found, could be expressed in a combination of symbols and whole numbers as shown here – a *double interlocking Fibonacci series* which shows the Fibonacci series in its role as a mathematical sub-unit of the  $\phi$  or Divine Proportion series.

In phyllotaxy, the study of the arrangement of leaves around a stem, examples of spiralling parastichies show relationships in the Fibonacci series –  $3 + 5, 5 + 8, 8 + 13 . .$

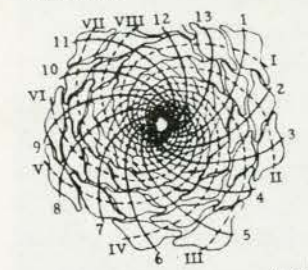
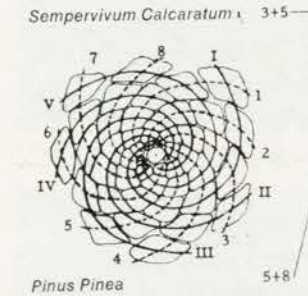
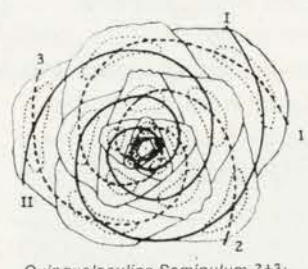
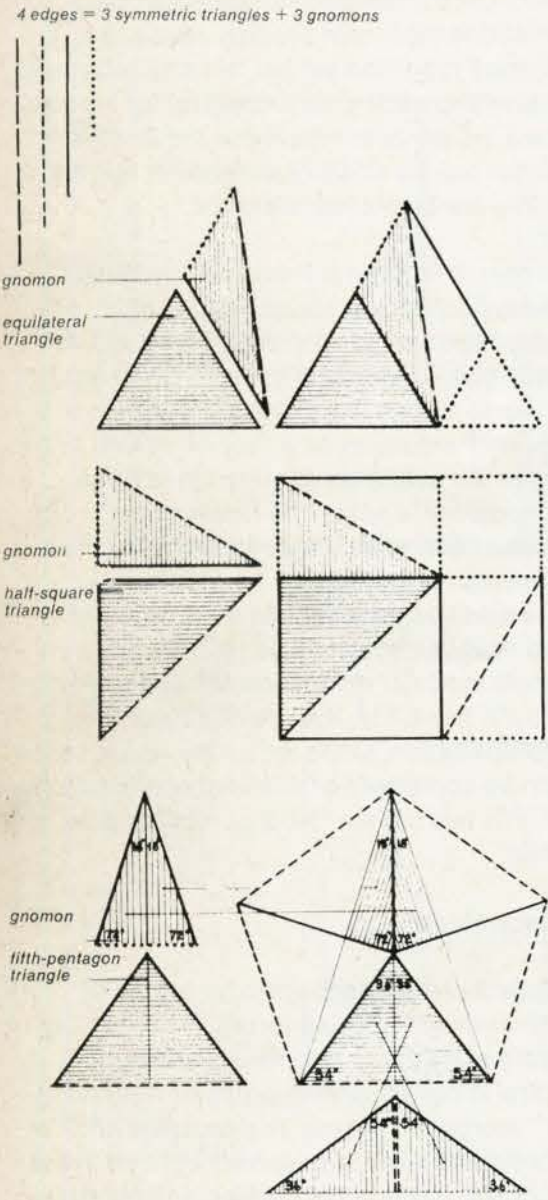
For instance, with two opposing spirals beginning at an inner leaf, one spiral passes through 3 leaves and the opposing spiral in an opposite direction passes through 5 leaves before the two spirals again intersect. Some botanists have interpreted these recurring relationships as approximations, or a mystical striving toward the perfection of the Divine Proportion. A more meaningful possibility is that these relationships in three dimensional space express exact values in a Divine Proportion series. If the longer increments of the flatter spirals are in Divine Proportion to the shorter increments of the steeper spirals in three dimensional space, then we have  $3(1) +$

$5(\phi) = \phi^5$  exactly,  $5(1) + 8(\phi) = \phi^6$ , and  $8(1) + 13(\phi) = \phi^7$ . As we can see from the table of values, these combinations represent precise values in a Divine Proportion series. It is also interesting that within each growth pattern, for instance the  $3 + 5$  parastichies, there are 3 of the longer spirals and 5 of the shorter spirals *within the total circumference*.

Research in natural forms will certainly uncover other variations of what might be called spatial "proportional counting" in units of  $\phi$  – *Fibonacci series*. This should indicate something of the significance of the Divine Proportion as a *fact of spatial ordering in the evolution of all forms in three dimensional space*. The fascinating possibilities of its use in man-made forms, allowing for continuous internal enrichment and additive growth, is in stark contrast to the rigid use of repetitive multiples of a single modular dimension. While providing growth flexibility, it still lends itself to prefabrication, since the proportional series can be composed of different combinations of only two units – "whole units" and " $\phi$  units".

## Hierarchies

While it clearly appears to be a special achievement of living forms, the *repeating cycle of bilateral, rotational, helical and spiral* is not apparently valid for non-living or "inorganic" forms. The energies and configurations *progressively* built up in the rhythmic interplay of rotation and polarity result in the *gradual* intensification of structure and the flexible vitality which is a special achievement of "higher" living forms. An example which does indicate *evolution of form through a complete cycle is the structure of hemoglobin* which took the 22 years work of Perutz and his associates to uncover. This extraordinary configuration of 10,000 atoms includes the *bilateral* tetrahedral bonding of carbon atoms in the glycine molecules, the *rotational* clustering of the heme molecules, the intricately *helical* alpha and beta chains which in turn are folded into irregular *spirals* and, finally, each of the four *spiralling* myoglobin-type parts interlocked in a



$\phi$ -Fibonacci combination symbol	factor value
$\phi$	1.618
$1 + \phi$	2.618
$1 + 2\phi$	4.236
$2 + 3\phi$	6.854
$3 + 5\phi$	11.090
$5 + 8\phi$	17.944
$8 + 13\phi$	29.034

*Euphorbia Wulfenii*  
(after A. H. Church)  
Relation of Phyllotaxis to Mechanical Laws  
American Botanical Memoirs XV, 1901

symmetrical tetrahedral arrangement to form an overall *bilateral* symmetry, reaffirming a basic simplicity of organization over the complexity of differentiated parts to start a new cycle – a striking example of the completion of a cycle and the beginning of a new one in the hierarchies which build up living forms. Nothing is lost. All the atoms and molecules and variations of form are there, but it is bilateral and simple in its totality. With all the internal complexity of this structure, we can barely conceive of the fantastic number of hierarchies within hierarchies which include and give meaningful organization to the 280 million such hemoglobin molecules contained in a single red blood cell – which in itself takes the *rotational* form of a disc.

Not only does there appear to be a progress in the life forms corresponding to the geometric progression toward complexity and increase in scale, but this progression can be seen as a repeating one with each new cycle building *hierarchy upon hierarchy which includes at each stage of development the record of its earlier evolution, the hierarchies of form and the hierarchies of energy evolving from the interplay of polarity and rotation.*

With tremendous leaps in the scale and complexity of life forms, when the geometry is camouflaged by variations in color, motion and mysterious habitats, obscured by lapses in time and hidden embryo shelters, the cycles of symmetries are less sharply defined. *Bilateral* man, evolved from numberless hierarchies of cycles of form, from the primordial ordering of atoms and molecules, goes through the cycle again in the early stages of embryonic development from the *bilateral*, then *rotational* cleavages of the ovum, to the *helical* body stalk of 18 or 19 days, to the *spiral* embryo of about 4 weeks to the miniature complexity integrated into his ultimate *bilateral* form as a 2 inch, 10 week embryo of potential human being.

Aldous Huxley has observed that, "the cells orient themselves along lines of tension, and multiply faster here than elsewhere."<sup>2</sup> Acted

CANADIAN

# BUILDING DIGEST

DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL



## AIR CONDITIONING PROCESSES

by K. R. Solvason

UDC 697.9

Control of the temperature and humidity of room air is one of the important aspects of conditioning for human comfort (CBD 102). Heat and moisture must be supplied to or removed from the air of a space to maintain the desired conditions. This normally involves provision of an air stream at a higher or lower temperature and humidity than that of the space to the degree needed to balance the heat and moisture loads in the room (CBD 106). A knowledge of the processes by which the treatment of air is carried out is essential for an understanding of the capabilities and limitations of an air conditioning system. The problems or expense involved in achieving certain conditions are important considerations in the selection and specification of the air conditioning requirements for a building, and are ultimately related to the design of the building enclosure. It is the purpose of this Digest, therefore, to examine some of the processes involved in air treatment.

The properties of air that are manipulated by air conditioning equipment are temperature, moisture content and enthalpy or heat content. These three properties are interrelated, so that any two completely define the state point or condition of the air.

A psychrometric chart is a graphical representation of all possible conditions within the range for which the chart is constructed. One design of such a chart in skeleton form is shown in Figures 1 to 4. The horizontal scale is air temperature or dry-bulb temperature and the vertical scale is moisture content expressed in pounds of water per pound of air. Vertical lines are, therefore, constant temperature lines,

and horizontal lines are constant moisture content lines. The curved line on the left is the saturation line or 100 per cent relative humidity line, which represents the maximum amount of moisture that can be held at the various temperatures and is a boundary of the chart. The temperatures at points along this line are referred to as saturation, or dew-point, temperatures. Other degrees of saturation can also be shown, as indicated by the 50 per cent relative humidity line.

The heat content of moist air represents the heat content of both the air and the water vapour it contains. Thus the total heat content can be increased by raising either the temperature or the moisture content. A constant heat content line is, therefore, one of increasing temperature and decreasing moisture content or of increasing moisture content and decreasing temperature. Constant heat content lines are straight lines sloping downward to the right.

The chart is an excellent tool for visualizing air conditioning processes and can also be used for calculations. The problem to be solved is usually one of maintaining a particular condition, such as A in Figure 1. If a room loses heat and moisture, air must be supplied to the room at some condition such as B having a higher temperature and higher moisture content than that in the room. If the room gains heat and moisture, air must be supplied at some condition such as C having a lower temperature and moisture content. Some of the processes by which conditions such as B and C can be achieved are relatively simple while others are rather involved.

NRC

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OTTAWA

DECEMBER 1968

CBD 108

Heating air from condition D to condition E in Figure 1 involves only an increase in heat content and no change in moisture content. On the chart this is represented by a constant moisture content line from D to E. Similarly, cooling from E to D is represented by removing heat, with no change in moisture content. Cooling beyond point D can proceed without moisture removal until the saturation line is reached; but any further cooling must proceed along the saturation line to some point F, with a resulting decrease in moisture content.

### Air Mixing

Two streams of air at different temperature and humidity conditions are often mixed to produce one air stream with the desired supply conditions. The temperature of the mixture will be the weighted mean temperature of the two original streams, and the moisture content (lb of water per lb of dry air), their weighted mean moisture content. With the mixing technique, outside air and air returned from the space can often be used to provide the desired supply condition. This is illustrated in Figure 1. Room air with temperature and moisture content conditions at A is mixed with outside air at condition G. The condition of the mixture is some point C on a straight line joining G and A. The location of C on the line depends on the proportions of the mixture. The supply conditions can be adjusted by adjusting the proportions of each. Two separately conditioned air streams are sometimes mixed to achieve the desired supply condition.

### Cooling and Humidifying

Cooling and humidifying can be accomplished by spraying water into the air. Such a process is called adiabatic, in as much as no heat is added or extracted. It is also known as evaporative cooling. When an unsaturated stream of air is passed through a recirculated water spray, water is evaporated; if the spray is adequate, the air will be saturated. With no heat added in the process, the heat required to evaporate the water can only come from the air, thus reducing air temperature while increasing moisture content. The total heat content of the moist air remains unchanged.

This process is shown as line HI in Figure 2, where air, initially at condition H, is treated in an adiabatic spray. As no heat is added while the moisture content of the air is in-

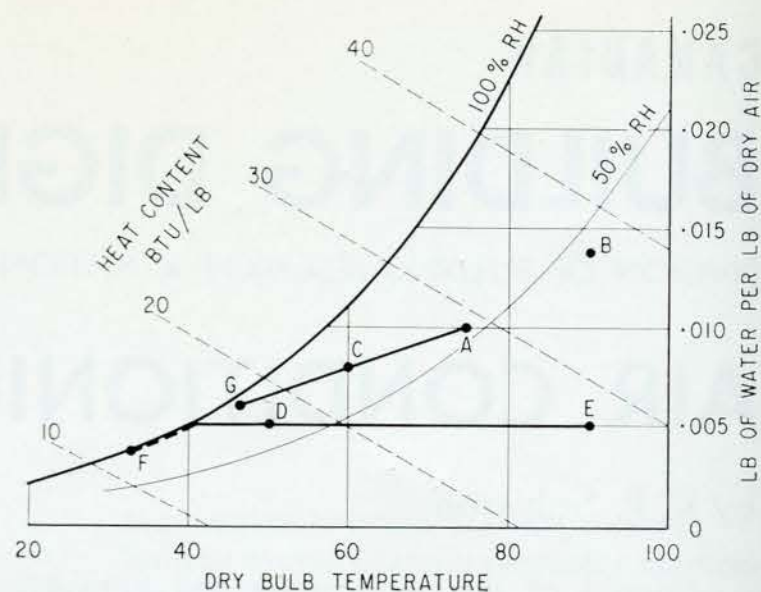


Figure 1 Heating, cooling, and mixing processes.

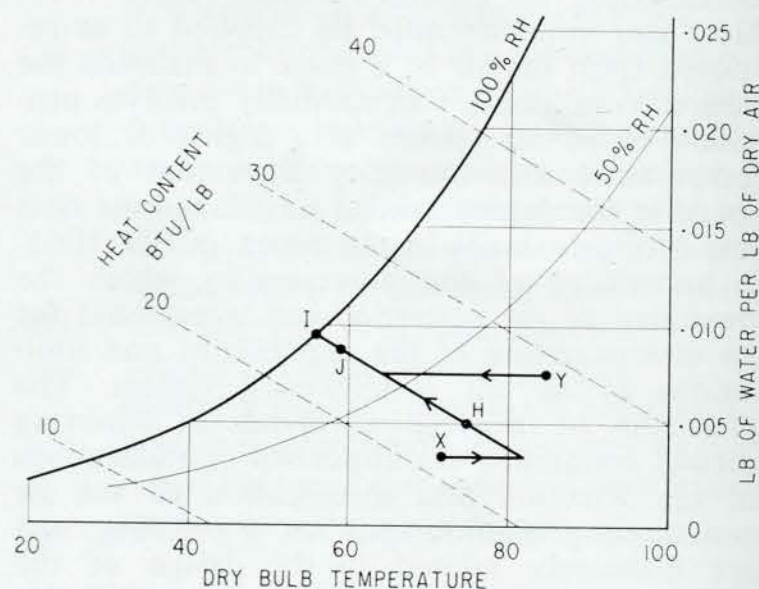


Figure 2 The evaporative process.

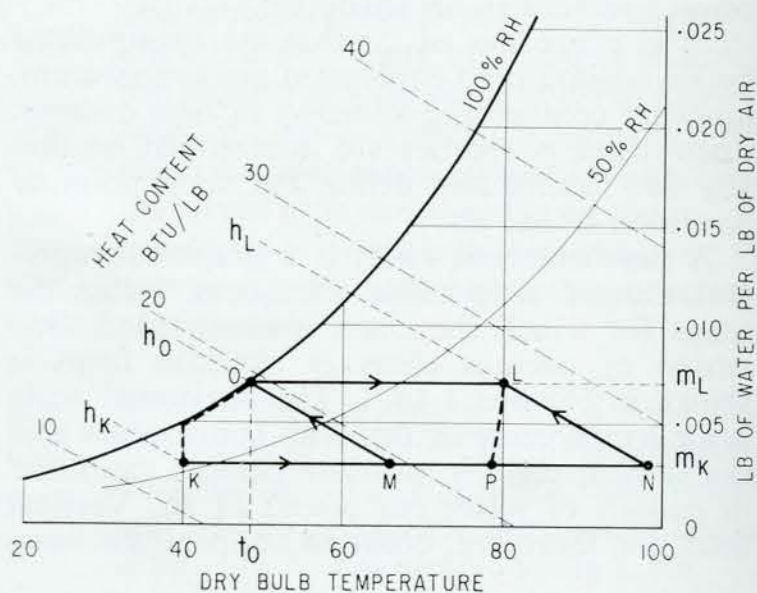


Figure 3 Heating and humidifying process.

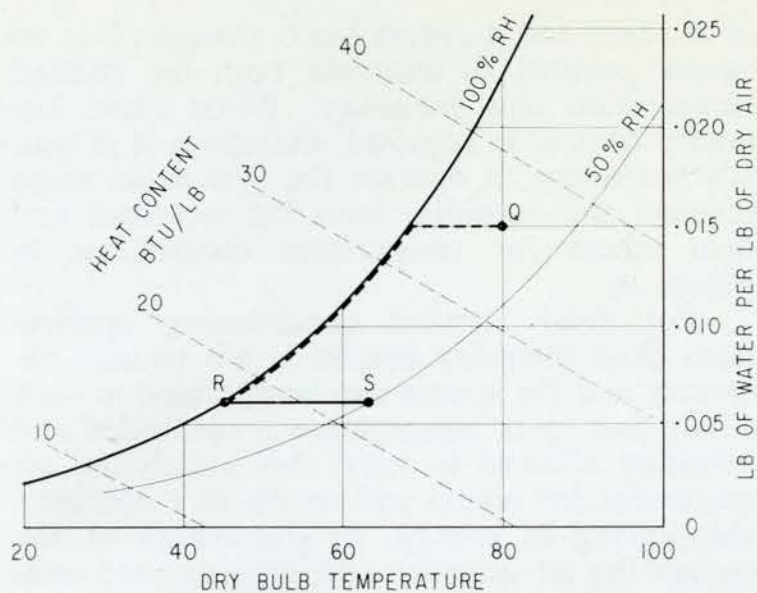


Figure 4 Cooling and dehumidifying process.

creased, the process must proceed along a line of constant heat content and will reach condition I at saturation. The temperature achieved at saturation, therefore, depends only on the initial total heat content and this, in turn, depends on the initial dry-bulb temperature and moisture content. This temperature is referred to as the thermodynamic wet-bulb temperature and is approximately equal to the temperature of the wetted wick of a wet-bulb thermometer. Lines of constant wet-bulb temperature can be regarded as lines of constant heat content.

If the spray were inadequate, the process might proceed only to some unsaturated condition J on the same wet-bulb line. This would produce the same effect as conditioning only part of the air stream to condition I and then mixing it with air at the initial condition H. Such a process would result if part of the air were allowed to bypass the spray.

The exit condition of the air can be controlled if the wet-bulb temperature of the entering air is adjusted by heating or cooling, or preferably by mixing with outside air. Heating air above condition X or cooling it below condition Y will produce the required entering wet-bulb temperature. Air at either X or Y can also be brought to condition I by passing it through a sprayed coil or a spray maintained at temperature I by heating or cooling.

The application of the adiabatic spray process to air conditioning is limited by the outside air wet-bulb temperatures and the space air conditions required: If the need is for space conditions of 75°F and 50 per cent relative humidity, corresponding to a saturation tem-

perature of 55°F, evaporative cooling will not be adequate during the summer in most parts of Canada because outside wet-bulb temperatures exceed this value for a significant part of the time. In industrial and commercial applications where higher humidities and temperatures can be tolerated for part of the time, and where large air quantities are acceptable, outside air treated in an adiabatic spray may be supplied to the space to relieve high temperature conditions during summer months.

The evaporative cooling process is used extensively for cooling water. Both the water temperature and the air dry-bulb temperature approach the wet-bulb temperature. This is the process used in cooling towers.

### Heating and Humidifying

Heating and humidifying, a common winter requirement, involves the supply of heat to raise the temperature of the air and its associated water vapour plus addition of heat to evaporate the added moisture. Certain psychrometric conditions must also be fulfilled in order to introduce the moisture into the air. This is best illustrated by an example.

If air at condition K (Figure 3) is to be heated and humidified to condition L:  $(h_L - h_K)$  Btu of heat and  $(m_L - m_K)$  lb of water must be added for each pound of air.

There are several ways in which this can be accomplished. The lowest temperature at which air will hold the desired moisture quantity is the dew-point or saturation temperature corresponding to condition L and the lowest heat content possible for this condition is  $h_0$ . The process can be carried out by treating air in a spray heated to  $t_0$  where the air will be heated and saturated at  $t_0$ ; it can then be heated without moisture addition to condition L. Alternatively, air can be heated to M where its wet-bulb temperature is  $t_0$ , then treated in an adiabatic spray to cool and saturate it at  $t_0$ , followed by heating to L. A third alternative is to heat air to N where the wet-bulb temperature is equal to the wet-bulb desired for condition L, then add adiabatically the exact amount of water to increase the moisture content and decrease the dry-bulb temperature to reach condition L.

If air is humidified with steam, it must first be heated so that its heat content plus the heat content of the steam exceeds  $h_0$ . Usually only one heating coil is used, in which case the air is heated to some condition P, so that the heat

content at P plus the heat added by the steam produces the required heat content and temperature at L.

### Cooling and Dehumidifying

Cooling and dehumidifying are also common requirements in air conditioning. When air passes through a heat exchanger or coil whose temperature is below the dew-point temperature of the air, moisture condenses and the dry-bulb temperature of the air is reduced. The heat extraction involves both the heat content of the air and the latent heat of the water vapour condensed.

The condition of air leaving a cooling coil depends on the coil design. If a water spray is added to the coil or if a cooled water spray is used, the exit air will for practical purposes be saturated at the spray-water temperature, provided only that the spray is adequate. An example is shown in Figure 4 where air at condition Q is cooled and dehumidified to condition R by passing through a sprayed coil or water spray maintained at the temperature R. The reduction in temperature, moisture content, and heat content is apparent.

Cases often arise where dehumidifying requirements result in an air temperature too low for direct introduction into the room. Heating along a constant moisture content line to some condition S is required. This situation usually arises when both temperature and humidity in the space must be controlled and the dehumidifying load demands a saturated stream. The temperature and moisture content in a saturated stream cannot be controlled independently, however. For a given cooling load and a given dehumidifying load, there is only one possible air quantity and only one possible saturated temperature that will provide the correct deficiency in heat and the correct deficiency in moisture to maintain the desired temperature and humidity in the space.

If the heat and moisture loads change, but change in the same proportion, the air quantity can be changed or the supply temperature can be changed (within narrow limits) to maintain the desired room conditions. But if the ratio

of the heat and moisture loads changes, it is no longer possible to maintain both the desired temperature and humidity. When close humidity control is required, therefore, it is usually necessary to operate the system so as to regulate the humidity level but overcool and then reheat for temperature control, as in Figure 4.

For most comfort conditioning applications close humidity control is not usually necessary and the system can be operated in such a way that space temperature is controlled and humidity allowed to vary; this avoids the requirement for reheat and results in a considerable saving in energy. In the design of the system the air quantity and the saturated temperature are usually selected so as to maintain some desired space condition at the design cooling and dehumidifying loads. At part loads the temperature is controlled and the humidity allowed to vary above and below the desired value. When both temperature and humidity must be under positive control, the complexity of the system and its controls, and thus the costs, are increased.

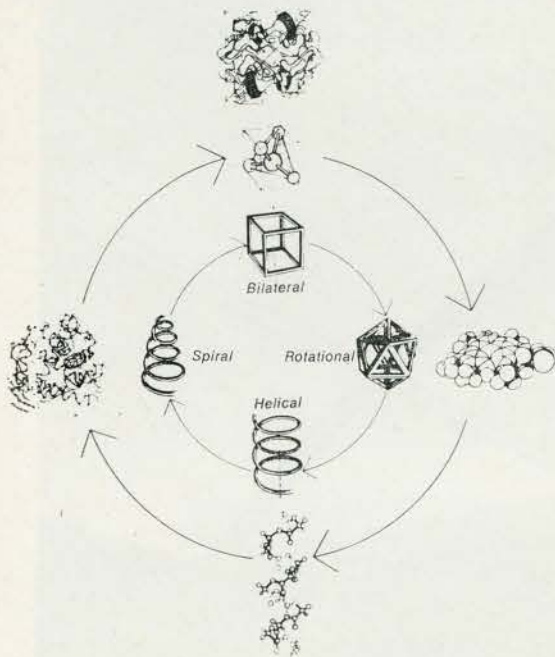
### Conclusion

In this Digest, it has been possible to describe only in general terms the processes involved in treating air for comfort air conditioning. To assess the suitability of a given air-conditioning system for a specific building, a detailed quantitative analysis is necessary. It is only at this point that the full implications of the building and its loads become apparent.

The psychrometric chart provides a graphical representation of the properties of moist air and a means of illustrating the nature of the processes involved. It is necessary to understand these processes in order to appreciate the general capabilities and limitations of different systems, and to recognize the implications of the room conditions that are specified. An arbitrary selection of a specific temperature and humidity, without reference to the possible range of conditions that will adequately satisfy the requirements of the occupancy, may lead to unnecessarily complex and costly systems.

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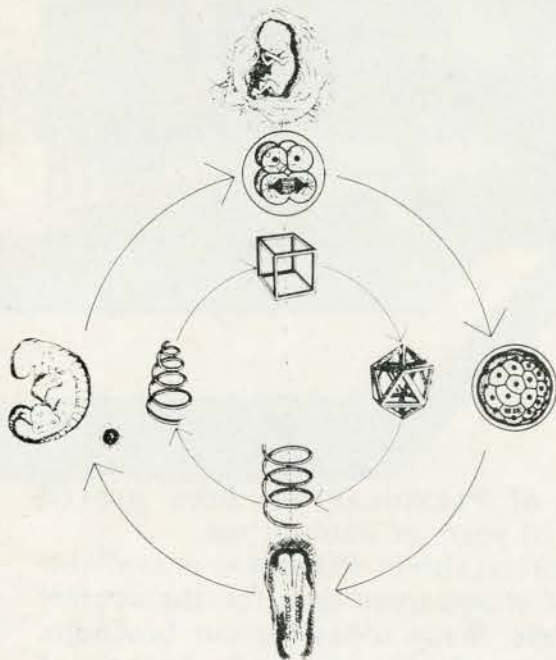
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on in turn by tensions related to the earth's rotation and to gravity, the pure geometry of atoms and molecules has been continuously adding to itself in self-transforming patterns, arranging and rearranging itself in infinite possibilities of form.

Form thus finds its own form, extending feelers, gills and tentacles to the world around it, in its *rotational* tensioning, expanding its magic circle to new concepts of *space* – from deep sea creature's first sensitivity to light to man's skyward extension of sight through radar telescope, from the first articulation of fin and finger to the spiritual dimensions of man's creativity – his response to the challenging tension of individual man with his collective environment.

Form finds new *helical* dimensions, elongating to differentiate intake and output, strengthening backbone between tusk and tail, head and anal poles, articulating the tensions between male and female from simple reproduction to elaborate courtships, tensioning emotions between sexuality and spirituality, stretching to new concepts of *time* between past and future, memory and anticipation, between the awareness of man's darkest origin and his highest aspiration, between the depths of the unconscious mind and conscious thought.

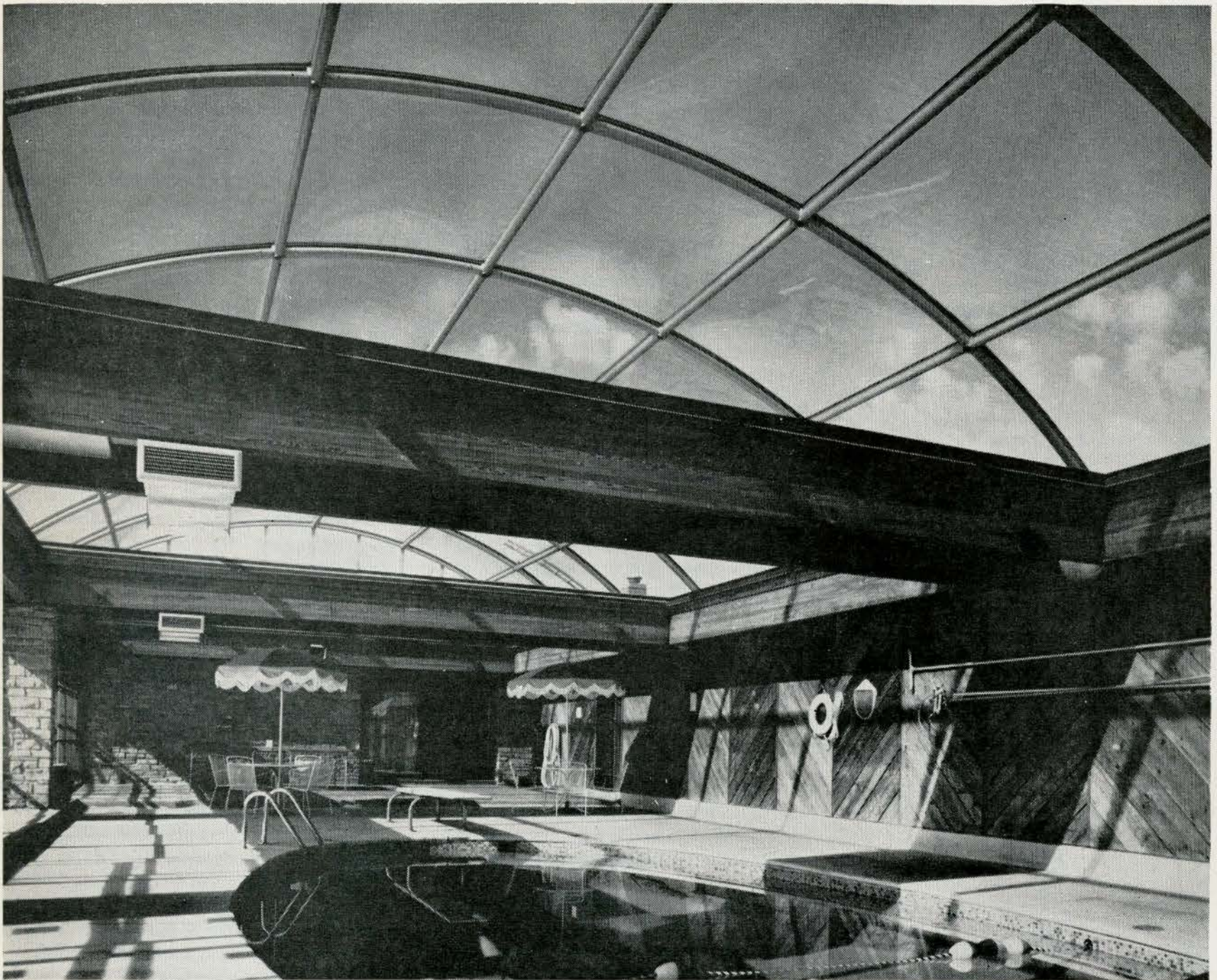


Form stretches to elaborate both length and breadth in *spiralling* shells and branches, antennae and antlers, experimenting in exotic forms with "displayed existential value", dividing and sub-dividing into the intricate filigree of blood vessels and delicate nerve ends, involuting to extend the internal surfaces of digestive glands and lungs for the detailed and intensive organization of complex life processes, discovering for itself infinite variety and complexity – subtleties of camouflage, heightened movement, the play of light and coloring of forms, *the tensioning of forms in space and time* toward an infinity of matter, toward weightlessness and toward the intricate involution and complexity of the brain.

In the fleeting moments of delicate balance between the tensions of polarity and rotation, *the tensions of space and time are resolved in bilateral* living form, the interlocking of complexity to produce a new unity of relationship, the transformation of the end of complexity to a new beginning of simplicity – the inclusion of complexity within simplicity – the discovery of the cycle – the balancing and neutralizing of tensions of space and time within a higher order – the creation of the first *hierarchy* of form. From countless levels of such hierarchies the brain of man was formed, the evolution of human consciousness and the psychic potentials of individuation and "rebirth", man's mystical striving for the secret of creation, for concepts of immortality *free of time and space and causality – for synchronicity* – the "static" immortal synthesis of "kinetic" mortal concepts. The balancing of these tensions reaches its highest forms of integration in the early synthesis of religious concepts, in the monotheism of ancient Egypt, recurring in the God of Moses and in Zeus, king of gods and men at the apex of Olympian hierarchies – man's articulation of the *unknown*. Stages of concepts in the evolution of human *knowledge* were also marked by synthesis – Parmenides' realization of a spherical earth, Aristarchus' of the earth's movement around the sun and his determination of the scale of the solar system, the discoveries of Kepler, Gallileo, Newton and Darwin. As new scientific concepts of the universe extended the conscious mind, earlier discarded concepts were transferred to the primordial memory of the unconscious mind, so that in Carl Jung's concept of psychic "individuation", the principle of synchronicity is expressed in extensions of the conscious and unconscious mind *to new balances of what is known and what is unknown*.



*Valhalla Inn, Toronto  
33' x 73' barrel-vault Plexiglas cover. Plexiglas color 2412, Bronze  
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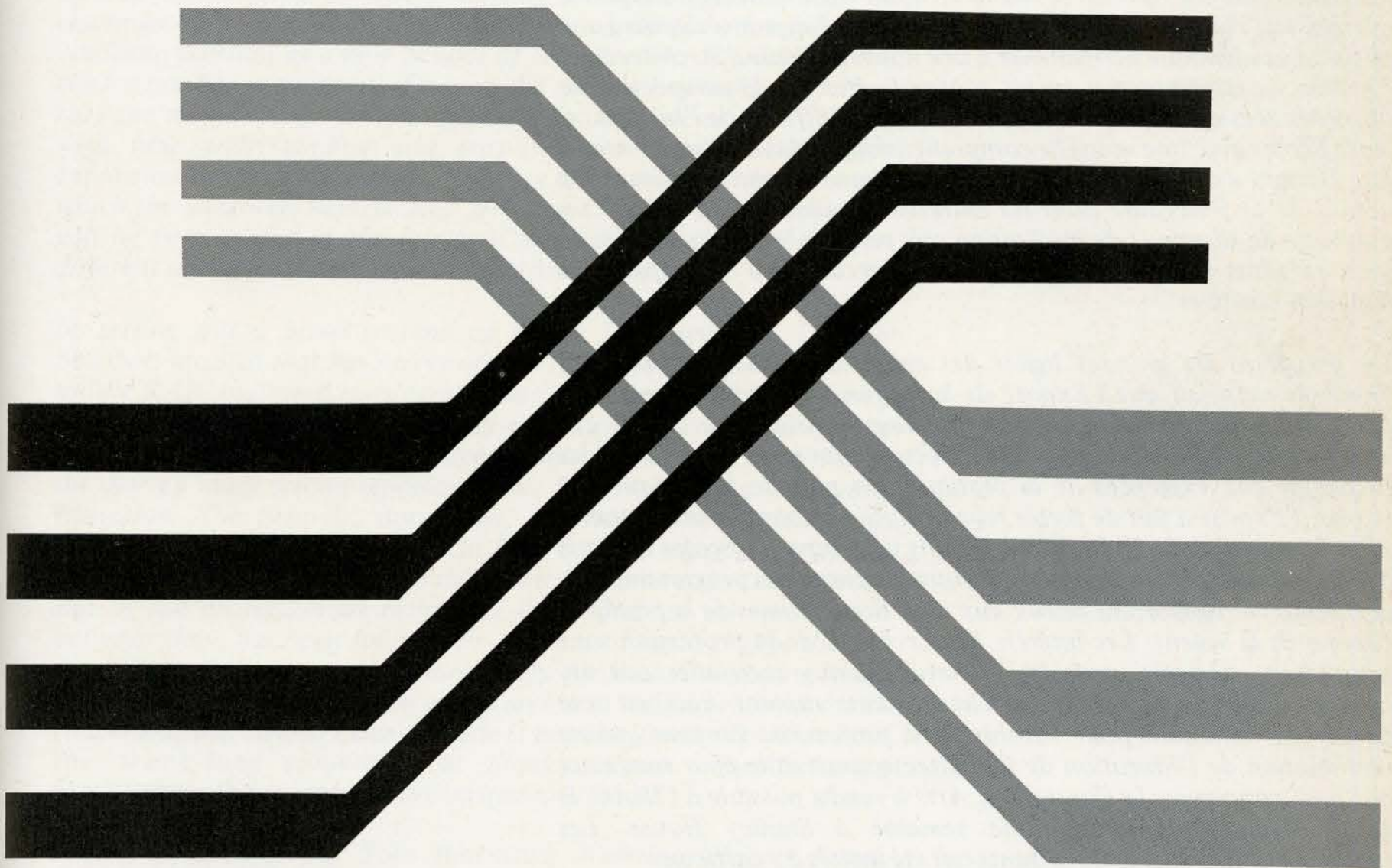


# Education and Communication

# Education et Communication

The Stanley House Architect-Educator  
Conference

La Conférence à Stanley House des  
Architectes-Enseignants



*Les assemblées à Stanley House sont offertes par le Conseil des Arts, pour fournir une occasion aux personnes intéressées aux arts, humanités ou sciences sociales, de se rencontrer, discuter les idées et échanger les points de vues sur un thème précis, dans l'espoir que l'expérience stimulera et récompensera et que les liaisons d'amitiés durables et la coopération professionnelle seront de l'avant durant la longue semaine de sessions tenues à la maison de retraite de Gaspé. Ceci était certainement le cas quand le groupe représentant l'Institut Royal d'Architecture du Canada, se réunit en août. Un architecte pratiquant, qui assistait comme président d'un comité, a été appointé depuis à une position académique permanente à une nouvelle Ecole d'Architecture. En plus, la conférence a eu un profond effet sur la perspective de plusieurs assistants; ils traitent maintenant des Affaires de l'Institut ou leurs Ecoles avec une nouvelle compréhension et plus de discernement. Luc Durand a donné l'impression de ce sentiment quand se référant à la nature de la procédure dont les entretiens étaient tenus, il dit: "un murmure de silence et de méditation sera perpétué dans la mémoire de ceux présents et aidera dans différentes occasions à accomplir plus d'actions positives".*

*En préparant les grandes lignes des sujets de discussions Douglas Shadbolt rappelait que l'Exposé de la Profession conduit récemment par l'IRAC indiquait un mécontentement considérable parmi des architectes avec l'éducation qu'ils ont reçue quant à son efficacité en les préparant aux exigences de la pratique. En plus de la critique des Ecoles, l'Exposé a fait de fortes représentations pour des programmes sur la continuité de l'éducation. Depuis ce temps les Ecoles ont pris quelques initiatives en essayant de trouver un nouveau programme qui, croient-ils, se rapportera mieux aux directions futures de la pratique, comme ils la voient. Les intérêts des Ecoles et de la profession sont intimement associés, mais les communications entre-elles ont été limitées. Dans une période de changements rapides, ceci est une dangereuse situation pour l'avenir de la profession. Croyant qu'une réévaluation de l'éducation de l'architecte serait utile pour tous ceux qui sont concernés, le Conseil des Arts a rendu possible à l'IRAC, la tenue d'une conférence d'une semaine à Stanley House. Les praticiens et les éducateurs suivants ont été invités à y participer: \**

*John Bland, Montréal; Tore Bjornstad, Waterloo; Robert Briggs, Toronto; Ian Davidson, Vancouver; Guy Desbarats, Montréal; Luc Durand, Québec; Samuel Gitterman, Ottawa; William Greer, Toronto; Harry Mayerovitch, Montréal; Norman McMurrich, Toronto; Peter Prangnell, Toronto; Roy Sellors, Winnipeg; Douglas Shadbolt, Ottawa; Warren Smale, Simcoe.*

\*Voir Architecture Canada Septembre 1968, Page 21

*Stanley House meetings are sponsored by the Canada Council to provide an opportunity for people with common interests in the arts, humanities or social sciences to meet, discuss ideas and exchange points of view on a given theme, all in the hope the experience will be stimulating and rewarding and that lasting bonds of friendship and professional cooperation will be forged during the week long summer gatherings at the secluded Gaspé retreat. This was certainly the case when the group representing the Royal Architectural Institute of Canada met in August. One practicing architect, who attended as chairman of a committee, has since been appointed to a full time academic position at a new School of Architecture. In addition, the conference had a profound effect on the outlook of many attending; they are now dealing with the affairs of the Institute or their Schools with new understanding and purposefulness. Luc Durand gave expression to this feeling when, referring to the nature of the setting in which the talks were held, he said "a murmur of silence and meditation will be perpetuated in the minds of those present and will help on different occasions to achieve more positive action".*

*In setting out a broad outline of points for discussion, Douglas Shadbolt recalled that the Survey of the Profession conducted recently by the RAIC indicated considerable dissatisfaction by architects with the education they had received relative to its effectiveness in preparing them for the exigencies of practice. Besides criticism of the Schools, the Survey made strong representations for programs on continuing education. The Schools, since then, have taken some initiative in searching out new curricula which, they believe, relate better to the future directions of practice, as they see it. The interests of the Schools and of the profession are intimately connected but communication between them has been limited. In a period of rapid change this is a dangerous situation for the future of the profession. Believing that a reassessment of the education of the architect would be useful for all concerned, the Canada Council made it possible for the RAIC to hold the week-long conference at Stanley House. The following practitioners and educators were invited to attend:\**

*John Bland, Montreal; Tore Bjornstad, Waterloo; Robert Briggs, Toronto; Ian Davidson, Vancouver; Guy Desbarats, Montreal; Luc Durand, Québec; Samuel Gitterman, Ottawa; William Greer, Toronto; Harry Mayerovitch, Montreal; Norman McMurrich, Toronto; Peter Prangnell, Toronto; Roy Sellors, Winnipeg; Douglas Shadbolt, Ottawa; Warren Smale, Simcoe.*

\*See Architecture Canada September 1968, Page 21

*Douglas Shadbolt fut le président des assemblées tenues sans formalités, chaque jour sur la véranda ou dans le jardin dominant la Baie de Chaleur et le soir près d'un foyer allumé dans le salon de Stanley House. Le président assura que les objectifs énoncés de la conférence étaient réalisés durant les périodes de discussions. Au début, il mentionna que nous devrions examiner l'état de la profession de l'architecture avec une référence particulière au rôle de l'architecte dans l'industrie de la construction et évaluer son efficacité dans un état de conditions changeantes. Les discussions ont été concentrées autour d'une tentative de définir le nouveau rôle ou rôles de l'architecte pour rencontrer ces conditions changeantes et d'ébaucher les critères de performance requis pour les accomplir. Le groupe a examiné les programmes d'éducation courants et proposés, les idées et méthodes et a essayé d'évaluer leur efficacité pour obtenir les critères de performance voulus, considérant séparément les différents problèmes au niveaux des étudiants, des diplômés et des cours professionnels supplémentaires. Les implications des nouveaux rôles sur les attitudes, l'organisation et la présente administration de la profession ont été considérés avec l'idée de fournir des recommandations utiles à l'IRAC et aux Ecoles d'Architecture pour action appropriée.*

*Il y a eu une réalisation immédiate d'une véritable affinité entre la pensée de l'éducateur et du praticien. Ni l'un ni l'autre croyaient qu'elle existait, jusqu'à ce qu'ils expriment leur pensée ouvertement à l'assemblée amicale à Stanley House.*

*Un sommaire définitif ou critique des discussions qui ont résultées durant les cinq jours, sur la rive de la Péninsule de Gaspé, est impossible. C'était une opportunité d'explorer les idées avec d'autres qui partagent un intérêt spécial concernant le sujet de la conférence. Un rédacteur risquerait de faire un énoncé incomplet et la probabilité que les impressions et citations collectées n'exprimeraient pas avec précision l'intention des auteurs.*

*Cinq matières générales émergent de ces discussions:*

- 1. Le but de la profession dans une société changeante et le rôle de l'architecte.*
- 2. Les objectifs de l'enseignement d'architecture.*
- 3. Les influences d'une nouvelle technologie et des nouvelles méthodes de penser.*
- 4. La recherche comme source d'information.*
- 5. Liaison d'enseignement entre étudiants et la profession—bureau-atelier.*

*Douglas Shadbolt was chairman of the meetings, held informally each day on the verandah or the lawn overlooking the Baie de Chaleur and in the evenings beside a roaring fire in the living room of Stanley House. The chairman made sure that the stated objectives of the conference were realized in the discussion periods. Initially, he noted that we should examine the state of the profession of architecture with particular reference to the role of the architect in the building industry and evaluate his effectiveness in light of changing conditions. Discussions centred around an attempt to define the new role or roles of the architect to meet these changing conditions and to outline the performance criteria required to fulfill them. The group examined current and proposed educational programs, ideas and methods, then attempted to evaluate their effectiveness to meet the performance criteria, considering separately the different problems of undergraduate, graduate and continuing education. The implications of the new roles on the attitudes, organization and present administration of the profession were considered with the idea of providing useful recommendations to the RAIC and to the Schools of Architecture for appropriate action.*

*There was an immediate realization of a genuine affinity between the thinking of educator and practitioner that neither really believed existed until they expressed their thought openly to the free and friendly assembly at Stanley House.*

*A definitive summary or critique of the discussions that ensued during the five days on the shore of the Gaspé Peninsula is impossible. It was an opportunity to explore ideas with others who shared special concern about the subject matter of the conference. One risks incomplete statement and the probability that the impressions and quotations collected may not be expressed as their authors intended.*

*Five general topics emerged from the discussions:*

- 1. The purpose of the profession in a changing society and the role of the architect.*
- 2. The objectives of architectural education.*
- 3. The influences of new technology and new ways of thinking.*
- 4. Research as a source of information.*
- 5. Educational liaison between students and the profession—a teaching office.*

### Domaines d'Opportunité

Pratique Privée  
Service Public  
Service Demi-Privé  
Formation  
Industrie  
Propriété Immobilière et Développ.  
Institutionnel

### Expérience

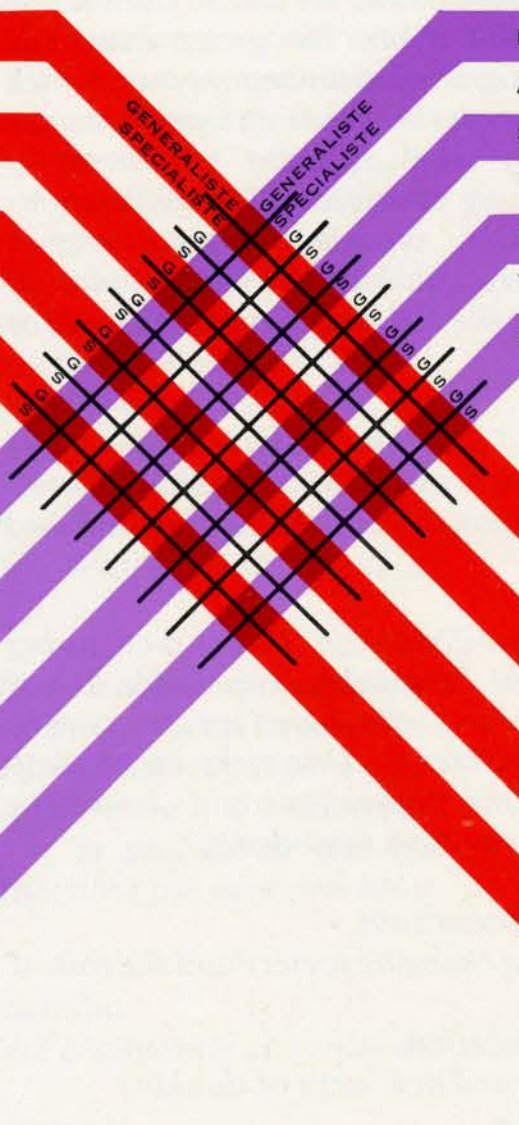
Projets Architecturaux  
Administration et Organisation  
Science et Technologie  
Recherche Appliquée et Développ.  
Production  
Ventes  
Renseignement et Communications

### Exemples d'Expérience

Systèmes Architecturaux  
Politique — Procédures  
Construction et Planification  
Environnement  
Rendements de Performance  
Tout Aspect et Possibilité  
Procédure et Organisation Totales  
Publicité  
Conseil Technique  
Journalisme — Moyens de Communication  
Méthodes Audiovisuelles

### Exemples d'Opportunité

Bureaux — Petit, Grand ou disciplinaire  
Sociétés désintéressées  
Services — Féd., Prov. ou Municipal  
Elu — Désigné — Employé  
Corporations de la Couronne  
Commission ou Agences  
Université — Diplômé ou Faculté  
Secondaire — Ecoles Primaires  
Construction  
Fabrication — Distribution  
Promotion — Ventes  
Hypothèque et Prêt  
Associations Professionnelles  
Fondations — Associations Religieuses



**Areas of Opportunity**

- Private Practice
- Public Service
- Semi-Public Service
- Education
- Industry
- Real Estate and Development
- Institutional

**Areas of Experience**

- Architectural Design
- Administration and Management
- Science and Technology
- Applied Research and Development
- Production
- Sales
- Information and Communications

**Examples of Experience**

- Architectural Systems
- Policy — Procedures
- Building and Planning — Environmental — Performance Calculations
- Every Aspect and Possibility
- Total Process and Handling
- Advertising — Technical Advisory
- Journalism — News Media Audio and Visual Methods

**Examples of Opportunity**

- Practices — Small, Large or Multi-disciplinary Non-Profit Corporations
- Departments — Fed. Prov. or Municipal Elected — Appointed — Employed
- Crown Corporations Commissions or Agencies
- University — Post Graduate or Faculty Secondary — Primary Schools
- Construction Manufacturing — Distribution
- Promotion — Sales Mortgage and Loan
- Professional Associations Foundations — Religious Bodies



## 1. Le But de la Profession dans une Société Changeante et le Rôle de l'Architecte

L'examen du rôle de l'architecte a été exprimé en forme graphique comme base pour discussion. Guy Desbarats a présenté "Le Grillage" une matrice qui dresse les opportunités du travail de l'architecte contre l'expérience connue des gradués universitaires formés dans l'architecture. Cette grande ligne démontre comment le rôle de l'architecte peut être varié et suggère le besoin, la direction et la fonction du produit d'une éducation orientée en architecture.

Il est dangereux de penser de l'architecture—ou autres recherches—comme quelque chose exercée sans limites spécifiques. L'essence de ce qu'est l'architecture est claire mais ses angles sont doux et fusionnent insensiblement avec plusieurs autres considérations. Pendant que des divisions professionnelles peuvent avoir quelques commodités, elles peuvent couper et déformer la réalité.

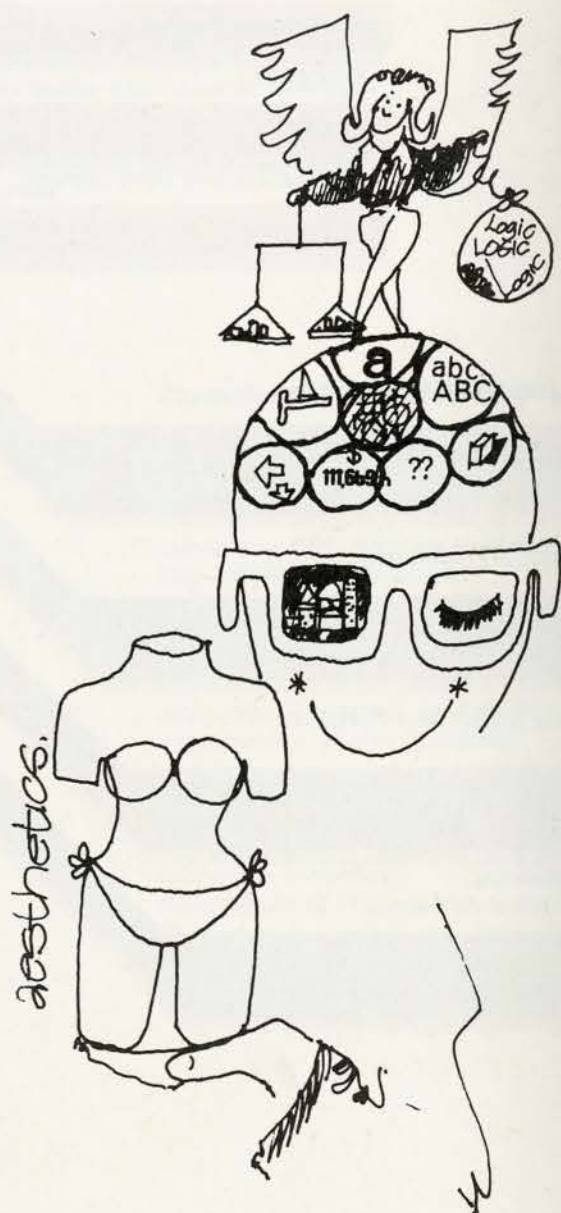
Le mouvement perpétuel semble être la tradition du siècle. Il est évident que le champ d'opportunités ouvertes aux architectes exige une nouvelle approche à l'éducation. Les délibérations apportent quelques mécontentements avec des produits passés des écoles d'architecture et, par conséquent avec le rôle subséquent de l'architecte. Il peut être impliqué dans l'ardeur de ceux présents de suggérer l'adoption du "nouveau" et oublier le passé, qu'ils exprimaient ici une certaine défensive. Quelque-uns pensaient que nous cherchions des améliorations et des remèdes sans un diagnostic précis et complet des problèmes de la profession. Quoique nous ne puissions déterminer précisément ce qui ne va pas dans le rôle actuel de l'architecte, nous avons quand même continué la recherche d'une vraie image de la situation telle qu'elle existe. Nous admettons que l'architecte *n'est pas* une simple entité dans son appel dynamique et qu'il devrait y avoir une réalisation générale de ceci s'il doit se spécialiser afin de faire face au défi de la technologie en épanouissement du dessin d'urbanisme et du dessin de la construction, ou autres confrontations.

Devons-nous chercher la formation de spécialistes avec des pensées quantitatives ou la formation de super-généralistes sans responsabilités?

A la longue, nous étions tous d'accord que nous aimerions croire que l'architecte de demain commencera comme un être humain qui travaille fort dans les complications de la technique d'aujourd'hui et finalement produit quelque chose d'une certaine valeur pour d'autres humains. Ceci n'est pas une vocation claire et on doute qu'elle le deviendra. Les architectes sont bons, mauvais ou indifférents—ordinairement sur la base de leur réelle implication avec la nature humaine. Ils seront ainsi jugés ou estimés par leur confrère.

Evidemment, les circonstances forcent de nouvelles voies de pratique, mais qu'elles sont ces nouvelles voies et sont-elles significatives? La matrice indique qu'il y a plusieurs nouvelles opportunités pour l'usage de la formation de l'architecture dans une variété de pratiques.

Le but du grillage, employant la forme graphique est d'examiner la distribution des emplois avec le total des positions disponibles dans l'industrie de la construction ainsi que de vérifier les polices de promotions de l'éducation et de la profession. Par ce moyen nous pouvons tenter d'assurer qu'il y aura une présence significative du point de vue de l'architecture au sein de la société.





## 1. The Purpose of the Profession in a Changing Society and the Role of the Architect

The examination of the role of the architect in society was expressed in graphic form as a basis for discussion. Guy Desbarats presented "The Grid", a matrix which plots the architectural job opportunities possible against the known experience of architecturally trained university graduates. This outline demonstrates how varied the role of the architect can be and suggests the need, direction and function of the product of an architecturally oriented education.

It is dangerous to think of architecture—or any other pursuit—as something practiced within specific boundaries. The essence of what is architecture is clear but its edges are soft and merge imperceptibly with many other considerations. While professional divisions may have some convenience, they can cut off and distort reality.

Perpetual movement seems to be the tradition of the century. It is obvious that the open field of possibilities offered to architects requires a completely new approach to education. The deliberations aired some dissatisfaction with past products of architectural schools and, therefore, with the architects' subsequent role. It might be implied, in the eagerness of those present to suggest adoption of "newness" and forget the past, that they were expressing a certain defensiveness here. Some felt that we were looking for improvements and remedies without an accurate and complete diagnosis of the problems of the profession. Although we could not be precise in determining what exactly is wrong with the present role of the architect, we nevertheless continued the search for a true picture of the situation as it exists. We agreed the architect is *not* a single entity in his dynamic calling and that there must be a general realization of this if he is to specialize to meet the challenge of the exploding technology of urban design and building design, or any other confrontation.

Must we seek the formation of specialists with quantitative minds or the formation of super-generalists without responsibilities?

In the long run, we all agreed that we would like to believe that the architect of tomorrow will start as a human being who works hard in the complications of today's technique and finally produces something of worth for other human beings. This is not a clear vocation and it is doubtful that it ever will be. Architects are good, bad or indifferent, usually on the basis of their real involvement with human nature. They will be so judged or estimated by their fellow men.

Circumstances obviously force new ways of practice, but what are these new ways and are they significant? The matrix indicates that there are many new opportunities for the use of architectural training in a variety of practices.

One purpose of the grid, using the graphic form, is to examine the employment distribution with the total available job opportunities in the building industry so as to verify educational and professional promotional policies. In this way we can attempt to ensure that there will be a significant presence of architectural point of view within society.

The indications are that the matrix might serve as a useful tool in calculating the existence of and the need for registered architects. It may also be possible for alumni associations to use the principle as a

Les indications sont que la matrice pourrait servir comme un outil utile en calculant l'existence de, et le besoin pour les architectes enregistrés. Il est possible aussi que les anciens étudiants d'associations emploieront le principe comme une base extrêmement possible sur laquelle on peut examiner les rôles fonctionnels exercés par les individus, autres que ceux qui ont une formation en architecture, lequel rôle pourrait être joué par des diplômés en architecture à des degrés variés d'occupation après la graduation. C'est aussi une base extrêmement possible sur laquelle on peut examiner les rôles fonctionnels exercés par des individus, autres que ceux qui ont une formation en architecture, lequel rôle pourrait être joué par des diplômés en architecture.

Le grillage démontre une multitude de rôles pour le généraliste et le spécialiste dans le domaine de l'architecture. Chaque section peut être développée bien au delà de ce qui est indiqué. L'impact d'une personne ayant une formation en architecture pourrait se faire ressentir dans bien d'autres champs d'opérations. Les indications peuvent bien être que nous n'entraînons pas assez de gens dans la voie de notre profession et que, si nous augmentons le rendement de personnes bien formées, l'impact de notre profession dans la société deviendra plus effectif beaucoup plus tôt.

A la fin, les participants à la conférence sentaient que le rôle unique de l'architecte était la formation de concepts en construction où spécifiquement le jugement est impliqué en relations avec les êtres humains. Harry Mayerovitch l'a résumé avec concision lorsqu'il a dit qu'on pourrait dire que les architectes exercent leurs fonctions dans leur domaine comme s'ils étaient une conscience pour l'industrie de la construction.

## **2. Les Objectifs de l'Education en Architecture**

Le rapport entre les écoles et la profession pratiquée dans tous les stades de l'éducation et rééducation, et l'emploi, était de premier rapport. Les discussions ont inclus une considération de participation des étudiants et de la faculté dans les affaires et l'administration d'associations et instituts professionnels. Le rapport concernant cette topique réapparaît mais, puisqu'il est difficile de séparer l'éducation de la formation, nous considérons spécialement l'étudiant n'ayant pas son diplôme et sa relation avec la faculté à la pratique de la profession et sa période interne après sa graduation.

Le besoin le plus important pour le diplômé, autre que l'expérience de la pratique, peut être celui d'un cours avancé, ou post-gradué, ou d'éducation sous forme de spécialisation se rapportant à la recherche qui en retour porte une intime relation aux besoins de la pratique de la profession et aux agences publiques.

Au delà des besoins d'éducation des étudiants, il y a une demande sérieuse pour l'éducation continue par les architectes pratiquants et, en grands termes, par le public en général. Un rapport plus rapproché entre les écoles d'architecture et la profession est des plus désirable dans ce genre d'éducation qui présente de grandes opportunités pour une recherche active et informative dans plusieurs sphères de la pratique et des techniques.

La longueur du programme d'études et son contenu établis par les écoles sont différentes dans presque tous les cas. Depuis qu'il y a tant de

basis of a survey to calculate the position of their graduates in architecture at various stages of occupation after graduation. It is also an extremely workable basis on which to examine the functional roles exercised by individuals, other than those architecturally trained, whose role might be played by architecturally trained graduates.

The grid demonstrates a multitude of roles for the generalist and the specialist in the architectural field. Each section can be expanded well beyond that indicated. The impact of a person who has received architectural training could be felt in so many fields of endeavour. The indications may well be that we are not training nearly enough people in the way of our profession and that, if we increased the output of well trained people, then the impact of our profession on society would be more effective that much sooner.

In the end, conference participants felt that the unique role of the architect was in concept formation in the building field where, specifically, it involved judgment in relation to human beings. Harry Mayerovitch summed it up most concisely when he said that "architects could be said to function as the conscience of the building Industry".

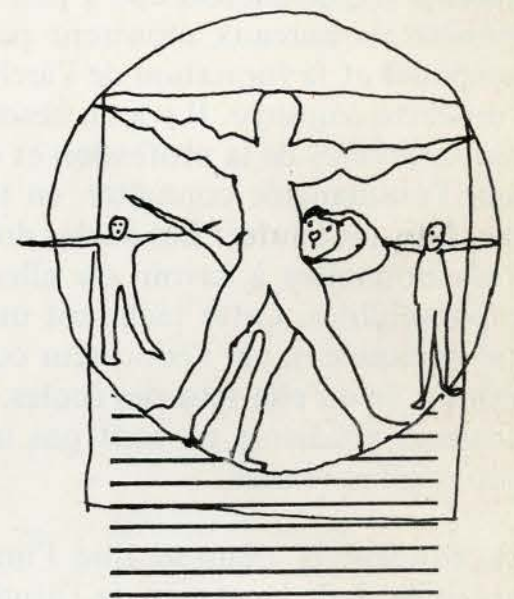
## 2. Objectives of Architectural Education

The relationship between the Schools and the practicing profession in all stages of training, retraining, and employment, was of prime concern. Discussions included a consideration of participation by students and faculty in the affairs and administration of professional associations and institutes. Much of the concern about this topic recurs but, since it is difficult to separate education from training, we considered specially the undergraduate and his relation to the faculty, to the practicing profession and his internship period after graduation.

The most important need of the graduate, other than practical experience, can be one of advanced, or post-graduate education where some form of specialization is the main purpose. Specialization relates to research which in turn bears an intimate relationship to the needs of the practicing profession and to public agencies.

Beyond the educational needs of graduate students there is a serious demand for continuing education by practicing architects and, in broad terms, by the public-at-large. A close relationship between the Schools of Architecture and the profession is most desirable in this type of education, which presents great opportunities for active and informed research into the many spheres of practice and techniques.

The length of the program and the format of the curriculum established by Schools is different in almost every case. Since there are so many fields to serve, this variety is desirable and it gives an opportunity for students to choose their approach to general education, as well as to specialization later. A set length of time for any course is really only useful for administrative purposes and limitations may not serve the best interests of either the individual student or the profession as a whole. It is possible to prescribe a series of approaches to general education so students may make the selection of an option around a central main stream. In the course structure there should be no constraint on leaving for a period of travel or practical experience. The



domaines à servir, cette variété est désirable et elle présente l'occasion aux étudiants de choisir leur approche à une éducation générale, aussi bien qu'à une spécialisation plus tard. Quelque soit le cours, une période définitive n'est réellement pas utile sauf pour des buts administratifs et les limitations ne servent peut-être pas les meilleurs intérêts de l'étudiant en particulier ou de la profession en général. Il est possible de prescrire une série d'approches à l'éducation générale afin que les étudiants puissent faire la sélection d'une option autour d'un programme directeur. Dans la structure des cours, il ne devrait pas y avoir de contrainte sur un départ pour une période de voyage ou expérience pratique. La qualité du produit de finition est le seul point réel en question. La profession accepte le jugement de l'école quand un diplôme en architecture est accordé, mais que vaut ce diplôme? Il ne désigne pas nécessairement le gradué pour la profession. Un degré d'étudiant est seulement l'évidence de l'habileté de l'étudiant de venir à bout d'une complexité de construction avec une compétence raisonnable. Ceci était l'objectif dans le passé, mais maintenant il y a du changement. La profession a mise une responsabilité sur l'école de présenter un produit compétent. Maintenant la question est: est-ce que les écoles produisent un gradué qui est adaptable aux rôles variés que nous avons antérieurement essayé de définir? En réalité, il se peut qu'un nombre de sujets enseignés à l'université pourraient être mieux enseignés ailleurs, depuis qu'à l'université ils emploient un temps précieux qui doit être disposé pour une éducation réelle. Plusieurs aspects de la formation pourraient être mieux enseignés dans des conditions actuelles, plutôt que dans l'ambiance artificielle de l'école.

L'expérience de bureau peut être d'une qualité variée pour les étudiants. Quelquefois elle a peu de valeur lorsque les professionnels opérant les bureaux montrent pas plus d'intérêt dans l'avancement personnel et la formation de l'architecte interne que dans la situation d'un autre employé. Il y a un besoin pour une entente rapprochée des responsabilités de la profession et du professeur. Il y a aussi un besoin pour l'étudiant de connaître, en tout temps où il se place en relation avec l'un ou l'autre. Les écoles doivent travailler avec les associations professionnelles à savoir où elles se tiennent en rapport avec les responsabilités. Cette tâche est une responsabilité qui ne devrait pas être abdiquée ni par l'éducateur ou les associations. La profession doit énoncer ce qu'elle veut des écoles, dans une claire compréhension, que plusieurs étudiants ne sont pas intéressés, excités ou inspirés par le corps professionnel.

Les éducateurs pensent que l'image de la profession est souvent implantée dans la pensée de l'étudiant à l'école secondaire, et qu'en résultat les étudiants eux-mêmes se présentent aux écoles d'architecture sont déjà mal informés sur la direction et l'intention de la profession. La qualité des candidats est améliorée d'année en année. Ils sont plus idéalistes et ont une forte vue de la réalité. Il peut être même dit que l'attitude de l'étudiant débutant est maintenant souvent plus disposée à l'espérance que celle de la profession. Est-ce qu'il se peut que la profession n'a pas l'esprit assez ouvert au changement indiqué? Si non, alors une attention immédiate aux conséquences est impérative. Une action positive est requise et tôt.

Il a été pensé dans quelques instances, que le programme des études dans les écoles ne considère pas l'étudiant comme un individu, mais qu'en établissant des règles il le force vers un modèle défini. En vue du rôle changeant de l'architecture dans la société, il était fortement pensé qu'il y a une nécessité pour la plus large flexibilité dans l'opportunité du choix et pour l'autodétermination au sein des Ecoles et, par delà, dans la profession. Les Ecoles en particulier envisagent une double responsabilité:

quality of the end product is the only real point in question. The profession accepts the judgment of the School when an architectural degree is granted, but what does the degree mean? It does not necessarily fit the graduate for the profession. An undergraduate degree is only evidence of the ability of the student to cope with a reasonable complexity of building with reasonable competence. This was the objective in the past, but there is now a change. The profession has put a responsibility on the School to turn out a competent product. Now, the question is: are the Schools producing a graduate who is adaptable to the various roles which we have previously attempted to define? In reality it may be that a number of the subjects taught in university could be taught better elsewhere since, in university, they occupy valuable time which should be available for real education. Many facets of training could be better taught in actual conditions, rather than in the artificial atmosphere of the School.

Office experience can be of varying quality for students. Sometimes it is very poor, since the professionals operating the offices show little interest in the personal advancement and training of the intern architect over that of any other employee. There is a need for a close understanding of the responsibilities of the profession and the educator. There is also a need for the student to know, at all times, where he stands in relation to either one. The Schools must attempt to work out with the professional associations what the responsibilities are and where they lie. This task is a responsibility which should not be abdicated by either the educationalist or the associations. The profession must state what it wants from the Schools, in the clear understanding that many of the students may not be interested, excited or inspired by the professional body.

Educationalists feel that the image of the profession is often implanted on the student in high school and, as a result, those presenting themselves as students at Architectural Schools are already misinformed on the direction and intent of the profession. The quality of the applicants is better each year. They are more idealistic and have a strong view of reality. It might even be said that the attitude of the incoming student is now often far more hopeful than that of the profession itself. Can it be that the profession is not open minded enough to the change indicated? If it is not, then immediate attention to the consequences is imperative. Positive action is required and soon.

It was thought in some instances that the curriculum of the Schools does not consider the student as an individual but that, by established rules, it forces him into a set pattern. In view of the changing role of the architect in society, it was strongly felt that there is a necessity for the widest flexibility in opportunity for choice and for self determination within the Schools and, beyond that, in the profession. Specifically, the Schools face a double responsibility:

- (i) To train the students to an understanding of the significant facts of modern life and technology from the special viewpoint of the architectural discipline. This involves an understanding of the dual equipment of the human being—his capacity to deal with a situation rationally, objectively; and his capacity to deny and defy (often subjectively) forms previously determined as rational but which may have outgrown their usefulness. In short, to dream, to imagine and to conceive.
- (ii) To train students as craftsmen in the day-to-day translation of building needs to building facts. Considering this, it was felt that we would admit that the Schools and the profession are not consciously attempting to produce the architect of tomorrow but

- (i) De former les étudiants à la compréhension des faits significatifs de la vie moderne et la technologie du point de vue spécial de la discipline de l'architecture. Ceci comprend une compréhension de la double équipe de l'être humain, sa capacité de traiter avec une situation rationnellement, et avec objectivité et sa capacité de dénier et défier (souvent subjectivement) des formes précédemment déterminées comme étant rationnelles, mais qui peuvent avoir dépassé leur nécessité. En résumé, de rêver, d'imaginer et de concevoir.
- (ii) D'importance égale la formation des étudiants comme artisans dans la traduction d'un jour à l'autre des besoins en construction en faits de la construction. Considérant cela, nous sentions que nous pourrions admettre que les écoles et la profession ne sont pas conscientes de tenter à produire l'architecte de demain mais qu'ils essaient de produire le genre de personne qui sera la plus logiquement développée dans l'architecture de demain. Il a été agréé qu'aucune accentuation sur "l'expression créative de soi-même" fait, et a fait beaucoup de dommage, non seulement à l'individu impliqué, mais à la profession en général.

Que ce soit général ou spécial, les disciplines essentielles de la formation en architecture sont:

- (a) *Formation de concept*—tout le domaine de solution des problèmes, la formation de jugements de valeur, la présentation de situations et la manière de prendre des décisions. Il devrait être souligné que l'environnement pour un humain doit être la fin, et ceci veut dire que la technologie, quoique d'importance significative, ne doit être qu'un asservissement à cette fin.
- (b) *Science de la planification*—l'architecte a besoin d'une formation technologique de la planification, sur une petite échelle et sur celle de l'urbanisme. Ceci doit inclure une connaissance des systèmes de mouvement, des procédures gouvernementales, par systèmes d'analyse, des applications de l'ordinateur et une vaste étendue de sujets spécialisés.

Dans toutes les approches variées de l'éducation qui ont été discutées deux genres émergent comme étant importants:

- (i) La formation des architectes à comprendre la condition humaine par l'intermédiaire de disciplines variées, leurs frontières étant éliminées. Ceci pourrait engager (ou développer) une nouvelle formation en architecture, employant comme modèle le concept exprimé comme étant la philosophie connue sous le terme de "université libre".
- (ii) La méthode "systèmes" appliquée à la formation des architectes, présupposent une connaissance d'analyse par systèmes, la recherche "d'opérations" et toutes les techniques de solutionner les problèmes développés par la science et l'industrie. Le procédé de l'architecture, à partir par la science et l'industrie. Le procédé de l'architecture, à partir du rassemblement des données, la solution de problèmes et la production jusqu'à la réalisation pourrait être enseigné comme séries de systèmes.

Il a été agréé à l'unanimité, à Stanley House qu'il devrait y avoir une communication plus étroite entre les écoles d'architecture et la profession. Ce sentiment a été exprimé à plusieurs reprises durant les discussions. Quelques uns des moyens de créer une communication utile entre ces deux éléments se trouvent dans les deux dernières sections sur La Recherche et Le Bureau-Atelier.

are trying to produce the type of person who will most logically develop into the architect of tomorrow. It was agreed that any emphasis on "creative expression of self" does, and has done, great damage, not only to the individual involved but to the profession at large.

Whether it be general or special, the essential disciplines of architectural training are:

- (a) *Concept formation*—the whole field of problem solving, the making of value judgments, structuring situations, and decision making. It should be stressed that the environment for a human being must be the end, and this means that technology, although of significant importance, must be subservient to this end.
- (b) *Planning science*—The architect requires training in the technology of planning, both at the small scale and on the urban scale. It must include a knowledge of movement systems, governmental processes, systems analysis, computer application and a wide range of specialist subjects.

In all the various approaches to education that were discussed, two types emerged as being important:

- (i) The training of architects to understand the human condition through input from various disciplines, the boundaries of which have been eliminated. This could involve (or evolve) a new kind of architectural training, using as a model the concept expressed in the philosophy of what is known as the "free university".
- (ii) The systems approach to the training of architects, presupposing a knowledge of systems analysis, operations research and all the various problem-solving techniques developed by science and industry. The architectural process, from data collection, problem solving and production through to realization, could be taught as a series of systems.

It was unanimously agreed at Stanley House that there should be closer communication between the Schools of Architecture and the profession. This feeling was expressed over and over again throughout discussions. Some of the ways to create a working communication between these two elements are found in the last two sections on Research and the Teaching Office.

### **3. The Influences of New Technology and New Ways of Thinking**

Every discussion at Stanley House reflected the great impact on current architectural thinking of new technological developments. Systems analysis promotes one new way of thinking which, like the scientific attitude, can extend understanding; and another relates to the computer, which can handle unprecedented masses of data with speed and accuracy hitherto impossible in attacking architectural problems. A certain infatuation with these techniques is perhaps understandable, but it can also lead to distorted attitudes. The technological approach can overemphasize the purely measurable aspects of the architect's work, when other aspects must not be ignored. The ever-present

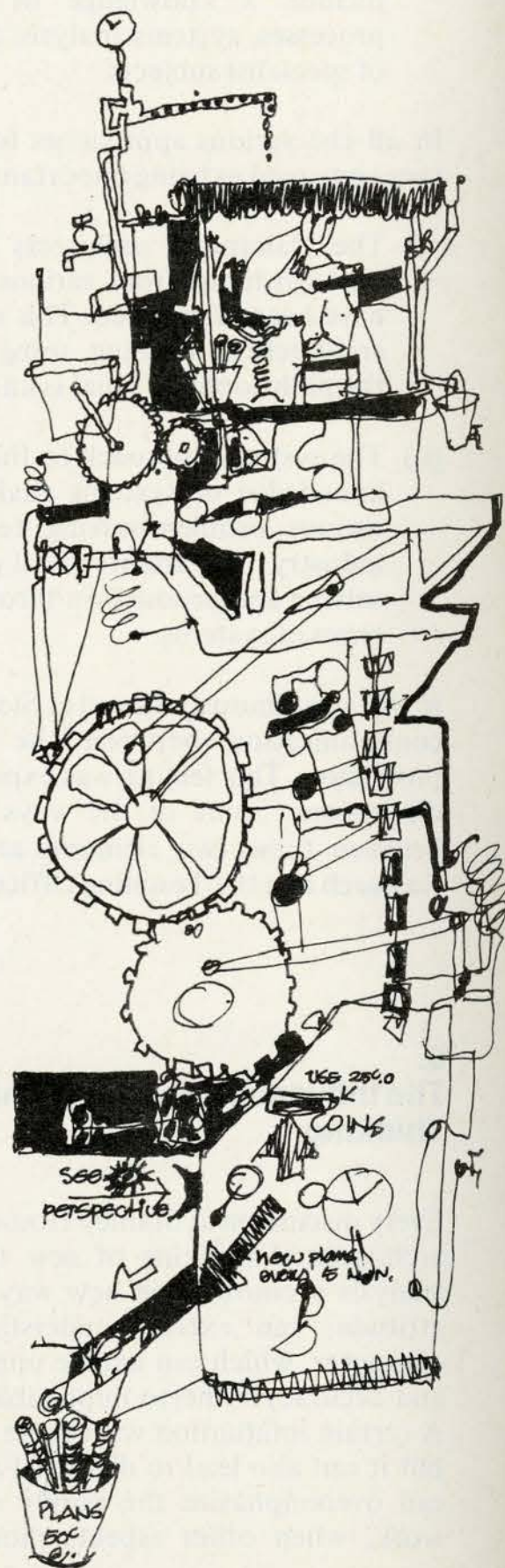
### 3. Les Influences d'une Nouvelle Technologie et des Nouvelles Méthodes de Penser

Chaque discussion à Stanley House reflétait la forte impression que font les nouveaux développements technologiques sur la pensée de l'architecte. L'analyse par systèmes favorise une nouvelle manière de penser qui, comme l'attitude scientifique, peut augmenter la compréhension; et une autre attachée à l'ordinateur, qui peut manipuler un volume de données sans précédent avec rapidité et exactitude jusqu'ici impossible, en attaquant les problèmes de l'architecture. Une certaine infatuation avec ces techniques est peut être compréhensible, mais il se peut aussi qu'elle entraîne à des attitudes déformées. L'approche technologique peut accentuer trop les aspects purement mesurables du travail de l'architecte lorsque d'autres aspects ne doivent pas être ignorés. La situation toujours présente est une d'action et de réaction lorsque nous luttons à faire bon emploi des développements pour lesquels quelquefois des éloges exagérés sont faits.

La nouvelle méthode de penser apportée par la nouvelle technologie est beaucoup plus importante que d'employer la technologie à produire de multiples perspectives des rappels instantanés ou un facturation automatique. L'ordinateur introduit les architectes aux recherches d'opérations et à l'analyse par systèmes. La logique symbolique et les mathématiques qui s'écoulent de l'ordinateur (tels que les matrices à trois dimensions, les entrephases, les entrecroisements et les réseaux) ouvrent les portes à une meilleure compréhension du problème complexe et à plusieurs vues du dessin de bâtiments et au delà de ceci, de l'environnement urbain. Cette nouvelle préoccupation de systèmes se concernant avec l'expérimentation abstraite dans l'exploitation de possibilités, se rapporte directement aux problèmes du dessin de conception exactement comme l'attitude scientifique, il y a cent ans, fournissait un nouveau sens de direction à l'architecture, quoique les expériences contrôlées actuelles étaient rarement une possibilité pour l'architecte.

Il y avait une unité évidente d'intérêt, entre ceux représentant les écoles et ceux représentant la profession, à élargir l'étendue de la pratique contrôlée et limitée par des forces opérant dans la société courante. Ceci est ainsi partiellement à cause de l'inexpérience de la profession avec les nouvelles avances technologiques dans le domaine de la planification et de la gestion. Si la profession doit continuer à être une force substantielle dans le façonnement humain, elle doit s'efforcer à produire une plus grande influence dans certains territoires où les architectes ont commencé à quitter (par exemple, les arrangements systématiques de concepts de planification). La logique de l'ordinateur et son application, trouveront dans un avenir rapproché un usage plus courant dans tous les aspects de la pratique de l'architecture, de l'organisation des procédures de gestion au dessin créatif.

Dans le domaine de la science de l'ordinateur et de la nouvelle technologie, il y a un sentiment parmi les architectes que les moyens deviendront plus importants que la fin et que le besoin humain et la vue inspirée de l'homme et son environnement pourraient être perdus dans le développement. L'architecte doit continuer à réaliser ses fonctions comme humaniste en appliquant les découvertes de toutes sortes en science à la technologie. Ce sentiment indique qu'il pourrait y avoir une dichotomie et, s'il en était, cela concerne l'action que "tant d'attention au procédé supprime le but de l'architecture"; que l'architecture est un domaine où l'éthique et la moralité sont engagés;





situation is one of action-and-reaction as we struggle to make good use of developments for which, sometimes, exaggerated claims are made.

The new method of thought, brought about by the new technology, is far more important than using the technology to produce multiple outline perspectives, instant recall or automatic billing. The computer introduces architects to operations research and systems analysis. The symbolic logic and the mathematics that flow from it (such as three-dimensional matrices, interphases, crossovers and networks) opens doors to a wider understanding of the complex, multi-faceted problems of designing buildings and, beyond this, of the urban environment. The new systems attitude, concerned with abstract experimentation in the exploration of possibilities, is directly relevant to the problems of design, just as the scientific attitude one hundred years ago provided a new sense of direction to architecture, even though actual controlled experiments were seldom a possibility for architects.

There was an evident unity of interest, between those representing the schools and those representing the practicing profession, to widen the scope of present practice. Currently, professional practice seems to become more directed, controlled and limited by the forces operating in society. This is so, partly because of the profession's unfamiliarity with new technological advances in the area of planning and management. If the profession is to continue to exercise any substantial impact on the shaping of the human environment, it must force itself to become a greater influence in certain areas which architects have begun to vacate (for example, systematic layout of planning concepts). The computer logic and its application will find, in the near future, an ever-increasing use in all aspects of architectural practice, from management procedures to creative design.

In the realm of computer science and the new technology there is a lingering feeling among architects that the means will become more important than the end and that the much needed humane and inspired view of man and his environment could be lost in the process. The architect must still perform his function as a humanist while applying the discoveries of all kinds of science through technology. This thought indicates that there might be a dichotomy and, if so, it concerns the plea that "so much attention to process excludes the aim of architecture"; that architecture is the "art of conscience" of the building industry; that architecture is an area where ethics and morality are involved; that the architect is concerned with the quintessence of fitness; and that he should be aware of larger social concerns well beyond the utilitarian.

Agreement centred upon the notion that architecture involves the understanding of the totality of a problem. The logical continuation of this thinking brought about an examination of interdisciplinary team action in environmental and urban design. The architect is a vital part of the team and, when working in collaboration with other disciplines, he should do all he can to break down interdisciplinary barriers. This feeling alone indicates a recognition of such barriers and of the need for their removal. A branching away not only exists in differences between allied professions but also, as noted earlier, in the separation of courses in school programs or in significant differences between students and the profession.

The new thinking leads to a greater exchange of ideas and an understanding of the common problems and goals of all disciplines. The aim is to build bridges, not barriers. One of the best ways to do this is to use as bridges the accumulation of information employing the new

que l'architecte se concerne avec la quintessence de la convenance; et qu'il devrait être averti de plus grands rapports sociaux bien au delà de l'utilitaire.

Une entente s'est concentrée sur la notion que l'architecture engage la compréhension de la totalité d'un problème. La continuation logique de cette pensée apporta l'examen de l'action de groupes interdisciplinaires dans la conception d'environnement et de dessin urbain. L'architecte est une partie vitale de l'équipe et, en travaillant en collaboration avec d'autres disciplines, il doit faire tout ce qu'il peut pour abattre les barrières interdisciplinaires. Ce seul sentiment indique une reconnaissance de telles barrières et le besoin pour leur suppression. Un branchement existe non pas seulement en différences entre professions alliées mais aussi comme mentionné auparavant, dans la séparation des cours dans les programmes scolaires ou en différences significatives entre étudiants et la profession.

La nouvelle pensée conduit à un plus grand échange d'idées et à une compréhension des problèmes et buts communs de toutes disciplines. L'objet est de bâtir des ponts, et non des barrières. La meilleure manière d'accomplir ceci est d'employer comme ponts l'accumulation de renseignements en employant la nouvelle technologie. Un intérêt attardé dans la préservation de l'identité de la profession "telle qu'elle existe" persiste toujours comme cela n'a jamais été l'habitude de la profession de pratiquer ou d'encourager l'échange d'information ou d'opinions. Cette nouvelle manière de penser conduira à un changement professionnel.

#### **4. La Recherche comme une Source d'Information**

Dans la pratique les architectes sont toujours à faire d'authentiques recherches dans leurs bureaux, mais c'est intuitif et sans structure. Les architectes généralement n'ont pas assez de connaissances de la discipline de la recherche. En plus, quant une tâche de recherche est exercée, il y a un manque de circulation de l'information, pas seulement dans le bureau lui-même mais dans la profession en général.

La recherche dans l'ensemble de l'industrie de la construction n'est présentement pas coordonnée et la direction de celle-ci a été inégale et peu profonde, quoique souvent de grande valeur. Par conséquent, la recherche doit être organisée sérieusement comme une chaîne puissante entre le présent et le futur. L'énoncé et l'assignation des problèmes dans l'ensemble d'un programme devraient être travaillés conjointement par les professionnels engagés et les écoles. Sur cette base, il est possible que les objectifs de recherches seront regardés plus sérieusement par les corps garants— publics et privés—que celles des méthodes dominantes du hasard.

Si l'architecture est "une recherche non structurée intuitivement exprimée dans la création d'environnements alternatifs", alors il y a une bonne raison, pour nous en tant que profession, de réviser les sources de fonds pour recherches, les méthodes de mise en oeuvre et la formation de subventions dans cette poursuite. Les principales sources réelles ou possibles de fonds dans l'industrie de la construction sont, fédéralement, le Conseil National des Recherches, la Société Centrale d'Hypothèque et de Logement, le Conseil des Arts, le Ministère de

technology. A lingering interest in the preservation of the identity of the profession "as such" still exists, since it has not been a habit of the profession to practice or encourage the exchange of information or opinion. This new way of thinking will lead to professional change.

#### 4. Research as a Source of Information

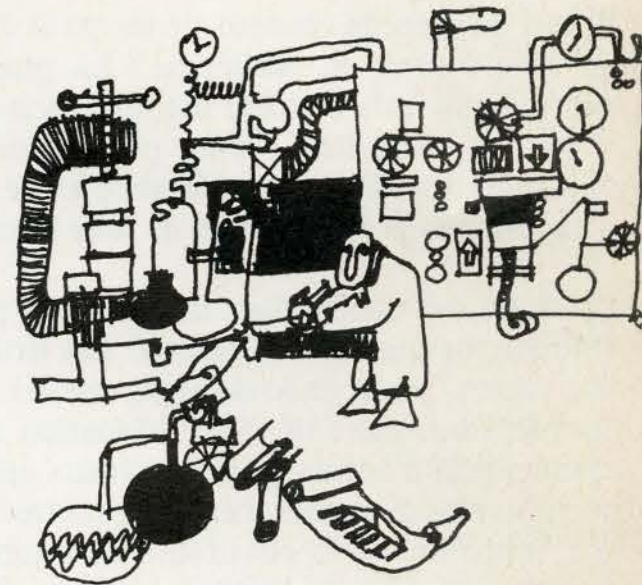
Architects in practice are always doing genuine research within their offices, but it is intuitive and unstructured. Architects, generally, lack knowledge of the discipline of research. Furthermore, once a research task is carried out, there is a lack of circulation of the information, not only within the office itself but to the profession at large.

Research in the whole building industry is presently uncoordinated, and direction of it has been patchy and shallow, though often most valid. Research, therefore, must be more seriously organized as a powerful link between the present and the future. The stating and assignment of problems in an overall program should be worked out jointly by the professionals involved and the Schools. On this basis, possibly, the objectives of research would be regarded more seriously by sponsoring bodies—both public and private—than are the prevailing haphazard methods.

If architecture is "unstructured research intuitively expressed in the creation of alternative environments", then there is good reason for us, as a profession, to review the sources of funds for research, the methods of application, and the making of grants for this purpose. The chief real or possible sources of funds in the building industry are, federally, the National Research Council, Central Mortgage and Housing Corporation, the Canada Council, the Department of Industry, Trade and Commerce and of Labor; provincially, the appropriate ministries of education, industry and culture; and generally, private corporations, including industries related to building; private foundations; and, finally and probably the smallest source, the members of the profession, collectively or individually. Most of these bodies grant funds for research largely in the area of building technology only and little money is available for environmental research, including the vast area of architectural feedback and performance evaluation.

It is a costly process in time and effort to apply for research funds. Most architects are completely unaware of how to apply for them even if they wished to. Greater communication in the dissemination of knowledge and information therefore is required in order to encourage research and to make effective use of the results.

The task of the Schools in research can be to stake out the areas requiring attention. Proposals could be received from the Schools for endorsement by the provincial associations and coordination by the RAIC. The training of new teachers and the retraining of others for new student programs and research programs must be investigated. In addition to the Schools, there is another obvious field for coordination and promotion by several committees of the RAIC. The Research Committee can establish criteria for areas of research, encourage improvement in the professional ability to define problem areas, and advise how funds may be procured. The Education Committee can assist in the process of isolating the problem areas and determining methods of action in the educational fields. The representatives of Schools and the profession come together in the Education Committee



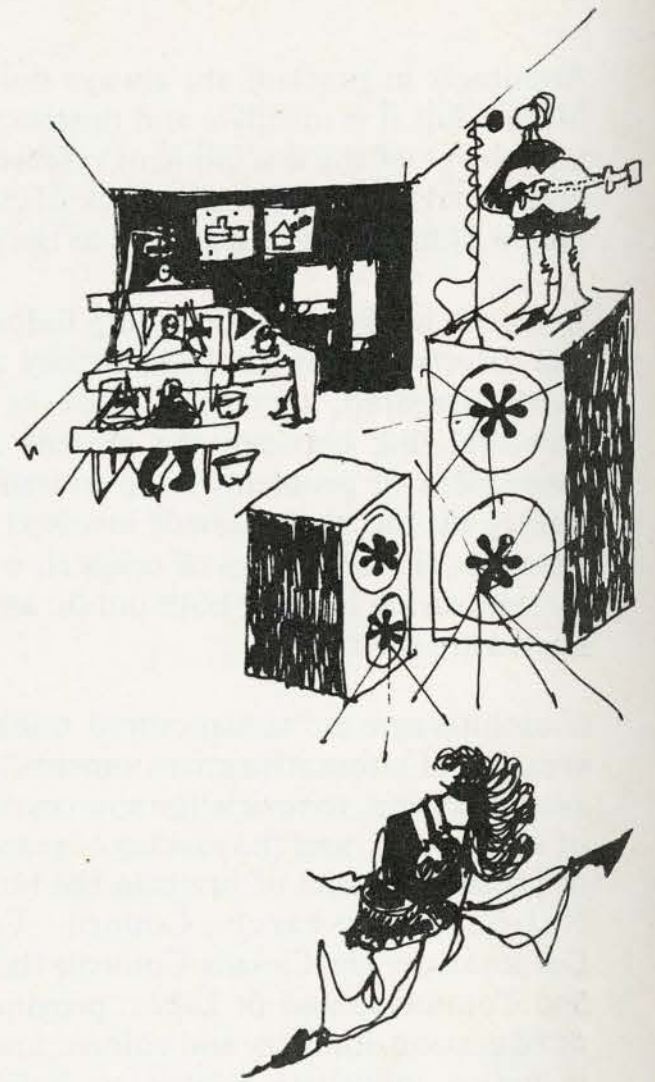
l'Industrie et du Commerce et du Travail; provincialement, les ministères appropriés à l'éducation, l'industrie et la culture, et généralement, les corporations privées, incluant les industries se rapportant à la construction, les établissements privés, et finalement et probablement la plus petite source, les membres de la profession, collectivement ou individuellement. La plupart de ces corps accordent des fonds surtout pour recherches dans le domaine de la technologie constructive mais très peu d'argent est disponible pour la recherche de l'environnement, et pour la dissémination de renseignements dans la profession et l'évaluation de la performance.

Il faut un procédé couteux de temps et d'effort pour faire une demande de fonds pour la recherche. La plupart des architectes ignorent complètement la manière d'application pour obtenir ces fonds, même s'ils le désiraient. Une plus grande communication dans la dissémination de la connaissance et de l'information est requise afin d'encourager la recherche et de faire l'usage des résultats.

La tâche des écoles dans la recherche peut être de se concentrer aux endroits demandant attention. Les propositions peuvent être reçues des écoles, pour endossement, par les associations provinciales et la coordination par l'IRAC. L'éducation de nouveaux professeurs et la rééducation d'autres, pour nouveaux programmes pour étudiants et les programmes de recherches doivent être étudiés. En dehors des écoles, il y a évidemment la possibilité de coordination et de promotion par plusieurs comités de l'IRAC. Le Comité de Recherches peut établir les critères, pour établir les domaines de recherches, encourager l'amélioration dans l'habileté professionnelle à définir les endroits ayant des problèmes, et aviser comment les fonds peuvent être procurés. Le Comité d'Education peut assister dans le procédé à isoler les endroits ayant des problèmes et déterminer les méthodes d'action dans les domaines d'éducation. Les représentants des écoles et la profession s'unissent en conférence dans le Comité de l'Education et en travaillant conjointement, peuvent préparer une direction pour la recherche et aussi se rencontrer avec d'autres corps qui sont orientés vers l'environnement (tels que sociologistes, urbanistes et autres groupes professionnels semblables). La Commission des Publications de l'IRAC a une responsabilité d'enregistrer l'existence de la recherche et de transmettre en détails, où il est possible, la richesse d'information potentiellement disponible. La publication des découvertes et des résultats de recherches peuvent servir de liaison entre tous les membres de la profession et avec d'autres disciplines et les organisations de construction et du développement communautaire. Avec le manque de telle communication, il pourrait y avoir une répétition d'efforts et l'utilisation de découvertes par la recherche ne serait pas possible.

La recherche est interdisciplinaire et ne peut pas être organisée dans un vide. Les universités entourant toutes disciplines clairement ont un rôle très important à jouer et les écoles d'architecture avec elles sont une partie vitale dans un service total à l'industrie de la construction. Partout de bons hommes doivent être trouvés dans le but de rencontrer les besoins de l'industrie de la construction et d'améliorer l'environnement de l'homme.

Les jugements professionnels doivent être faits sur la base de la collection d'information et de l'analyse par la recherche et l'évaluation. Les systèmes doivent être développer pour l'emploi et l'extension de cette information particulière. La recherche offre à la profession un moyen de traiter positivement avec les facilités d'études techniques par "systèmes" et l'analyse systématique et les aptitudes possibles dans la science appliquée de l'ordinateur.



and, working jointly, can set a trend for research as well as meet with other bodies which are environmentally oriented (such as sociologists, planners and other similar professional groups). The Publications Board of the RAIC has a clear responsibility to record the existence of research and to transmit in detail, where possible, the wealth of information potentially available. Publication of the findings and results of research can serve as a useful link between all members of the profession and with other disciplines and organizations in building and community development. Lacking such communication, there might be duplication of effort and early utilization of findings would not be possible.

Research is interdisciplinary and cannot thrive in a vacuum. The universities encompassing all disciplines clearly have a most important role to play and the Schools of Architecture within them are a vital part in a total service to the building industry. The right men everywhere must be found to head the research councils, foundations and institutes in order to meet the needs of the building industry and to aid in the betterment of man's environment.

Professional judgments must be made on a wide base of data collection and analysis through research and measurement. Systems must be developed for the expansion and employment of this particular data. Research gives scope to the profession to deal positively with the facilities of systems engineering and analysis and the possible skills in applied computer science.

Leadership is needed immediately. The architectural profession must plan and promote research and arrange for systematic communication.

## **5. Educational Liaison between Students and the Profession – A Teaching Office**

An architect will be far more effective as a professional by acknowledging and participating in the continuous learning process. Communication between all levels of the profession is an essential element in this process. Douglas Shadbolt recalled a paper he delivered at Banff Session '67 entitled, "Teaching Office" which could be a method and an approach to link the Schools and the profession. The idea has been considered on other occasions but it has not produced nearly as much unanimous interest as it did among the participants at the Stanley House discussions. The following extracts from Professor Shadbolt's paper give an idea of what stimulated the interest shown in the idea of the "Teaching Office".

"The situation, as I see it, calls for a new kind of co-operative venture between the Schools and the profession, to develop a continuous learning experience for the student, if we are to get over the schism between Schools and the architects in practice. Part of the problem lies in the way the two groups see their role. To trot out some stereotyped generalizations, the Schools look on the profession as being mired down by over-riding economic and practical requirements, working on obsolete building types which are non-architectural problems (whatever that means) and they therefore tend to take the line that they are training people for the future, and the profession will simply have to convert these people to their purposes as best they can. Optimistically, they say that in the meantime, the student who is trained for the future will create a regenerative pressure in office for change.

Une direction est nécessaire immédiatement. La profession de l'architecte doit établir et promouvoir la recherche et s'organiser pour une communication systématique.

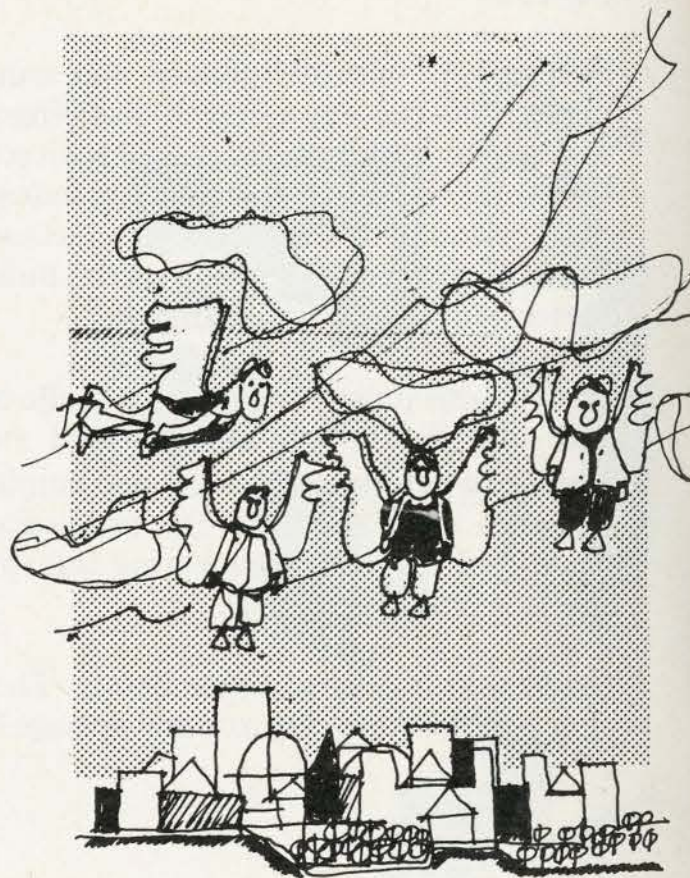
## 5. Liaison d'Enseignement entre Etudiants et la Profession – Un Bureau-Atelier

Un architecte sera beaucoup plus compétent comme professionnel en acquérant et participant à un procédé de formation continu. Une communication entre tous les niveaux de la profession est un élément essentiel dans ce procédé. Douglas Shadbolt faisait allusion à un communiqué qu'il a délivré à la Conférence de Banff en '67 intitulé "Bureau-Atelier" qui pourrait être une méthode et une voie d'accès reliant les écoles et la profession. L'idée a été considérée en d'autres occasions, mais elle n'a pas produit autant d'intérêt unanime qu'elle en a produit parmi les participants aux discussions à Stanley House. Les extraits suivants du communiqué du Professeur Shadbolt donnent une idée stimulante de l'intérêt montré à l'idée du "Bureau-Atelier".

"La situation, telle que je la vois, fait appel à une nouvelle sorte d'entreprise en coopération entre les écoles et la profession, pour développer une expérience d'enseignement continu pour l'étudiant, si nous devons franchir le schisme entre les écoles et les architectes en pratique. Une bonne partie du problème provient de la façon dont les deux groupes voient leur rôle. Pour exhiber quelques généralisations stéréotypées, les écoles considèrent la profession comme étant enlisée par des besoins économiques et des tâches pratiques, travaillant sur des genres de constructions démodés qui ne sont pas des problèmes de l'architecture (quoique cela semble dire) et par conséquent ils semblent prendre la direction qu'ils sont à former les gens pour le futur, et la profession aura simplement à convertir ces gens à leurs besoins au meilleur de leur connaissance. D'une manière optimiste, ils disent que dans l'entretemps, l'étudiant qui est formé pour le futur créera une pression régénératrice pour le changement dans le bureau d'études.

"La profession, d'autre part, voit l'Ecole comme produisant un groupe de gens légers avec la tête dans les nuages, qui n'ont pas le sens de la responsabilité pratique, qui ne connaissent pas la première chose concernant les procédés du bureau et sont d'une responsabilité financière sans intérêt et qu'ils coûtent de l'argent au bureau pour la formation. Cette opinion était clairement réflétée dans un questionnaire envoyé aux architectes pratiquants qui étaient d'anciens étudiants à une Ecole, où ils indiquaient que l'Ecole aurait dû pourvoir plus de formation pratique, plus de cours en finances, administration, propriété immobilière et ainsi de suite.

"Il me semble que nous devons différencier entre deux différentes positions qui sont inhérentes dans ce risque coopératif. Premièrement, nous devons reconnaître que nous avons la responsabilité de préparer des architectes pour la pratique immédiate, ici et maintenant. Je crois que nous devrions nous concentrer à définir le niveau de la compétence technique et de la responsabilité professionnelle dont nous espérons atteindre pour obtenir un degré professionnel de premier ordre et le niveau à atteindre pour obtenir une licence; et je placerais ceux-ci d'abord autour des problèmes de monter une construction ou un système de construction ensemble dans son contexte, avec juste considération à toutes ses ramifications—une sorte d'approche générale à l'architecture employant l'analogie de la médecine.



"The profession, on the other hand, sees the School as producing a bunch of airy-fairy people with their heads in the clouds, who have no sense of practical responsibility, who don't know the first thing about office procedures and are a dead liability, costing the office money to train. This opinion was clearly reflected in a questionnaire sent to practicing architects who were alumni of one School, where they indicated that they felt the School should have provided more practical training, more courses in financing, management, real estate practice and such.

"It seems to me that we must differentiate between two different jobs which are inherent in this cooperative venture. First of all, we must recognize that we have a responsibility to prepare architects for immediate practice, here and now. I believe we should concentrate on defining the level of technical competence and professional responsibility which we expect will meet the first professional degree requirements and those for licensing, and I would set these primarily around the problems of putting a building or building system together in its context, with due consideration to all of its ramifications—a sort of general practice approach to architecture, using the analogy of medicine.

"This clarifies the second job, which is to develop a much more accessible and wider postgraduate program with all kinds of in-between transition devices, such as refresher courses, night courses, summer program, etc, to get the established architects used to the idea of coming back to the university for further education and, ultimately, to go on for higher degrees. To encourage graduate work, we need more scholarships and fellowships, but particularly we need a great deal more variety in the types of programs available. I believe we need programs that range from one to four years, unlimited in scope, with research backup, all available on a kind of "supermarket" basis, where an architect can put together a course which interests him by shopping from a wide selection of courses from many disciplines. The result of this kind of approach would be to project the profession into the future, because it would generate demand in all kinds of new areas for interdisciplinary combinations to meet the evolving problems defined by on-going research.

"The germ of the idea for an architectural equivalent lies in the proposals for a "teaching office", which was suggested by Grenfell Baines recently and also in the working papers for the Banff Session '67 by Charles Mackie. The problem with the "teaching office" concept, as I understand it, is that it only works in the larger centres, and even then the students are dispersed throughout the city. Despite the best of intentions and a course outline, there must inherently be a wide diversity in the quality of training different students would receive, and hence competitive pressure to get assigned to the "good" office. Why not invert the process and develop the "Teaching Office" in the School, and bring the architects and the work to the students, rather than vice versa.

"Suppose, for example, a training centre was established in conjunction with a School of Architecture, and that this was organized, owned and controlled jointly by the School and the profession. It is essentially a non-profit service company which can undertake contract work for practicing architects, or, in some special cases, for clients directly. The staff of the Centre would be composed of some full-time architect-professors and technicians, but mostly interns, that is graduate architects putting in their training period prior to admission to the profession. The staffing of the drafting rooms would be composed of students at earlier stages of development in the

Ceci clarifie la seconde position, qui doit développer un programme postsecondaire plus accessible et plus vaste avec toutes sortes de moyens de transition, tels que des cours de rafraîchissements, cours du soir, programme d'été, etc . . . pour habituer les architectes établis à l'idée de revenir à l'université pour obtenir des grades universitaires plus élevés. Pour encourager les études du gradué, nous avons besoin de plus de bourses des universités et autres bourses, mais particulièrement nous avons besoin de variétés dans le genre de programmes disponibles. Je crois que nous avons besoin de programmes de durée d'un an à quatre ans, illimités en portée, avec une réserve de recherches, tous disponibles sur une base de centre d'achats, où un architecte peut mettre ensemble un cours qui l'intéresse en magasinant sur une large sélection de cours de plusieurs disciplines. Le résultat de cette sorte d'approche serait de projeter la profession dans le futur, parce qu'elle provoquerait une demande dans tous les nouveaux domaines de combinaisons interdisciplinaires, pour rencontrer les problèmes qui surgissent et qui sont définis par la recherche en cours.

“Le germe d'idée pour une équivalence de l'architecture repose sur les propositions pour un “bureau-atelier” qui ont été suggérées par Grenfell Baines récemment et aussi sur les communiqués de la Conférence à Banff '67 par Charles Mackie. Le grand problème de ce concept du “bureau-atelier” comme je le comprends c'est qu'il est possible seulement dans les grands centres et même alors les étudiants sont dispersés dans toute la ville. En dépit des meilleures intentions et la direction du cours il doit y avoir par inhérence une large diversité dans la qualité de la formation que différents élèves recevraient, et d'ici une pression de concurrence pour être assigné au “bon bureau”. Pourquoi ne pas renverser le procédé et développer le “Bureau-Atelier”, à l'école, et amener les architectes et le travail aux étudiants, plutôt que vice versa.

“Supposez, par exemple, qu'un Centre d'apprentissage serait établi en conjonction avec une Ecole d'Architecture et que ceci serait organisé et contrôlé conjointement et en co-propriété par l'Ecole et la profession. C'est un service de compagnie essentiellement sans profit, qui peut assumer des contrats de travail pour architectes pratiquants, ou, en cas spéciaux, pour clients directement. Le personnel du Centre serait composé de quelques professeurs en architecture et techniciens permanents, mais la plupart internes, qui seraient des architectes dans une période d'apprentissage avant l'admission à la profession. Le personnel des départements de dessins serait composé d'étudiants à des degrés de développement moins avancés dans le programme de l'architecture. Cette compagnie entreprendrait de faire le travail de production qu'un bureau normal d'architecture ferait et l'opération totale serait sur une grande échelle, engageant la plupart des étudiants dans l'Ecole. Le programme de formation consisterait à travailler sur des projets apportés au bureau par des architectes pratiquants et surveillés par eux. L'étudiant prendrait de l'expérience en travaillant avec des architectes pratiquants sur toutes les phases du développement et de la production d'un projet, y compris les opérations sur chantier et l'architecte enseignerait.

“Sur cette disposition un architecte consentirait avec son propre client à exécuter un projet au Centre. Alors, il négocierait avec le Centre, un contrat pour l'exécution de certaines parties spécifiques du travail total pour des honoraires qui seraient établis par la profession. Une partie du contrat comprendrait un engagement pour dates établies par la méthode d'acheminement critique, pour le client et l'architecte les



architectural program. The service company would undertake to do the production work that a normal architectural office would do, and the total operation would be on a pretty large scale, involving most of the students in the School. The training program would consist of working on projects brought to the office by practicing architects and supervised by them. The student would gain experience working with practicing architects in all phases of the development and production of the job, including the field operations, and the architect would teach.

“Under this arrangement an architect would agree with his own client to carry out a job at the Centre. He would then negotiate a contract with the Centre to carry out specific parts of the total work for fees which would be set by the profession. Part of the contract would include a critical path commitment for dates which would pin down both the client and the architect to a time schedule for decisions and put the job on a cost-control basis. The architect would retain over-riding supervisory control, in much the same way that a doctor who brings his patient to the hospital retains control of the treatment. However, the in-process development of the job would actually be carried out by the training staff, so that job procedures and the execution and quality of the work would be under the direct supervision of the Centre personnel, and standards would be set by them. The Centre would provide staff, space, consulting rooms for client interviews, board rooms, library and information service, and consultants. By acting strictly as a service company the Centre would not be in competition with practicing architects: it would simply be providing a service which they otherwise would have to provide themselves, and it would be doing it for a fee. As the Centre would be under the control of the profession and the School, there is no danger of its being taken advantage of by particular architects, or, in fact, of it getting out of hand.

“The development of such a Centre would resolve the problem of training once and for all. The full experience of the student up to licensing would be under the direct control of the profession-school partnership. The cooperation of all the architects in a given region under such a scheme could be economically feasible without committing whole practices to it. In other words, architects might want to commit one or two jobs a year to the Centre, but they would continue their regular practice in their own way. There would be definite advantages to them to come to the Centre and participate in this way, as they would not only be kept up to date with new and changing methods, but would be in a position to assess the current crop of students and recruit them for their own practices.

“One of the important opportunities, as I see it, is for the development of new building techniques and systematized procedures for all aspects of practice resulting from a dialogue between the profession and the school and the feedback of direct experience in office and field operations. The attraction for the School lies in the further justification of a major expenditure for an information centre as an extension of its library services, which might include complete information services regarding materials, products and techniques, display rooms etc, which would bring manufacturers, contractors, builders, real estate people and developers all into direct contact with the students and the professionals.

“A properly organized building information centre could soon develop a telecommunications link with a future national network and help to uncork the great pile of information that is now stored in Ottawa. In certain centres, the combination of building information centre and a

temps programmés pour décisions, donnant ainsi au projet une base pour le contrôle des prix. L'architecte retiendrait le contrôle de surveillance à peu près de la même manière qu'un docteur qui transporte son patient à l'hôpital et retient le contrôle de son traitement. Toutefois, le procédé de développement du projet serait actuellement exécuté par le personnel enseignant afin que les procédures et l'exécution et la qualité du travail seraient sous la surveillance directe du personnel du Centre et les normes seraient déterminées par eux. Le Centre fournirait le personnel, l'espace, les salles de consultation pour les clients convoqués, les salles de conférence, une bibliothèque, un service d'information, et des architectes conseils. En enseignant strictement comme une compagnie de service, le Centre ne serait pas en compétition avec les architectes pratiquants: il fournirait tout simplement un service, que les architectes fourniraient autrement par eux-mêmes, et il le ferait pour des honoraires. Comme le Centre serait sous le contrôle de la profession et de l'École, il n'y a aucun danger que des architectes particuliers en prennent avantage ou, en fait, que le contrôle leur échappe.

“Le développement d'un tel Centre résoudrait enfin et pour toujours le problème de la formation. L'expérience complète de l'étudiant jusqu'à l'obtention de la licence serait sous le contrôle direct de l'école et de la profession en association. La coopération de tous les architectes dans une région déterminée sous un tel arrangement serait économiquement possible sans en engager toutes les pratiques. En d'autres mots, les architectes pourraient soumettre au Centre, un ou deux projets par année, mais ils continueraient leur pratique régulière à leur propre manière. Il y aurait des avantages définis pour eux de venir au Centre, et participer de cette manière, car ils y trouveraient non seulement l'occasion de se tenir au courant des méthodes nouvelles et changeantes, mais ils seraient aussi dans une position d'évaluer les diplômés récents afin de les employer dans leurs propres bureaux.

“Il y aurait une très bonne occasion comme je la vois, pour le développement de nouvelles techniques de construction et de procédures systématiques pour tous les aspects de la pratique résultant d'un dialogue entre la profession et l'école et de la rétroaction de l'expérience directe dans les opérations du bureau et du chantier. L'attrait pour l'École repose sur la justification d'une plus grande dépense, pour un centre d'information comme une extension de ses services de bibliothèque qui pourraient inclure un service de renseignements complet sur les matériaux, les produits et les techniques, des salles d'expositions, etc..., qui amèneraient les manufacturiers, les entrepreneurs, les contracteurs, les agents de propriétés immobilières et les agents d'exploitation, en contact direct avec les étudiants et les professionnels.

“Un centre d'information en construction proprement organisé pourrait bientôt développer un réseau de télécommunication relié ultérieurement à un réseau national libérant ainsi l'amoncellement d'information sur la construction qui est en réserve à Ottawa. Dans certains centres la combinaison d'un centre de renseignement et d'un centre d'enseignement avec une école d'architecture formerait le noyau pour des additions supplémentaires—par exemple, une facilité de recherche, et—idéalement—le spectre complet des professions du dessin, architectes, paysagistes, urbanistes, ingénieurs en construction, dessinateurs industriels, artistes dans les arts appliqués”.

La proposition d'un “bureau-atelier” est une suggestion intéressante et beaucoup de temps a été voué à la discussion de cette idée, à Stanley House. Le Bureau-Atelier serait un endroit important de contact entre les écoles et la profession et un où la théorie et la pratique pourraient

training centre with an architectural school would provide the nucleus for still further additions—for example, a research facility, and—ideally—the full spectrum of design professions: architects, landscape architects, urban planners, building engineers, industrial designers, applied artists.”

The proposal for an “office atelier” is an interesting suggestion and much time was spent at Stanley House discussing the idea. The teaching office would be an important area of contact between the Schools and the profession and one where theory and practice might be tested. It would be a place where the innovation of research could be translated into technical reality in a practical office. The faculty of the School could be used as a resource for research into administration, organization and technical achievement.

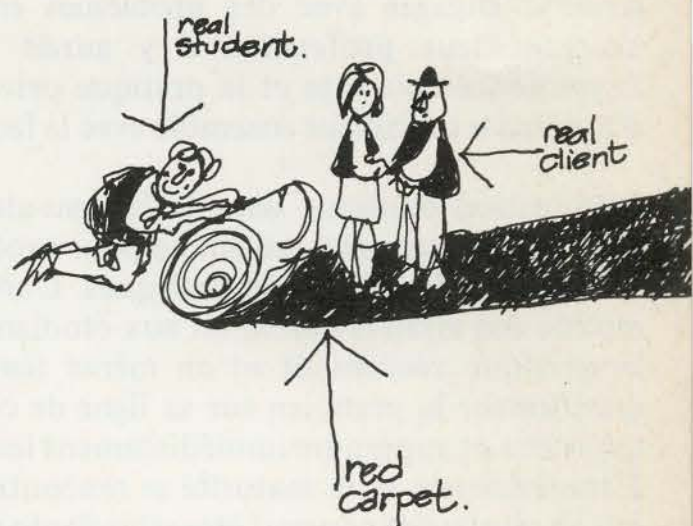
A teaching office could be related to the widest social needs of the building industry, becoming a vital teaching centre and communicative link with society. Situations would always exist to interest and stimulate students. A true sense of reality would occur, where those involved were “doing” things rather than “talking” about what they intend to do or have done. The teaching office could be a most effective educational tool in the practical training of students. Since real clients would be involved, with real problems and real practicing architects, there would be an effective link between the usual experience of private practice and the practical training of students working together with the faculty of the Schools.

Continuing education in the teaching office would include many kinds of opportunities in research for professionals attending from their own practices. The architect experienced in the reality of the business world would give students some idea of what practice is truly like, at the same time the students could question the practitioner in the desirability and effectiveness of his approach and immediately learn of the reasons for the approach taken. Inexperience and maturity would meet and the resulting communication could be stimulating for all concerned.

In the teaching office, new methods and advanced technology would be utilized in an approach to real problems and in methods of solution. It would serve as a living forum for the profession in the broadest sense, where student, graduate, faculty, professional and client would benefit by active participation.

Douglas Shadbolt summarized it this way: “It is my conviction that this is a feasible proposition which could provide a unique means of integrated continuing education for the student and the practitioner, as well as providing more and higher-level services to the public. Such a program would substitute action for words in the search for ways and means to up-grade the status of the architectural profession in the eyes of the public”.

When so many facets of education can come together in one enterprise, it seems advisable that the practical and financial aspects of the proposals should be viewed with serious concern by the Schools, by the provincial associations and by the Institute so that the accumulation of information will be coordinated and duplication of effort can be avoided.



être éprouvées. Ce serait une place où l'innovation de recherche pourrait être traduite en une réalité technique dans un bureau pratique. La faculté de l'école pourrait être employée comme une ressource pour recherche dans l'administration, l'organisation et un accomplissement technique.

Un bureau-atelier pourrait être relié aux plus grands besoins sociaux de l'industrie de la construction, devenant un centre d'enseignement vital et une liaison de communication avec la société. Il existerait toujours des situations qui intéresseraient et stimuleraient les étudiants. Un vrai sens de réalité surviendrait si ceux qui sont engagés, étaient à faire des choses au lieu de parler de ce qu'ils ont l'intention de faire ou de ce qu'ils ont fait. Le bureau-atelier pourrait être l'outil d'éducation le plus efficace dans la formation des étudiants. Puisque des clients réels seraient engagés avec des problèmes réels et des architectes réels exerçant leur profession, il y aurait une liaison effective entre l'expérience courante et la pratique privée et la préparation pratique d'étudiants travaillant ensemble avec la faculté des écoles.

L'éducation continue dans le bureau-atelier comprendrait plusieurs sortes d'occasions en recherche pour professionnels en assistance tant en exerçant leurs propres pratiques. L'architecte expérimenté dans le monde des affaires donnerait aux étudiants quelques idées de ce qu'est la pratique réellement et en même temps les étudiants pourraient questionner la praticien sur sa ligne de conduite et l'efficacité de son approche et apprendre immédiatement les raisons pour cette approche. L'inexpérience et la maturité se rencontreraient et la communication qui en résulterait pourrait être stimulante pour tous les participants.

Dans le bureau-atelier, de nouvelles méthodes et des technologies avancées seraient utilisées dans une approche à des problèmes réels et des méthodes de solution. Il servirait comme forum vivant pour la profession dans un sens très large où l'étudiant, le gradué, la faculté, le professionnel et le client bénéficieraient par participation active.

Douglas Shadbolt a fait le résumé de cette manière: "C'est ma conviction que ceci est une proposition possible qui pourrait apporter des moyens uniques d'intégrer une éducation continue pour l'étudiant et le praticien aussi bien que de pourvoir davantage de service pour le public ainsi que des services à un niveau plus élevé. Un tel programme remplacerait la parole par l'action dans la recherche de manières et de moyens pour élever la situation de la profession de l'architecture aux yeux du public".

Quand tant d'aspects peuvent se rencontrer dans une même entreprise, il semble recommandable que les aspects pratiques et financiers des propositions devraient être regardés avec un sérieux intérêt par les écoles, par les associations provinciales et par l'Institut, afin que l'accumulation de renseignements soit coordonnée et la répétition d'efforts soit évitée.

## Conclusion

La conférence à Stanley House a accompli plus que ce qu'attendaient ceux qui l'ont organisée. En général, elle a fourni l'occasion et un temps suffisant pour une discussion continue et l'échange d'idées sur un nombre important de problèmes d'éducation en architecture, auxquels

The Stanley House conference achieved more than those who planned it expected. In general, it provided an opportunity and adequate time for continuing discussion and thought on a number of important architectural educational problems which can be given only superficial consideration on normal occasions. It was purposely a slow-paced conference. In fact, much of the good which came out of it resulted from the leisurely discussions between groups of two and three which took place between the scheduled talks.

The value of any conference of this type lies initially in the production of good recommendations and, ultimately, in their successful implementation. The five major recommendations were:

1. That Douglas Shadbolt's suggestion for a "Teaching Office" be promoted as a worthwhile experiment.
2. That the RAIC initiate a "White Paper" on Architectural Research.
3. That the RAIC endeavour to encourage and exert influence in respect to the appointment of architects to senior positions in government.
4. (a) That an effort be made to establish a partnership between the practicing and teaching elements of the profession.  
(b) That a financial subsidy be provided to assist undergraduates from Schools of Architecture to meet.
5. That the Stanley House conference on architectural education be reported, that its recommendations be pursued, and that other conferences at Stanley House be encouraged.

*William N. Greer*  
*Chairman, RAIC Publications Board*

### **President's Message on Implementation of Stanley House Report Recommendations**

*It is a pleasure to report that action has been taken on all five recommendations in this report. RAIC Council has endorsed the proposal of Douglas Shadbolt for a feasibility study on the Teaching Office. The Chairman of the Research Committee has been requested to prepare the White Paper (concurrently with other immediate tasks already begun by this Committee). Council instructed me to write to the Prime Minister to make him aware of our interest in the appointment of architects to senior posts, a matter which I have also taken up informally with the Federal Department of Public Works relative to architectural appointments within the Department.*

*There have been several interesting developments in respect to the relationship between the practicing and teaching elements. My own visits to the nine schools are proving to be of mutual benefit. Out of the first visit arose the idea of having student contributing editors to Architecture Canada, and these have now been appointed. We are presently investigating two sources of financing to permit two students from each School to attend the AIA/RAIC Convention in Chicago next June.*

*Norman McMurrich*  
*President RAIC*

nous donnons seulement une considération superficielle en des occasions normales. Intentionnellement, c'était une conférence paisible. En fait, beaucoup de bien a été tiré des discussions entre petits groupes de deux et trois, qui ont eu lieu entre les entretiens au programme.

La valeur d'une conférence de ce genre est principalement dans la production de bonnes recommandations et, ensuite dans l'exécution menée à bonne fin. Les cinq recommandations majeures étaient:

1. Que la suggestion de Douglas Shadbolt, pour un "bureau-atelier" soit favorisée comme une expérience d'importance.
2. Que l'IRAC prépare un livre blanc sur la Recherche en Architecture.
3. Que l'IRAC s'efforce d'encourager et d'exercer une influence à la désignation d'architectes à des positions supérieures au gouvernement.
4. (a) Qu'un effort soit fait pour établir une association entre les éléments pratiques et enseignés de la profession.  
(b) Qu'une subvention financière soit fournie afin de faciliter la réunion des étudiants de différentes Ecoles d'Architecture.
5. Que la conférence à Stanley House, sur l'éducation en architecture soit rapportée, que ses recommandations soient poursuivies et que d'autres conférences à Stanley House soient encouragées.

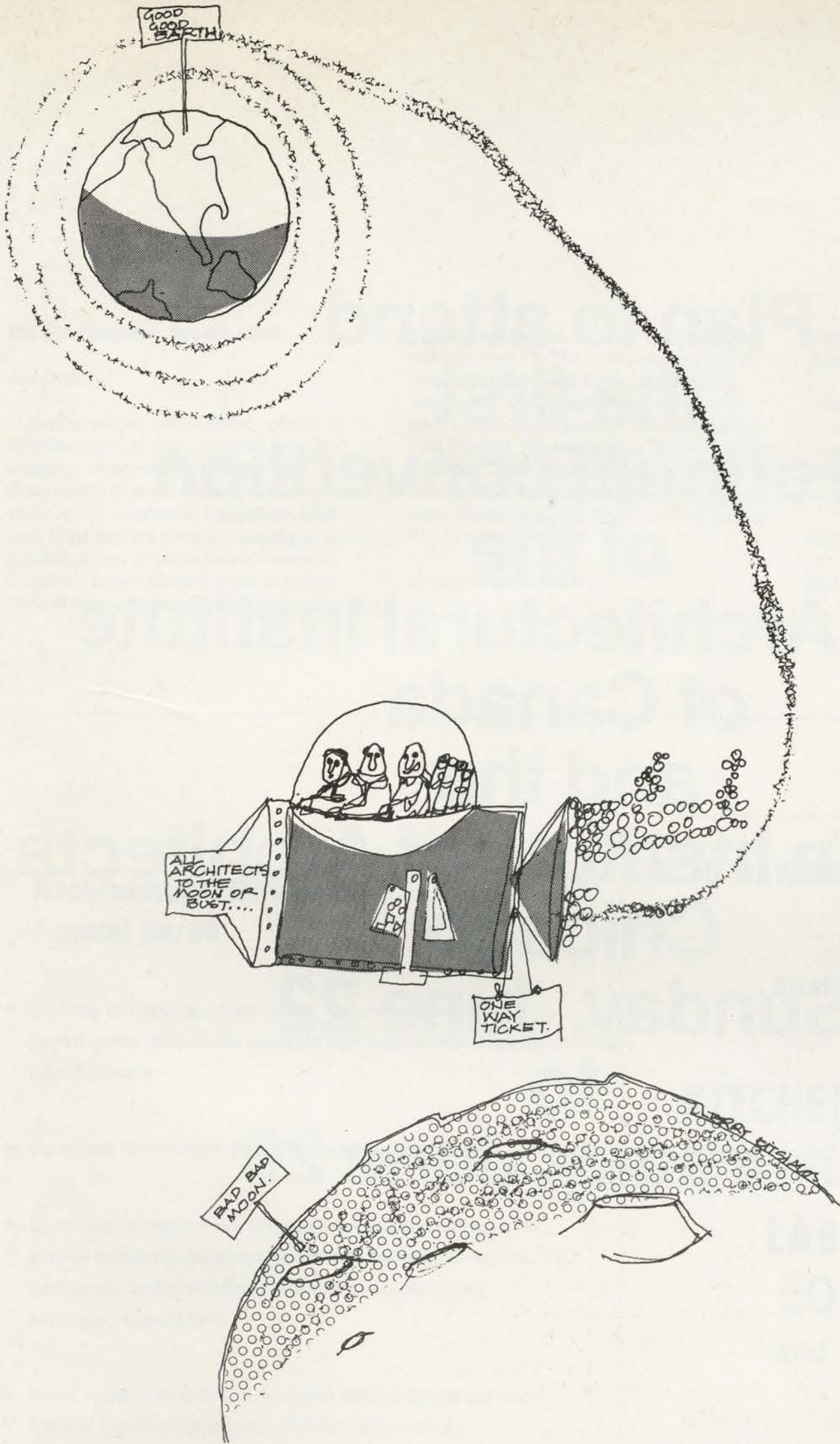
*William N. Greer*  
*Président de la Commission des Publications de l'IRAC*

### **Message du Président sur la Réalisation des Recommandations du Rapport de la Conférence à Stanley House**

*C'est un plaisir de relater rapporter qu'une action a été prise sur les cinq recommandations dans ce rapport. Le Conseil de l'IRAC a appuyé la proposition de Douglas Shadbolt, pour l'étude de la possibilité d'un "Bureau-Atelier". Le Président du Comité de Recherche a été invité à préparer le livre blanc concurremment avec d'autres entretiens immédiats déjà commencés par ce Comité. Le Conseil m'a recommandé d'écrire au Premier Ministre afin de le tenir au courant de notre intérêt à la désignation d'architectes à des postes supérieurs, une affaire que j'ai aussi discutée sans formalités, avec le Ministère fédéral des Travaux Publics, surtout par rapport à la désignation d'architectes au Ministère.*

*Il y a plusieurs développements intéressants en rapport à l'association entre les éléments pratiques et le corps enseignant. Mes propres visites aux neuf écoles ont prouvé d'être d'un avantage mutuel. De la première visite, il se produit l'idée d'avoir des étudiants éditeurs contribuant à l'Architecture Canada, et ceux-ci ont maintenant été appointés. Nous sommes actuellement en train d'étudier deux sources financières qui pourraient permettre à deux étudiants de chaque Ecole d'assister à la Convention de l'AIA et l'IRAC à Chicago, en juin prochain.*

*Norman McMurrich*  
*Président de l'IRAC*



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**Xth UIA Congress, Buenos Aires**

*The Editors:*

In the December 1967 Letters column of *Architecture Canada* I wrote to draw the attention of members to the Xth UIA Congress in Buenos Aires, October 9-14, 1969, and to suggest to Canadians planning to go that we combine the event with an organized tour of other South American Centers. I have attended three previous Congresses – Paris, Mexico and London and

found them well worth while for a group of not less than 15. The minimum cost will be about \$1,100.00 (exclusive of Congress expenses), which represents a saving of about \$150.00 per person. The tour would visit Brasilia, Rio de Janeiro, Buenos Aires, Santiago, Lima, Cuzco, Macchu Pichu, Bogota. Will architects interested please write me at Page and Steele, 2 St. Clair Ave. W., Toronto 7.

*Claude Jarrett, MRAIC*

**Vancouver Megamonoliths Under Examination**

*The Editors:*

Thank you for a turned on October issue – Bow-Mac's Auto Emporium is looking better every day.

We are reassessing our Megamonoliths.

*Barry V. Downs, MRAIC, Vancouver.*

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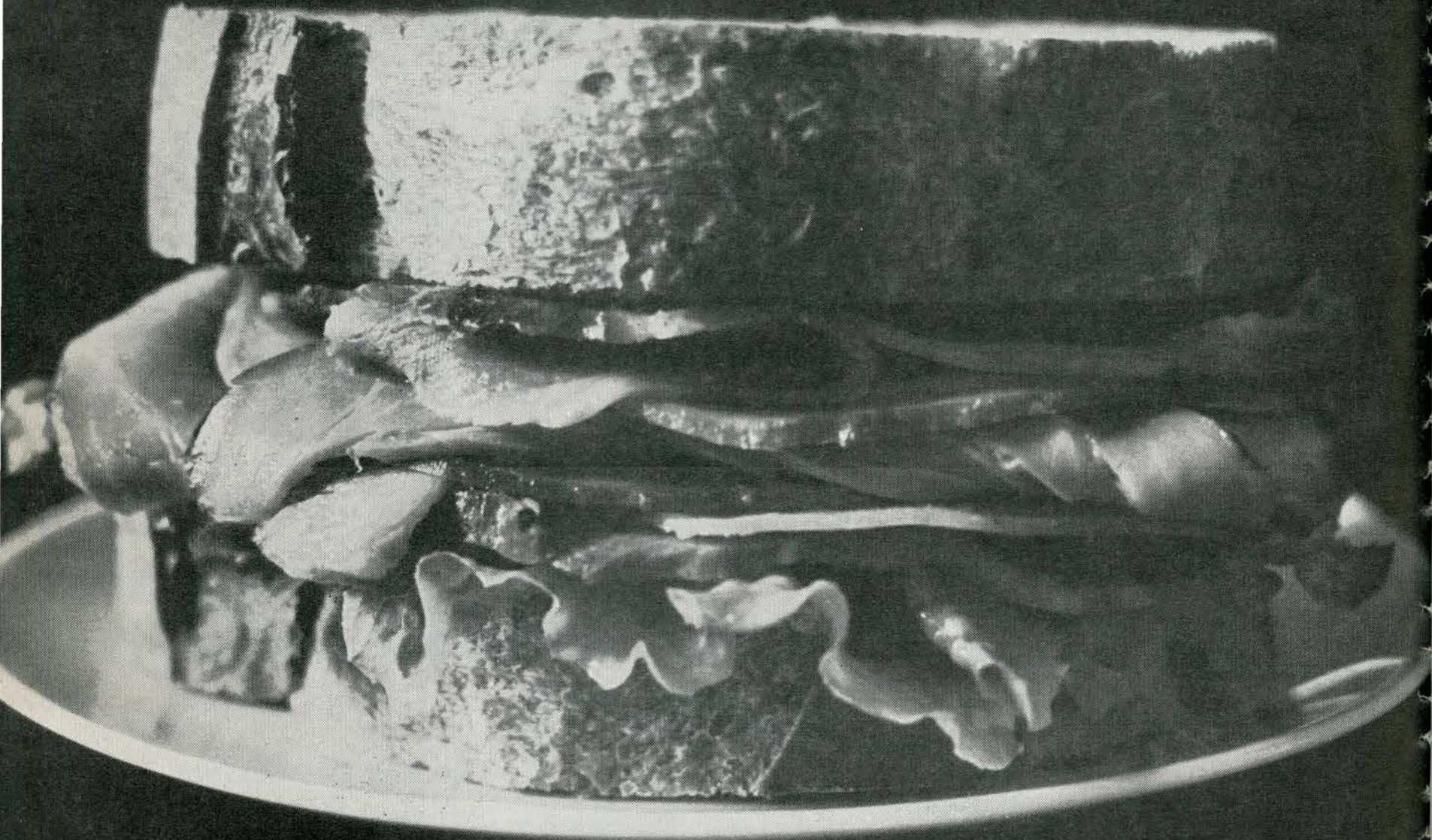
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**Practice Notes**

Russell K. Yapp, Architect has formed a new practice at 141 Avenue Road, Toronto 5, Ontario, Telephone 923-4998. Mr Yapp was project captain for Page and Steele and John Andrews on Scarborough College, and project captain for Raymond Moriyama on the Minota Hagey Residence and Health Services Building at the University of Waterloo.

Bernard Gillespie and Gordon Evans have formed a partnership on November 1st, 1968, under the name of Gillespie & Evans, Architects, from Mr. Gillespie's offices at Suite 2802, Box 85, Toronto-Dominion

Centre, Toronto 1, Ontario.

**Architects Required**

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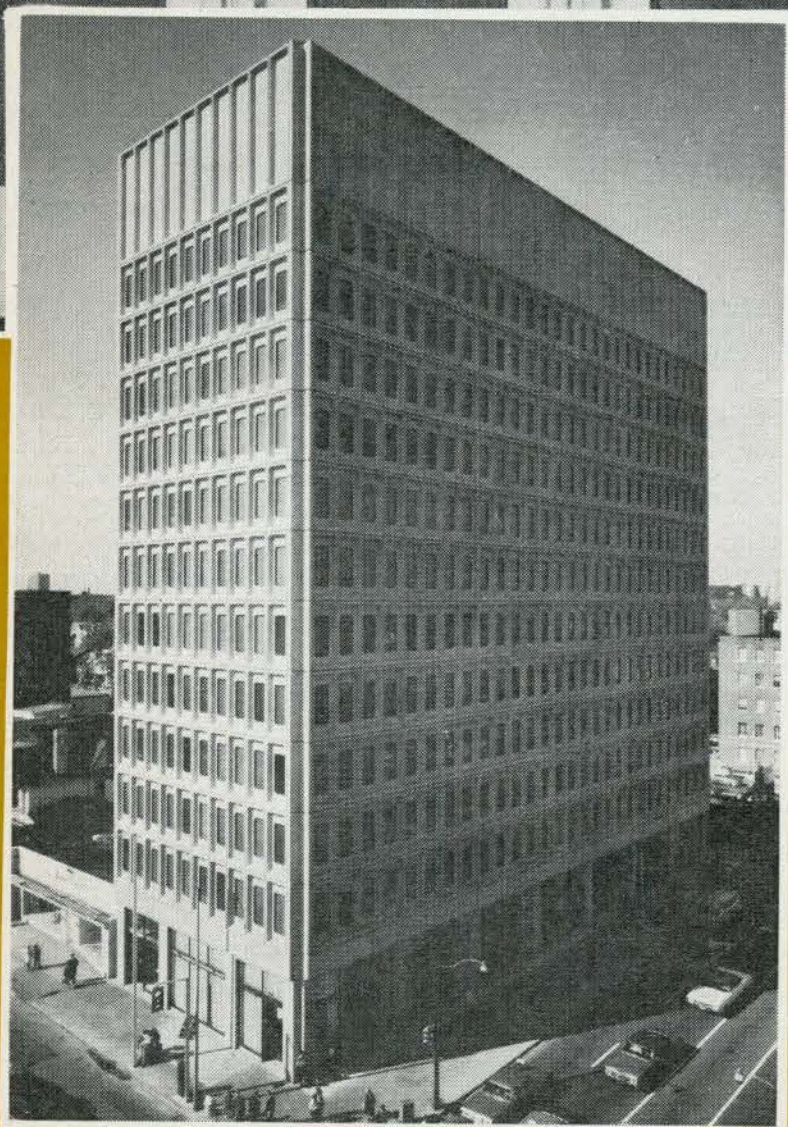
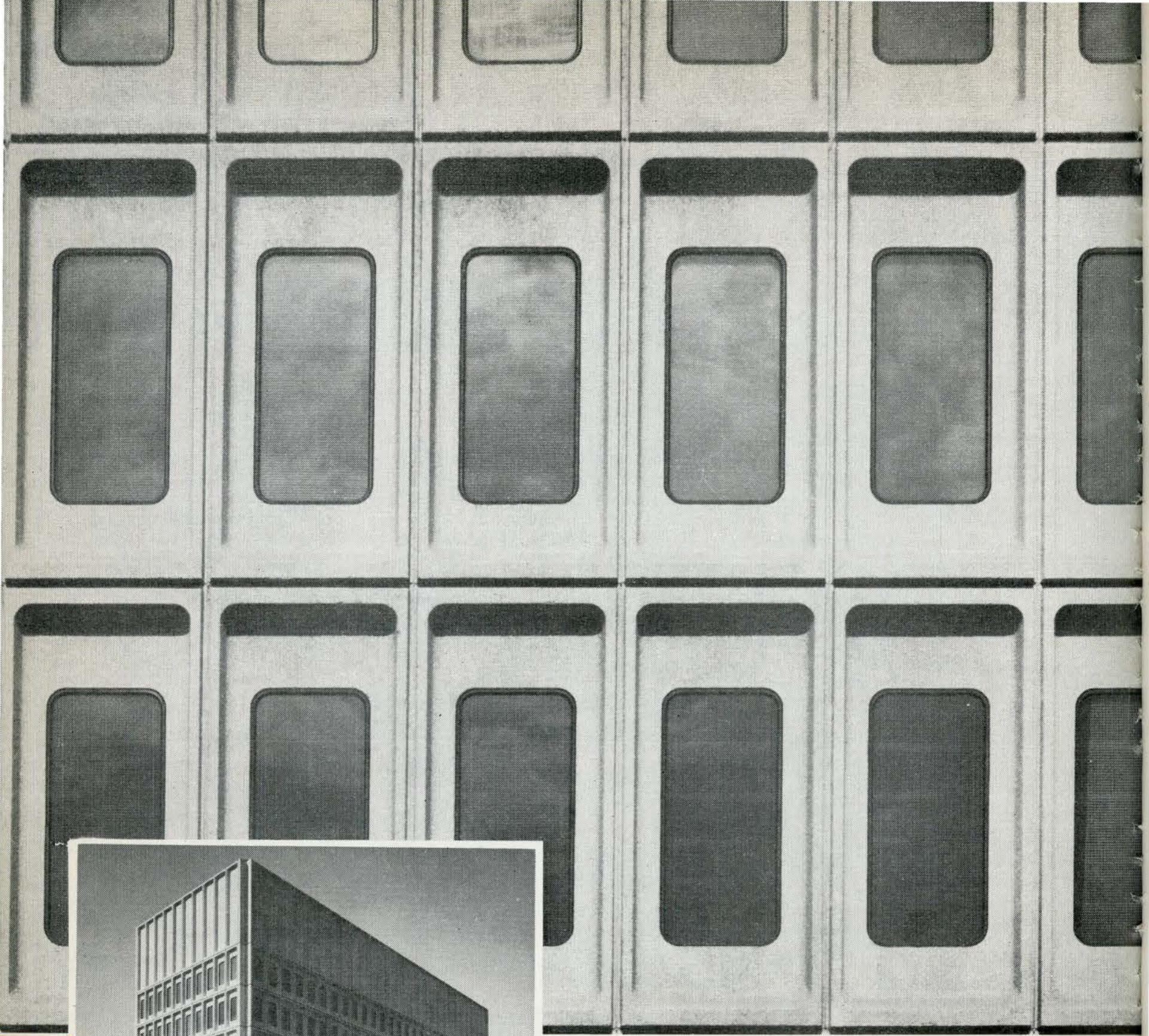
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OAA Secretary, Harold Little, *Jan 7*  
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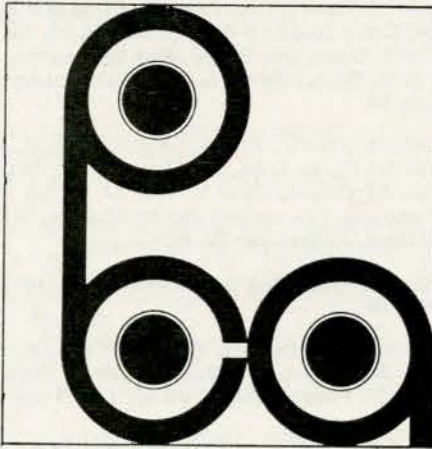
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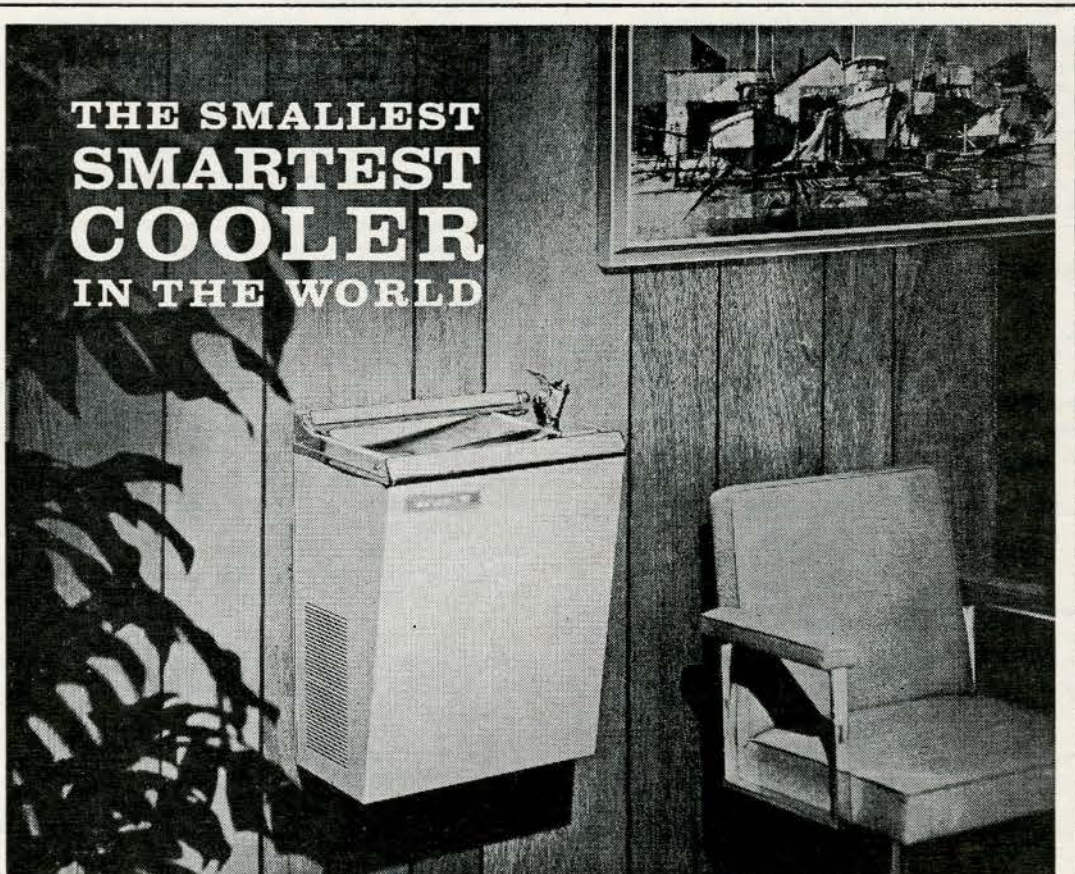
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