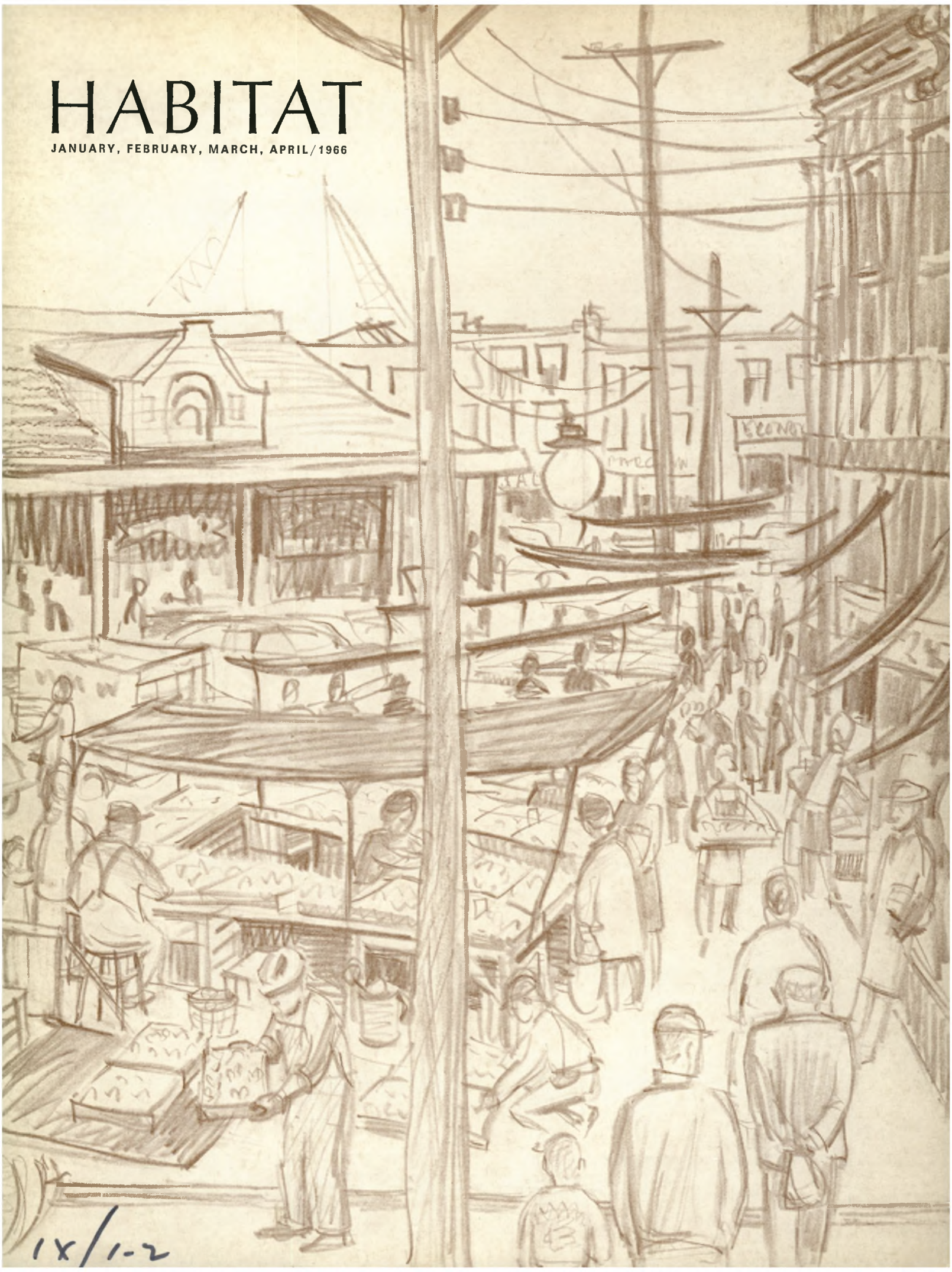
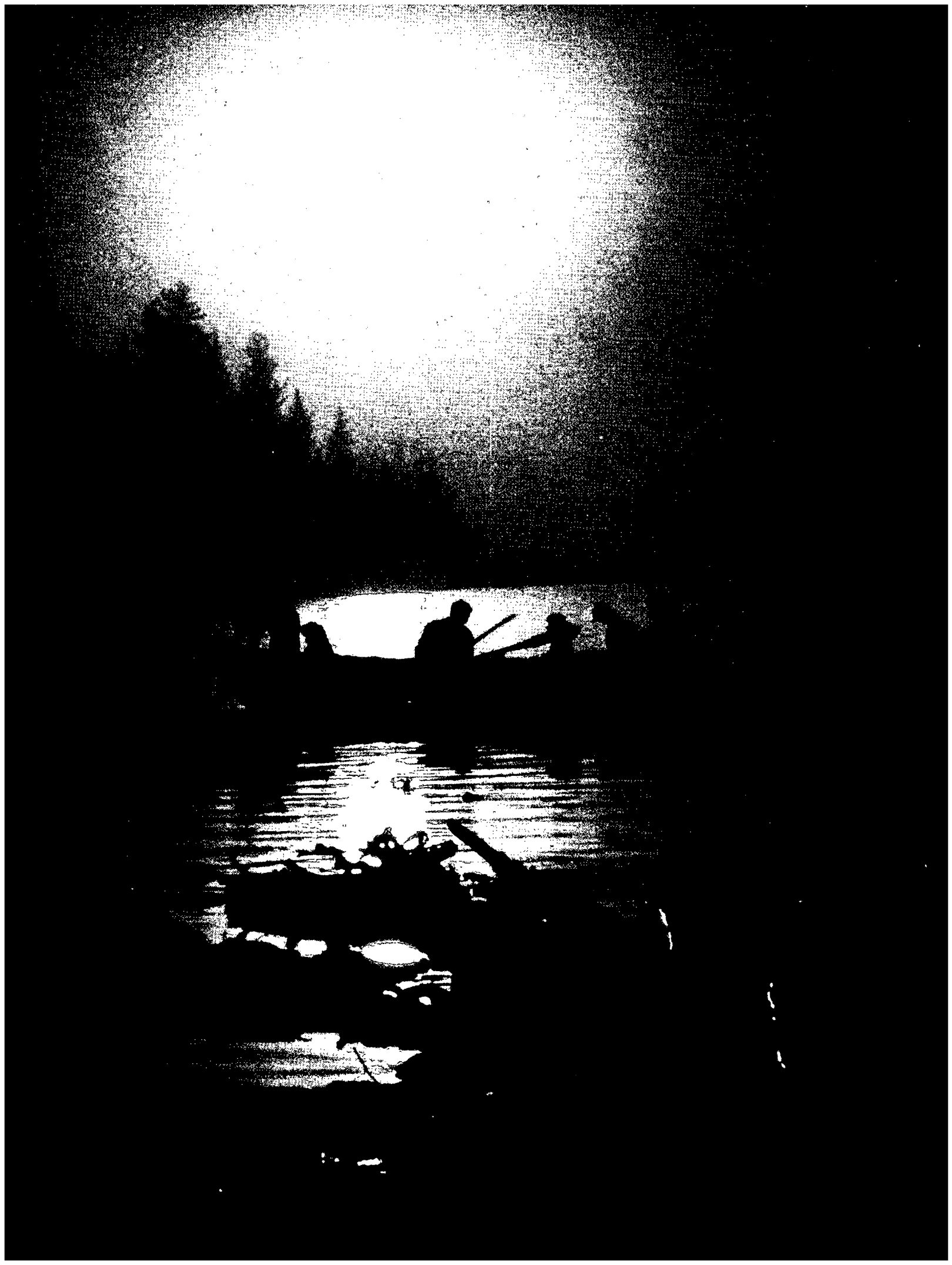
HABITAT

JANUARY, FEBRUARY, MARCH, APRIL/1966





HABITAT

VOLUME IX
NUMBER 1 and 2

HABITAT, a bimonthly publication of Central Mortgage and Housing Corporation, is listed in the Canadian Periodical Index and authorized as second class matter by the Post Office Department and for payment of postage in cash.
Opinions expressed by the authors are not necessarily those of CMHC. All communications should be addressed to the Editor, H. R. B. MacInnes.

CONTENTS — JANUARY, FEBRUARY, MARCH, APRIL/66

FRONT COVER: *By-ward Market by Phyllis Lee*

INSIDE FRONT COVER: *A silhouette of Indians fishing on the Hay River — N.F.B.*

There is not nearly enough professional staff to meet the planning and other needs of those urban centers in Canada that wish to undertake renewal. There is a desperate dearth of trained competent planners, architects, geographers, sociologists, economists and all those who must play an essential role in urban growth and development — people trained to deal not only with large issues, but with small-scale, local and human situations.

Because of our concern over the shortage of trained personnel in the planning field, CMHC has authorized Professor Gerald Hodge of the Division of Town and Regional Planning, University of Toronto, to undertake a study to locate the critical gaps in government, municipal and consultant staffs and determine what skills are required to fill these needs.

It will examine trends in the demand for personnel, in relation to their effect on university and other training programs, and on the future of Canadian urban development.

Professor Hodge is a well-known researcher on the subject of planning in Canada, and will carry out the study in close association with members of CMHC's Advisory Group involved in planning.

1867 | 1967

BOUCHERVILLE

This is the last of a two part article by Stewart Wilson, Professor of Architecture, McGill University. Most of the pictures and research were compiled by the third year architectural students during 1964.

Boucherville has had a romantic, even if pastoral, history. The central square and small streets are redolent of the past. But one cannot say that the town possesses many notable structures. Older buildings are neither very old, for the most part, nor very numerous.

The charm of Boucherville must lie elsewhere. This attractiveness would appear to reside in the site, the layout or physical arrangement of the old village, the preservation of certain specimens of older building and the evidence of a continued domestic tradition, even if imperfect. The retention of Boucherville's attractiveness would depend, to some extent, upon a preservation of these characteristics.

Amongst the older buildings, the church is most interesting. Much has been published about L'Eglise Ste-Famille de Boucherville. A small booklet, recently printed for the parish, illustrated with photographs, and available to visitors, describes succinctly the origin and history of the church. An account is given of the wealth of artistic treasures, contained as furnishings and sacred objects within the fabric, many of which are now classified as art objects by the Commission of Historical Monuments of Quebec.

We quote from the text of Mgr. J. Poissant, curé: "At the request of the parishioners of Boucherville, the Minister of Cultural Affairs through the Commission of Historic Monuments has classified L'Eglise Ste-Famille as an historical monument. The Lieutenant-Governor was pleased to take this decision in council on July the fourteenth, 1964. This church was built in 1801 after the plans and specifications of L'Abbé Pierre Conefroy, curé of Boucherville (Quebec 1752-Boucherville 1816) and under the supervision of M. Conefroy. It served as model to several other churches in the province: L'Acadie, 1801; St. Grégoire (Nicolet) 1803; Baie du Febvre, 1806; Chambly, 1809; La Présentation, 1823; Charlesbourg, 1827; etc. In 1843 fire caused damage to the steeple, the choir and the old organ. Louis-Thomas Berlinguet carried out the necessary repairs."

Father Lalande wrote that, "Work started in the month of August, 1843, five months later, on Christmas Day, the parish church of Boucherville was opened for worship". Today the monument and its artwork are protected by an automatic sprinkler system.

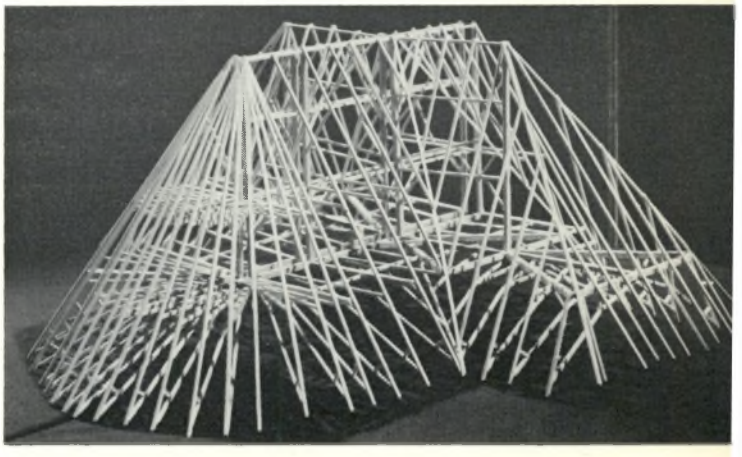
The length of the church is one hundred and fifty feet, and the width, sixty. The nave forms a cross with the transepts. The choir has a semi-circular apse.

The specifications of Pierre Conefroy are kept in the archives of the Episcopal Palace in Quebec. M. Gérard Morisset in his book, "L'Architecture en Nouvelle-France," has stated: "The text is so complete and so clear that the contractors could not excuse any slight forgetfulness, or any tendency to speculate with claims for 'extras'."

The Boucherville church was considered one of the most handsome religious buildings on the St. Lawrence River at the time it was built. The present Boucherville church is the third church, built in 1801, and repaired in 1843 after the fire. A wreathed oval on the frieze of the entablature over the arched entrance is carved with the date 1801.

Mr. Allan Gowans in a footnote to his work, "Church Architecture in New France", has written that, "The elements of the Conefroy plan were derived intuitively from the Quebec tradition of the seventeenth and eighteenth centuries."

It would appear that these were intuitions of great clarity. An examination of the roof structure of Ste-Famile bears out claims made for the logic of the



Transverse wooden structural frames, inside the roof, span the nave with each third frame becoming a kingpost-like truss.

Arched windows with Stations of the Cross between pierce the thick stone walls of the church.

arrangements and the completeness of the design.

Inside the high mediaeval roof, transverse wooden structural frames occur every four feet, and span the nave. Each third frame, twelve feet on centers, becomes a king post like truss. King posts are dimensioned 10″ x 10″ square. Between these posts and the lower chords of frames, horizontal cross-braces connect principal and secondary frames. Diagonal braces between ridge-beam and king post interconnect with horizontal tie-braces.

Transept framing is simple and nicely related to the nave. The transepts are rectangular on plan, and the transept center-line lines up with a truss-frame on a 12-foot bay line. As usual, a 10 x 10 post occurs at this point of intersection, below the ridge line of the nave. A transept-spanning beam in line with the nave wall intersects with and supports the roof-frame on the center-line of the transept. Secondary framing either supporting or bracing the transept roof structure radiates from the post. Roof-framing members are joined with 9″ x ¾″ wooden dowels.

The bell-tower framing is structurally independent from the nave. At the base, the tower framing is connected to nave framing by dowels. Vertical bracing is in the form of two 4″ x 11″ truss members on the side of the tower frame facing the apse.

The interior of the church was redecorated under the curate, the Rev. M. Joachim Primeau, in 1877, and the church was re-opened in 1879. The style is simple and restrained. Inside, the vaulted ceiling is of wood, panelled and painted in color and gilt. Raised bands, springing from a high cornice, divide the vault into panels, while conforming in general layout to the hidden structural bay-system. Roof trusses of the tall roof (le comble) occur directly over the ribs and are supported by the segments of walls between windows.

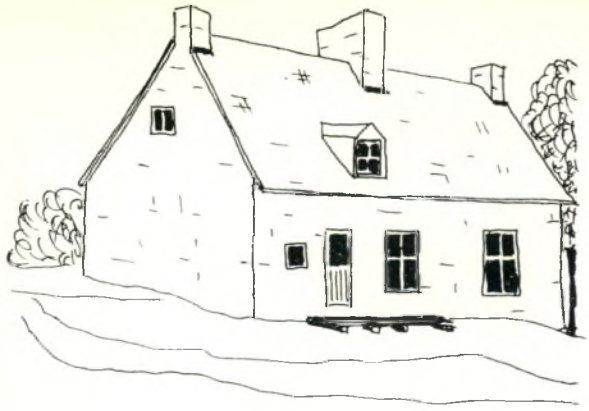
Arched windows with classical trim pierce through thick stone walls. Between windows are Stations of the Cross, while higher up on the walls are large free-standing statues supported by ornamental console-brackets.

The walls of the semi-circular apse are more richly decorated, and are subdivided into panels of irregular width by delicate, slightly raised pilasters with Corinthian caps. Arched openings and niches are placed in the wider openings and ornamental panels with gilt arabesques and surrounds occupy the narrower panels.

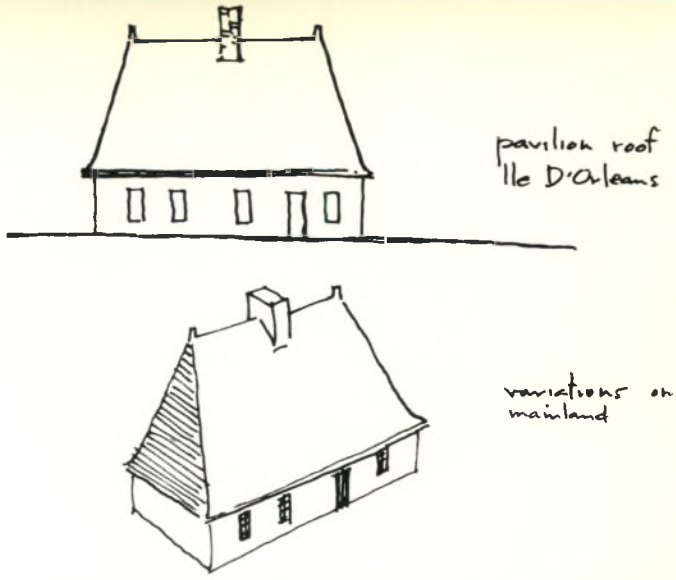
The apse is dominated by the tabernacle of the great altar, richly carved and gold-encrusted, a master work, completed in 1745 by Gilles Bolvin who worked after drawings prepared by Père Augustin Quintal, a native of Boucherville

Narrower vaults span transepts and intersect with the main vault immediately in front of the apse. Balconies occur in transepts.

The main form of the church is derived from its plan and structure, to which the richness of decorative elements is subordinate. The opinions of Father Lalande, written in 1891, at a time when the simple and clear forms of traditional work were no longer in fashion, are of interest: "On the exterior, the church is not remarkable, unless it be a lovable simplicity and antiquity of shape which has become for us almost historic, so much are we accustomed to these forms in the old churches



The old architecture of Quebec was massive with an aspect of fortified buildings.



which line the shores of the St. Lawrence.

One must admit that this old style has its beauties — Brittany furnished us with models, nearly all our churches are built following a similar plan. We are tempted to say that not only do they have an air about them which is more country-like, more Breton, more Canadian, but, even, that they are more Catholic."

As we have described the well-ordered and rational design and construction of the Ste-Famille church, this would be a suitable occasion to describe similar characteristics of the old stone and wooden houses of Boucherville.

Early French-Canadian houses were simple and straightforward. Rugged, durable and regular in form, they were economical and neatly laid-out structures given the means available in those days.

The ravages of time, the hazards of fire and destruction, and the successive modifications of different generations have not permitted many truly ancient buildings to survive. Many of the original buildings were built of impermanent materials. They were never numerous.

We can discover from Pierre Boucher what was the manner of house-building in those days. In the thirteenth chapter of his book, he gives answers to various questions put to him in France. "What are the houses built of? Some are built entirely of stone, and covered with planks or pine-boards, others are built of half-timber work with masonry infill, still others are built entirely of wood, and all the afore-mentioned houses are covered with planks."

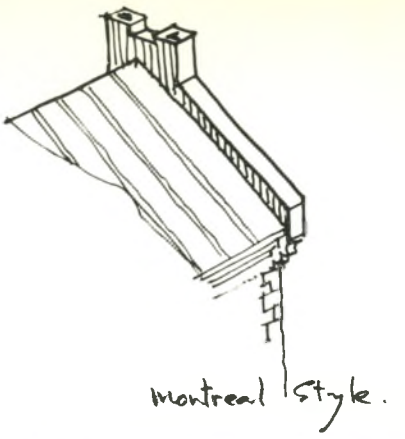
Wooden or partly wooden buildings raised by the pioneers have not survived and few early stone structures remain in the Montreal region. Most of the "Quebec style" stone or wooden houses, now extant, were built prior to eighteen-seventy.

The old architecture of Quebec was the colonial architecture of France. Little of the originals remain, although vigorous later developments still dot the countryside. The "Quebec style" or true colonial manner of the seventeenth century, may be seen today, often repaired or restored, on the Island of Orleans and vicinity. Long and narrow, with thick stone walls, these early farmhouses, display steeply pitched and hipped pavilion-style or gable roofs. Projection of roofs at eaves was small. Early roofs were straight or were provided with a slight kick or change of roof slope at eaves.

The roof-structure was framed in heavy timbers, dovetailed and pinned together by wooden dovels. Timber for framing and planks was commonly of white pine, large forests of which once flourished in Eastern Canada. Roof-covering was originally thatch or shingle with birch-bark underneath. Until recently, thatched roofs could be seen on barns in certain areas. One or two large fireplaces were located inside the house. Large stone chimneys projected through the ridge.

The regularly spaced windows, tall French small-paned (8″ x 6″) casements, opening in, were large and numerous. Roof and floor structures did not follow the same layout, usually window-spacing was related to the structural bay-system of the roof and upper floor. Several doors, unsymmetrically placed, broke the even flow of windows. Because the ground floor contained only two rooms, one of which was larger, since it served as kitchen and living room, the principal entrance was rarely centered. An entrance led directly into the kitchen. This room was the full width of the house. A stair climbed out of a corner. One or two doors led from the kitchen.

The "Montreal style" house, a later development, remained massive but became deeper and more square on plan. The true "Montreal style" house, a migrant from the city, had stone gable end walls which projected above the slope of the roof as a firebreak. The gable projected forward at the eaves to receive the projecting roof cornice



The Quebec style House was long and narrow with high pitched roof and gable verge.

and was managed in a series of stone corbels shaped in classic profile with torus and cymarecta mouldings. A stone chimney or pair of chimneys rose centrally from each gable wall. A feeling or need for symmetry during this period demanded a chimney on each gable. When there was only one working chimney, other chimneys were false and were built of wood.

The country or farm-house version of this style seems to have retained the balanced gable treatment for dignity rather than utility. In simple farm-houses all walls were enclosed beneath the roof. The roof-slope was reduced from something approaching 60 degrees to an approximate 45. Roofs were often covered with French diamond-pattern shingles in "fer-blanc" or hand-dipped tin-plated sheet-iron. Eaves were projected further. The roof was flared into the eaves with a sweeping curve resulting in the characteristic bell-cast form. Widely projecting eaves provided shade, shed rain clear of windows and served as light reflector and modulator.

Framing of roofs and floors was in the manner of timber post-and-beam structure. Principal floor beams and roof frames were set on centers varying from six to eight feet approximately. Framing spanned from front to rear walls and was sheathed with thick plank.

Walls were two to three feet thick, and were constructed with outcrop stone from fields or boulders from streams and beaches, laid up from inside and outside as two shells in approximately horizontal courses on generous beds of lime mortar. Spaces between the wall-faces were filled with broken stone and mortar. Joints were slurried over with mortar. In some districts walls were made more weatherproof by plastering with stucco, or sheathing was placed over the exposed northern walls. Larger stones or quoins were selected for corners. Walls were thicker at their base giving a raked or battered effect. This manner of laying up masonry was known as "style panier" or basket style. Where upper floor beams

The Canadian style house was an adaptation of the Quebec and Montreal styles (above) to withstand the vigorous Canadian climate.

were supported on the wall a straight course of more carefully chosen stones occur. This course of regular stones was carried around the house. Iron tie-rods with S-shaped wrought-iron anchors were often placed on this plane to resist the thrust of roof rafters, and to tie the gable wall to floor and roof framing.

The plan of the house was more developed and usually contained at least three rooms on the ground floor. A salon or parlor was provided as well as bedroom and kitchen. The parlor was reserved for important occasions so that the front door opening into it was rarely opened. This meant that the door facing the "rang" was little used. The kitchen was the family room. The family and "les amis" entered through the kitchen door. The kitchen door was placed in a sheltered position or faced south.

From the kitchen a steep stair led to the attic. Early "colons" used the attic as a granary and storage place. Bedrooms were placed in the attic later. Small dormer windows in the roof often had a different arrangement from window openings below. Ground floor window openings were large and tall. Sills were low above the floor. Openings were trimmed with dressed, shaped or

well-chosen regular stones on the exterior and were fitted inside the house with wooden frames imbedded in mortar. Sash were full-length wooden casements. Glass size increased gradually. In summer, windows were shaded with solid or slatted wooden shutters which folded back against the stone walls and were held with S-shaped retainers. Double windows were installed in winter.

Gradually, these forms were altered and adapted to suit needs and to accommodate the climate. Early floors were close to grade. Floors were lifted above the snow to permit a cellar, or a lower storage floor or workshop with adequate windows. Balconies were added at the raised floor line. At first, balconies were placed only on the front and rear. Often they were additions to older houses. Either they were unroofed or separate balcony-roofs were added. In newer houses the roof was continued over the balcony. Then balconies swept around the house and the flared roof swept with them. Wealthier farmers or village-dwellers slowly converted their houses to provide a more ample and comfortable style of life. Roofs became less sharp, eaves projected boldly, and the roof flared more sweetly at the eaves. Sheet-metal was preferred for roof-covering. Painted galvanized iron sheet cut into shingles or applied in sheet-form with standing seam or battered joints were common roofing materials. More recently factory-pressed light-weight galvanized iron sheets have been widely used on house and barn. Chimneys became smaller and neater, often placed one on each side of the ridge. The irregular layout of fire places gave a better distribution of radiated heat.

The "Canadian style" or typical rural house-form of Quebec was still maturing when it was attacked by industrialism on the one hand and Victorian fantasy on the other. A separate and equally distinguished rural house-type, the "gentilhommière" or seigneurial manor-house had received the death-blow earlier. The manor-house in its later development, a sophisticated blend of French-Canadian form and workmanship with Neo-Greek influences from British and American sources, probably contributed to the development of the typical vernacular farm-house.

Early houses and those built in the nineteenth century in the vernacular or more sophisticated manner possess charm and dignity.

In the later nineteenth century, fewer stone houses were built. Wood continued to be employed and the use of brick increased. Victorian houses have a richer but more cluttered appearance.

While many houses, particularly the wooden, remained traditional in form, brick houses showed signs of innovating taste. From the city came the false front or the flat hopper-roof faced with slate-hung or shingled semi-mansards, steep-pitched dormers and towers piercing the skyline.

This was a period of verbalizing romanticism and literary and historical associationism. A larger number of social classes existed and the early expanding technology and resultant wealth gave more opportunity for ostentation. New mechanical tools shaped materials with ease, and permitted the turning and fretting of wood. Carpenters assembled lace-like fantasies and grotesque decorations. Late Victorian finickyness produced elaborate compositions in the ball and turned style. Florid form complicated street elevations. More variety led to restlessness and discord.

The well-designed twentieth-century house has returned to earlier principles; even if relative proportions and dimensioning of individual parts has changed. However, some contemporary houses have even more blatant flourishes. Seen against the increasing inanity, even the vulgarities of Victoriana now have charm.

Victorian fantasies were mostly additive. Richnesses were piled up mechanically. Underlying forms were comparatively simple. As a result, older houses of any period usually blend together reasonably well.

Boucherville offers an interesting display of comparative house types. West of the village along the river road, the houses illustrate a cycle of forms from the seventeenth to the twentieth century. The trend is from the orderly and simple to the complicated, and back to the simple. Hedges and landscaped gardens bind the heterogeneous forms together and make up for any lack of overall order and unity.

East of the village, Rue de Montbrun, an important artery, one mile in length, runs from Marie Victoria and the river to a secondary back-road. On the corner stands the oldest house on this street. Constructed one hundred and forty-seven years ago, the house is in the "Montreal style". The gable wall contains fireplaces and chimneys and projects above the roof line as a fire-wall.

De Montbrun connects the old village and center of new development, and is used as an access road. Rue St. Sacrement meets De Montbrun and links this road with church, schools and old village center.

An interesting comparison can be drawn between Rue de Montbrun in the old area, and the new town.

The street in the old section is 35 feet wide, including sidewalk. In the new section the street is slightly wider but the impression is of much greater width and space.

In the old area the street has a more tight-packed and close feeling, with more atmosphere and sense of the presence of human life. In the new part the atmosphere is harsh and more sterile in appearance.

The sidewalk of the old street is irregular. The road curves slightly. Houses are close to the sidewalk. Lawns occur in back and sides but not in front of houses. Hedges or fences border sidewalks. Large old trees provide shade. Houses vary in period from 1800 to 1962. Sheds, lean-to's and shacks are thrown up in back and side yards.

In the new area, houses are set far back of lawns in the typical suburban manner.

While it is difficult to boil down many observations into few principles, the visual survey of Boucherville does lead to certain distillations.

Variations in characteristic and typical spaces, and in the general form and arrangement of buildings, trees, plantings and ground - cover make for important differences in the "feel" of an environment.

The relationship of building heights to street width is important in establishing the general living character and visual quality of an area or street.

Social areas and focal-point spaces demand emphasis and require more space than surrounding areas. These spaces should be arranged so as to be suitable for their purpose. More space should be allocated to them than is needed on a purely minimum basis in order to denote their importance in the hierarchical scheme. There should be a sense of culmination in focal-point spaces and a transition between these and peripheral areas. Boundaries or edges of districts require careful study.

A general regularity in the height, size and volume of buildings on a street makes for consistency of character, while abrupt changes in apparent size, scale, volume, mass or silhouette tend to destroy the unity of an area or street.

When the majority of the buildings in an area or street are small, and are set close to the street, the introduction of a larger than average building set back from the street on open and untreated land results in disharmony. This effect increases with the extent of the set-back and the apparent size of the volume of the building as seen from sidewalk or street.

Existing character is lost by haphazard renovations. Partial changes which ignore the form of old buildings, or the prevailing character of living areas, spoil original values without establishing the new.

Bright colors, when used in relatively large areas or together with bold or unrelated forms, tend to disrupt existing relations.

Unused and uncared-for lots, and accumulated exposed junk make dismal settings.

Records of history, or of previous activities worth preserving, may reside not only in solid artefacts, but they may also be evident, less tangibly, but sometimes more powerfully, in the spatial relationships of any living place. If structures, interesting for historical reasons, or aesthetically of value, are torn down and moved, even with loving care, they may leave behind the more valuable, but ignored possessions.

Apart from literary or historical associations, admirable though these may be, existing areas which have achieved a pleasant and characteristic living environment are memorable in themselves and deserve to survive.

Rehabilitation and preservation of living areas which possess a heritage could be undertaken by a careful adaptation of old means to new ends. Such areas could be adjusted to permit the fulfillment of new roles, without undue sacrifice, in the life of a community.

In today's world, where the pace of change is constantly accelerating, such projects would require careful study and restraint in handling.

In early days, the simplicity of pioneer life led to restraint, later wealth brought confusion. The situation today is more extreme. A plethora of materials and methods of construction are available. New physical and social pressures are rapidly mounting. The process of providing housing and other facilities which will enhance the older neighboring community has become more complex and difficult.

BOUCHERVILLE

Voici la fin d'un article de M. Stewart Wilson, professeur d'architecture à l'Université McGill. Les étudiants de troisième année en architecture ont rassemblé en 1964 la plupart des photos et effectué la plus grande partie des recherches.

L'histoire de Boucherville a été romantique, même si elle a été pastorale. La place centrale et les petites rues respirent le passé. On ne peut pas dire, cependant, que la ville possède un grand nombre de bâtiments remarquables. Les vieux édifices ne sont ni très vieux, pour la plupart, ni très nombreux.

Le charme de Boucherville doit être ailleurs. Cet attrait semble se trouver dans l'emplacement, le tracé ou la disposition des bâtiments du vieux village, la conservation de certains spécimens de bâtiments plus anciens et les marques d'une tradition domestique qui se maintient même si elle est imparfaite. L'attrait que Boucherville continue d'exercer dépend, jusqu'à un certain point, de la conservation de ces caractéristiques.

L'église est le plus intéressant de ces vieux bâtiments. On a beaucoup écrit au sujet de l'église de la Sainte-Famille de Boucherville. Les visiteurs peuvent se procurer un opuscule illustré, à l'aide de photos, publié récemment à l'intention des paroissiens, qui décrit brièvement l'origine et l'histoire de l'église. On y décrit la richesse des trésors artistiques, soit les meubles et les objets sacrés, qui se trouvent dans l'église, et dont un grand nombre sont maintenant classifiés objets d'art par la Commission des monuments historiques du Québec.

Voici un extrait du texte du curé, Mgr Poissant: "A la demande des paroissiens de Boucherville, le Ministre des Affaires culturelles, par l'entremise de la Commission des monuments historiques, a classifié l'église de la Sainte-Famille, monument historique. Il a plu au Lieutenant-gouverneur en conseil de prendre cette décision le 14 juillet 1964.

Cette église a été construite en 1801 d'après les plans et le cahier des charges et sous la direction de M. l'abbé Pierre Conefroy, curé de Boucherville (Québec 1752-Boucherville 1816). Elle a servi de modèle à plusieurs autres églises de la province: L'Acadie, 1801, Saint-Grégoire (Nicolet) 1803, la Baie du Febvre, 1806, Chambly, 1809, la Présentation, 1823, Charlesbourg, 1827, etc. En 1843, un incendie a endommagé le clocher, le choeur et le vieil orgue. M. Louis-Thomas Berlinguet a effectué les réparations nécessaires".

M. l'abbé Lalande a écrit: "Les travaux ont commencé au mois d'août 1843; cinq mois plus tard, soit le jour de Noël, on ouvrit l'église paroissiale de Boucherville au culte". De nos jours, l'église et ses oeuvres d'art sont protégées par un système d'extincteur automatique d'incendie.

L'église mesure 150 pieds de long sur soixante de large. La nef et le transept forment une croix. Le choeur est complété d'une abside en forme de demi-cercle.

On garde le cahier des charges de M. l'abbé Pierre Conefroy aux archives du palais épiscopal de Québec. M. Gérard Morisset a écrit dans son ouvrage "L'Architecture en Nouvelle-France": "Le texte est si complet et si clair que les entrepreneurs ne pouvaient trouver d'excuse pour faire le moindre oubli ni pour avoir la moindre tendance à présenter des réclamations pour des travaux supplémentaires.

A l'époque de sa construction, on tenait l'église de Boucherville pour le plus bel édifice religieux des rives du Saint-Laurent. L'église actuelle de Boucherville est la troisième; elle a été construite en 1801 et réparée en 1843 après l'incendie. L'année "1801" est sculptée à même l'ovale enguirlandé de la frise de l'entablement au-dessus de l'entrée en forme d'arche.

M. Allan Gowans a écrit dans un renvoi de son ouvrage "Church Architecture in New France": "Les éléments du plan Conefroy proviennent par intuition de la tradition québecoise des dix-septième et dix-huitième siècles".

Il semble que cette intuition ait été d'une grande clarté. L'examen de la structure du toit de l'église de la Sainte-Famille confirme les assertions relatives à la logique de la disposition et à la perfection du plan.

A l'intérieur du toit médiéval élevé on trouve à tous les quatre pieds des cadres de bois au-dessus de la nef. Un cadre sur trois, à 12 pieds de centre à centre, devient une ferme du genre poinçon. La dimension des poinçons est de dix pouces de côté. Entre ces poinçons et la membrure inférieure de la ferme, des contre-fiches horizontales relient les cadres principaux et les cadres

secondaires. Des décharges diagonales entre la poutre faîtière et le poinçon sont reliées aux entraits horizontaux.

La charpente simple du transept se raccorde joliment à la nef. Les transepts sont de forme rectangulaire; l'axe du transept s'aligne avec une ferme sur une ligne de baie de douze pieds. Comme d'habitude, on trouve un poinçon de dix pouces sur dix pouces à ce point d'intersection, sous la ligne du faîte de la nef. Une poutre qui se prolonge au-dessus du transept en ligne avec le mur de la nef, croise et supporte la charpente du toit à l'axe du transept. La charpente secondaire qui appuie ou contrevente la structure du toit du transept part du poinçon. Les membres de la charpente de toit sont assemblés à l'aide de goujons de 9 pouces sur ¾ de pouce.

La charpente du clocher est indépendante de celle de la nef. La base du clocher est reliée à la charpente de la nef au moyen de goujons. Deux membres de ferme de 4 pouces sur 11 pouces dans le côté de la charpente de la tour et face à l'abside constituent la décharge verticale du clocher.

L'intérieur de l'église a été redécoré en 1877, pendant que M. le curé Joachim Primeau était en fonctions puis l'église a été ouverte à nouveau en 1879. Le style est simple et sobre. A l'intérieur, le plafond en forme de voûte est fait de panneaux de bois peints en couleurs et dorés. Des tringles surélevées à partir d'une haute corniche divisent la voûte en panneaux, tout en se conformant au plan général du système de baies dissimulées. Les fermes de toit, qui forment le comble sont placées directement au-dessus des nervures et sont appuyées sur des parties de mur entre les fenêtres.

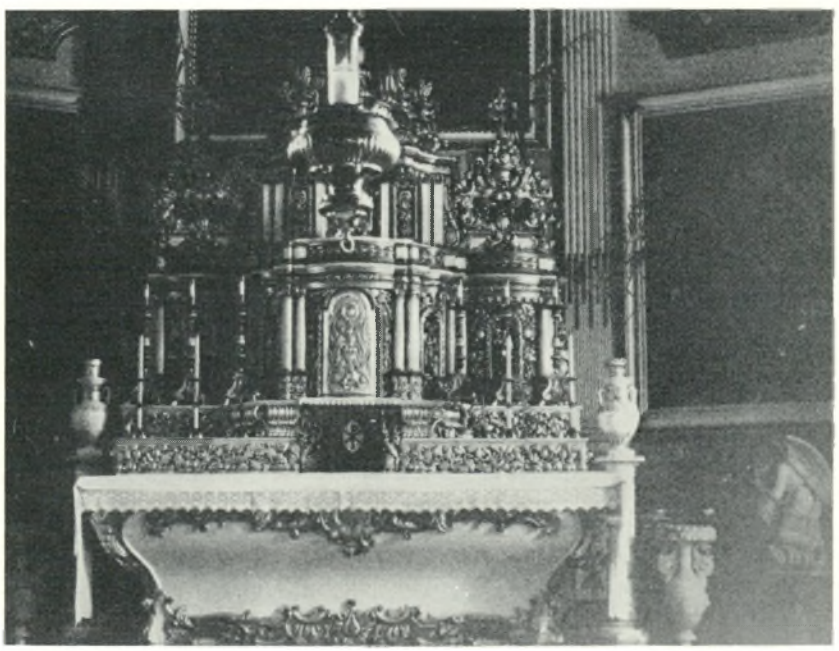
Des fenêtres en forme d'arche aux moulures classiques percent les murs de pierre épais. Les stations du chemin de la croix sont placées entre les fenêtres, tandis que plus haut, des consoles murales d'ornement supportent de grandes statues amovibles.

Les murs de l'abside semi-circulaire sont décorés plus richement et subdivisés en panneaux de largeur irrégulière par des pilastres fins légèrement surélevés et surmontés de chaperons corinthiens. Des baies en forme d'arche et des niches se trouvent dans les grandes baies, tandis que des plaques décoratives couvertes d'arabesques et de bordures dorées sont installées sur les panneaux étroits.

L'abside est dominée par le tabernacle du maître-autel richement sculpté et incrusté d'or, chef-d'oeuvre terminé en 1745 par Gilles Bolvin qui a effectué ce travail selon des dessins du Père Augustin Quintal, qui naquit à Boucherville.

Des voûtes étroites, qui se prolongent au-dessus des transepts, intersectent la voûte principale immédiatement en face de l'abside. Les transepts contiennent des jubés.

La forme principale de l'église découle du plan et de la structure de celle-ci, auxquels la richesse des éléments décoratifs est subordonnée. Il est intéressant de connaître l'opinion de l'abbé Lalande, écrite en 1891, époque à laquelle les formes simples et claires du travail traditionnel n'étaient plus à la mode: "De l'extérieur,



L'autel de bois recouvert de peinture d'or, sculpté par Gilles Bolvin en 1745 est probablement la plus belle pièce d'art de cette église.

La maison Gaboury a subi une réfection importante à l'extérieur et à l'intérieur, lors de sa reconstruction en 1870. La maison Gaboury telle qu'elle est aujourd'hui.

l'église n'a rien de remarquable, si ce n'est à cause d'une agréable simplicité et ancienneté de son style qui est devenu presque historique pour nous, tellement nous sommes habitués à retrouver ce style dans les vieilles églises qui s'alignent le long des rives du Saint-Laurent.

Il faut admettre que ce vieux style possède sa beauté, la Bretagne nous en a fourni des modèles; presque toutes nos églises sont bâties selon des plans semblables. On est tenté de dire que non seulement elles ont un air qui est plus champêtre, plus breton, plus canadien mais même qu'elles ont un air plus catholique."

Puisque nous avons décrit le modèle bien ordonné et pratique et l'architecture de l'église de la Sainte-Famille, l'occasion semble appropriée de décrire les caractéristiques semblables des vieilles maisons de pierre de Boucherville.

Les anciennes maisons canadiennes - françaises étaient simples et peu compliquées. Solides, durables et de forme régulière, elles étaient des bâtiments économiques et bien agencés, selon les moyens disponibles à cette époque.

Les ravages du temps, les dangers d'incendie et de destruction ainsi que les modifications successives apportées par les diverses générations n'ont pas permis à un grand nombre de bâtiments vraiment anciens de survivre. Un grand nombre des bâtiments originaux ont été construits à l'aide de matériaux non permanents. Ils n'ont jamais été nombreux.

Nous pouvons apprendre de Pierre Boucher la manière de construire les maisons à cette époque. Il donne au chapitre treize de son ouvrage la réponse aux diverses questions qu'on lui avait posées en France. "De quels matériaux les maisons sont-elles construites? Un certain nombre de maisons sont construites entièrement de pierre et couvertes de madriers ou de planches de pin, tandis que d'autres sont construites selon un ouvrage de demi-boisage avec remplissage de maçonnerie, d'autres encore sont bâties entièrement de bois; toutes les maisons susmentionnées sont recouvertes de madriers."

Les bâtiments construits entièrement ou en partie en bois n'ont pas survécu; peu de maisons construites en pierre sont encore debout. La plupart des maisons existantes construites de pierre ou de bois ont été construites au dix-neuvième siècle.

Les murs, de deux à trois pieds d'épaisseur, étaient construits de pierres qui sortent de terre dans les champs ou de pierres érodées trouvées sur les plages, et disposées en deux rangs sur un lit fait d'une grande quantité de mortier à la chaux. Les espaces entre les rangs étaient remplis de pierre concassée et de mortier. Les joints du mur étaient recouverts d'un coulis de mortier affleuré au parement de pierre.

Les toits étaient à pente raide. La charpente des toits et des parquets de bois était bâtie de poteaux et de poutres. Les poutres principales des planchers et les charpentes des toits étaient disposées selon des axes qui variaient de six à huit pieds environ. Les poutres et les charpentes dont la portée s'étendait des murs avant aux murs arrière, étaient recouvertes d'épais madriers.

On avait tendance à disposer selon des axes, qui se trouvaient entre les divisions en baies de la charpente, les portes et les fenêtres qui étaient souvent placées avec symétrie. Les fenêtres percées dans les murs étaient nombreuses, ordinairement une par mur situé dans chaque baie.

L'entrée principale était rarement au centre, à cause du plan intérieur, qui ne comprenait souvent que deux pièces au rez-de-chaussée, dont l'une servait de cuisine

Une porte en aluminum cache une porte en bois sculpté.

et de vivoir général et de ce fait, était plus grande que l'autre.

L'ouverture des fenêtres était large et haute. On avait tendance à placer le seuil des fenêtres à faible distance du parquet. L'ouverture des fenêtres était bordée à l'extérieur de pierres aplanies, taillées ou de pierres de surface régulière choisies avec soin et garnies à l'intérieur de chambranles de bois encastrés dans le mortier. Les châssis comprenaient deux battants de bois qui couvraient toute la longueur de l'ouverture. Au début, les châssis étaient recouverts de petits carreaux, mais on se servit de carreaux plus grands par la suite.

On pratiquait dans le toit des petites lucarnes dont l'agencement était souvent différent de celui des ouvertures au-dessous.

Les anciennes maisons ainsi que celles qui ont été construites à une date plus récente, montrent des proportions qui leur donnent un air de dignité et un espacement méthodique des fenêtres, des portes et des lucarnes.

On construisit moins de maisons de pierre durant la dernière partie du dix-neuvième siècle. On continua l'usage du bois, mais celui de la brique augmenta. Les maisons de l'époque victorienne ont une apparence plus riche mais plus encombrée.

Alors qu'un grand nombre de maisons, surtout celles qui étaient construites en bois, gardaient la forme traditionnelle, les maisons de brique indiquaient un goût d'innovation. De la grande ville vint le style de la façade truquée ou du toit plat genre trémie avec demi-mansarde parée d'ardoise ou de bardeau, des lucarnes à pente raide et des tours en flèche sur la ligne d'horizon.

C'était là une période de verbiage romanesque et d'associations littéraires et historiques. Le nombre des classes sociales augmentait, tandis que la technologie

Verrou ancien forgé à la main.

Ferrures forgées.

Panneautage de porte dont le motif est de style Régence.

naissante en voie de développement, était la cause d'une richesse qui augmentait les occasions d'ostentation. Les nouvelles machines-outils qui toupillaient facilement les matériaux, permettaient de façonner le bois au tour et de le découper. Les menuisiers assemblaient des fantaisies qui ressemblaient à de la dentelle ainsi que des décorations grotesques. La tendance à fignoler de la fin de l'époque victorienne a donné des travaux compliqués dans le style de la boule et du bois façonné. Les formes ornées à l'excès compliquaient l'élévation des rues. Une diversité accrue entraîna l'agitation et la discordance.

La maison bien conçue du vingtième siècle est retournée aux principes anciens, même si les proportions et les dimensions relatives des différents éléments ont changé. Certaines maisons contemporaines comprennent des enjolivures d'une vulgarité encore plus criarde. Même les vulgarités de l'époque victorienne ont du charme de nos jours, lorsqu'on les compare à la niaiserie croissante.

On ajoutait surtout les fantaisies victoriennes les unes aux autres. On empilait machinalement la somptuosité. Les formes du dessous étaient relativement simples. Il en résulte que les vieilles maisons de toutes les époques forment ordinairement un tout assez harmonieux.

Boucherville offre un étalage intéressant qui permet de comparer les divers genres de maisons. Le long du chemin qui longe le fleuve, à l'ouest du village, les maisons représentent un cycle de formes du dix-septième au vingtième siècle. La tendance va de l'ordonné et du simple au compliqué en revenant au simple. Les haies et les jardins paysagers unissent les formes disparates et suppléent au manque d'ordre et d'unité de l'ensemble.

A l'est du village, la rue de Montbrun, artère importante d'un mille de long, va de la rue Marie-Victorin et du fleuve à un chemin secondaire de peu d'importance. On remarque au coin la plus vieille maison de cette rue. Construite il y a cent quarante-sept ans, cette maison est du "style de Montréal". Le mur du côté du pignon, qui contient des foyers et des cheminées, s'élève au-dessus du toit en guise de mur ignifuge.

La rue de Montbrun, qui relie le vieux village au centre de la partie plus nouvelle de la ville, sert de chemin d'accès. La rue Saint-Sacrement, qui rejoint la rue de Montbrun relie ce chemin à l'église, aux écoles et au centre du vieux village.

On peut établir une comparaison intéressante entre la partie de la rue de Montbrun qui est dans le vieux secteur et la partie qui se trouve dans la nouvelle ville. Dans le vieux secteur, cette rue a trente-cinq pieds de large, y compris le trottoir. Dans le nouveau secteur, elle est un peu plus large, mais on a l'impression qu'elle est beaucoup plus large et qu'il y a beaucoup plus d'espace.

Dans le vieux secteur, la rue donne une sensation d'encombrement et de proximité ainsi que d'une meilleure ambiance et de présence de vie humaine. Dans le nouveau secteur, l'atmosphère semble dure et plus stérile.

Le trottoir du vieux secteur de la rue est irrégulier. Cette rue décrit une légère courbe. Les maisons sont situées près du trottoir. Les pelouses se trouvent à l'arrière et aux côtés, mais non à l'avant des maisons. Des haies et des clôtures bordent les trottoirs. De vieux arbres de grande taille fournissent de l'ombre. La période à laquelle les maisons ont été construites varie de 1800 à 1962. Des hangars, des appentis et des cabanes ont été construits au petit bonheur à l'arrière et aux côtés des maisons.

Dans le nouveau secteur, les maisons sont situées loin de la rue derrière une pelouse, selon la façon typique des banlieues.

Quoiqu'il soit difficile de résumer un grand nombre d'observations en quelques principes, l'étude visuelle de Boucherville nous permet d'en arriver à certaines conclusions.

Des variations de caractéristiques et d'espaces importants, de l'architecture générale et de la disposition des édifices, des arbres, des arbustes et du recouvrement du sol, constituent des différences appréciables dans "l'atmosphère" d'un voisinage

Le rapport entre la hauteur des édifices et la largeur des rues est important lorsqu'on établit le caractère général de vie et l'apparence d'un secteur ou d'une rue.

Les endroits de réunion et les espaces principaux demandent d'être accentués et requièrent plus d'espace que les secteurs environnants. Ces espaces devraient être aménagés en rapport avec leur destination. On devrait y prévoir plus d'espace que le strict minimum afin de marquer leur importance sur le plan hiérarchique. Il devrait exister une sensation de point culminant aux endroits principaux et une transition entre ces derniers et les secteurs périphériques. Les limites ou les bordures des secteurs demandent une étude sérieuse.

Une régularité générale de la hauteur, des dimensions et du volume des édifices d'une rue contribue à créer l'uniformité de caractère, tandis que les change-

ments brusques dans les dimensions apparentes, l'échelle, le volume, la masse ou la silhouette tendent à détruire l'harmonie d'un secteur ou d'une rue.

Lorsque la majorité des édifices d'un secteur ou d'une rue sont de dimensions restreintes et sont situés près de la rue, la construction d'un édifice, plus considérable que la moyenne et éloigné de la rue sur un terrain découvert et non aménagé, brise l'harmonie. Cet effet prend une ampleur proportionnée à la distance où se trouve l'édifice et à l'importance des dimensions de l'édifice, lorsqu'on le regarde du trottoir ou de la rue.

Les rénovations faites au petit bonheur font perdre le caractère existant d'un bâtiment ou d'un milieu. Les changements partiels qui ne tiennent pas compte de la forme des vieux édifices ni du caractère prédominant des secteurs habités gâtent les valeurs originales sans en établir de nouvelles.

Les couleurs voyantes, employées dans un espace d'une certaine grandeur ou avec des formes hardies ou dénuées de rapport entre elles, ont tendance à rompre les rapports existants.

Les terrains vagues dont on ne prend pas soin et les tas de ferraille laissés à la vue forment de tristes spectacles.

Les annales de l'histoire ou l'activité antérieure qui valent la peine d'être conservées ne se retrouvent peut-être pas seulement dans des produits ouvrés, à caractère massif, mais on peut aussi les retrouver d'une façon moins tangible, mais parfois plus puissante, dans les rapports spatiaux de n'importe quel endroit habité. Lorsque des structures intéressantes en raison de leur histoire ou à cause de leur valeur esthétique sont démolies et transportées, même avec un soin amoureux, elles peuvent laisser derrière elles des trésors plus précieux mais ignorés.

Les secteurs, qui sont devenus un voisinage plaisant où l'on trouve certaines caractéristiques qui en augmentent l'agrément, sont mémorables en eux-mêmes et méritent de survivre pour ces raisons, en plus des raisons qui peuvent les relier à la littérature ou à l'histoire, même si ces dernières considérations sont dignes d'admiration.

La restauration et la conservation de secteurs d'habitation qui ont un héritage peuvent être entreprises en faisant une adaptation soignée de vieux moyens à des fins nouvelles. On pourrait transformer ces secteurs afin de leur permettre de jouer de nouveaux rôles dans la vie de la collectivité, sans qu'il soit nécessaire de faire de trop grands sacrifices.

De nos jours où le rythme du changement s'accélère constamment, de telles entreprises demanderaient d'être soigneusement étudiées et d'être réalisées avec discernement.

Autrefois, la simplicité de la vie de pionnier donnait lieu aux restrictions; la richesse qui vint plus tard apporta la confusion. La situation de nos jours est de beaucoup plus mauvaise. Un très grand nombre de matériaux et de méthodes de construction sont disponibles. Les nouvelles pressions physiques et sociales montent rapidement. Le processus de fournir le logement et les autres services qui mettront en valeur les vieilles collectivités du voisinage, est devenu de plus en plus complexe et difficile.

INTEGRATION OR ISOLATION

by Sylvia Goldblatt

Scarlettwood Public Housing Project.

The following article prepared especially for Habitat by Miss Goldblatt (Mrs. A. Murray) is taken from a study of two public housing projects in Suburban Toronto. The study undertaken with a grant from CMHC was the basis for Miss Goldblatt's Master of Social Work Thesis at the University of Toronto.

Canada has been described as "the last nation in the Western world to adopt subsidized public housing as a national measure".[1]

Federal housing legislation was on the books as early as 1938. Yet it has taken almost 30 years for the leadership, organization and public support to emerge that would make a program of public housing — on a meaningful scale — a social and physical reality.

This study examines the problem of integrating public housing residents with their neighbors outside the project. The basic assumption is that one measure of integration is the extent of joint use of facilities by public housing residents and their neighbors. It is this joint use of facilities that can provide a sense of identification with the community and an opportunity for a shared experience that leads to stronger inter-personal relationships.

Two public housing developments, built in the suburbs of Metropolitan Toronto in the early 1960's, are examined as a study in contrasts.

Scarlettwood, built in upper middle class suburban Etobicoke on the western outskirts of Toronto, is a small 150-unit project that might be said to meet the demands of those who say: "Don't concentrate large numbers of low-income families together as the segregated poor — scatter them among those with a higher economic and social standard of living so that the poor can benefit from a contact with those whose aspirations and achievements can be a source of inspiration". The second project, by contrast, is twice the size — 347 units — and it was built in an area where the income of the neighbours outside the development is very close to that of the residents within it. This project is known as Warden Woods and is located in the suburb of Scarborough on the eastern outskirts of Toronto.

FACTORS INFLUENCING INTEGRATION

Before reviewing the extent to which facilities were jointly used, six influential factors that affect integration are examined. These include: physical barriers; environmental differences; family size and structure; family income and rent; length of residence; and political rapport.

PHYSICAL BARRIERS

Both projects were set down in isolated corners of their municipalities, separated from immediate contact with the rest of the community by a ravine or river and by major traffic arteries. Such barriers make it costly to provide services to a small population, whether it be bus transportation, shopping, recreation or social services. As one public administrator put it:

> "How can we give them recreation services when older areas in the municipality have been waiting for these services for many years and still haven't got them?"

A private agency administrator remarked:

> "Staff find it hard to reach the project because transportation from here is awkward and so time-consuming."

[1]P. E. H. Brady, *Relating Public Housing Abroad to Canadian Public Housing,* Toronto: Metropolitan Housing Authority, 1962, p. 38.

Warden Wood Public Housing Project like Scarlettwood is isolated by natural barriers and by poor and expensive bus service to community facilities.

ENVIRONMENTAL DIFFERENCES

Both projects are largely composed of row housing — a design that does not exist in the immediate neighborhood of either area. It makes them conspicuously different from the neighborhood. The predominance of a quadrangle pattern of streets within each project forms another contrast with their respective neighborhoods. Density of child population and an architectural design which turns the projects in on themselves add to a sense of separateness.

One tenant said Scarlettwood looked like an army barracks from the adjoining thoroughfare. A worker in the same project said of the tenants:

> "Scarlettwood depresses me — the buildings, the attitude of the people. They know they haven't the services they need. They are trying to get an organization going but there's a problem of apathy that stems from economic deprivation. They see themselves as always wanting to get out and get a place of their own. They don't really care about the project, except in a very few cases."

The number of single-parent families adds a disrupting element to the environment, community leaders suggested, because of the special problems of child rearing, moral behavior and lack of incentive among those families.

> "The absence of parental authority results in these children being in court," one leader noted. "It's a whole community of people without a recognized authority in the person of a father."

(Note: Because the sample studied in this research was made up of families in which there was a mother and a father in the home, this aspect of the situation was not clearly demonstrated.)

This analysis by community leaders, however, seemed to be confirmed by the attitude of public housing tenants who expressed a strong desire to get out of the projects. They seemed most anxious to get out before their children arrived at teen age. They complained about being lumped with those families who make trouble for the community. They also objected vehemently to the absence of privacy and linked this to the ever-present numbers of children. (There were 143 children in the 30 families interviewed, with 75 per cent of them under the age of 10.) One tenant put it this way:

> "People are the same everywhere, but living so close makes it much worse here."

A social service worker suggested:

> "The lack of privacy compounded by the quadrangle design makes it harder to help those who could be helped."

Another worker commented:

> "Those who seem to be able to get the most from our help are those who stay unto themselves — these are the people who only want to stop off here and then get out."

Some housing in Warden Wood looks out to the street, but in Scarlettwood the residents complain of a lack of privacy because the buildings face inward.

The same worker, however, felt that residents were always making demands for services such as visiting homemakers. "If they would just be neighborly and help each other," she suggested.

Outside each project, attitudes in the neighborhood ranged from virtual ignorance of the project itself to resentment. In the immediate area of Scarlettwood, homeowners were angered by its presence on the grounds that it would devalue their property. Beyond the immediate neighbors, citizens seemed unaware of its existence. The Housing Authority showed its concern for public opinion by maintaining the property in beautiful condition with the aid of a resident caretaker, assisted by two non-resident grounds-keepers.

Near the Warden Woods project, resentment voiced by homeowners could be traced to another factor. The houses in the project, in some cases, are an improvement over those to be found in the immediate neighborhood, — incomes of project residents and neighbors are relatively close. Hence the neighbors feel that those in the project are being handed something on a silver platter that they had to work for all their lives. It is difficult to find support in the surrounding community for meeting the special needs of public housing families. Efforts to provide a nursery school for children living in the project's high-rise apartment block were bitterly opposed. There is no resident grounds-keeper in Warden Woods.

FAMILY SIZE AND STRUCTURE

The number and ages of children in a family will have a decided influence on how they use shops, recreation and transportation facilities. In this sample, 80 per cent of

the families had at least four children — some had as many as nine. As mentioned above, at least 75 per cent of the children in these families are under the age of 10. A mother with four children under the age of five will find it difficult to shop under the best of circumstances. When the stores are not within walking distance the problem is compounded. To send five children swimming, at 25 cents per child plus transportation charges, is a costly undertaking.

Every family with young children knows that the cost and availability of baby sitters is a real problem. For the low-income family it is a most conspicuous hurdle to integration.

LENGTH OF RESIDENCE

Although the length of time a family has lived in an area might be considered the key element in their use of available facilities, this did not prove to be the case. Eighty per cent of the families interviewed had lived in the projects for more than a year. But their adaptability, their willingness and capacity to reach out, seemed to determine the use they made of existing facilities rather than their length of residence.

FAMILY INCOME AND RENT

For the family with insecure work opportunities a great attraction for them in public housing is that their rent is reduced when earnings go down. Even if they have to go on welfare, they still have a decent house in which to raise their family. This fact not withstanding, Mr. P. E. H. Brady wrote in 1962:

> "The rent to income ratio in Canadian public housing operations suggests that too high a proportion of income is being directed towards rent."[1]

Today (1966) families earning $5,000 annually pay as high as 31% of their earnings for rent in public housing, an Ontario Housing Corporation official pointed out. For the large family in particular this leaves very little to spend on activities that would contribute to integration. It also makes it impossible to save enough to buy a house.

The respondents were in general agreement that a major cause of friction within the project was the subject of reporting income and its relation to rent. One of the choicest topics of gossipy conversation is that Mrs. W. has taken a job without telling the housing authority. If she tells the housing authority, her earnings are calculated as part of the family income and the rent goes up. It might be that Mr. W. is moonlighting without telling the authority, and for the same reason. One family whose bags were packed to move to a house they had bought, admitted that the only way they had managed to save enough for a down payment was for the husband to work as much extra time as he could get and for his wife to take a job. They did not report this extra earning to the authorities.

> "I know that was cheating but I figured that if I could save enough for a down payment on a house, then some other family would be able to take over this one. I could never have saved if I had had to pay the increased rent on what we earned."

POLITICAL RAPPORT

There was no sign that any rapport had been established between the tenants and their political representatives similar to what has been observed among low-income families in the center of the city. No one seemed to consider their alderman as a logical person to approach with complaints or demands. One woman said: "If we talked to our local alderman, they'd kick us out." When asked if they go out to vote, respondents replied:

> "The municipal and provincial elections, I didn't vote because the polling booth was too far away. For the federal elections it was in the caretaker's apartment and I voted."

The political representatives interviewed indicated they have little or no contact with the residents in the public housing projects. More than one made it clear that "we would never have had public housing in our municipality if it had not been rammed down our throats by Metro" (metropolitan government). They objected to "putting them all together".

The atmosphere in public housing is "too much like an institution", another politician complained. They were very critical of higher levels of government for building public housing projects without agreeing to finance the services needed to help a group of low-income families.

> "Put one or two of them on a street, so if they are in trouble there aren't too many for the neighbors to be able to help them."

JOINT USE OF FACILITIES

As noted in the introduction, one measure of integration for public housing residents with their neighbors outside the project, is joint use of facilities. The six facilities examined were: health; recreation; transportation; shopping; education; churches.

[1]Brady, op. cit., p. 16.

HEALTH

Because so many of the families in this study were protected by some form of medical insurance through the husband's place of employment, there was little opportunity to observe problems of medical deprivation among low-income families. But a school official made the observation that:

> "There are many project children who are not getting the medical care they need because the families without medical insurance avoid using a doctor they cannot afford."

Both of these housing projects are a considerable distance from hospital clinics, well-baby clinics or public medical services of any description. Some hint of what this meant to families without medical insurance came out during interviews when reference was made to less fortunate families or when the respondent did not have coverage.

It was in the area of dental and eye care that everyone seemed to be in the most trouble. There are no dental clinics for low-income families in either Etobicoke or Scarborough. The notes that are sent home with a child from the public health people at the school are just ignored:

> "There's just no money for it — 'though we've been told the kids need it."

The word dentist brought forth responses like: "Forget it"; "Hate to think about it"; "It's out of the question".

Auxiliary services were in short supply in both projects. The health and welfare workers made it clear: "They desperately need more services." Lack of psychological services for children and adults is a constant source of frustration to those who are seeking or giving health services.

The opportunity for integration of public housing tenants through health and welfare services in either area, is very limited.

RECREATION

Both Etobicoke Township and Scarborough Township operate their recreation services on the principle that

> "no one gets something for nothing; people only appreciate something if they have to pay for it".

But in discussions with township officials who feel very strongly about "the right of every individual to constructive leisure-time activity", there was a degree of acknowledgement that the pay-your-own-way policy was as much a financial necessity as a statement of principle.

The fact that the City of Toronto offers free swimming lessons in the schools, free outdoor pools, free artificial rinks in the winter, et cetera, may have been a political decision at the time it was introduced — as one suburban leader suggested — but it also made it possible for everyone to enjoy these facilities regardless of income.

The result of the suburban recreation policy is that only playground programs are free. In the field of youth services fees cover a portion of the cost, adult programs must be self-sustaining. This puts a drastic curb on the joint use of recreation facilities by low-income public housing residents and their neighbors outside

The income of the people living in the neighborhood is not much greater than those in the Warden Wood. This creates some resentment because of the better housing and the subsidized rental in the Public Housing Project. The middle-income residents in the neighborhood of Scarlettwood seem unaware of the project in their area.

The beautifully landscaped grounds of Scarlettwood restrict the children's play.

the development.

A 25 cent fee for swimming at a local high school becomes a layout of almost two dollars for a family with four children who must be given transportation to the school. One mother explained that she had saved three dollars in order to give one of her children swimming lessons at the school during the summer. When an emergency drained off the three dollars, the swimming lessons had to be forgotten. As one administrator put it:

> "Low-income families live so close to economic disaster that it takes very little to tip the balance of security."

Free recreation services on a limited scale are provided by a few local churches. Parents spoke warmly of this effort. "They even come and pick our kids up once a week because it's too far for them to go on their own," one Scarlettwood family explained.

In the field of adult services, recreation facilities were either non-existent or out of the financial reach of project residents. Watching T.V. seemed to be the main recreational activity.

Some of the men had hobbies or some activity through their jobs, but the women described little recreation activity for themselves. The exception was in Scarlettwood where the Y.W.C.A. offers a program for both homebound and working mothers that ranges from crafts and calisthenics to discussion groups and films. One participant explained "the 'Y' is so nice they won't take the 25 cents from you if you haven't got it".

In the development of recreation programs the role of leadership seems crucial. Many administrators and community leaders made it clear that low-income families lack the "know-how" for volunteer leadership. There also has to be some stability of tenancy to provide time for development of this "know-how".

In Scarlettwood, an 18 year old boy has given leadership in the formation of a Scarlettwood Youth Organization that embraces young people in the project and the neighborhood. The Municipal Recreation Department in this area has helped stage a number of successful dances in the community arena. Neighborhood parents, in an effort to segregate the project residents, attempted to get the Recreation Department to form two separate groups; the attempt was unsuccessful.

Warden Woods' teenagers have had no leadership. More than one authority spoke of neighborhood gangs which include teenagers from Warden Woods. One educator described them as "depressingly similar to the gang picture in large American cities".

TRANSPORTATION

In view of the fact that these two projects are so far from existing facilities, transportation is a vital service. About half the families have cars, but for those without a car the place of transportation — particularly for large families — cannot be overemphasized. In addition, suburban residents pay double fare in order to come into the center of the city.

Infrequent weekday service or even total absence on Sundays puts a formidable hurdle in the way of families wishing to use public parks, shopping facilities, recreation facilities or even a visit to friends and relatives.

SHOPPING

For both developments large scale shopping cannot be done in the immediate vicinity. Scarlettwood residents do have shops within a short walk from their homes, but only a few food items can be purchased. A small shopping plaza is planned for the Warden Woods project.

If they have a car some families return to their old place of residence to do shopping. One housewife pointed out that when she lived close to the stores in the heart of the city she could visit them more frequently and take advantage of the sales. Some said they used rummage sales or the Crippled Civilians Store to shop for their children's clothes. There were many families who had always shopped in the large department stores and continued to do so.

Some families had met the food shopping problem by buying freezers together with a frozen food service — which they could ill afford.

EDUCATION

Unlike other areas where joint use of facilities is often optional, education has a built-in requirement for such use. Obligatory school attendance between the ages of five and 16 means that children of public housing residents and their neighbors are mingled throughout the elementary and secondary school system.

At the schools serving both projects, children of public housing residents tend to transport the problems of troubled families to the classroom.

How the school system copes with this influx seems keyed to the proportion of project children in the school itself. In Westmount Public School which serves the Scarlettwood project, there is one Scarlettwood child for every three from the surrounding area. In Warden

Avenue Public School, there is one public housing child to every neighborhood child.

At Westmount School — an architecturally charming building 20 minutes by foot away from the Scarlettwood project — the teachers' initial reaction to project children was to separate them from the neighborhood ones in their minds, but this attitude was altered in time. The initial tendency of school authorities to split project children from the others stemmed logically from the problems they presented. Teachers had to learn how to handle children with an inordinately short interest span.

> "Even by Grade III some of these children have been in eight different schools."

Teachers found an unfamiliar set of behavior problems. They encountered children with stories of events on the home front which had a disrupting influence; father in jail, common-law relationships, several children in one family with different fathers.

But within a year's time school personnel at Westmount spoke of project children learning to conform to the behavior patterns of the rest of the school population:

> "They no longer spit, for example, because our kids don't spit."

Westmount School has tried to meet the special learning problems some children have. Additional teachers are being taken on staff in order to permit them to work with smaller groups of students.

> "Although students may show the same I.Q. in testing, other factors influence their capacity to learn."

There are classes for the 'gifted child' and for the 'slow learner'. Out of the four 'gifted children' in the school two were children from the project and two from the neighborhood. Of the 12 children in the 'opportunity class', 10 are from Scarlettwood and two from the neighborhood.

An educator made the observation that the public housing students and those of the neighborhood will never completely integrate because the aspirations of the parents for their children are different. The neighborhood parent is largely from the business community and has had a high school education. His ambition is to see his children go to university. The public housing parent is largely an unskilled worker with a public school education. The most he expects to see his child achieve is a high school education.

The parents of children from Scarlettwood have no opportunity to integrate through a Home and School organization since it does not exist in Westmount School.

Warden Avenue public school was expanded to twice its original size in order to accommodate children from the Warden Woods project. The school adjoins the housing development property and has one public housing child for every neighborhood child. Because of its proximity to the project the school seems to be the first point of reference for troubled families. School personnel said:

> "We need the services of a full-time social worker . . . we should be devoting our time to educational duties for which we were trained . . . instead we're doing social work for which we are not trained."
>
> ". . . sometimes the children arrive at school in the winter inadequately clothed or in a very neglected condition . . . sometimes the children are mistreated at home. To compound the situation, there is so much turnover among the tenants, it means new problems are constantly arriving."

Before the school was expanded, they explained, "we could cope with some of our own families who needed help . . . there were seldom more than eight or 10 families." Now, there are so many families in need of help "the school doesn't know where to turn for all the help they need".

The staff at Warden Avenue School was given an additional vice-principal in order to offset the burden of work created by the public housing population. More help is needed from community social services, the writer was told. What is needed is: "some kind of center where they could find social work help".

The school hears complaints from families in the project and in the neighborhood, who are working hard to give their children a standard of behavior and feel themselves undermined by families who are unable to discipline their children. The disorganized families pay no attention to notes and reports sent home by the school.

There is an active Home and School organization in Warden Avenue School. Some residents claimed they felt snubbed when they went to meetings. Others denied this vehemently and said they were "treated like everybody else". One active leader from the neighborhood complained of the lack of "know how" among project residents:

> "You ask them if they want help with a job they agree to do and it's refused but when the time comes nothing gets done."

Her other major annoyance was based on the fact that "they seem to always want something for nothing". She

described the reluctance displayed by project people, for paying their way into a school concert or leaving left-over cookies for the teachers' staff room.

The educational aspirations of parents in the Warden Woods project and in the neighborhood seem to be directed no higher than the high school level. Educators were in general agreement that any increased opportunity that might be offered inside the project would be equally useful and important to neighborhood children, i.e. a nursery school.

CHURCHES

For some public housing families the church is the one avenue for integration with their neighbors outside the project. In neither of these developments would the number be large. The link in most cases is with the small, evangelical churches; the larger churches play a limited role. Some churches send cars to the project to pick up children who want to go to Sunday School or adults who want to attend services.

In Scarlettwood, the warmest praise was directed toward the Gospel Church that gave the project children a hobby class one night a week and an opportunity to go to camp for 10 days in the summer. A clergyman from one of the well-established churches said he was sure that most of his congregation were unaware that this little public housing project existed.

In Warden Woods, the Mennonite Church has tried to offer help wherever possible. The Church has a piece of property very close to the development on which they are eager to build a facility that could be helpful to the low-income families in the project.

In both the east and west-end communities the clergy acknowledged a feeling of helplessness when called upon to assist families suffering from a multitude of social problems. As one neighbor put it: "Even the clergy, they don't know what to do". She was referring to a family with a drinking problem where there was a lot of difficulty disciplining the children. One clergyman said he thought "the single-parent families have the worst time of it".

OBSERVATIONS AND CONCLUSIONS

On the basis of this inquiry joint use of facilities is not related to whether a public housing project is situated near a high or a low income area. Neither community consciously worked at providing facilities that could be used by both those living in the projects and their neighbors outside the projects. The one exception might be the schools. Joint use of facilities is unlikely to materialize unless this is an objective identified as part of the overall purpose for which public housing is designed.

Alvin L. Schorr makes this point in his book "Slums and Social Insecurity":

> "Public housing is pressed, if it is going to serve families with any precision, to define its objectives and to alter policies to further these objectives. At least three choices are open:
>
> (1) a real estate operation for the respectable poor — the purely poor,
>
> (2) a rehabilitative program for the seriously dependent and troubled poor,
>
> (3) a greatly enlarged and altered program, at least in part deinstitutionalized with a variety of kinds of housing opportunities.
>
> In the absence of a settled decision to seek the third course of (deinstitutionalized housing with a variety of kinds of housing opportunities) . . . local housing authorities are moving slowly, in most cases with pronounced reluctance, toward rehabilitative programs. Under present circumstances the families who are entering public housing make such a course inevitable . . . the families are isolated and segregated . . . many receive public assistance . . . many are broken families. They cannot be abandoned to their problems; they must be served. Moreover, when they are not served, buildings deteriorate, delinquencies occur, and deprived youngsters grow into disabled adults. It becomes plain that neglect is expensive."[1]

These remarks may provide some insight into why there is such reluctance on the part of the general public to accept public housing tenants into their midst. If in fact the housing authorities are failing to diagnose "with precision" the needs of families who are placed in public housing, then there is no way of determining and providing the help they need. Consequently the member of the public who happens to find himself living beside a "seriously dependent and troubled" family is left to cope with the discomfiting behavior of this family. No one would expect a healthy family to cope with another physically ill family; perhaps it is unreasonable to ask the healthy family to cope with the socially ill family.

The potential for integrating public housing families with neighbors outside the development, is closely related to the variety of poverty from which the families suffer. The self-respecting "respectable poor" may well fit into "deinstitutionalized" housing and become integrated with

[1]Alvin L. Schorr, *Slums and Social Insecurity*, U.S. Department of Health, Education, and Welfare. Social Security Administration Division of Research and Statistics. Washington: U.S. Government Printing Office, 1963, p. 115.

very little community help beyond the provision of decent accommodation at a price they can afford. "A rehabilitative program for the seriously dependent and troubled poor" cannot be undertaken by neighbors. It must be an integral part of a total public housing service planned and carried out by the community.

If integration of public housing tenants and neighbors is to be one objective of a program for adequately housing low-income families, then observations in this study lead to the following conclusions:

(1) Housing should be designed so as to blend it with neighborhood housing.

(2) Street patterns within the development should help to direct residents out toward the neighborhood rather than in on themselves.

(3) Density of child population — particularly in the under 10 year old age group — should be planned for in such a way as to reduce tension due to lack of privacy. Provision of a facility i.e. day care center and/or nursery school for use by residents and neighbors could contribute to integration.

(4) Provision should be made for a family service center within the project or very close to it. By making the center available for use by tenants and their neighbors outside the project an increased sense of community is possible.

The precise nature of this facility would be influenced by what services are already available. It seems advisable to this writer to place the emphasis on a health and education program. Health services might include: a well-baby clinic, pre- and post-natal clinic, well-equipped dental service, mental health clinic for all ages including family therapy and social service counselling. Education services might include: nursery school and day-care, after school programs for children who need help with homework, family life education programs for various age groups in the family including parents and grandparents. A service that would give guidance for both paid and voluntary work.

(5) The locating of public housing projects in less isolated places would reduce the high cost per capita of providing services such as transportation; recreation and shopping. Municipalities would be able to encourage integration by keeping these services within the financial reach of low-income families.

(6) Responsibility, for developing the leadership potential among public housing tenants, must be accepted as an appropriate community service.

(7) Public housing must be seen as one part of the total welfare picture. Decent housing is a basic service for those who cannot afford it on the commercial market. However, low-income families who are "sick families" —those with serious emotional and social problems — cannot integrate unless they are helped to function as "healthy families". Good housing is crucial, but alone it will not serve this end.

Public housing might be used the way we use a hospital. Some patients require a place to rest and with a minimum of care they will return to society in good health. Some patients require intensive care if they are to recover. This means making available all the skill and knowledge of medical science. There is always the reality to be faced that some patients cannot recover no matter what is done for them. This is not to say that any effort should be spared to give them what help is available.

Out of enlightened self-interest, if not for humanitarian reasons, society must see public housing as an opportunity to serve the economically undernourished. The diseases that spring from neglect of this group are too obvious: anti-social behavior; mental break-down and the perpetuation of poverty. If integration of these low-income families is to be one of the goals of our public housing program, the concept of the "Therapeutic Community" might be usefully adopted. It was developed in the post-war years to help mental patients avoid a sense of isolation from those who enjoy good health. They are given every opportunity to make use of the health that can be extended to them by the more fortunate both inside and outside the hospital. Both the literature and the writer's research support the assumption that isolation — physical or social — is harmful to the task of integrating low-income families in the community.

There is a challenge to public housing planners and to all who would help the low-income family to diagnose its needs and work towards meeting them. By now it is well known that in the central city, where there is a concentration of low-income families, there has been an insufficient supply of needed services and this shortage is even more pronounced in the more recently developed communities which came into existence in the post-war era. The physical and social isolation of the new suburban communities, combined with their incapacity and/or unwillingness to cope with the special needs of low-income families, creates, unsurmountable hurdles to integration, through joint use of facilities, for the public housing resident. It is this inaccessibility of services that creates the major problems of integration, rather than the differences or similarity of income between the residents and their neighbors.

You take the Highroad

Kensington Market, Toronto.

. . . and I'll take the Street

by Aryeh Cooperstock

At a time when recreation in our cities is a problem of both space and variety we ignore the valuable resource under our feet. There are miles of streets in our cities with unexplored potentials for recreation. Some people cannot, or will not, travel to amusement places. Locating some activities on streets will contribute to solving the problem of conveniently accessible recreation areas in cities. Some social goals will also be achieved in this way, and a contribution can be made to assuring the security of the familiar and intimate scale of neighborhood living. But since street activities come into conflict with the needs of traffic, we must seek ways to accommodate both those needs and the needs of pedestrians. These can range from restrictions to physical design. All of them are limited, of course, since the potentialities of streets are limited. It is the largesse of leisure that increases the urgency to explore every possibility. So let us look to the street.

The street is more than a thoroughfare for automobiles, utility lines, and pedestrians — although it is that too. The street is the locus of a vast catalogue of activities ranging from shopping to rabble-rousing, charivari to procuring, showing off to peddling. Streets, like people, live and die. And they are just as diverse. One street may be swarming with bustling burghers running errands and errant hawkers vending gadgets; another may be a funeral alameda. The personality of a particular street may just happen or it could be formed by the catalyst of clannish eccentricity or imaginative entrepreneuring. Regardless of function or personality, all streets perform social roles of one kind or another. Climate and culture affect them, need and desire determine them. Yet other uses could and should be added to them to enliven the lives of urban dwellers.

Many streets become the living rooms of the poor, their social hall, gymnasium, and grand ballroom. These functions, perhaps begun through lack of choice, have assumed a vibrancy often lacking in institutions designed for those with *embarras de choix*. A brief visit to St. Lawrence Street and Sherbrooke Street West in Montreal or New York's Harlem and Park Avenue confirms the disparity of spirit. Too often the vital areas of the poor neighborhoods are assaulted by sanitation fanatics and myopic dogooders waving anti-blight banners and preaching the dogma of slum clearance as an end in itself. Certainly the irreclaimable slums should be

cleared: there is little sanctity in squalor. But the positive outgrowths of such milieux should not be demolished in the process. And the excitement of street activities is high on the positive list. Logically, we should seek ways to enhance the life on city streets rather than methods for getting people off them.

But the logic of this proposition is not universally accepted. Streets are generally considered from many points of view other than their human activity, i.e., activity which involves the entertainment, diversion, or social communication of people. The literature on streets deals with traffic, traffic safety, traffic signs, traffic congestion, traffic delays, acquisition, capacity, cross-sections, design, encroachments, intersections, legislation, orientation, nameplates, railroads, systems, parking, planting, widening, business, furniture, lighting. No street recreation, no street games. Consulting recreation research, one finds nothing dealing with street recreation per se. An occasional paragraph does refer to street games but usually in a negative tone, "Streets and back alleys are usually the places where children run afoul of the law in their play."[1] Or with grudging recognition of their existence: "Less highly organized and less destructive to social attitudes [than juvenile delinquency] is the street play of children: pick-up ball games, craps, card-playing, penny-pitching, and the like. Most of the games take on some form of gambling; they are all made hazardous by traffic."[2]

Streets are simply not considered as recreational and social entities. Traffic has become the main component of the street scene and the major focus of inquiry and investigation. This is the reality of our times and probably a harbinger of what the future holds. There are cogent reasons for changing the traffic-oriented streets and redirecting future studies. Ways must be found to accommodate the needs of people and their cars.

In terms of recreation, the reputation of streets is unsavory for two main reasons: safety and delinquency. The problem of the former is the direct result of traffic's transcendence over pedestrians. Yet in many places the dangers are defied, and in some circumstances, streets are preferred to playgrounds. When it comes to delinquency, the street play of children and teenagers has become synonymous with "getting into trouble". These biases are not unfounded and there is a need to eliminate both the biases and the roots from which they stem.

Not everyone thinks of street activity in censorious terms. Residents of the liveliest streets probably do not think about street life at all, but rather accept what goes on as the normal course of events. Their arena for play is, like most other things in their lives, not separated from the precincts of daily existence.

Not every street is a potential circus; not everyone wants lively neighborhoods every time he turns a corner, and some streets maintain restricted usage for good reasons. Considering the recreational needs of urbanites, however, one street (or a number of streets) in each neighborhood may be developed as a social node. Business sections, bereft after dusk and on week-ends, can become centers of activity. A little color and clamor can add much to the bleak city-scape and enrich the lives of its inhabitants.

"Recreation" means any form of amusement, play, or relaxation. More profoundly the word connotes the idea of restoring or refreshing the body and mind. Streets have always been important settings for recreation. Before there were public buildings — like churches, auditoriums, supermarkets — all public activity occurred in streets or at their concourses, the town squares. Thus worship and courtship, proclamation and celebration, merchantry and festivity, tournament and interment, and all other community events had a natural locale. The street was the store of daily life, and here it was perpetually restored. Biblical prophets preached on corners, religious processions of all cultures have always used city arteries. Socrates confronted Phaedrus on the streets of Athens; Plautus and Terence presented their adaptations of Greek plays on streets in ancient Rome. Before the 17th century Puritans began to rescue England from wallowing in abysmal sin,

> "(Londoners) made communal feast and carnival in the street. Kings held occasional court in the street, and princes caroused and raised hell's delight in the street. Grown men as well as children played games in the street, and exercised at sports. In the street men aired their grievances . . . and in the street, at the cart's tail, in the pillory, or on the gallows, they paid the penalty of their daring. In celebration of victories, oxen were roasted in the street, bonfires lit, and barrels of wine emptied into the conduits, free to all. The noble as well as the plebian fought out their quarrels in the street. . . . Those with no lodging slept on the street, and in the last extremity they were allowed to die in the street. For all except these last, the street was another home from home, with, despite the Watch and the constables, fewer restrictions than

[1]G. D. Butler, *Introduction to Community Recreation.* (Prepared for the National Recreation Association.) New York, McGraw-Hill, 1940, p. 81.

[2]Elizabeth Halsey, *Development of Public Recreation in Metropolitan Chicago.* Chicago, Chicago Recreation Commission, 1940, p. 164.

the home."[3]

In Latin countries the streets were even livelier. When the Christian emperors of the Dark Ages proscribed the theater of Roman "lasciviousness", schools of minstrels, ballad singers, itinerant story-tellers, and jugglers were spawned. Somehow, defying tyrant and temperance, the excitement of the street kept itself alive. Then a new adversary arose — the wheeled vehicle.

Long before the autocracy of the automobile there was resistance to wheeled vehicles using the city streets. Because of technical advances which transformed the primitive wheel into an efficient device, various vehicles invaded the cities of the 16th century. Neither the cities nor the streets had been designed with such vehicles in mind. They presented a threat not only to life and limb, but also to the social fabric. There were vociferous protests in France and England. This was an exercise in futility. These were perhaps the last plaintive voices to cry out before the pandemonium which followed the prelude composed by Henry Ford. Once the wheels began to turn, rolling over inadequate surfaces, there was no superior force to stop their motion. When carts were replaced by cars the pedestrian was almost dealt his *coup de grâce*. But some counter forces contested this onslaught, and rescued a few traditional functions for the streets of cities. How is this manifest in our "automobillious" society? What does take place on our streets?

Nothing attracts people as much as other people. Without movement of people, it is eminently clear, there would be no life on any street. The more they are, and the more varied they are, the more interesting the street. Sometimes, though, a uniformity in ethnicity embodies a variety in itself within the context of a large city. In residential terms, this type of conglomeration is referred to as a "ghetto" — a pejorative term. It has come to mean enforced segregation of a particular group. No precise substitutive word has been coined for the voluntary self-isolation of a group. Yet many ghettos have been formed through the deliberate design of their inhabitants. The compulsory ghetto is one of the most pernicious phenomena in the history of hate. The voluntary ghetto is an important social matrix and recreational resource.

The sophisticate may find the ethnic neighborhood a breeding ground for provincial fauna. But it is also a shelter from the predatory mammoths of the outside; a guarantor of security; a preserver of community, culture, and consanguineous ties. Each succeeding wave of immigrants to North America generally settled in a quarter of its own. Theoretically, after a generation or so, a very rapid assimilation is supposed to take place. But the melting pot does not seem to boil as fast as the pundits would have us believe. And in some places it has not even begun to simmer. Now this might be caused by the recency of arrival or some other more basic cause, like the hostility of the indigenes, or nostalgia, or inveterate traditions. Considerable mixture through intermarriage and assimilation into the dominant culture has occurred among all groups. This process will probably continue and accelerate. But some groups want to retain their identities; and they will go to great lengths to do so — witness Montreal Chinatown's resistance to dismemberment. In terms of recreation the ethnic areas are as vital to a city as the primary industries of a sovereign state.

In a city like New York the lines demarcating ethnic concentrations often blur and interweave which adds an extra dimension to the great city. The inhabitants are not always pleased with this arrangement, but for the visitor it can be fascinating. What he finds is a city whose cosmopolitan character is bona fide: it is based on, and assured by, the residents rather than the visitors. So an adventuresome tourist can walk through five or six clusters of sounds, smells, and stores in an hour. It is necessary that he walks. Otherwise the colors of the street-scape will be scrambled into an undifferentiable mélange.

Presumably these ethnic groups might want to continue their residential patterns for at least a few more generations. There is no completely persuasive argument for homogenization as opposed to cultural pluralism. For that matter, we certainly have strong feelings for pluralism in Canada, as was amply demonstrated in the Bilingualism and Biculturism Commission's hearings. Perpetuating ethnic quarters will serve more than the purpose of assuring the security of the familiar and will intimate the scale of neighborhood living for those groups. Ethnic neighborhoods offer cities and their visitors a great variety of diversions. And the street is one of the main locations where they can be found. For the street is public: there is no admission charge; and alive: because it is central to the social life of many a group; and attractive: for when a group celebrates on a street its pride is on display.

One of the most colorful of these celebrations is the Italian *Festa* which is seen on many of our streets. Among the baggage of the first Italian immigrants to America was a tradition of street festivals in honor of

[3]Thomas Burke, *The Streets of London Through the Centuries*. London, B. T. Batsford, 1949, pp. 2f.

Left: Streets may become areas of delight offering the only entertainment to poorer families. Below: Procession in downtown Montreal.

various saints' days. Elaborate designs of stringed light bulbs span the roadways; they can be seen from blocks away; they are as colorful as the imagination of the particular parish. Various stands line both sides of the street. Sausages, pastries, and pizzas are sold; encounters with fortune in a host of games are offered. There is also singing, playing, processionals and sometimes dancing. And swarms of people, but no cars. Depending on the parish, there are variations on the theme. The motivation of a *Festa* is religious but it is a community ceremonial. People from all sorts of groups come from all parts of cities to participate in these *Feste*. They are public picnics that transcend ethnic boundaries.

Although Italian communities — in North America at least — have the most active and developed street life, they are not unique. The Chinese celebrate their new year with dragons and fire-works on the street; the Armenians mark their Easter with a candlelight processional through the streets; St. Patrick's Day parades are certainly ubiquitous; and without the street the exuberance of St. Jean Baptiste day would lose much of its verve. Such activities which render the streets lively and interesting should be encouraged, developed, and perhaps duplicated in other neighborhoods.

There are, of course, many other possibilities: market streets, for instance. On the whole, market streets are recreational by definition. Marché Bonsecours in Montreal, Petticoat Lane in London, Mercado Merced in Mexico City, Olvera Street in Los Angeles, Rechov Hacarmel in Tel Aviv, Orchard Street in New York, the Ginzas of Japan, Les Halles in Paris, the Oriental bazaars — to name just a few — flout many of hygiene's

rules yet seethe with entertainment and regalement. Even Boston's Haymarket, lacerated as it is by a grotesque expressway, has retained much of its spirit. Modern preoccupation with sanitation has killed many markets, and although we are not advocating disease and dirt we must consider retainment of the cultures bred at the market place. Curiously the patricians from prophylactic districts "love" to browse and bargain in the slum markets of the world. They certainly find them entertaining. And for the merchants, the markets are often the totality of their worlds — including their diversions.

Often the main business of a market seems secondary to everything else that goes on. Amidst the expletives of the merchants, the arrays of produce stands, and the smells of delicatessen, children play hide-and-seek, mis-

sionaries proselytize, musicians concertize, puppeteers dance their dolls, and politics is debated. Frequently a major bargain is being vociferously negotiated in a manner more amusing than a prize fight. And the crowd that assembles immediately, uninhibited by the decorum of a formal theater, becomes completely involved in the drama.

What gives vitality to market-street recreation is simple to discern. The market is one of the main foci in the lives of its participants, sellers and customers. In this context recreation is a part of daily life rather than a specialized activity. Spontaneity has few impediments. To the participants such amusements may be the only possibility; but to the observer they are a perpetual picnic. From either perspective their value is indisputable.

But not every street could or should be a market. Even if most markets do go to sleep at night, some people like to sleep in the daytime. So they would like their block to remain relatively quiet most of the time. On evenings or week-ends, however, an occasional activity on the street can distract them from the TV set, upset their lethargy, and add some spice to an otherwise stale existence. If street markets are dismissed as plagues of the poor, then a sad cynicism has prevailed. Rejecting their recreational value is a serious loss. The supermarket is an efficient, useful, and important institution. Perhaps it can be designed with some street market character. Then not only will disease remain diminished, but recreation reinforced.

Planned entertainment also finds a suitable setting on urban streets. Legitimate theater, mutatis mutandis, can be, and has been, successfully produced on any city block. A brave pioneering group has admirably shown that slum dwellers make a good audience. In the summer of 1962 "Theater in the Street" made its debut on East Fourth Street, New York. Two one-act farces, one in English and one in Spanish, have since been added to the original repertoire of one Lorca play. The opening performance — a demonstration of guts and dedication to the real purpose of theater — was played to an audience that had not planned to come: no one was dressed for the occasion, no one had read the critics. People watched from seats in the middle of the road, from windows, from stoops, from firescapes, from railings, with babies on their knees, with dinner plate in hand. Many stopped to watch, then left; but most passers-by remained. Children found their way to the laps of the actors. The audience got so involved that it provided answers to questions posed by the protagonists.

The appearance of this group has restored a custom that goes back at least to ancient Rome. Hopefully it is only a beginning.

Without "Theater in the Street" the audience it reached most likely would never have seen a living theater. And even with the stimulus of once having seen

PHOTOS ON PP. 24, 28 BY HENRY COOPERSTOCK, TORONTO.

Kensington Market, Toronto: Friendly bargaining in open-air markets draw the people of the neighborhood together.

it in this form, it would probably still avoid the conventional showcases. When the play is on one's own block he can watch it with ease. When it is presented around the corner or a few blocks away he still does not have to shave or put on a tie. The most obvious advantage, of course, is that it is free. Until now the performers have been unpaid, and the scanty budget (which comes from the contributions of a small foundation and from individuals) is used completely for necessary equipment. Public funds are certainly due to so important and useful a venture; and active participation by theatrical unions, producers, and angels. Undoubtedly every city would benefit from a theater in the street.

Still, despite the efforts of Thespians, social workers, and community associations, spontaneous street recreation will most likely remain the most important form of recreation. Witness what happens when a city street is designated "Play Street — No Traffic". All sorts of games crop up on sidewalk and roadway. Even the perennial crap game, popular long before Damon Runyon immortalized it, manages to survive police surveillance and moral censure, and continues to locate "the action" on city streets. (Even on the day of the Kennedy assassination, one daily game continued as usual on an East Harlem street in New York. Normally a raucous to-do, the only sound heard was that of the dice hitting the pavement. The big man standing on his knees shot with practiced finesse as the tears rolled shamelessly down his cheeks.) On a hot, muggy summer day a gushing fire hydrant substitutes for the beaches and Niagara Falls for those who might never (or hardly ever) get to either. The street belongs to its inhabitants, and they use it as their playground.

Coming back to children, the preference for the street over the playground has good reasons. For one thing, the street is always better located; and perhaps more important, the street permits informal, unorganized, and unstructured play. The naturally formed groups can function as they wish. They seek deliverance from the organized world they must live in most of the time, in school and home. The modern adult might want to "escape from freedom"; his junior does not yet understand that this could be either necessary or desirable. Hence the choice of the street — whenever possible.

Most of these activities are the remnants of what was once a far more active street life. That is, they survived the competition of wheels. But that competition is becoming more formidable daily as car ownership increases. What is necessary is to effect an accommodation without capitulation, a compromise with the car.

Regardless of how much it expands, traffic does not require access to and passage on every street. Shopping and preservation of historic structures have been more-or-less accepted as reasons for restricting traffic. Such unfettered places can be used as recreational areas. Other streets should also be liberated for that purpose. The rationale for this thinking is both desirability and pragmatic utility. In what ways can this be achieved?

First: Business districts — office and commercial — carry heavy vehicular movement only during certain hours. These can easily become pedestrian centers afterwards. The sad pallor of St. James Street in Montreal or Wall Street in New York on a Sunday is undoubtedly replicated in many places. No cars and no people. These vacant pavements could be superb roller rinks. Most recreation manuals emphasize the need for hard-surface playground space. In these districts it is already available. And since this sort of space is needed most on weekends, the multiple use is automatically sensible. On warm evenings music can be broadcast from the buildings for folk, square, and other dancing. Some public relations minded banks or businesses of the area could provide the necessary equipment. In this way residents from nearby can come there for recreation, leaving their own streets for the cars to move freely.

Second: Some local streets, properly paved, would discourage superfluous vehicles. Although many shortcuts will be eradicated to the frustration of drivers, a legion of play streets will be added to cities. Pavements can be brick or cobblestone; various barriers can force traffic to maintain slow speeds. It is not cars per se that makes street games dangerous but the fast-moving cars and indifferent drivers. Speed laws obviously are insufficient to prevent either of these occurrences. An unsympathetic pavement and physical impediments will. Then the various games of children and entertainments of adults which are unique to streets can proceed almost unmolested. The occasional slow-moving car will be an interesting visitor rather than a dangerous foe. Street play then will no longer be the obverse of safe play.

Most local streets can be adjusted for such purposes. Of course it is not necessary to do so everywhere. In some places it may not be at all desirable. Fast traffic should be directed to fly on arterial highways, underground channels, and main thoroughfares. And the

pedestrian will be able to rule his own street.

Third: Traffic dividers, despite their intended primary use, can be recreational nodes. Rather than barren islands of cement, they can be parks. In addition to planting and textured floors, small picnic or chess tables would be a welcome addition. At major city crossroads entertainment would be provided by the stream of passers-by: cars and people.

The grassy dividers on broad boulevards can be enhanced by additions to the verdure. For one thing, since small fences are sufficient for safety, lawn bowling is one possible activity. Houston Street in New York has lively Bocci (an Italian bowling game) competitions on its island in mid-street. An occasional outdoor (or indoor) cafe or snack bar is also possible, and there is certainly room for some colorful kiosks. Supplemented by some boulevard amenities from Paris, a new interest will be achieved.

Fourth: Sidewalks have been victimized by voracious automobiles probably more than anything else. In any competition between roadway and path the former gets the prime cuts and the latter makes do with the scraps. The only time wide sidewalks seems to survive is when commercial lobbies persuade legislators that their livelihood depends on them. But they are the indisputable property of pedestrians.

In streets where limiting traffic is impractical, a wide sidewalk can allow for both play and safety. Children will use the sidewalk regardless of width. So the philosophy which cuts walks and adds playgrounds is a non sequitur. Thus the problem should be attacked squarely. In overall traffic planning the sidewalk must be recognized as more than the transition zone between parking space and objective of the journey. It must also be seen as a main play space.

To add variety to street design while bearing safety and recreation goals in mind, some streets could be reduced to one lane for traffic and the rest for sidewalks. During assigned periods, for instance at night, the wide footways could be used for cars, at least for parking. On market streets wouldn't this be a practical design? A schedule might be worked out so that service vehicles arrive at given times — not interfering with each other's passage. Or, more simply, two lanes can be allowed on those streets. Then a Mountain Street in Montreal, a Charles Street in Boston, a Grand Street in San Francisco could all be Ponti Vecchio.

Another possible sidewalk variation is to cover it like the Galleria in Milan. This appears in Vincent Ponte's plan for downtown Montreal. Or shop-keepers might be induced to extend their awnings out to the curb and mate them with those of their neighbors. Or building codes could require roofs of such structures to cover the pathways as in many Mediterranean countries such as Israel, Italy, Tunisia and Egypt. Window-shopping is an acknowledged leisure activity. In our not always clement Canadian climate it could be enjoyed all year.

Fifth: The bicycle's renaissance is long overdue. North American streets may not swarm with them as in Europe. Some people might take to them for the journey to work if the distance is not formidable. Nonetheless, bicycling is a long-established recreation. Until now it has been enjoyed largely in parks. The provision of special bicycle paths on streets, however, would make the pastime all the more interesting. If Paris can establish special lanes for buses, a narrower bicycle path on an urban thoroughfare should be easier to achieve. While viewing botanical wonders is refreshing for the mind and soul, the panorama of city streets also has much to recommend. Things like minor shopping trips might become bicycle trips reducing automobile traffic. Physical fitness ideals will be helped as well.

Sixth: Multi-level streets have been accepted in theory in many places, set on drawing boards in many city offices, and experimented with elsewhere. Architects and planners have produced numerous designs ranging from hard-headed practicality to phantasmagoria. Victor Gruen's plan for Fort Worth is well known; and plans for an entire city under the Seine have been devised. No doubt the day is not far away when such thoroughfares will become the norm in the metropolis. Presently the cost is generally thought prohibitive. But lack of an alternative will render it imperative. Few systems more efficiently separate pedestrians from vehicles. For street recreation, of course, they will be a boon. Imagine an upstairs street for people and a downstairs street for cars.

Until the new Jerusalem arrives, some small beginnings should be made. Pedestrian overpasses are already common over city parkways; pedestrian underpasses are in use in some cities' downtown areas. More overpasses in midtowns are justly the pedestrian's right. The stroller has more time to observe the urban scenery than the driver anxious to arrive at a destination. While both deserve visual enjoyment, the mobile usually has the advantageous seat in the orchestra. By broadening the

balconies and serving refreshments from ice cream carts, espresso wagons, the show can be pleasurable for the whole audience.

Underground streets, viz., subway passages, are also important byways. When the transit system is being modernized (as in New York) or being built (as in Montreal) the street dimensions of the passageways should be taken into account. If arcaded sidewalks are deemed fantastic, then the underground ways are instantly more practical during inclement weather. They are needed anyway. Let them become full-scale streets.

Seventh: Hotel lobbies and office building hallways are interior streets of constant use. But only occasionally, at Christmas, for instance, are they approached with recreation in mind. The heavy traffic is due to more than avoiding automobiles, weather, and extra walking. They are streets in their own right, and, as has been proposed for their outdoor kinsmen, they too can be socio-recreational centers. When carols are sung in a business lobby or department store many people who came for other reasons participate. It can be said on the whole that these quasi-captive audiences can be drawn upon for any activity. Interior street traffic can thus support various diversions — planned and/or spontaneous. Should their roles as thoroughfares increase by way of added attractions, another advance will be made in alleviating traffic problems. Looking at the growing network of Montreal's underground streets, one wonders why no sidewalk cafes have been opening in Place Ville Marie or Place Victoria. They are a natural and a wonderful activity that tourists remember most from Europe. Instead of standing bored and annoyed in serpentine congestion while waiting for a seat in the cinema, wouldn't sitting and sipping a capucino be a more pleasant way to wait. Hopefully the wonderful opportunity will not continue to be missed as the subterranean passages extend further. Something like Theater in the Street could perform in such places in winter; wandering minstrels could reappear; and the Salvation Army, if allowed entrance, might even gain some converts with its musical fare.

Whatever is done to enhance streets, whatever embellishments are added, whatever revisions are made, whatever regulations promulgated, the street in itself will remain a central social artery. For urban people the street has social relevance for many reasons. No matter how much the liveliest streets are attacked by urban renewal, highway programs, or similar légère de main, they magically manage to reconstitute themselves in other places. For the capacious boulevards that replace these streets are seldom as amenable to ebullience. "Saving our Cities" too often means killing our streets. Again, this is not applause for uncleanness. It is an entreaty for the protection of a worthwhile resource.

Recreation is a necessity. While many of the functions streets used to serve are unnecessary today, we can think of restoring some of them for recreation. Approached thus, would-be anachronisms assume different meanings. Something like a street banquet, a theater, a bonfire, a song fest are potential entertainments. Locating them on the street answers a number of problems:

1. There is a shortage of conveniently accessible recreation areas.
2. Some people cannot, or will not, travel to amusement places.
3. A sense of community can be established and/or reinforced.
4. City diversity qua tourist attractions would be increased for both residents and visitors.

These factors also justify the preservation, continuity, and transposition of many current street activities. A changed reputation is necessary for the street first. Adjustments for safety must be carried out; but perhaps more important, adjustments in biases. There can be no guarantee of success in any of these matters. But there is an urgency to experiment beyond conventional lines.

Surely these notions are not the only possibilities. A need certainly exists to find others so that the social and recreational needs of city dwellers can be met and satisfied. Every year the urban population grows. Every year recreational problems increase concomitantly. Streets are indispensible to the life of any city. Keeping them alive will help to keep cities alive.

Mr. Cooperstock is city planner born in Winnipeg. He holds a B.A. Degree from Brandeis University and an M.C.P. from Massachusetts Institute of Technology. He is a member of the Corporation of Urbanists of Quebec and a provisional member of the American Institute of Planning. Formerly a planner with the firm of Jean-Claude La Haye and Associates, he is now a Location Research Manager in Quebec for Steinberg's Ltd.

FAMOUS PLAYERS

Le foyer du cinéma Capitol à Montréal, au temps où la comparaison avec Versailles était de mise.

Cinéma 1920 - 1966

par Eric Minton,
Division de l'information, SCHL

Alors que la télévision en couleurs deviendra un fait accompli cette année, un nouveau cinéma a ouvert ses portes dernièrement à Hull, Québec. Un auditoire de première, jeune, élégant, a rempli la salle pour voir un film japonais présenté avec des sous-titres en anglais.

Le cinéma moderne s'est installé sur la place du marché, car l'emplacement de ce dernier est en effet au centre du plus nouveau centre commercial de la banlieue de Hull, la Place Cartier, ensemble moderne comprenant des magasins de spécialités, des supermarchés et un cinéma mettant à l'affiche les plus récentes productions internationales.

Commentant la soirée d'inauguration, l'Ottawa Journal disait:

> "Alors que des douzaines de salles de cinéma qui ferment leurs portes sont transformées en magasins de meubles ou en entrepôts, il est encourageant de voir s'ouvrir un nouveau cinéma dans notre région. A l'inauguration du cinéma Vendôme, situé dans le nouveau centre commercial de Hull, sur le boulevard St-Joseph, on a sablé le champagne, foulé des tapis moelleux et on a montré à l'écran un des films les mieux cotés de l'année.
>
> Le cinéma Vendôme est une salle magnifiquement équipée qui contient 677 sièges confortables. Le parquet a une pente assez accentuée pour que le spectateur ne soit pas obligé de se casser le cou pour voir le grand écran. La salle elle-même est dégagée et attrayante; le foyer est décoré de nacre et d'écarlate — cette couleur étant celle des draperies de velours aux fenêtres."

L'ouverture de ce petit cinéma dans une grande région métropolitaine cadre bien avec la tendance qui se manifeste de nos jours dans le monde de la pellicule, à savoir, de petits établissements confortables, qui peuvent admettre au total de 400 à 700 personnes assises, rarement plus. L'architecture est conçue pour donner la priorité à la meilleure vision du film de toutes les parties de la salle. Les foyers sont petits et d'aspect commercial. On y expose discrètement des tableaux d'art moderne prêtés par une "galerie" locale. On n'y vend habituellement pas de maïs éclaté.

Si nous comparons un théâtre de ce genre avec la conception initiale qu'on avait d'un cinéma dans les premières années de 1920, nous remarquons un contraste frappant. A cette époque, la projection animée était un moyen d'expression artistique relativement neuf. Les acteurs et le péché, en termes victoriens, étaient encore sur un pied d'égalité dans l'esprit de la classe moyenne qui était portée à fuir les "vues" hebdomadaires, préférant n'y aller qu'occasionnellement, pour voir les acrobaties de Douglas Fairbanks ou le comique spirituel de Mary Pickford.

Afin de retenir d'une façon permanente le nombreux auditoire qui attendait dans les villes et les villages d'Amérique du Nord, Hollywood s'est lancé à grands frais dans la réalisation d'un programme ambitieux. De nouvelles salles de cinéma ont commencé à surgir à travers tout le pays, non pas dans les banlieues, mais sur la rue Bank, la rue Ste-Catherine, la rue Yonge, l'avenue Portage, la rue Granville, dans toutes les rues principales au Canada. Ces cinémas, liés aux studios d'Hollywood par un système de location en bloc des films à sensation, ont assuré un débouché aux nouvelles "vues". De plus, les dimensions imposantes de ces édifices dans le voisinage ont donné à l'industrie naissante le "statut" dont elle avait besoin et ont contribué à dissiper les soupçons du grand public.

Dans cette ère d'extravagance, les grandes compagnies de films à Hollywood rivalisaient intensément dans la construction de salles de spectacles grandioses et luxueuses. D'immenses et nouvelles salles de spectacles ont surgi à un rythme rappelant le développement des anciens "Nickelodeons". A Ottawa, le théâtre Loews, parachevé en 1920, comprenait 2353 sièges. Avec ses parquets recouverts de tapis, ses placiers en uniforme, ses sièges capitonnés, ses candélabres de cristal et son ameublement qui rappelait la grandeur de l'époque de l'Empire, ce nouveau théâtre a été tenu pour l'un des édifices les plus imposants du quartier central des affaires.

Un éditorial de l'Ottawa Journal a bien décrit la mentalité de l'époque:

> "Il y a à peine quelques années, semble-t-il, qu'Ottawa faisait des conjonctures sur les chances d'avenir d'un autre théâtre, mais il s'est présenté un fait qui a beaucoup influencé le monde du spectacle, à savoir les progrès du film. Il y a des gens qui hochent la tête devant l'engouement pour ce mode de distraction populaire, qui a tout de même survécu à toutes les prédictions des pessimistes. Et qui peut dire avec certitude que la ville et ses citoyens s'en portent plus mal? L'ambiance y est saine et artistique, la musique souvent bonne et, en certains cas, elle suscite le goût pour les compositions de haute qualité et le talent; une bonne partie de la représentation est éducative d'une façon ou d'une autre et on y trouve relativement peu de choses répréhensibles; les producteurs ont constaté en effet que ce genre de spectacle ne rapporte pas. Il est trop tôt pour dire si le progrès remarquablement rapide des théâtres à prix modique, est un bien ou un mal. Il semble qu'il soit égal que nous nous prononcions en faveur ou contre puisque les citoyens d'Ottawa ont évidemment décidé de fréquenter le cinéma. Tout ce que nous pouvons espérer, c'est que la population d'Ottawa fasse la distinction entre les bons et les mauvais spectacles et que les réalisateurs de ces derniers constatent qu'ils ne sont pas appréciés dans cette ville."

Le nouveau théâtre Loews à Ottawa a été inauguré le 8 novembre 1920 par la présentation du film "The Love Flower" de D. W. Griffith et de cinq numéros de vaudeville. Toute la journée les spectateurs ont fait la queue d'un coin de rue à l'autre. Le journal publia le commentaire suivant:

> "Le superbe théâtre a été vivement apprécié par tous ceux qui ont assisté à la représentation. On y a réalisé, assurément un degré de magnificence et de décor que peu de théâtres au Canada peuvent égaler. L'intérêt suscité par la représentation a été accru par la présence d'un certain nombre de vedettes de cinéma."

Le bouquet de cette soirée a certainement été le fait que le populaire artiste Texas Guinan a dirigé le choeur pour chanter "Avalon" mais en y adaptant d'autres paroles qui exprimaient des sentiments profonds à l'égard d'Ottawa. On peut presque encore entendre les applaudissements dont les plus nourris étaient ceux d'un groupe de jeunes notables de la résidence du Gouverneur général installés dans une des loges.

Ainsi, Hollywood faisait son entrée dans la capitale, avec l'approbation tacite du vice-roi. Les autorités municipales furent aussi à la hauteur de la situation en remettant à M. Marcus Loew lors d'une réception donnée à l'hôtel de ville, une clef en or pour commémorer l'événement.

Plus tard, dans la même décennie, une série de petits cinémas de quartier se sont ajoutés aux grands

FAMOUS PLAYERS

Le somptueux cinéma Impérial à Toronto, construit au temps où le cinéma était encore une innovation.

théâtres. On n'a pas tenté dans ces établissements de second ordre d'imiter, même en miniature, les gloires de Versailles, mais les meilleurs d'entre eux étaient bien construits et bien conçus pour la projection de films. L'ameublement Empire céda sa place au style espagnol dans ces établissements de moindre importance. Souvent le plafond était une imitation d'un ciel avec des nuages et de petites étoiles clignotantes. Des oiseaux, soigneusement empaillés, en position de vol, complétaient l'illusion.

Dans les années d'après 1930, on a construit peu de salles de cinéma. La situation économique d'alors ne favorisait pas ce genre de construction. Celles qui ont été érigées, cependant, reflétaient une nouvelle tendance dans la construction et la décoration. Les grands foyers décoratifs rappelant l'antique apparat de France ou d'Espagne avaient disparu. A leur place, on a fait valoir le modernisme sévère de 1933, fondé sur la popularité temporaire des chromes et de l'éclairage indirect.

Cette ère dura jusqu'en 1948. La chaîne de cinémas Rank de Grande-Bretagne qui s'est établie après la guerre a redonné un peu de vie à l'industrie. Toutefois, au même moment, la télévision a obligé à repenser toute la question.

Du jour au lendemain, la situation a changé. Les cinémas du centre des villes et des quartiers avoisinants qui ne fonctionnaient qu'avec un mince bénéfice ont fermé leurs portes.

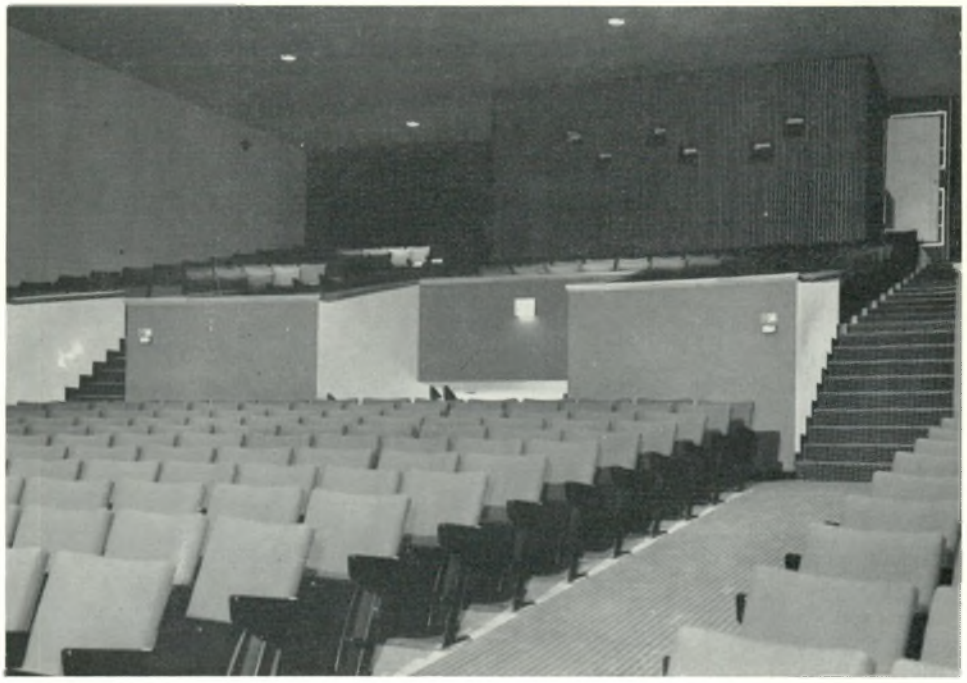
Cependant, le bouleversement économique a été, à la longue, salutaire. Il a permis à l'industrie du cinéma d'atteindre un niveau de maturité auquel la télévision n'est pas près d'arriver. Cette maturité nouvelle, à son tour, a incité un auditoire de plus en plus nombreux à aller voir non seulement des films américains, mais aussi les meilleurs films réalisés dans d'autres pays, et dans une grande diversité de langues, traduits soit en sous-titre soit par doublage.

Aujourd'hui, le cinéma est encore à la hausse. Les cinémas en plein air sont fréquentés à la fois par les jeunes amateurs de films et par les familles. Une nation si bien pourvue d'automobiles est toujours à proximité du grand écran installé près des limites des villes.

Les salles de spectacles de 1920 demeurent toujours, quoique leur nombre diminue chaque année. Des projets

PLACE VILLE-MARIE CINEMA, MONTREAL

L'architecture du cinéma nouveau: le Petit cinéma, Place Ville-Marie, Montréal.



La salle du nouveau cinéma Vendôme à Hull, Québec, l'un des nombreux nouveaux petits cinémas qui s'ouvrent maintenant.

préconisent la transformation du théâtre Capitol à Ottawa (d'abord appelé Loews) en deux salles; récemment on a publié des projets pour la partie ouest de la ville comprenant un ensemble de trois cinémas faisant partie d'un nouveau grand centre commercial.

Cette situation se répète par tout le pays; à Montréal, les deux cinémas de la Place Ville-Marie, le cinéma Festival, et la double salle de l'Elysée procurent à un auditoire choisi des facilités intéressantes. C'est la même chose à Halifax, Winnipeg et Vancouver.

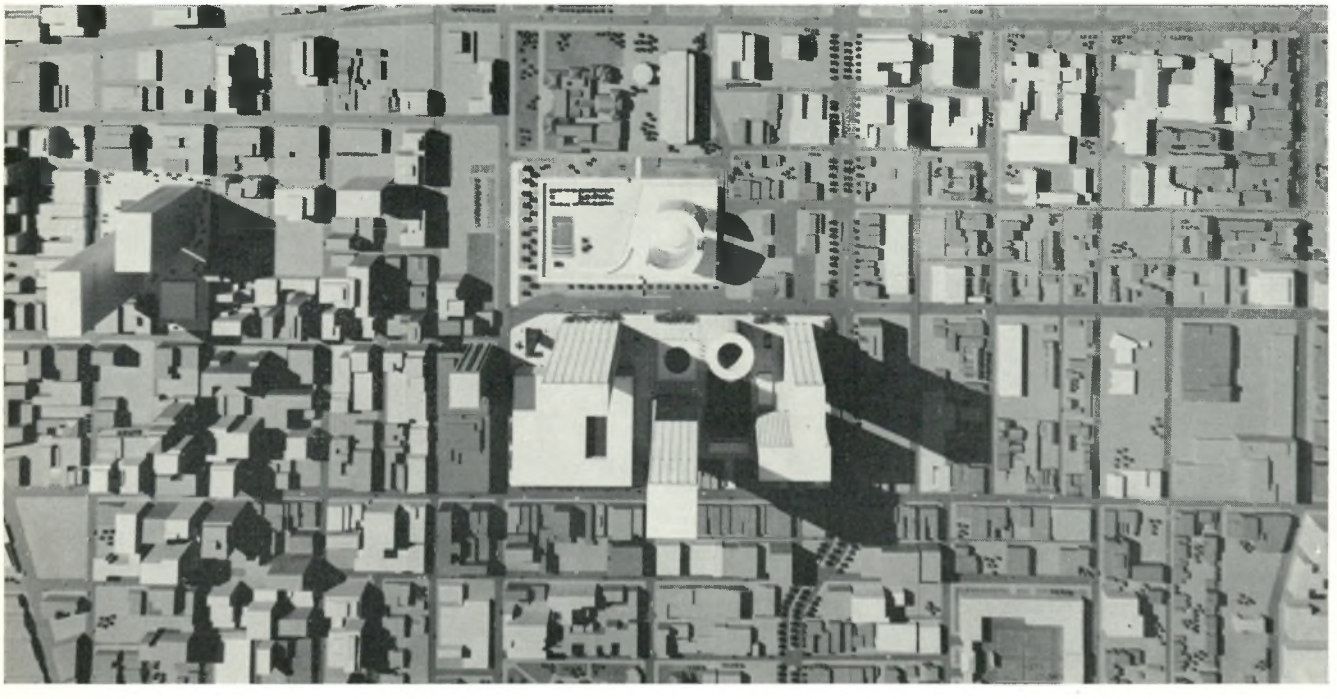
Cette nouvelle tendance et cette prospérité du cinéma, ont fait naître des projets de production de films au Canada. Déjà, certaines productions en langue française ont connu un succès appréciable. En 1964 et en 1965, des films canadiens se sont classés parmi les premiers au festival du film de New York.

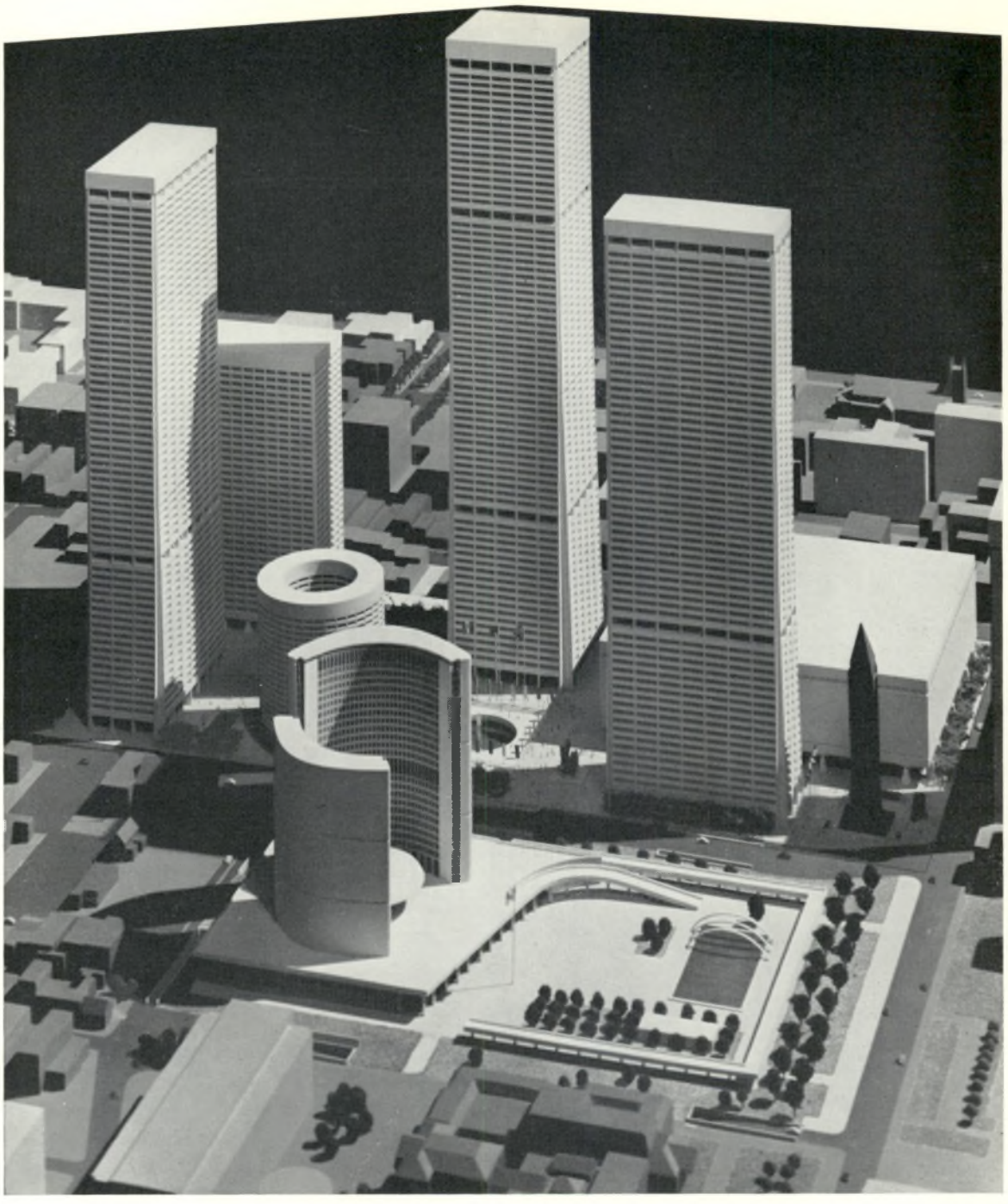
Les cinémas comme le Loews, le Capitol, le Palace et l'Orpheum comptent maintenant presque un demi-siècle d'existence. L'évolution est inévitable et le monde du film n'en est pas exempt mais les nouveaux cinémas d'aujourd'hui présentent des programmes d'une telle profondeur et d'une telle diversité ainsi qu'un tel degré d'excellence dans leur architecture qu'ils dépassent en tout, sauf dans leurs dimensions matérielles imposantes, les grands édifices construits dans les premières années 1920.

Il n'est donc pas surprenant que de temps à autre, nous nous surprenions à dire encore: "allons au cinéma".

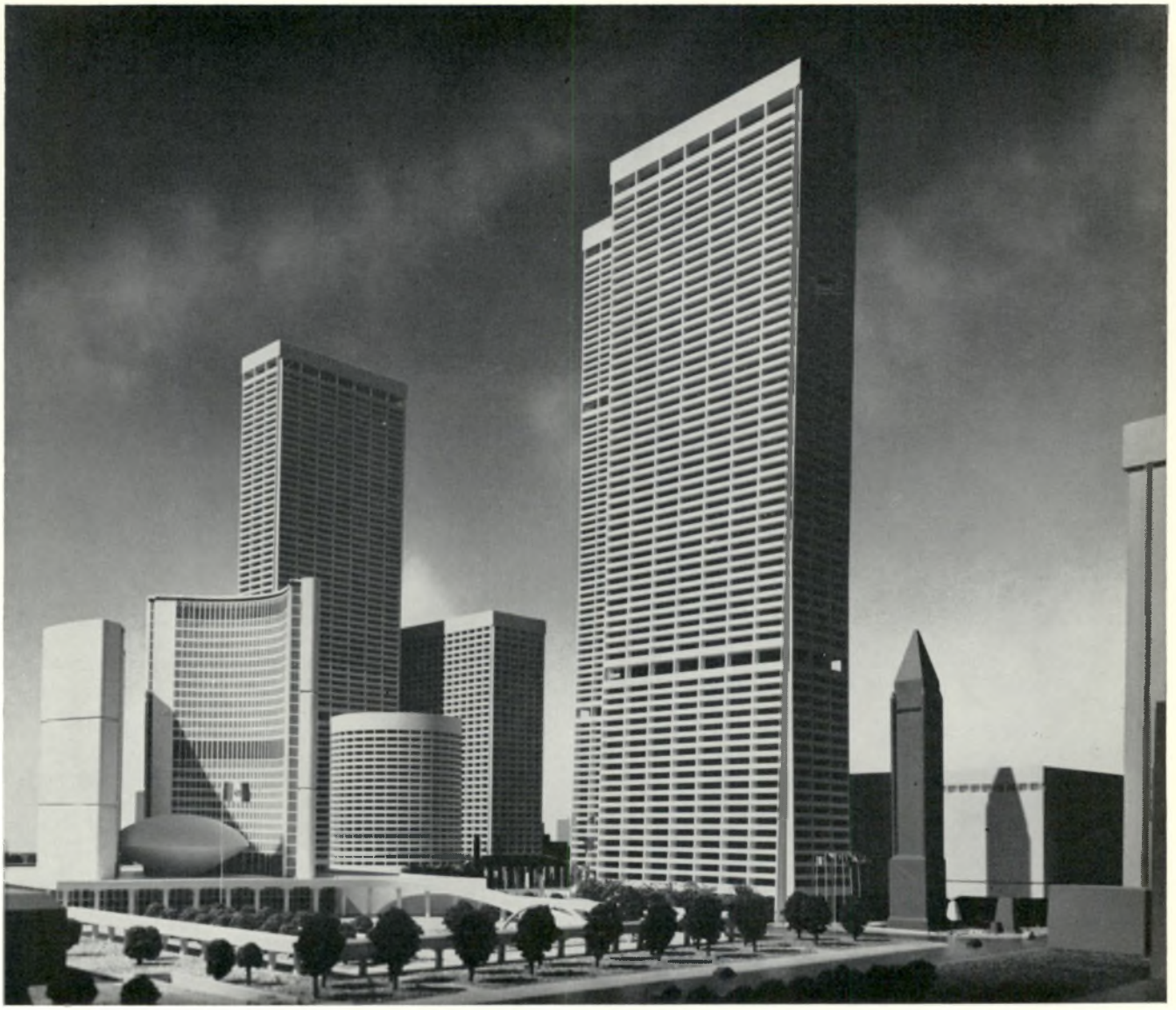
THE EATON PROJECT

The late fifties and sixties will be known as the period for the rebirth of Canadian cities. Every major urban area in Canada is carrying out some form of redevelopment. Toronto is no exception. The creation of the New City Hall in the downtown area has sparked a $260,000,000 plan to redevelop a portion of the adjacent area by Eaton Centre Ltd., a subsidiary of T. Eaton Co. Ltd. The aerial view below shows the New City Hall and Nathan Phillips Square. In the foreground and immediately east of the Municipal Buildings is the 22.5-acre core where the redevelopment will take place. The photo upper right shows how the site will appear after completion with the clock tower of the old City Hall remaining in place.





Above is an aerial looking eastward across City Hall and the Civic Square to Eaton Centre. Left and right rise the twin 57-storey office towers, the 69-storey apartment and office complex in the rear, the 32-storey office tower on Yonge, and the new Eaton department store and retail complex at the corner of Queen and Yonge. The top photo on the opposite page shows an easterly view from the upper City Hall level over Nathan Phillips Square (from left) the East Tower of City Hall, and part of the 500-room circular convention hotel with the 32-storey office tower behind. The lower photo is from the north-west corner of Bay and Queen and gives the details of a 57-storey office tower rising behind the old City Hall clock tower.



Site and design integration between City Hall and the Civic Square and Eaton Centre are clearly seen in the above photograph. Dominant in this prospect is the 57-storey free-standing office tower at the head of Bay. In front stands the 312-foot clock tower and behind it the new 7-storey Eaton Department Store. North of the tower, apparently clustered together but in reality each rising in its own setting, is the 500-room convention hotel, the twin 57-storey tower, and the third 32-storey skyscraper. The edge of the big 69-storey apartment and office tower juts out from behind the tower at the corner of Queen and Bay. The Centre extends 46 feet below ground to include two Parking Levels, a Concourse Level and a Promenade Level. From the Plaza Level, at street, buildings soar as high as 900 feet.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT

SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER/1966

HABITAT

VOLUME IX
NUMBER 5 and 6

HABITAT, a bimonthly publication of Central Mortgage and Housing Corporation, is listed in the Canadian Periodical Index and authorized as second class matter by the Post Office Department and for payment of postage in cash.
Opinions expressed by the authors are not necessarily those of CMHC. All communications should be addressed to the Editor, E. H. Q. Smith.

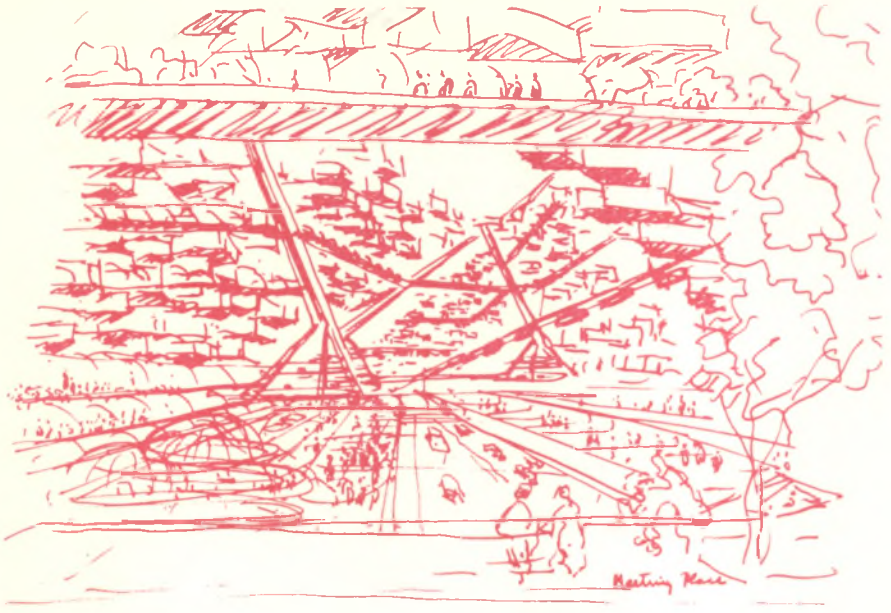
CONTENTS—September, October, November, December/66

A MOMENTOUS EVENT TAKES PLACE IN A CITY

"In those days a decree was issued by the Emperor Augustus for a general registration throughout the Roman world. This was the first registration of its kind; it took place when Quirinius was Governor of Syria. For this purpose everyone made his way to his own town; and so Joseph went up to Judea from the town of Nazareth in Galilee, to be registered at the city of David, called Bethlehem, because he was of the house of David by descent; and with him went Mary who was betrothed to him. She was pregnant, and while they were there the time came for her child to be born, and she gave birth to a son, her first-born. She wrapped him round, and laid him in a manger, because there was no room for them to lodge in the house.

Now in this same district there were shepherds out in the fields, keeping watch through the night over their flock, when suddenly there stood before them an angel of the Lord, and the splendour of the Lord shone round them. They were terror struck, but the angel said, 'Do not be afraid, I have good news for you: there is great joy coming to the whole people. To-day in the city of David a deliverer has been born to you — the Messiah, the Lord. And this is your sign: you will find a baby lying all wrapped up, in a manger.' "

St. Luke, Chapter 2



Mr. Safdie recently attended an architectural symposium at Roorkee in India. In the second of two articles he discusses the elements and design processes required to achieve morphological perfection in our cities.

The Meeting Place

Why not Utopia?

Part II: Proposals and Requirements by Moshe Safdie

Utopia is a city which allows man to enjoy all the extremes, from open space and wilderness to the intense enclosure and urbanity of the market and meeting place; from the privacy and seclusion of his house to the excitement and intercourse of the public place.

Man is most mobile in our Utopia. He is able to walk and move from one place to another without interruption, in pleasant surroundings, and with view and light at any level within the three-dimensional city.

Transportation is completely synchronized in Utopia. Man is able to move at great speeds from place to place through the use of personal and public transportation.

The organization of the city is such that the institutions, libraries, hospitals, museums, theatres, the market place and shops all form part of an integrated continuous public place. The green world inter-penetrates the city. Many centres are inter-linked to each other by extremely fast transit. Each centre is dependent and contributes to the other. The centres themselves are made up of membranes on which floating hillsides of houses shelter underneath them continuous public spaces. Housing, parks, schools, shops are all within walking distance within a three-dimensional network of movement.

At no time does one means of transit cross another, or a pedestrian have to pause for a car or a train. At no time does a car have to pause because of an intersection or red light, nor does a man have to wait in order to transfer from one means of transport to the other. Complete synchronization makes mobility perfect.

Within the house is ample space. Open to the view, to the sun, to the elements, each house has a garden. Our cities are clean, self-cleaning in fact. They have built-in equipment to ensure spotless maintenance. Industry is concentrated at centres of mobility, in immediate proximity to other parts of the city.

Utopia is a place in which we would all want to live. For each of us, Utopia is slightly different — it is a Utopia that we have within our own imagination. In its total sum, all our Utopias converge to become one thing, one place where all wish to live. But, why not Utopia? Why cannot Utopia — our Utopia — become a reality? We have the means, technical and economical. If we then have the will, why not Utopia?

FORCES OF CHANGE

Fifteen years ago, it was necessary for planners and architects to precede any discussion on the evolution of our urban environments by a shower of statistics, attempting to prove that population growth and migration patterns are bringing about drastic changes in the man-made environment. Those who predicted these changes were considered to be alarmists and pessimists in view of the large areas of uninhabited land in most countries and that a continuous dispersal of the growing population over these areas is expected, rather than a change in the form of cities and

urban environment itself.

It has now become obvious that these forces are causing a fundamental change in the methods of construction and forms of cities. Rather than quote all the authoritative projections of population growth in the coming years, I will only cite some basic figures which indicate the magnitude of the problem. In North America, the overall population is to be doubled in the next 40 years. Since population growth is not linear but rather a geometric series, if the present rate continues, it would quadruple in the following 40 years, and be 8 times that in 120 years. Accompanying this is a major shift of population from the low density rural regions of the United States and Canada to the major metropolitan areas. The rate must be such that construction, in addition to growth and shifting of population, provisions for the replacement of present housing and other functions of the city, allows for dilapidation, poverty, and slum, which are overwhelming both in the rural and metropolitan areas.

In Canada, a country of less than 20 million people, this rate of growth means that the equivalent of a city of 70,000 people must be constructed each and every month, including all houses, shops, schools, factories, hospitals, until the year 2000 to meet the needs of this growth.

Paradoxically, the production capability at the present time is not working to capacity. Within the limited context of the North American economy, it is possible to increase the production of the economy towards the provision of decent and better environment. This situation contrasts with other countries, which are at earlier stages of development. In the newly industrialized countries of Africa and Asia, the population growth rate is even greater than it is in North America or Europe, and at the same time, the shift of population from rural to metropolitan areas is moving at a much greater pace, as a by-product of industrialization. Experience shows that industrialization has never taken place without accompanying urbanization. In Japan, industrialization was accompanied by a shift from a rural to an urban society. Similarly, the industrialization of countries such as China, India, or the countries of Africa will be accompanied by a decline in rural population and by some form of urbanization.

At this stage of development there is a dual problem. The need for industrialization suggests the main production efforts are directed towards the construction of more production facilities, as was the case in Russia following the Revolution. But if the major efforts of production are directed towards industrial expansion, not much is left for constructing the environment — and providing consumer goods.

Thus, these countries are facing the problem of having a major portion of the population shift to urbanized centres; a major expansion of the population itself, in some cases doubling in 20 to 40 years; and the need to achieve the greatest possible economies in the construction of the environment due to restricted production facilities and the need to direct them towards industrial expansion.

The problem for these countries is how to provide the best possible environment within the limitations of the economy, and how to plan so that the amenities provided can be improved when production facilities are increased. If India follows the Japanese pattern in the next 30 to 40 years, it will have to construct housing and other facilities for 700 million people or 20 million per year, or one dwelling per second. Such numbers are beyond comprehension and bear no relation to the methods of construction or the method of planning, and the form of cities which we know today.

EQUILIBRIUM — CONSERVATION

In spite of its vast size, and in spite of the relatively low population density, North Americans are consuming and devastating the natural amenities of their countries to the point where conservation is difficult.

Conservation is a determining factor in the form and pattern of our urban environment because the entire equilibrium of the man-made environment and nature are being threatened. A point of balance must be established and the implications on the form, densities, and intensity of land use must be accepted.

In many countries, and particularly in North America, the entire tradition of legislation is for a laissez-faire policy in the use and ownership of land. But these same countries and their legislative bodies have also recognized, in recent years, limitations of individual freedom in those fields in which it affects the common good. Legislation, for instance, in the quality and production of food, drugs and so on has been enacted to protect the common good. But it has not yet been accepted by the public and its representatives that the use of land and the proper control of it is also of great importance to the common good in that the abuse of land may result in disorders for many years to come. If we destroy the equilibrium of the environment, we may never be able to regain it or to re-establish it without major consequences to the nature of the species.

CONCENTRATION

In searching to determine the form of the urban environ-

ment, two major groups of forces must be considered. There are the economic forces — our productive and natural resources in relation to the size of population and there are the human forces which have to do with the nature of man and his preferences as a social entity.

On the economic side, the problem can be precisely defined: we must evolve methods in which shelter can be constructed with the minimum of materials and labor and at the fastest possible rate. We must find forms of cities which do not use up more land than we have available. This will result in an economical system while still preserving sufficient land for agriculture and open space, so that the equilibrium between man-made environment and nature is maintained. Industrialization, mechanization of the building process, ingenuity in the evolution of systems, the investigation of forms permitting the kind of density and intensity of land use, will all work towards satisfying the forces of the economy.

On the human side, man's social and cultural aspirations must be explored. This complex problem will vary from culture to culture, from time to time, and cannot be discussed in absolute terms, but we can recognize certain preferences. Industrialized man is becoming highly selective. The amenities which he demands in comparison with the past are of great variety and quantity. A choice of recreational activities, a multitude and variety of shopping arrangements and educational facilities. What is significant about this development is that it takes several million people to support the amenities and institutions which are wanted. Thus, man is no longer content to live in small centers with the limited institutions which a small community can support. Not only is this demand true of urban man, but it applies to rural man who is not satisfied to live with the limited amenities which isolation has offered him in the past. Any form of urban environment we are contemplating must be a conglomerate population which is capable of supporting these facilities.

REGIONAL ORGANIZATION

It requires several million people to support the variety which we demand of life today. Yet, relatively small groups, from 20,000 to 200,000 people are capable of developing a limited community in which many aspects of service, government and identity can find fulfillment. The larger group which must support the broad institutions is too great for identity. We must, therefore, develop a hierarchy in the regional structure, from the smallest group of several families to the larger entity of a limited community and the broadest group of an entire region.

While it must be possible for each and every individual to share the facilities of the region as a whole, it must also be possible for him to identify himself with his immediate community. Thus a group structure of many elements linked to each other to become a greater whole, replaces our present structure of a metropolitan centre which, from a weak and disintegrating nucleus, is expanding without order. What is needed is the extension of the one-hour travel limit, which has always governed the size of a regional complex, through the use of new means of transit, personal and public, increasing it to three, four, or even five hundred miles. Thus, a region becomes a grouping of centres organized on a linear basis of communication.

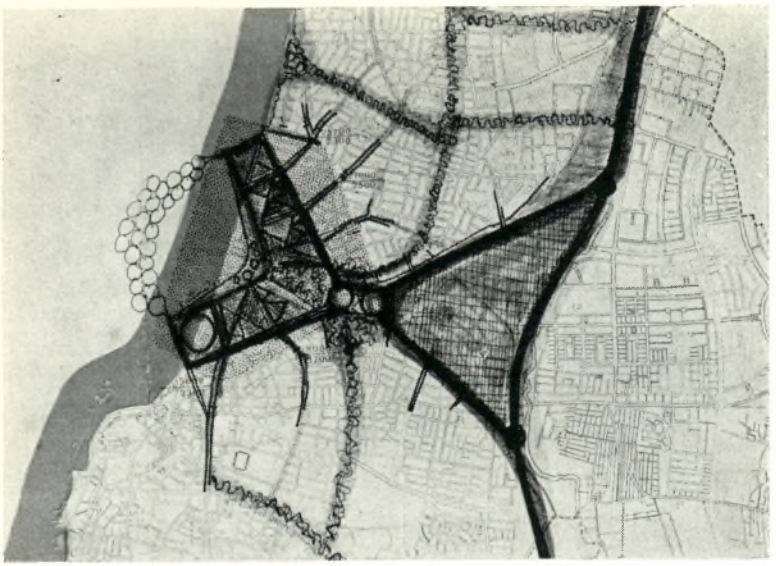
Each centre, small or large, would share the facilities of others. Each would integrate into the whole region while retaining its own identity. Agricultural communities which surround and serve these centres, and the recreational open spaces, would become an integral part of this region. The mass exodus of millions of people to the beaches or the mountains which takes place in every metropolitan centre would be channeled by having these areas linked to the communication spine of the region as a whole.

These proposals are based on the belief that modern man is mobile and wishes to experience in person the richness and variety that life can offer. It has been suggested that such variety can be achieved, not by the personal mobility of man, but by the provision of new systems of communications such as television, telephone, and others. Rather than take man to his experiences, they would be brought to man in his own home. It is my belief that no such system of communication, however sophisticated, can replace the physical presence of man. Consequently, the strongest single force which is to shape a regional organization is a provision of mobility, the re-organization of the city to a hierarchy of grouping.

There are those who argue for dispersal as an answer to the pressure of growth and expansion. Dispersal can only take place if it is organized on the lines of a regional complex, a dispersal not of an even, low density over the entire region, but a dispersal of concentrated nuclei all interlinked to each other to form a whole unit.

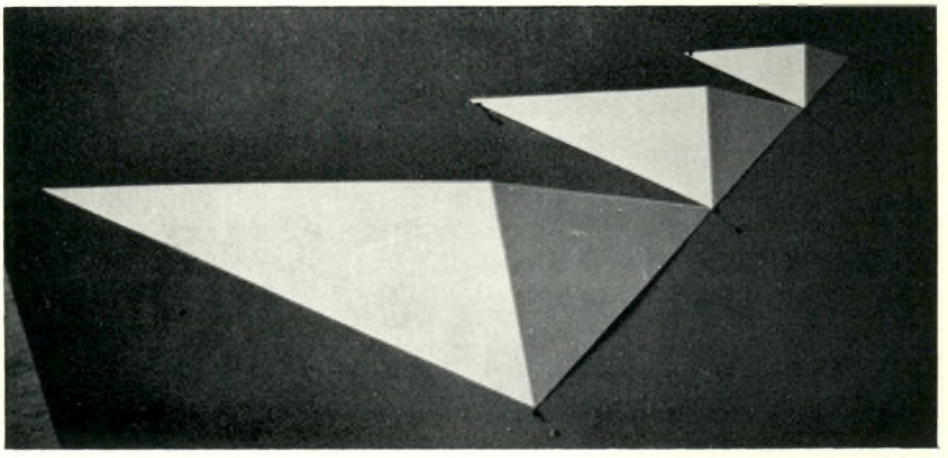
THE URBAN TEXTURE – GROUP VERSUS UNITS

The global change in our pattern of settlement affects the design of the urban texture itself. In the past, we have mostly been concerned with the design of "independent units", whether in rural or urban construction. Design criteria were for single independent units. Our problem today is the design of groupings of elements, wholly or par-



Redevelopment of this city and the unification of the cities of Tel Aviv and Jaffa. Growth of the sector is the determining factor. It is expected that the intensity of land use, as well as the economic capabilities of Israel would bring about a completion of the plan. Thus, the entire plan is based on a gnomonic growth of a form capable of expansion, each phase of expansion requiring more elaborate technical and economic means and resulting in a more intense use of land. A mixture of all core land uses in a three-dimensional pattern remains constant in each phase, organized around a basic circulation and transportation system.

MASTER PLAN
FOR THE CORE OF TEL AVIV,
ISRAEL.



GROWTH

In nature, all forms subject to growth are shaped by that force as in the case of the nautilus in which the entire form is a resultant of additive growth (gnomonic growth) or in the case of crystal structure in which each link is capable of additive growth, or a tree, in which cells are continuously produced and replaced.

tially dependent on each other. The process of design must change to accommodate this. The design of dependent elements in groups is the design of building systems, the organization of units in groups in which the relationship to each other is as significant as the design of the unit itself.

Historically, such considerations are foreign to the Renaissance tradition of Western architecture with the architect-conceived single building. In vernacular architecture, of villages and towns of various cultures, the limitation of building materials, the forces of climate and of society brought about the evolution of building systems. Contemporary construction faces us with the problem of complete dependency in order to preserve the amenities which we consider essential.

A single unit on the ground is exposed to sunlight and has privacy, both visual and acoustic. A grouping of units will be wholly dependent as to sunlight, each having to receive it — but not shade the other — and also relate to the other in order to achieve acoustic or visual privacy. Nor is identity a problem with the single unit. Isolated as it is, it is identifiable because of its own presence. In the grouping of units, identity is a problem since each unit must be different for identity, or a hierarchy of grouping and rhythms must be achieved in order to create the sense of identity.

The grouping of the units in the urban texture must be arranged in such a way as to preserve the amenities of sunlight, exposure to the rain and wind, the provision of privacy, the sheltering of public areas, and the provision of identity in the sense of location within the urban texture. It can go further: the groupings of these units can be evolved in such a way as to create new relationships within the urban texture, increasing the amenities which did not exist before.

A three dimensional arrangement of units in a hot climate can be made in such a way as to shade or shelter each other, and to achieve a better relationship between the various elements of the city. The three-dimensional plan opens up a potential which did not exist before. The key word is concentration, and the by-products of concentration are the inter-dependency of units and their grouping.

TOTAL STRUCTURE, OR THE MORPHOLOGICAL EVOLUTION OF BUILDING FORM

In the 1920's and 1930's, architects came to the realization that the design of cities and buildings must be done through rational analysis. Culminating in the CIAM, these architects and planners had set forth a programme for the rational development of buildings. These attempts were crude, isolating one particular functional element of the reality of the building and giving it formal interpretation while ignoring the others. In the 1950's a reaction occurred. It implied that a rational analysis of the programme of a building results in monotony and that a "rich" architecture could not result from such a process. In the words of Philip Johnston, "Structural honesty seems to me one of the bugaboos that we should free ourselves of very quickly. The entire modern movement looked at as an intellectual movement dating from Ruskin to Violet Leduc, going through the Verk Bundt, Bauhaus, Le Corbusier to World War II may be winding up its day. There is only one absolute today, and that is change. There are no rules, surely no certainties in any of the Arts. There is only the feeling of a wonderful freedom". The fallacy in this statement is a result of the misuse of the word "structure" and of the word "freedom".

Freedom exists in the stylistic world of fashion, but if our concern is with improving the environment the obstacles involved suggest otherwise. The key word for the architect today is not freedom but dependency. Dependency of units — the need to reduce the arbitrariness of the building form in fulfilling its function as perfectly as possible.

Morphology is defined as a branch of biology concerned with the form of animals, plants, and the structures, homologies and metamorphoses which govern or influence that form.

The definition of structure is the arrangement of all parts of the whole. It is this definition of structure that we must satisfy in our building form, and it is through the morphological process which evolves towards perfection that we must undertake it. The synonyms of the word structure are: integration, articulation, concatenation, organization, arrangement, system, organism, scheme, and complex. Each of these words must form the broadest programmatic base in our design of the urban texture.

ECONOMY — A MORAL OBLIGATION

To build economically is a moral obligation of our time. Never before was it universally accepted that every man has a right to certain amenities.

To the Greek "Democrats", the rights and equality of citizens was not contradicted by the existence of slaves. Elsewhere, the masses accepted that their rights to certain comforts be secondary to the rights of institutions which they supported. For Britons of the 1900's, it was possible to accept a democracy which was economically dependent on the subjection of others, i.e. the colonies. Only since

the end of the Second World War has it been universally accepted by most governments and by all world bodies that every man on this planet has equality in his rights to certain political and economic privileges. This political state of mind prevails because of technical advances — "progress", which made it possible for humanity to survive within such a political reality.

It has not been recognized that these political rights also affect building, for the emphasis now must be to provide the maximum for everyone. No longer is it possible to accept the palazzo next to the slum, nor the corporate palace next to the dilapidated dwellings. It is paradoxical that in North America today it is possible for the public to accept unemployment and underproduction of industry with the presence of slums and dilapidated cities. With such contradictions present, many architects preoccupy themselves with questions of style and taste and ignore the existence of broader problems which, once recognized, would eclipse these present preoccupations. This temporary blind spot in the public vision will eventually disappear and the contradiction between political aspirations and physical reality will be eliminated .

The problem is how to provide better dwellings, better environment, better schools, better cities, better transportation for all people, and how to build them with the least labour and the least material so the economy can provide more.

Economy is achieved by using the most readily available material to enclose the most space, and by using the least labour. The exploration of efficient form means the examination of those geometries which readily achieve structural stability with the least material, as well as those systems of "space packing", or the sub-division of space which most efficiently serves the requirements we are providing.

The wing of a vulture is made up of a three-dimensional network of thin bone giving maximum strength with minimum material; the beehive cell gives the maximum storage space for the minimum wax. In the construction of the environment, we must explore the geometries, the systems of construction which achieve the most with the least. But material is secondary to labour, and thus process is the governing factor. Two objects can have the same material, one object requiring 500 steps of jointing, connection, and manufacturing — the other requiring one. A bathroom may be formed by one man pouring a single material into a mould, forming each and every part in that one step in contrast with a bathroom formed by five men, making 500 connections of four different materials.

We have industrialized and mechanized many of our industries. We have not done so in building. We must adapt the production methods of automobiles, aircraft and appliances to building. We must learn to deal with the "structure of numbers". The assembly line is the combining of repetitive elements, and in using these methods we must preserve variety. We must also achieve rhythms, combinations and permutations which, within a repetitive construction results in a hierarchy, giving sense of location and identity to the man within it. To some, repetition is monotony. In nature, repetition within a hierarchy or an order results in unlimited variety. In building, we must achieve this hierarchy within our repetitive systems by understanding the structure of numbers.

THE REAL COST OF HOUSING

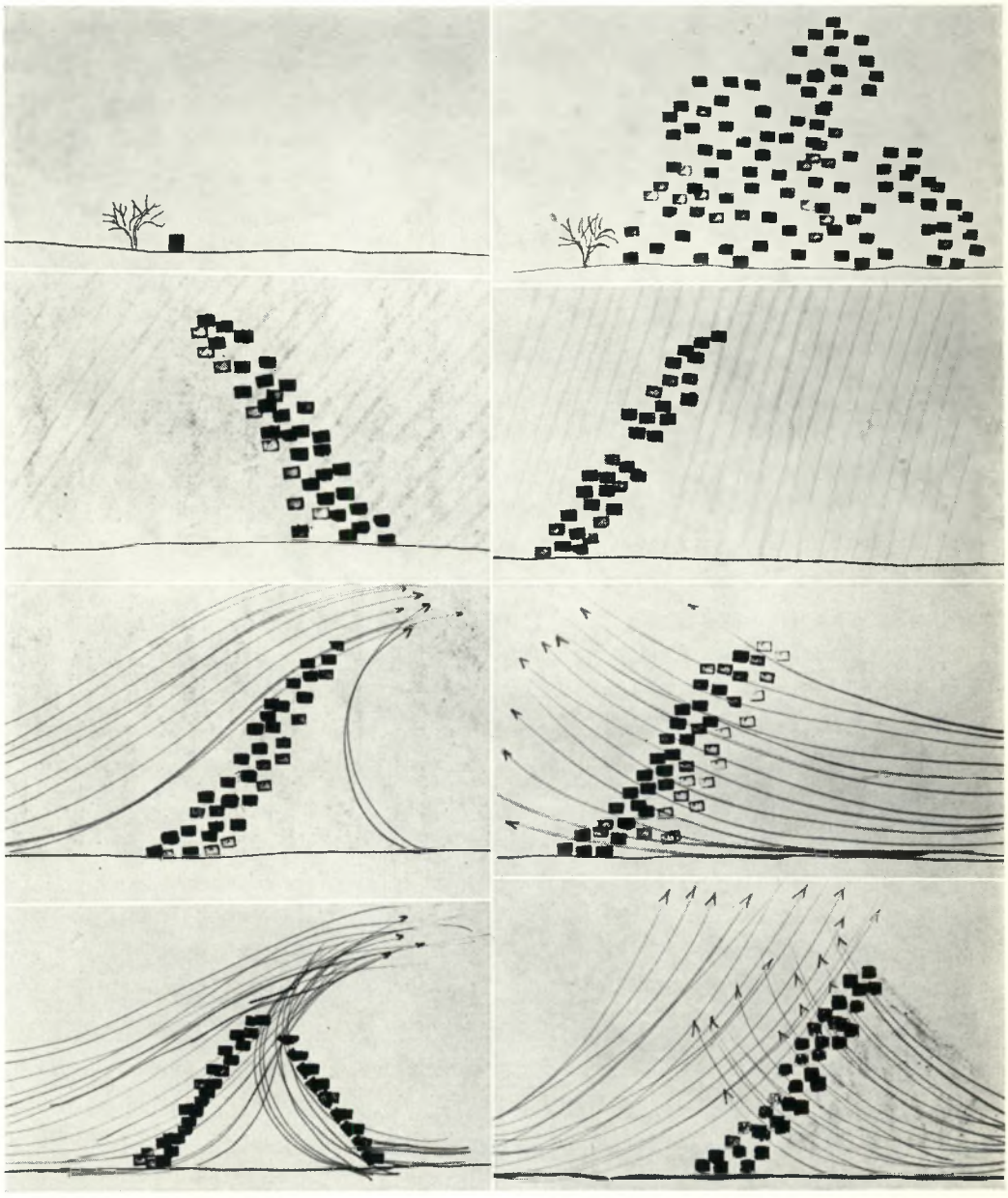
Minimum material and minimum labour mean a most economical package of unit construction. But we must be wary of the limited view of economy. A single dwelling, prefabricated and scattered one per acre may be the most economical if the only consideration is the cost of constructing the unit itself. But we cannot ignore the cost of servicing the land, the communication network required and the transportation systems. We cannot ignore the maintenance costs nor the time spent travelling by individuals from their dwelling. We must use another scale in establishing the real cost of housing, a scale which incorporates all the factors which are meaningful to the economy.

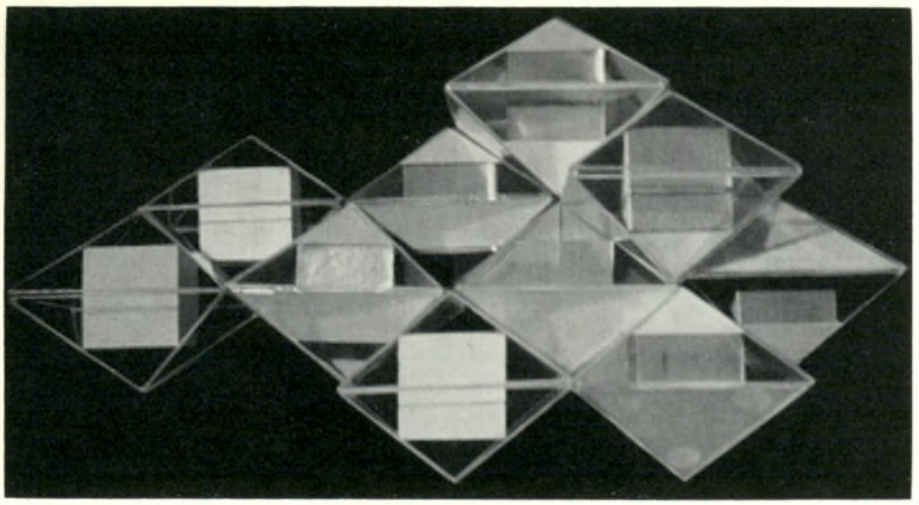
THE BUILDING INDUSTRY

The large corporations in North America and Europe, and the large government-owned organizations in other countries, reflect the transformed organization of industry over the past 50 years. In each case, a complete small-scale government had been organized to deal with the complex process. Only this type of organization could integrate the design and manufacture of thousands of different elements, could service and improve them through research and design development. In each case, it was possible to recover the monies spent on research through the resultant opening of future markets. Thus, a car manufacturer can invest millions in the tooling up of a single type of car, and a corporation such as Dupont can invest billions in developing products such as cellophane or nylon. But the building industry is fragmented into thousands of small manufacturers, each producing a product developed independently of the others. Design is undertaken by the architect who is divorced from the industry and the contractor has no part

GROUPS VERSUS UNITS

The grouping of several units creates a realm of problems non-existent in the design of the single independent unit. The grouping of units opens up the potential for new relationship improving upon the environment of the single independent unit. Units can be grouped to absorb light, or to shade each other from the light. To absorb the breezes and create breezes, or to reflect them and protect from them. Just as a relationship of sea and land creates a system of prevailing breezes, so can the groupings in the urban context create a micro-climate of their own. The regional architecture which will evolve will make a city in the North as different from a city in the Equator as the elm is of the cactus, and the pine is from the olive tree.





URBAN SYSTEM — 1965

The geometry has been modified to achieve a more efficient transmission of stresses within the structure. The proportions have been modified to achieve a more efficient organization of dwellings with very limited circulation space. The combination of units, of cells, permit for dwellings organized on 1, 1½ and 2 levels. The exterior surface has been reduced to achieve economy. The dwelling is organized into a more complex module of a basic shell into which highly sophisticated manufactured products are inserted and are replaceable, such as kitchens, bathrooms, storage units, other furnishings, stairs, and the like. These are organized on a module, either 2½ or 5 ft. wide and 10 ft. long. Thus the service element which is inserted arbitrarily into the cell unit in Habitat '67 has a definite place within the geometry in this modified system.

of either. Tax concessions given to most industries are not applicable. Materials developed in other industries are only later introduced into building. The relationship of the architect, who is designing the assembled complex; the industrial engineer who is designing the product itself; the contractor who assembles them, must be transformed into a single organization. This organization would develop systems of building, manufacturing all parts, undertaking basic research, marketing on an international scale. We have, then, two levels of design. The design of the building system evolving new vernacular to satisfy our building requirements, and its application to a specific area.

REGIONALISM

I have isolated particular facets of structure as if they could exist without the others. The design process integrates all those facets to achieve a perfect fitness of form. To the biologist, fitness of form is a definable state within evolution. When such a process takes place, it is inevitable that a true regionalism would evolve in which the form will vary from one climate to another, from one culture to another, as different as plant or animal life is within these regions.

In the temperate climate, the branches and leaves of the elm or the maple radiate in a spiral pattern, achieving the maximum absorption of light for every leaf. In the desert, a cactus leaf rotates so that it is perpendicular to the sunlight, absorbing the least possible sun and preserving moisture. The olive tree has one side of its leaf silver, and the leaves rotate in the course of a day with the silver side always facing the source of sun. We must learn to group the elements which make up our environment in the same unarbitrary way. For dwellings and public areas, to absorb the light and the sun where it is wanted, or to shade each other and shelter each other, protecting from the heat where it is needed.

The deciduous tree sheds its leaves in winter, transforming its form to accommodate a change in climate. Our cities, too, in these same climates must transform. In summer, shade is necessary, open space and breeze are desired; but when the cold winter comes, transparent shelters, lenses covering the public spaces and the open gardens, absorbing the sunlight, and protecting from the cold and the wind are necessary. The changing angle of the sun from season to season, the prevailing winds at winter and summer, all become forming elements, shaping the membranes which make up the city to achieve a morphological perfection.

We must transform the design process so that we achieve an architecture of evolution.

Land is subject
to marketable forces. NFB

A Theory of the Urban Land Market

by J. Everett Brown

Nearly everyone is persuaded that our urban malaise is the consequence of unplanned development. No one can dispute the all too obvious — the traffic congestion, slums, run down business areas, noise, ugliness and inconvenience which characterize much of our urban environment; therefore, proposals to do something about these conditions fall on receptive ears. Unfortunately the promise has tended to outrun the performance. This lack of achievement has been variously ascribed to the perversity of human nature or the lack of single-mindedness and fortitude by our political leaders. Without completely discounting the foregoing causes one cannot escape the suspicion that part of the failure may, in fact, lie with the empirical studies and plans themselves, and therefore with the planning process as now practised.

Not only is this lack of solid achievement cause for some misgivings about the planning process but so also is any serious consideration of the following facts. At least three of the older cities in British Columbia were developed in accordance with a complete community plan and yet they face problems of a nature similar to those encountered in the "unplanned" communities. Moreover, whether a community was originally developed according to some overall plan or grew without such a master plan, the final structural patterns of the communities are remarkably similar. Finally, many community plans of today are patterned after existing communities most of which developed without the benefit of a formal plan. All of this suggests that more weight is being given to the community plan than is warranted and that the clue to an understanding of our urban problems and their solutions lies, not so much in the

preparation of empirical studies and prescriptions, but in a theoretical grasp of the forces which have obviously shaped the urban complex in the first place. Such knowledge, if attainable, should make it possible to treat the cause and not the symptoms of our urban sickness and thereby increase our chances of success.

What is offered here is a theoretical exposition about one group of forces which, it is contended, have been instrumental in North America, at least, in shaping the community. These are the market forces in respect to land. It would be naive to argue that these are the only forces at work affecting the structure and character of a community, but it seems not unreasonable to assign to them a major role.

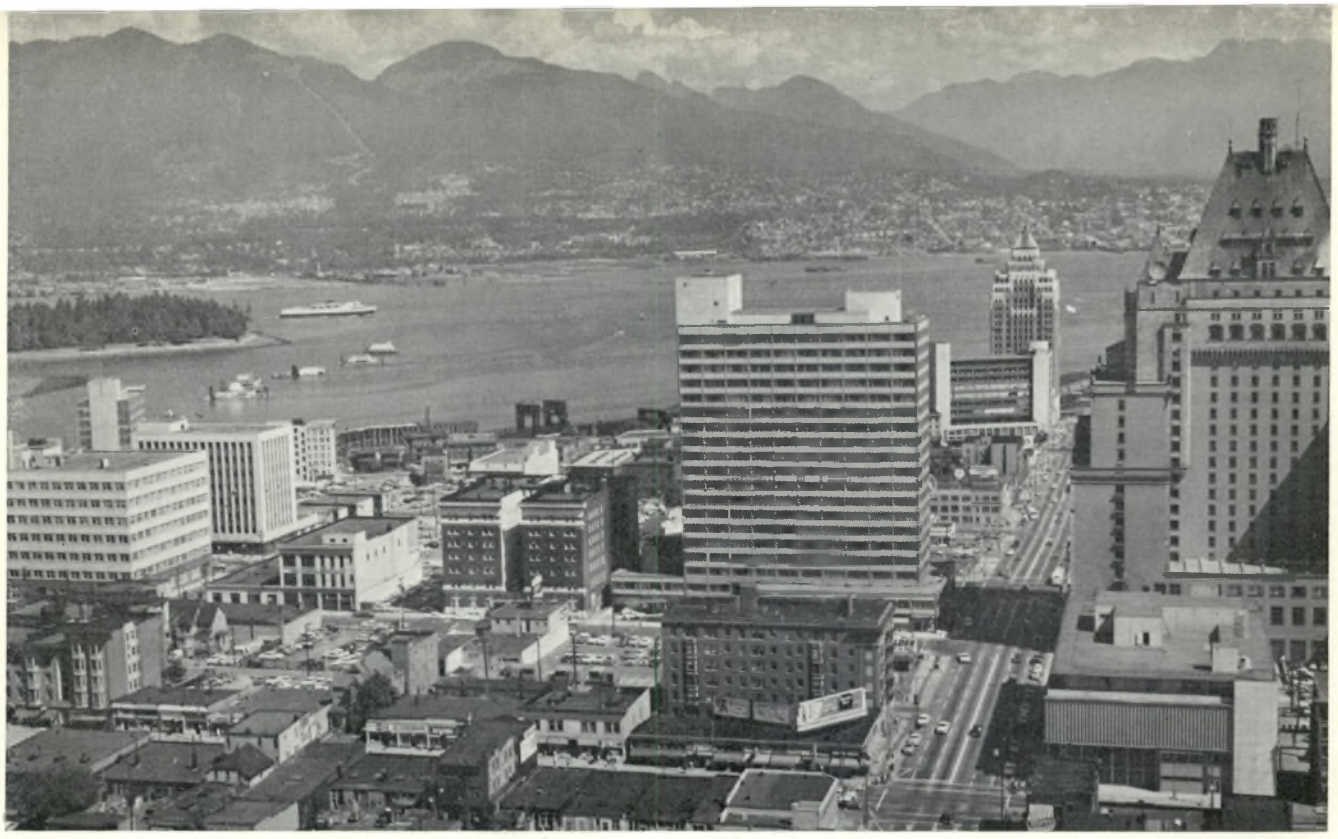
Most professional planners use the technique of a model as a means of abstracting from reality or of portraying the resultant abstraction. While such models may be satisfactory from a static or descriptive point of view they fail to provide a theoretical basis for understanding the dynamics of the urban situation. This suggests we should fall back on some of the techniques of an older discipline and in this respect nothing is more dynamic than the market place. The question is, does the theory of the market place apply to the urban scene — primarily urban land — and if so, under what limitations or special conditions?

The first theory, of which I am aware, on the formulation of a theory of the urban land market was the work of Professor William Alonso, the essence of which was reported in the Papers and Proceedings of the Regional Science Association for the year 1960. Without going into a lengthy summary of Professor Alonso's arguments he, essentially, tried to establish a common denominator for all use of land introducing the concept of "bid rent" as the demand side of the land use function, regardless of the type of use. Employing the standard mathematical exposition he further advanced the proposition that the slopes of the "bid rent" curves, decline as one progresses from commercial through residential to agricultural uses and that these different slopes account for the spatial distribution of functions in an urban situation. Professor Alonso's proposed common denominator is very interesting and ingenious. However, I do not believe that one can lump together into a single concept a market situation which is as complex as the urban land market. Moreover, it seems that elasticities of demand are too uncertain a measure to account so neatly for the spatial distribution of the uses of land.

While mathematics is a useful tool in developing and explaining marketing theory it is not convenient to use it here. I propose to establish by argument and analogy alone that economic theory in regard to the markets for other goods and services apply with equal relevancy to the urban land market.

In order to simplify the discussion later on, a very concise summary of marketing theory is introduced at this point. Classical economists recognized two marketing situations: (a) pure competition — many buyers and many sellers; and (b) monopoly — many buyers but a single seller, and gradually developed a theory in regard to the relationships existing among the factors of prices, costs and productions in respect to these two situations. It is only in comparatively recent times, however, that economists realized that these two situations were, in fact, the extremes of a marketing spectrum and that there existed a number of intermediate groupings in terms of the numbers of buyers or sellers or both. This latter group of marketing situations has been described as imperfect competition or monopolistic competition depending upon one's point of view. For example, in the case of a few sellers (oligopoly) the product of each seller is a sufficient fraction of the total so that variations in his output can affect the price received by the others sellers of that product. To minimize this effect we find in such situations product differentiation (brands), price leadership, and self-imposed limitations on production. Obviously product differentiation has little meaning where there is only one or two buyers — a situation not uncommon where producer goods — as contrasted with consumer goods — are concerned. For this reason it is common practice to distinguish between a consumer and a producer goods market.

Dealing primarily with North America, it is a commonplace observation that there is a real estate market. Moreover, this market has points of similarity as well as of dissimilarity with a stock or a commodity market. In brief, people buy real property either for their own personal residential use or as an investment, or speculation, or for use as part of a productive process under their control. People likewise sell when they no longer want the property for their own use, when they wish to change investments or when the productive process has come to an end in that particular location. From this an economist would deduce that, in fact, we have two kinds of markets — a consumer market and a producer market. As already suggested these two markets have different characteristics. Therefore, these markets are properly considered separately even though there is a common denominator, namely land — or space. This is not unusual, for example, the markets for motor



It is sometimes suggested land is different from other commodities, that particular sites are unique, especially downtown properties. When compared with wheat this is true, when compared with an art treasure it is not.

In most communities land is put on the market for a variety of uses.

cars and for motor trucks provide a parallel situation in which the common denominator is transportation.

Considering the consumer market first we can observe that the buyer of a home is influenced in his choice by a number of factors. It is common knowledge that the buyer of a motor car is not only looking for transportation but for many other things — convenience, comfort, prestige or status. Similarly, the acquisition of a home involves not only shelter but a comparable set of attributes. This applies with equal force to a dwelling intended for a selected site as it does to an existing structure. In addition to the basic needs of shelter and space, one must recognize all the other elements and amenities which go to make up the sum total of the needs which the purchaser hopes to satisfy. The demand side, therefore, involves not only land and space, but shelter, price and many other factors.

When we examine the supply side, particularly for new accommodation as distinct from "second hand", we find that in any given community there are generally a limited number of suppliers or developers and each attempts to differentiate his product from his competitors in terms of the various factors which appeal to the buyers. And, of course, this differentiation persists into the secondary market. In effect we have "brand" differentiation in the consumer market for housing or site location with the limited number of suppliers such a differentiation requires. Moreover, the suppliers attempt to keep the supply of available sites close to the level of the demand. In other words, the supplier is fully aware of the effect of his production on the market. As already noted, such a market in

the economist's terms is one of monopolistic competition.

The remainder of the land market is essentially a producer market, where frequently there are both few suppliers and few buyers or, in some cases, only one of each — a monopolist-monopsonist situation. One of the characteristics of such a market is that the price may fall anywhere between a maximum and a minimum set of values largely determined by the relative strengths of the buyer and the seller. It should also be noted that land in the producer market has essentially locational value only, which is its contribution in the productive process.

Probably one of the fundamental reasons why the application of marketing theory to real estate has not been advanced before is the strongly entrenched view that the supply of land is fixed and therefore the marketing rules do not apply. Since land cannot be reproduced in the ordinary sense, this is a logical conclusion. The fact that land, as a subject of consideration by economists, has had little attention since Ricardo, may be another reason. It has also been suggested that land is different from other commodities in that a particular site is unique, and this applies in particular to downtown property. When compared with an undifferentiated commodity such as wheat this statement is true, but when compared with an individualized commodity such as an art treasure of course it is not. These latter commodities all have one characteristic in common — a market in which there are very few buyers or sellers.

The crux of this argument, nevertheless, revolves around the question of the adequacy of the supply of land for urban uses. Statistically, in British Columbia somewhat less than one-half of one percent of the land area is devoted to urban uses and it has been said that in the continental United States the amount is approximately two percent. What the population explosion may do to the supply of both food and space at some future date is not relevant to the present argument. For some time in the future, at least, the supply side of land for urban uses is readily expansible, and this can be confirmed by observing that in every community land is put on the market for various uses generally in excess of the demand for that use and, furthermore, this situation has prevailed over a long period of time.

The idea that land is scarce, in the absolute sense, colors much of our thinking. Unfortunately the word "scarce" has two distinct meanings and this has led to much confusion. "Scarce" in the absolute sense means that there is little available, regardless of human effort. Such is the case for the rare earth elements which are present in the earth in infinitesimal amounts. "Scarce" in the economic sense means that the commodity only becomes available in usable form with human effort and therefore commands a price. If there is sufficient available without effort it is a free good — the air, for example, which we breathe. To restate the case, land for urban uses is not scarce in the absolute sense but is scarce in the economic sense in that it requires human effort to convert it to a usable form. And if we must look to the future, probably some other essential commodity may become exhausted before the supply of available land runs out. California, for example, is facing a water shortage but not, apparently, a land shortage.

Possibly at this point it should be stated that the market place does not always allocate scarce, in the economic sense, resources to their most productive use. The market suffers from a number of imperfections — the results of misjudgment, of misinformation, of short run gains or of special advantages. Therefore public authority is frequently required to exercise some control over the market to minimize the effects of these imperfections. While land is not scarce in the absolute sense, the misuse of land, or lack of use committed to urban needs, must always be a matter of concern to public authority. The solution to this situation revolves around the question of how best to influence or control the market.

The effective supply of land can be increased either by committing more undeveloped land to urban uses or by increasing the intensity of use of the land already so committed. Since intensity of use is a relative measure, it may be that additions to the urban area and increasing intensity of use advance together throughout the whole growth cycle of a community. Very preliminary investigations suggest that the number of persons per gross acre increases with the size of the community.

If intensity of use is to increase with the growth of a community, and observation and statistical measures confirm that it does, such a result can only come about if either new uses on the periphery are at greater than average intensity, or existing uses are gradually replaced by more intensive uses at the same locations either for the same or different kinds of use. Observations indicate that the latter is the case. Confining ourselves to the producer market for simplicity of argument, from the supply side the price offered for a site must exceed the capitalized value of the earnings realized under its present use or the supply will not be forthcoming. From the demand side

the price must not exceed the capitalized value of the expected earnings under the new and more intensive use or there will be no effective demand. In brief, the value of the site in the more intensive use must exceed the value for the site under the existing use if there is to be a growth in the intensity of use. However, this must imply a growth in the size of the local market for the particular service or commodity being produced at the site. Hence the urban land market is essentially a dependent one — dependent upon the basic market for goods and services produced primarily to serve the local market which in turn is dependent upon the community's "export" market. In brief, intensity of use would appear to be governed by the scale of the market for locally based goods and services although, as far as I am aware, the exact relationship is not known.

One last comment which has some significance in understanding the urban land market and the producer market phase in particular, the scale of operations of a business is governed by the size of the market and in turn reflects on the value of the site. The scale of operations of a particular business is affected by the extent of its share of the market. Since in the business community it is recognized that there is only "room" for a limited and understood number of such businesses, in a given community the demand for sites is correspondingly limited and for a particular site even more so.

While marketing theory is fairly complex, in part because of the many variants and special cases, it is hoped that the foregoing arguments, oversimplified as they may be, have established the basic proposition that the urban land market is not too greatly different from other markets and can be analysed and comprehended in the same terms. Possibly the elaboration and applications which follow will aid in rounding out this presentation.

If the foregoing theory has any validity it must be capable of accounting for the dynamic changes which one can observe taking place over time in a community as well as being useful in formulating effective government policy in connection with urban change and development. First we shall attempt to apply this theory to account for the growth of communities and for the spatial relations that exist within such communities. Secondly we shall consider three current urban problems in the light of this theory.

If we examine the demand side for land in the consumer residental market, it appears this is a function of the overall rate of growth in population of the particular community and of the income level of the community. These in turn are functions of the economic base that is, external trade, of the community — its extent and character. Urban growth, spatially, in our North American context is almost entirely the result of the effective demand for new housing and this market is largely met by private developers who may sell to consumers — single family dwellings — or to investors — multiple family units such as apartment blocks. Backing up this primary market is the secondary market whereby the housing stock filters down to lower income groups. Usually in the history of any community, land at first may have been used for agriculture or for growing trees or, in fact, have remained unused and undeveloped. Its conversion to residential use can only come about provided the consumer is prepared to pay at least as much for the land as it can earn in its original productive or unproductive state. Depending upon the productivity of the land this may represent a very small or a substantial price. In any event these basic uses, if any, are replaced by residential as the community grows and as can be observed almost universally this growth tends to be outward from the urban core or centre.

In the producer market whether it is a basic industry or is a commercial or secondary industrial activity, land is one of the factors of production and the owner of the land receives as his share of the productive process that share of the value of production attributable to the land. Obviously the value of the land in any given situation is governed by the value of the output which, in turn, is in part governed by the extent of the market served by the output. A large market means a large output, a large value of production and a large gross return to the factors of production. Hence, in a simple case, all things being equal, the value of land for commercial or industrial uses increases with the size of the market for the products.

Furthermore, for many kinds of commercial and industrial activities, if not for all, location or accessibility is a major factor in the productivity of land. Two propositions seem almost self evident, namely, that the centre of a circle is the most accessible point in a plane surface and correspondingly the centre of a community is the most productive location and therefore, the most valuable from a business point of view. Secondly, that for many commercial and industrial activities the value of land in the productive process is substantially greater than for residential purposes. Therefore over the course of time the so called central business district grows outward by displacing the residential areas. In brief, the growth of a community starts from some embryonic junction or point and consists of a double displacement — residential displacing agricul-

Over a period of time the central business district thrusts outward and displaces the residential areas.

A community grows from a junction or point. In doing so its residential section displaces agricultural and non-urban land at the periphery. At the same time the commercial or industrial displaces the residential at the surrounds of the commercial-industrial core.

ture or other non urban uses of land at the periphery of the community and either commercial or industrial displacing residential at the periphery of the commercial-industrial core. This of course, is a greatly simplified description of the process of urban growth and structure and moreover may only be valid for the pre-motor car era. Certainly under today's changed transportation picture a number of qualifications to this general outline of growth are required, although their nature is still largely conjectural.

In earlier periods the urban dimensions were constrained by danger and by the available means of transportation. This resulted in a very compact community with moderately intense uses. Moreover the boundaries of these communities were fairly sharply delineated either by a protective wall or by a clear demarcation between residential and rural uses. With the disappearance of first one and then the other of the constraining influences we find a more extensive development of the urban complex frequently including extremely low density residential development on the periphery, sometimes called urban sprawl, and the dispersal of productive activities both commercial and industrial in what sometimes appears to be an unpredictable manner. It is here that our knowledge is clearly deficient. The locational factors which determine the choice between competing communities for a given industry are well understood but the factors which determine location within a given community are not. Until these latter factors have been catalogued and analysed it will remain very difficult to fully understand the spatial relationships within an urban setting under present transportation and technological conditions. Indeed it might be argued that the current problems affecting older urban complexes have resulted mainly from the changes in structure which follow from the changing technology of transportation, communication and distribution of power, water, etc.

In any event apart from the effects of topography, geography and historical accident which in the past have modified the simple pattern of urban structure there has, in recent years, been some further modifications which are apparently the result of our newer technology. Some additional comments will be made in regard to this in connection with a discussion of the problem of the central business district. Subject to a degree of uncertainty about the effect of modern technology on the urban land market the growth and pattern of growth of communities appears to be completely comprehensible in terms of these market forces.

At least three problems of a land use or structural nature beset local governments and it is proposed to discuss these problems briefly in the light of the basic hypotheses here advanced. The first of these is the changing role of the business core — the so called central business district.

The structure or spatial distribution of activities in an urban complex has naturally been the subject of much interest to professional planners and they have pointed out that while the traditional form has had a single core or node other patterns such as binodal or multinodal are now not uncommon. Particularly in a metropolitan area growth outward from centres of two or more communities could eventually meet so that one would in effect have one community with two or more centres or nodes. The clash in the spheres of influence of their respective centres must inevitably impose some restrictions and limitations on the further development of each and I think there are a number of such instances. This situation does not appear however to be as serious as the rise of satellite centres or nodes which ring an older centre and effectively drain away or intercept part of the business formerly carried on almost exclusively in this older centre — the central business district. The loss in taxes for the core city and the loss in capital values and in financial returns to the business community are powerful incentives for finding some means of restoring the central business district to its former competitive position. And as one might expect this situation has given rise to many studies and reports with much exhortation but not too many concrete proposals.

While it would be presumptuous to deal with such a complex problem in a paragraph or two it would seem that those who focus their attention upon the transportation aspect have selected the factor which has exerted the greatest force in modifying the market potential of the core as against the satellite centres and in the latter's favour. Attempts by public authority to prohibit the development of such centres through the use of zoning ordinances or similar devices seem doomed to failure if in fact a particular location has value as a subcentre. Fortunately the number of such possible sites or locations must be extremely limited in any given community or the situation would be completely chaotic.

Transportation by its influence on the usability of sites or locations and therefore on the urban land market, shaped the pattern of older communities. Historically there has been a slow progression from walking to a horse drawn vehicle and more recently to electric tram or steam railway. Since these modes of transportation, particularly the latter, had to pay their way out of tolls or charges such a service

was only provided where the volume of traffic warranted it and this tended to be radially from the core and to points on the periphery having an adequate density of population. With the rise in the use of the motor car which operates without these financial limitations the circumstances have become completely altered. No one will drive the extra two or three miles to the central core if the goods or services can be obtained at the subcore. Moreover the newer centres have generally been designed to accommodate the motoring public. Hence the central business district has the double disadvantage of distance and design.

While the future of the central business district may sound somewhat dismal perhaps the real futility to date has been the attempts to preserve it in its former role and the apparent unwillingness to accept the fact that a new era is here. Such acceptance would involve among other things, a complete reassessment of the factors affecting the location of commerce, industry and other activities within a given urban complex. Very tentatively it appears that these activities break down into two main classes, those dependent on outside markets and those dependent upon the local market. It would also appear that this latter group fall into two sub-groups namely those dependent upon the whole community as a market and those which require only a part of the community. If this analysis is correct those dependent upon outside markets could locate anywhere within the community where the necessary faciilties are available. Moreover, they would appear to have a neutral effect on the structural pattern of the community. Those dependent upon the local market would be located in the central core or in a sub-core in accordance with their market requirements. The basic spatial distribution for a single core or node is probably repeated on a smaller scale at each subcore, and essentially for the same reasons. It perhaps bears repeating that this is the area which appears to require urgent and careful analysis.

In summary there is no doubt that the central business district in most large urban communities is undergoing great change and stress. Our concern is that large public, and less possibly, private investments will be made in an attempt to reinvigorate the core and that such attempts may not only fail but may in fact magnify the difficulties because they have been undertaken on the basis of incorrect assumptions.

The second point which the foregoing theory explains with reasonable cogency is the creation of slum areas adjacent to and surrounding the central business district. It is quite obvious from the outward growth of an urban community that the oldest residential areas, and therefore houses, are contained within the area which rings the central business district. In the secondary market both because of the age of the buildings and of their location they tend to go to persons in the lowest income group who have an effective demand. This income group generally attempt to supplement their income by renting part of their space to boarders and roomers. Hence we have a situation in which the oldest housing in the poorest physical condition with the most limited facilities suffers an even further handicap as a result of much overcrowding and little or no maintenance — and so slum areas are born.

The attempt to eliminate the slums by wholesale demolition has not been an unqualified success, because while the old housing can be replaced by much more acceptable public housing, such a program really only affects the visual or physical aspects of the problem. As has been suggested, it is fairly easy to take the people out of the slums but much more difficult to take the slums out of the people. New housing by itself does not solve the underlying problem of comparative poverty, and human misfortune and, moreover, where such housing is provided in large projects, as is usually the case, it perpetuates class stratification.

Furthermore, the attempt to bring about private development and use of former slum areas for new private housing faces all the problems of selling a very inferior brand product in a highly brand conscious consumer market. While it may be possible to change the basic characteristics of an area unless a slum areas has some natural competitive advantage over other housing areas in the community it will be difficult to create a favourable image out of nothing. Thus the re-use of slum areas, with or without government intervention, poses some real problems. If government intervenes, removes the slums and creates new housing it tends to perpetuate the social, if not the physical, problems of the area. If the area is to be re-used for private housing it must meet the test of the market and in this it may fail completely. In the latter case success is entirely a marketing problem and the situation may require a much more sophisticated approach than has heretofore been tried — at least by government. This is not to argue that we should be content with bad housing but simply to question the soundness of our current methods of dealing with the existing slum areas. It seems that some new techniques must be worked out, first to deal with the needs of the people themselves and secondly to bring about a desirable re-use of slum areas — and these two problems

are not necessarily related.

Lastly, there are the problems associated with transportation. The electric tramways and steam railways in their heyday had a virtual monopoly in urban transportation. Therefore, there was no question of patronage. However, in spite of increasing population in recent years, the annual number of passengers carried by public transit and commuter train has decreased in each succeeding year as compared to the previous year.

While there must, for a variety reasons (basically financial or physical) be some fraction of the population which depends upon public transit it would appear that this is not large. It would seem, therefore, that the attempt to increase the patronage of public transit has little chance of success on a straight fight with the motor car. This is particularly true where freeways are provided at no direct and immediate cost to the user of the motor car. The logistics of the situation suggests that there cannot be a large concentration of both people and cars at the same time in one area since one motor car requires roughly two hundred square feet for storage (parking). The large fraction of the working and shopping population which can afford to drive a motor car however will not be easily persuaded to use public transit. Therefore only through prohibition, excessive congestion or direct and heavy charges in the use of the motor car is there likely to be any measurable reversion to the use of public transportation.

Thus the transportation problem presents a sort of Hobson's choice. On the one hand it is not physically possible to accommodate the motor cars where such are used to provide transportation. The amount of land that would have to be devoted to freeways and parking would leave little for the activities which must normally be carried on in such an area. On the other hand one cannot induce people to abandon their automobiles in favour of public transit unless almost punitive action is taken against the operation of motor cars in downtown areas, actions which would appear to be politically very unpopular. There remains one choice which has received rather less consideration than it deserves, namely miniaturization.

Proposals have been made for, and designs prepared of, miniature motor cars which would provide the individual transportation so highly desired and yet substantially reduce the demands for space. Under this suggestion the present highways could accommodate eight to ten times the numerical volume of traffic while storage facilities could be altered to increase their capacity to hold twenty to thirty times the present number of vehicles. Parking charges for a standard size car could then be scaled to the point that very few would be prepared to meet such a cost. Likewise, public transit could be scaled and designed to take care of the natural demand for such a service. Probably in the very largest cities the current mix of public and private transportation would continue subject to some increase in the use of private automobiles if miniaturization came about. In short, as in the case of land use so for transportation, solutions for correcting a problem must be in accord with the basic market forces influencing that section of the economy.

In summary, older cities in particular face a triple problem; a redundancy of land (certainly for the time being) previously used for commercial and industrial purposes in the central business district; an unsightly and socially unacceptable ring of bad housing; and a transportation problem brought about by the change from public to private means of transport. Current attempts to meet these problems have generally failed because of a lack of understanding of the forces which have molded the urban communities in the past and the failure to evaluate the current effect of technological change on these basic forces.

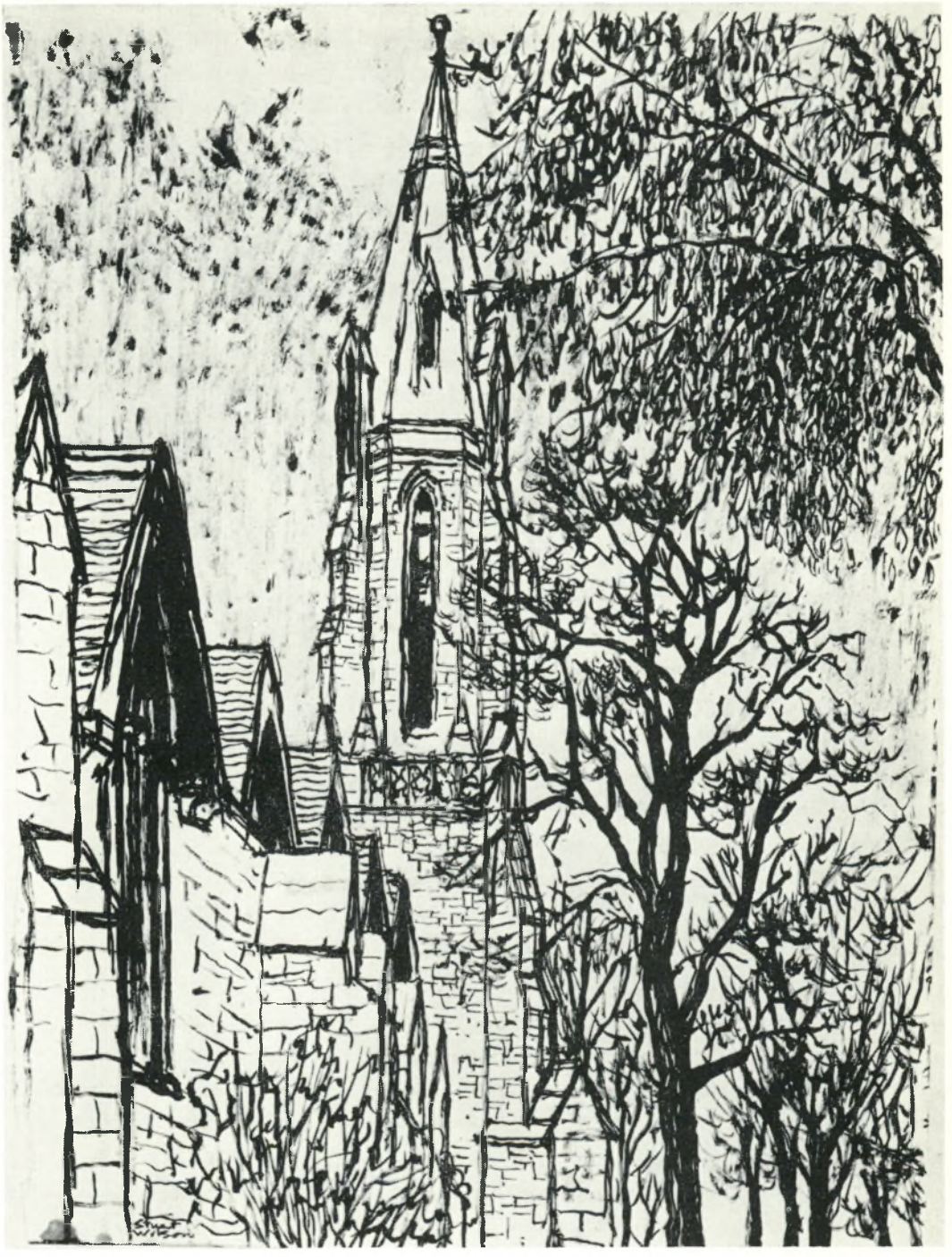
A recognition of the fact that we are dealing with a series of marketing problems of which the urban land market is one, would in our view lead to a much more realistic appraisal of the situation and the development of proposals which might have some hope of success.

* * *

Mr. Brown particularly wishes to acknowledge the help and encouragement of his planning staff in preparing this article. He also wishes to record his indebtedness to Mrs. Muriel Tassie for reading the manuscript and for her helpful suggestions.

Mr. Brown was born in Winnipeg, Manitoba. He obtained his M.A. from the University of British Columbia and his M.B.A. from the University of Chicago. He is also a Fellow of the Chartered Institute of Secretaries. During the War he served with the R.C.A.F. and since then has been employed by the Provincial Government. As an economist he has prepared reports in many fields including marketing, labour problems, welfare costs, Columbia River Development, freight rates and taxation. He was Secretary and Research Officer to the Goldenberg Royal Commission on Provincial-Municipal relations. He is presently Deputy Minister of Municipal Affairs and Inspector of Municipalities for the Province of British Columbia.

Spire, The English Episcopal Church.



"A Small Lapidary Treasure"

Stuart Wilson,
Professor of Architecture, McGill University.

Perth, a small lapidary treasure of a town in Lanark county, eastern Ontario, is located a few miles above the Rideau Waterway System, to which it is connected by the Tay River, sometimes known as the Tay Canal. Access is easy to the lakes and watery by-ways of the Rideau system and to many other nearby lakes. Yachtsmen are attracted to the waterway and fishermen to the lakes. Bass-fishing and duck-shooting are among the field sports which draw tourists. Photos in shop-windows depict tyros of both sexes, exhibiting with pride, enormous prizes caught with their own skill and their own cunning. Stuffed and varnished fish trophies grace hotel lobbies.

Although the town is best known to the outside world as a centre for recreation and sport, Perth, in a history of one hundred and fifty years, has been the site of a considerable amount of local development.

The first large body of settlers in what was to become Upper Canada, later Ontario, were Loyalists who left the former British colonies to the south after the Revolutionary war. The Loyalist groups were made up not only of Americans of British descent, but were also composed of German Lutherans and French Huguenots. The scattered outposts of New France had preceded, to be replaced later by British frontier posts and garrisons. The total population in the upper part of Canada in 1783 was reckoned by Joseph Bouchette to be 10,000; he wrote that later, "in the year 1814 it (the population) was taken in round numbers at ninety-five thousand souls, and which may be trusted to as a tolerably exact statement, or at least considering the difficulty that must be experienced in collecting the returns, as nearly so as can well be obtained".

In the eastern area the Loyalists settled the northern shore of the St. Lawrence from Johnstown, today's Cornwall to the Thousand Islands. The land behind remained undeveloped and covered with forests. Upper Canada became a separate province in 1799. Immigrants, many from below the border, as well as from the British Isles, soon outnumbered the Loyalists. A rude pioneer life grew up.

Although colonization in the more western part of the province was rapid, Bouchette wrote in 1814, "The most populous and improved part of the colony is undoubtedly that from Pointe au Baudet to the head of the Bay of Quinté, a range of one hundred and seventy miles, in which are contained the towns of Kingston, Johnstown and Cornwall; Fort Wellington, the Mohawk village, Brockville, and several smaller villages; besides a continuation of houses (many of them spacious and well-built) and farms by the side of the main road, as well as the other roads that lead to the interior settlements".

The territory lying between the Ottawa and the St. Lawrence rivers was divided into the Eastern and Johnstown districts on the St. Lawrence and the Ottawa and Bathurst districts on the Ottawa. Bathurst was made up of Carleton county in the north and Lanark in the south. Until 1816, Bathurst did not exist, being only uncultivated land.

In 1815 a group of less than a thousand immigrants from Greenock, Scotland, landed at Quebec City. Part of the group moved upriver to Brockville and explored the back-country. The presence of a canoe portage between the Pike (now the Tay) and the Mississippi River (Ontario) may have influenced the choice of the future Perth townsite, which was surveyed and laid out first in 1816. Shortly after, 2,000 veterans from Scottish regiments, officers and men of the Peninsular War and the War of 1812-14, formed a military settlement in Perth and Lanark. Perth, founded in 1816, and established as a part of a possible second line of defense in the hinterland, became the chief settlement and principal place of business and government in the district. The village was connected to the St. Lawrence at Brockville by a crude trail through the forests. Bytown, later Ottawa, did not exist at that time.

After the war, fear for the security of the St. Lawrence River line of communication, prompted the making of a more protected military and commercial route. Work on the Rideau Canal started in the summer of 1827 and was completed in the winter of 1832. The new water route, then the cheapest way to transport bulky amounts of heavy goods, opened up the country, and brought distant and isolated places within reach of more concentrated centres of population.

The Tay Canal between Perth and the Rideau system, was constructed in 1831-32. A lively trade developed between the area and Montreal. In 1834 the Hon. Malcolm Campbell, a well-known advocate of temperance, founded the "Perth Courier" a weekly newspaper. By 1839 Perth had become a settlement of some importance with four hundred houses, a church and other facilities. In 1850 Perth was incorporated as a village.

Today, not only is Perth a mecca for the sportsman and vacationer, but it is also the chief town of a rich agricultural district and the site for industries which produce textiles, shoes, hardware, electrical products, chemicals, soap and cosmetics. Perth possesses a public library and

municipal museum, a county home for the aged, a hospital, schools and churches. This year Perth held its 119th annual fall fair attended by 18,000 visitors.

At the corner of Gore and Peter Streets, the principal commercial arteries, in the shop-windows of a large emporium of miscellaneous hardware and equipment, for farmer, sportsman and townsman, was displayed amongst shotguns and fishing-gear, a new and as yet unnamed species of local fish. Beneath the fish, stuffed and mounted with pride, was a laconic caption stating that said specimen had been retrieved from the depths of Big Rideau Lake, where the water was very cold. A study of the trophy revealed the reason for the explanation. The fish was covered, not by scales, but with white fur.

The poor fish had a lesson to teach. Never masquerade as a wolf in sheep's clothing or you may feel like a fish out of water. A homely moral.

When we arrived, Perth was in darkness. The moon shone on tapestry stone walls. Chimes rang out from a glowing clock tower. We ambled down empty Gore Street. Corbel mouldings swelled from stone walls. Cornices projected. White sash-bars glimmered between the small panes of upper windows. Pedimented central bays crowned old stone mansions. Fan-lights and side-lights framed panelled doors. Canopies, bracketed on consoles, arched over doorways. Old forms echoed old ways and revived memories of the former American colonies and of older Europe.

Textures of tweedy stone and crisp silhouettes of sturdy buildings edged the street. Beneath an arched stone bridge, a creek, the Little River, flowed between dark walls and below hanging balconies, burbled over speckled stones and coursed on by dim grassy banks. The glowing clock-tower was the highest pinnacle of a dignified and mellow sandstone Town Hall. The muncipal edifice was close to the sidewalk but reposed on an open area of land or market-square. A bandstand loomed dimly behind and the lawn of a park stretched into shade and darkness. Ahead a modern bridge spanned the Tay, and Gore Street led onwards into the night.

Opposite the tower, Basin Street passed through a gap between façades. A slight slope inclined towards grassy banks around a shining pool. A broad square of still water linked to the Tay had been a turning-basin, permitting barges and the former steamboat to turn and moor by the rock-clad walls.

In the old days, an active market surrounded the Town-Hall. Boats were tied up, loaded and unloaded in the basin opposite. Long squared timbers from surrounding forests were floated down the Tay to the Rideau. Formerly the town-centre must have presented a picture of frantic activity; horses, waggons, buggies, livestock, lumber, barges and people came together. Water and land met.

Now the view was pleasant, but more sedentary. Electrical power and motorized transport had established a wider linkage, and new forms of social restraint controlled demeanour.

A narrow beaten tow-path led through trim grass along the bank and under swing-bridges. Mechanisms remained, but had been dismantled and spiked and the bridges no longer swung. No tall steamboat funnel or mast had passed through for a long time. Official signs limited road-vehicles to a five-ton load. At one end of a bridge the old weigh-scales reposed in a wooden shelter. Beyond the last swing-bridge the Tay flowed smoothly between glimmering windows in square houses into blackness.

Back at the main corner, outside the old stone walls of the Hotel Perth, 1826, the sound of jigs and reels, rendered on the mouth-organ, floated out of the door labelled "Ladies and Escorts". Over a nearby entrance a neon sign said, "Men". We entered. The beverage room was brightly lit. A group of local men-folk sat quietly at tables, which supported glasses of brewed beverage. A ball-team, young men in bright sweaters and peaked caps, sat amongst older workers and farmers. The atmosphere was relaxed and easy-going. Even the waiter barely stirred.

We began to sketch some of the personalities. A

The Clock Tower on Gore Street.

crabbed type, curious but unenthusiastic, left his glass temporarily to peer over our shoulders and scoff, "I see you're wasting your time", he ground out meanly. "Yeah, like you!" The tart rejoinder was too much for his acidulous personality. He retired to glare and mutter over his ale. The rest of the room were only mildly interested, and they went back happily to their entertainment.

A hardy beak-nosed old gentleman of eighty-five summers recited from memory, with suitable elocutionary flourishes, a selection from the pounding verses of Robert W. Service. A harsh wind from the Yukon had swept into the tepid room. Service went north, but Mair went west. Did he know the work of Dr. Charles Mair, an earlier Canadian pioneer-poet, born in 1838 in nearby Lanark village, educated by the Dominie there, at the District School of Perth and at Queen's University? Mair survived the Riel Rebellion. Though captured, he escaped. He traded in fur, explored and wrote poetry, considered by some to be the first Canadian poetry, in the English language, of any distinction.

Mature customers ("You must be 21 and prove it", the sign said) listened intently, applauded heartily at the end of the ballad and requested their favorite, "The Shooting of Dan McGrew". The elderly minstrel considered this invitation and said, "My landlady locks me out if I don't get in before ten, but I'll give you one more". He didn't stop before he had chanted three others. I, for one, felt nervous, thinking about him wandering alone, all through the night, flicking at his lyre, thundering out verse and gathering dew beside the Tay.

This solicitude was unneccessary as I saw him the next day, hale and hearty, sitting in the sun on a wooden public-bench. The bench was on the sidewalk near the wrought-iron fence in front of the elegant Perth Legion Hall, formerly the Roger Matheson House, on the north side of Gore Street between Herriott and Foster Streets. A tall tree grew from the garden of the Legion Hall and cast a shadow on paving and wall.

Formerly, Gore Street possessed many trees, but they were chopped down. Now that only one has remained, and that a splash of colour, light and movement against the stone walls, chimneys and dormer-windows, a group of cognoscenti and amateurs of beauty have held this single tree to be precious. The local journal, whose masthead proclaimed "The truth shall make you free", was the Perth Courier. This newspaper, the ninth oldest in Canada, published from its original home on the north side of Gore Street since 1848, released a photo of the street and tree. The caption explained, "An architectural group desirous of preserving and enhancing the charm of old towns like Perth liken this remaining tree on Gore Street to the one on High Street, Oxford, England, called the most important tree in that county".

Whether the fortuitous resemblance of the Perth tree to the Oxford tree has rendered it more valuable could be debated, but certainly the lone tree on Gore Street has bestowed an element of charm and life to Perth, Lanark County, Ontario.

Perth Legion Hall (the former Roger Matheson House) and the north side of Gore Street.

Most of the town's principal shops have been located on three or four wide blocks on Gore and two on Peter Street. The strong dignified old buildings, some of stone, others of skilfully ornamented nineteenth century burnt umber or yellow ochre brickwork, have been blemished in some cases by overweening signs. One or two displays made one feel that someone was leaning over and breathing down one's neck. Fortunately the vigour and strength of the old work still survived. Bold blunt signs painted on stone or brick in vigorous display letters of Roman form not only read better, but their well-designed emphatic outlines harmonized with the rugged buildings.

In this central area, wooden benches for weary pedestrians or meditative souls have provided a pleasant and useful addition to the commercial streets. Each bench has been donated by a local merchant as announced by a small plaque on the back-rest of the bench. Use of the benches by shoppers and the elderly showed plainly that this public amenity was appreciated.

One block south of Gore, at the corner of Peter and Wilson, the Revere Hotel had several such benches, placed amongst sheltering trees against a wall with a southern exposure. Old gents sat outside on the benches and chatted.

An almost regular grid of square blocks and straight streets has been formed by the street-plan of Perth. Some very solid buildings, usually placed in large gardens, or, as in the central area, snugged close to sidewalks, adorned the blocks. Some of the clapboard houses were originally constructed of oak or cedar logs and were sheathed over later.

The free play of the capricious Tay contrasted with this regularity as it meandered across the man-made pattern. The wayward water-course was split into several channels. The Tay became two streams. The Little River and the Tay proper, and a third or diversionary offshoot of the Little River towards the Tay, have between them carved out two islands in the centre of town.

Half a block eastwards, from the hotel on the corner of Wilson and Peter, was to be found one of the finest parks that any Canadian town might boast of. The attractiveness of a variety of carefully groomed flat or rolling grassy vistas, combined with stands of trees and clumps of natural growth, was increased by the interlaced movement or repose of tortuous water-courses. The John A. Stewart Memorial Park occupied the northern six acres on Haggart's Island, and the southern tip of Cockburn's Island. Mrs. J. A. Stewart presented the park to the town of Perth on February the third, 1947, in memory of her husband, a former M.P. for Lanark.

Wilson Street ran from the hotel towards the Park, past wooden cottages and a large stone mill, and turned up Herriott, beside an opulent mansion, to return to the stone buildings along Gore in a block-square loop. The green lawns of the Park rolled away from the curb over Pre-Cambrian shoulders and bumps down to a large pool made by a widening of the Little River.

A water-happy hound haunted the shores and hung around with his tongue lolling and his ears perked up, nudging with his nose an old bottle or a dead branch. He hoped you would play. So you hurled the branch twirling through the air to splash on the far side of the pool, and his splash overlapped the first as he leaped in. He swam strongly through the foam on the cold water and came out

of the long reeds with the prize in his mouth and a happy look about his jib.

You dodged the shower as he shook himself dry and headed for a small cambered wooden bridge at the head of the pool. A pioneer stone mill with a single long chimney of yellow brick at the peak of the gable stood on the right bank with its stone walls wet in the water. The stream rushed and sluiced over boulders. Lying beside the mill and stretching between tree-covered banks, a still quiet pool awaited its turn to course down the rapids.

A lawn of smooth shaven grass fringed with trees spread across Haggart's Island and down to a rushing stream. North beyond the lawn was the bandstand and the rear of the town-hall, with its old market-wing extension with widely overhanging eaves, now converted into a fire-station. A freshly-painted but ancient fire-pump, an original of hand-wrought iron and crafted woodwork, stood outside on the grass.

On the west side of the old town-hall, the galvanized iron, barn-like forms of a feed and seed establishment with its own beaten-earth courtyard space behind an archway on Gore and open to the old market-square, remained as a practical service to farmers.

The offshoot from the Little River led through copses and over rapids to a dammed outlet and spilled into a swimming hole in the Tay, fitted up as a modern swimming establishment with diving-board and dressing rooms.

Mill Street, a country-like tree-lined road, led south from Gore, east of the town-hall, crossed the stream over a bridge and continued along the east bank of Haggart's Island. A large grey regency-style mansion contrasted solemnly with a red canoe, lying on its side where the sun splashed the grass. The Haggart House was built in 1840 by the first John Haggart, a pioneer miller. The son, the Hon. H. G. Haggart, sat in the House of Commons for 41 years in five Conservative governments. He served as Postmaster General and later as Minister of Railways and Canals. His untiring efforts resulted in the improvement of the Tay River transportation.

Ahead, on the right through the trees, were the remains of an old stone mill, standing half in the reedy water and half on land. Arches, through which water formerly coursed, were blocked up and the superstructure was a tumbled ruin.

At the southern end of the island was a dam across the Tay. A footpath led through the trees around the point of the island to a rickety wooden suspension bridge, which hung above an old timber crib-dam on the Little River. The bridge ended on a large boulder platform which shelved smoothly into the water-pool below the dam.

The dams were constructed to impound water for the operation of the wheels of the various sawmills, oatmills, flouring and carding mills that were built by the industrial pioneers of Perth.

A step or two along a footpath and Thom Street appeared through trees. Thom led to Peter. Past pleasant houses and gardens and we arrived where we had started. Few walks, so short, have displayed as much of interest and delight.

Perth's early development took place when industry was rugged but smaller and more easy to control. The products of fields and forests were shaped and processed by primitive machines powered by small amounts of rushing water and transported in boats or barges over rivers and lakes to distant markets. Precious water resources were carefully managed, modified and channeled. The town clustered close to the source of power and movement. A tight integration of people, buildings, streets and natural resources produced a densely structured and richly textured pattern. The quality of the buildings and their suitable arrangements resulted from the skills and talents of the masons, carpenters, builders and designers of those days and the needs and taste of the people for whom they worked.

Ruins of an old stone mill, on the River Tay.

Vieux moulin à côté de la Little River.

Un bijou de petite ville

Stuart Wilson, Professeur d'architecture, Université McGill.

La petite ville de Perth, le bijou du comté de Lanark, dans l'est de l'Ontario, n'est qu'à quelques milles du réseau de voies navigables de la rivière Rideau auquel elle est reliée par la rivière Tay, connue également sous le nom de canal Tay. De Perth, on se rend facilement aux lacs et canaux du bassin de la Rideau et à bien d'autres lacs environnants. Les amateurs de yachting sont attirés par les canaux et rivières et les pêcheurs par les nombreux lacs. La pêche au bar et la chasse aux canards comptent parmi les sports qui y attirent les touristes. Dans les vitrines des magasins on voit des photos de pêcheurs, hommes ou femmes, exhibant avec fierté les énormes poissons qu'ils ont capturés, tandis que les murs des foyers d'hôtels sont abondamment décorés de poissons empaillés, revêtus d'un beau vernis.

Centre récréatif et sportif réputé, Perth a été, au cours de ses cent cinquante années d'existence, le théâtre de bien des transformations.

Le premier groupe d'immigrants à venir s'établir dans ce qui devait être le Haut-Canada, et plus tard l'Ontario, était formé de Loyalistes qui, après la Révolution, avaient quitté les centres anglais de colonisation du sud des Etats-Unis. Les premiers furent des Américains d'ascendance anglaise, de luthériens allemands et de huguenots français. Des postes-frontières militairement occupés avaient remplacé les avant-postes érigés par les Français. Joseph Bouchette estimait que la population du Haut-Canada atteignait 10,000 âmes en 1783 et qu'elle s'était élevée à 95,000 âmes vers 1814, chiffre que l'on peut considérer comme assez exact, compte tenu des difficultés du recensement.

Dans l'Est, les Loyalistes s'établirent sur la rive nord du St-Laurent, depuis Johnston, aujourd'hui Cornwall, jusqu'aux Mille-Iles. Tous les territoires situés à l'arrière, inexploités, étaient couverts de forêts. Le Haut-Canada devint une province en 1799. Les immigrants venus d'outre-frontière et de Grande-Bretagne eurent vite fait d'y dépasser en nombre les Loyalistes. Ce fut le début d'une ère de rudes pionniers.

Quoique la colonisation se répandit vers l'ouest de la province assez rapidement, Joseph Bouchette écrivait en 1814: "La région la plus populeuse et la plus progressive de la colonie est celle qui s'étend depuis la Pointe-au-Baudet jusqu'à la tête de la Baie de Quinté, sur une distance d'environ 170 milles; elle comprenait les villes de Kingston, Johnstown et Cornwall; également Fort Wellington, Mohawk Village, Brockville et plusieurs autres petits villages; on voit aussi le long de la route nationale et des routes secondaires conduisant à l'intérieur des terres, de nombreuses habitations, souvent spacieuses et bien construites ainsi que des fermes.

Toutes les terres situées entre le St-Laurent et l'Outaouais avaient été divisées comme suit: sur le St-Laurent, les districts Eastern et de Johnstown; sur l'Outaouais, les districts d'Ottawa et de Bathurst. Le district de Bathurst comprenait les comtés de Carleton dans la partie nord et de Lanark dans la partie sud. Avant 1816, Bathurst n'était qu'une bande de terrain inculte.

En 1815, un groupe d'un peu moins de 1,000 immigrants de Greenock, en Ecosse, arrivèrent à Québec. Plusieurs d'entre eux, ayant remonté le fleuve jusqu'à Brockville, explorèrent les alentours. La présence d'un portage entre la rivière Pike, aujourd'hui la Tay, et la rivière Mississippi (Ont.) a très probablement influencé le choix du site de Perth, dont on établit les plans en 1816. Peu après, 2,000 officiers et soldats de régiments écossais qui avaient participé à la guerre d'Espagne ainsi qu'à la guerre de 1812-1814 établirent une colonie militaire à Perth et Lanark. Perth, fondée en 1816, et considérée comme une deuxième ligne de défense à l'intérieur des terres, devint le site principal et le chef-lieu commercial et administratif de la région. Le village fut relié au St-Laurent par un sentier battu à travers la forêt. Bytown, devenue plus tard Ottawa, n'existait pas encore.

Après la guerre, pour assurer la sécurité sur la route de communication avec le St-Laurent, on décida de construire une route, protégée militairement, qui favoriserait le commerce. La construction du canal Rideau débuta au cours de l'été de 1827 pour se terminer durant l'hiver de 1832. Cette nouvelle voie navigable, constituant le moyen le plus économique de transporter les lourdes charges de marchandises, contribuait à rapprocher les endroits éloignés et isolés des centres populeux.

Le canal Tay, entre Perth et le réseau navigable de la Rideau, fut construit et complété en 1831-1832. Un trafic intense s'établit entre cette région et Montréal. En 1834, l'honorable Malcolm Campbell, partisan bien connu de la tempérance, y fondait un hebdomadaire, le "Perth Courier". Vers 1839, avec ses 400 maisons, son église et quelques autres installations, Perth était devenue un centre d'une certaine importance. C'est en 1850 que Perth fut constituée en municipalité.

Aujourd'hui, Perth est non seulement un lieu de villégiature très connu, mais également une ville industrielle où l'on produit des textiles, des chaussures, de la quincaillerie, des dispositifs électriques, des produits chimiques, du savon et des cosmétiques. Perth est dotée

d'une bibliothèque publique, d'un musée municipal, d'une maison de retraite pour personnes âgées, d'un hôpital, de nombreuses écoles et églises. Cette année, à l'occasion du 119e anniversaire de la ville, 18,000 visiteurs s'y sont rendus.

Au coin des deux principales artères commerciales de la ville, les rues Gore et Peter, nous avons vu dans la vitrine d'un grand magasin de quincaillerie et d'équipement pour la ferme, le sport et autres usages, parmi des fusils de chasse et des agrès de pêche, un poisson empaillé inconnu et anonyme. Une courte légende signale que ce spécimen a été pris dans le grand lac Rideau, très profond et dont les eaux sont très froides. En y regardant de plus près, on s'aperçoit que ce poisson n'est pas recouvert d'écailles comme les autres poissons, mais d'une belle fourrure blanche.

La morale de l'histoire est celle-ci: ne faites pas comme le loup déguisé en brebis, ou vous pourriez vous retrouver dans la situation d'un poisson hors de l'eau.

Nous arrivons à Perth à la nuit tombée. La lune éclaire les murs de pierre; dans une tour, une grosse horloge sonne les heures. D'un pas tranquille, nous parcourons Gore Street, déserte à cette heure. Des poutres en saillie et des corniches surplombent les murs de pierre; le bas des fenêtres brille sous la lune entre les petits carreaux. Des baies à fronton ornent les vieilles maisons. Des fenêtres en éventail et des carreaux encadrent les portes à panneaux; des auvents, rivés aux portails, surplombent les portes d'entrée. Toutes ces formes surannées nous rappellent le passé, nous ramènent aux premiers temps de la colonisation et nous font même penser à la vieille Europe.

Des maisons d'apparence robuste en pierre de taille de belle texture bordent la rue. Sous les arceaux du pont de pierre, un petit cours d'eau, la Little River, coule le long des murs et sous les balcons, en murmurant sur les galets cachés dans les hautes herbes. L'horloge de la tour couronne l'hôtel de ville, construit en grès; cet édifice municipal se dresse sur la place du marché, tout près de la rue. La silhouette d'un kiosque à musique apparaît à l'arrière, dans un parc qui s'estompe dans l'ombre. Devant nous, un pont moderne enjambe la rivière Tay, et Gore Street s'enfonce plus loin, dans la nuit.

Près de la tour, Basin Street file entre les façades des maisons. Un talus descend vers les bords herbeux d'une nappe d'eau qui luit dans la nuit; ce bassin d'eau dormante, relié à la rivière Tay, servait autrefois de mouillage aux barges et aux bateaux à vapeur qui venaient y virer.

Une activité incessante régnait autrefois sur la place du marché qui entourait l'hôtel de ville. En face, dans le bassin, on chargeait et on déchargeait les bateaux. D'énormes billes de bois provenant des forêts environnantes flottaient sur la Tay en direction de la rivière Rideau. Le centre de la ville, à l'endroit où l'eau et la terre se rencontraient, présentait tous les symptômes d'une activité fébrile: foule dense, chevaux, voitures de promeneurs et de rouliers, animaux sur pied, bois de construction, barges, etc.

Aujourd'hui, le paysage présente un aspect plus agréable et plus moderne. L'électricité et le transport motorisé ayant réduit les distances, ont étendu la portée physique et sociale de l'activité et renouvelé le comportement humain.

Un étroit chemin de halage suit le bord de la rivière sous les anciens ponts tournants, qui ne tournent plus, mais dont on peut encore voir les dispositifs hors d'usage. Car il ne passe plus ici de gros bateaux à voiles ou à vapeur depuis longtemps. Des panneaux indicateurs signalent que le chargement des camions est limité à 5 tonnes. A l'extrémité d'un pont, la balance de pesage dort sous son abri en bois. Au delà du dernier vieux pont tournant, la rivière Tay suit son cours vers l'obscurité, au delà des fenêtres qui miroitent.

Nous arrivons au coin le plus affairé de la rue, devant un hôtel aux vieux murs de pierre, l'hôtel Perth, qui date de 1826. A travers la porte marquée "Ladies and escorts" nous parviennent des airs de gigues et de danses écossaises joués sur l'harmonica. Quelques pas plus loin, une enseigne au néon indique la taverne: nous entrons. La pièce est bien éclairée. Plusieurs citoyens de l'endroit sont assis à des tables bien garnies de verres de bière. Les joueurs d'une équipe de balle, portant leur uniforme à chandail rouge et leur casquette à visière, sont attablés avec des ouvriers et des fermiers plus âgés. Tous semblent à l'aise dans cette atmosphère détendue; le garçon de table lui-même n'a pas l'air de s'en faire.

Nous commençons à dessiner quelques têtes; un type au visage renfrogné quitte momentanément sa table pour voir ce que nous faisons et nous dit en raillant: "Vous avez du temps à perdre!" La réplique vint sur le même ton: "Un peu comme vous!" Ce qui n'a pas l'heur de plaire au grincheux qui retourne à son verre de bière en marmonnant. Les autres, peu intéressés, reprennent leur joyeuse conversation.

Un solide vieillard de 85 ans, au nez aquilin, récite avec assez de verve des vers de Robert W. Service. Un grand vent venu du Yukon refroidissait la salle. Service a vécu au Nord, mais Mair s'est fixé dans l'Ouest. Nous

L'angle des rues Gore et Peter.

demandons à notre vieil artiste s'il connaît les oeuvres du poète Charles Mair, né en 1838 dans le petit village de Lanark, tout près de Perth. Mair fit ses études primaires à la petite école de Lanark, puis à l'école régionale de Perth, et enfin à l'Université Queen's. Mair a survécu à la rébellion de Riel; fait prisonnier, il réussit à s'évader. Il fut trafiquant de pelleteries, explorateur et poète; on le considère comme le premier poète canadien de langue anglaise ayant écrit des oeuvres de valeur.

Les clients plus âgés ("Vous devez être en mesure de prouver que vous avez plus de 21 ans" dit l'affiche) écoutent attentivement et applaudissent chaleureusement une première ballade et réclament leur chanson favorite, "The Shooting of Dan McGrew"; le vieux chanteur réfléchit un instant et déclare: "Ma logeuse me ferme la porte au nez si j'arrive après 10 heures; mais je vais vous en chanter une dernière." En fait, il ne s'arrête qu'après trois chansons. J'étais un peu malheureux à la pensée que le bonhomme allait passer la nuit dehors, à chanter ou à réciter des vers et à marcher dans la rosée le long de la rivière Tay.

J'avais tort; je le revis le lendemain matin, frais et dispos, assis au soleil, sur un banc public qui longe la grille de fer forgé, en face de l'élégant immeuble de la Legion Hall, autrefois la maison de Roger Matheson, sur le côté nord de Gore Street, entre les rues Herriott et Foster. Dans les jardins de l'immeuble, un grand arbre jette son ombre sur le pavé et sur les murs.

Il y avait autrefois plusieurs arbres sur Gore Street; on les a abattus et il ne reste maintenant que celui-ci qui jette un peu de couleur et de vie sur les murs de pierre, les cheminées et les lucarnes; un groupe de connaisseurs et d'amateurs de la belle nature le considèrent comme un trésor. Le journal local, le "Perth Courier", dont la devise "The truth shall make you free" chante la "vérité libératrice", occupe le 9e rang, par ordre chronologique, parmi les journaux canadiens. Il a toujours été imprimé au même endroit depuis sa fondation, en 1848. Ce journal a publié une photo de Gore Street et de son arbre unique, avec la légende suivante: "Un groupe de citoyens intéressés à conserver et à rehausser le charme des vieilles municipalités comme Perth comparent l'arbre de la rue Gore à celui de High Street, à Oxford, en Angleterre, que l'on considère là-bas comme l'arbre le plus important du comté."

On ne peut dire si cette ressemblance a donné plus d'importance à l'arbre unique de Gore Street, mais on peut dire qu'il donne un cachet spécial à Perth.

La plupart des magasins importants de Perth sont situés rues Gore et Peter; ils occupent quatre pâtés de maisons rue Gore et deux rue Peter. La plupart sont de vieilles bâtisses de pierre ou de brique décorative du 19e siècle aux teintes terre de Sienne ou ocre jaune, déparées par des affiches audacieuses dont quelques-unes donnent l'impression qu'on vous épie. Heureusement, les vieilles constructions sont encore solides. Les annonces peintes sur la pierre ou la brique en caractères romains sont non seulement faciles à lire, mais leur audace s'harmonise agréablement aux traits rudes des immeubles.

Au centre de la ville, des bancs de bois où vont s'asseoir les piétons fatigués et les flâneurs donnent aux rues commerciales un cachet inattendu. Sur le dossier de chacun des bancs, une plaque indique le nom du marchand qui l'a donné à la municipalité; le grand nombre de clients et de personnes âgées qui utilisent ces bancs de repos démontre sans équivoque l'appréciation des citoyens.

L'hôtel Revere, au coin des rues Peter et Wilson, à un pâté de maisons de Gore Street, offre aux passants plusieurs de ces bancs publics, le long d'un mur, du côté

Construction en bois, de style local, côté nord, rue Wilson.

A gauche, la vieille tour à feu.

sud; plusieurs personnes d'âge mûr s'y reposent, à l'ombre des arbres, tout en causant.

A Perth, le plan général présente l'aspect de rues bien droites coupées par des pâtés de maisons uniformes. On en voit de très vieilles entourées de grands parterres, ou bien, comme dans le centre de la ville, placées tout près des trottoirs. Plusieurs d'entre elles, construites de billes de chêne ou de cèdre, furent plus tard revêtues de planches à clin.

Le cours sinueux de la capricieuse rivière Tay à travers la ville contraste avec l'aspect régulier et uniforme de l'endroit. La rivière se divise en plusieurs canaux. Elle forme deux bras: la Tay elle-même et la Little River, et un ruisseau allant de la Little River à la Tay; ces trois bras ont formé deux petites îles au centre de la ville.

A l'est de l'hôtel, au coin des rues Wilson et Peter, se trouve un des plus beaux parcs municipaux du Canada. La beauté des parterres bien entretenus et des échappées de verdure auxquels s'ajoutent des bosquets et des massifs d'arbustes est encore rehaussée par les petits ruisseaux qui serpentent à travers le parc. Le John A. Stewart Memorial Park qui occupe six acres dans la partie nord de Haggart's

Island et dans la partie sud de Cockburn's Island, a été donné à la municipalité en février 1947 par Mme J. A. Stewart, en mémoire de son mari qui fut député du comté de Lanark aux Communes.

Wilson Street va de l'hôtel au parc, au-delà des maisons de bois et d'un gros moulin en pierre; elle oblique ensuite à Herriott Street tout près d'un imposant manoir, revient vers les vieilles bâtisses de pierre de Gore Street et se termine sur une petite place. Le gazon verdoyant s'étend depuis la rue sur les ressauts du précambrien et les inégalités de terrain jusqu'à une assez grande étendue d'eau formée par un élargissement de la Little River.

Un chien, langue pendante et oreilles dressées, court sur la berge et, de temps en temps, pousse du museau une bouteille vide ou une branche morte. Comme il a l'air de vouloir jouer, nous lançons une branche dans l'étang, en faisant rejaillir l'eau, en même temps que le chien y plonge; il nage vigoureusement dans l'eau froide vers la branche qu'il rapporte, comme un trophée, dans sa gueule.

Nous essayons d'éviter la douche que le chien provoque en se secouant et nous nous dirigeons vers un petit pont de bois situé à la tête de l'étang. Là, sur la rive droite, se dresse un vieux moulin en pierre au pignon surmonté d'un longue cheminée en brique jaune; les vieux murs sont humides et le ruisseau court en bondissant sur les roches. A côté du moulin, entre des berges couvertes d'arbres, une nappe d'eau qui ira descendre les rapides.

Une grande étendue de gazon frais coupé, bordée d'arbres, couvre Haggart's Island et descend jusqu'au ruisseau qui coule avec impétuosité. Au nord, nous voyons le kiosque à musique, l'arrière de l'hôtel de ville, la vieille rallonge du marché avec ses vieilles gouttières; cette rallonge a été transformée en caserne de pompiers. Sur le parterre en avant de la caserne, nous apercevons une vieille pompe à incendie fraîchement peinte; c'est une pièce d'artisanat, en fer forgé et en bois.

A l'ouest du vieil hôtel de ville, une sorte de grange revêtue de tôle et ressemblant à un entrepôt de grains et de provendes reste à la disposition des cultivateurs; de Gore Street, on pénètre par un porche dans la cour intérieure en terre battue; il y a une sortie sur la place du vieux marché.

Un bras de la Little River traverse les halliers et les rapides jusqu'à une petite écluse pour ensuite se déverser dans la Tay, où une piscine moderne a été construite, avec plongeoir, vestiaires et autres facilités.

Mill Street est une rue bordée d'arbres, ressemblant vaguement à une route rurale; elle va vers le sud depuis Gore Street, à l'est de l'hôtel de ville, enjambe la rivière à l'aide d'un pont et se termine sur la rive gauche de Haggart's Island. Près d'un manoir gris de style Régence, un canot rouge, couché dans l'herbe et exposé aux rayons du soleil, crée un contraste frappant. The Haggart House a été construite en 1840 par le premier John Haggart, un des premiers meuniers. Son fils, l'honorable H. G. Haggart, siégea aux Communes pendant 41 ans sous cinq régimes conservateurs. Il fut ministre des Postes, puis ministre des Chemins de fer et Canaux. Il est un des premiers responsables de l'amélioration de la navigation sur la rivière Tay.

En face, on peut voir à travers les arbres les ruines d'un vieux moulin en pierre, construit moitié dans l'eau et moitié sur terre. Les arches sous lesquelles l'eau courait, ont été bouchées, et la bâtisse tombe en ruines.

A l'extrémité sud de l'île, une écluse traverse la rivière Tay. A travers les arbres, un sentier conduit jusqu'à la pointe de l'île, à un vieux pont qui enjambe une vieille écluse faite de billes sur la Little River. Le pont se termine sur un grand plateau rocheux qui s'enfonce graduellement dans l'eau, en aval de l'écluse.

Les écluses ont été construites pour capter les eaux nécessaires au fonctionnement des roues à aubes qui faisaient tourner les divers moulins construits par les premiers industriels de Perth: "moulins" à scie, à farine, à tisser, etc.

A quelques pas, au bout d'un sentier, Thom Street nous apparaît à travers les arbres et nous ramène à Peter Street. Nous passons devant de jolies maisons et de beaux jardins pour revenir finalement à notre point de départ. Il est assez rare qu'une si courte promenade offre tant de charme et d'intérêt.

Au début, la vie était rude à Perth; mais l'industrie, peu avancée, y était par ailleurs plus facile à prendre en main. Les produits des champs et des forêts étaient transformés à l'aide de machines primitives actionnées à l'eau, puis transportés, au moyen de barges et de bateaux, sur les rivières et les lacs vers des marchés éloignés. On prenait grand soin de l'eau, la principale ressource du temps; on l'aménageait, on en changeait le cours, on la canalisait. Blottie au centre des ressources naturelles et des moyens de transport, Perth a su établir une agglomération bien structurée grâce à ses habitants, à ses maisons, à ses rues et aux ressources qu'elle avait à sa disposition. La belle et bonne construction de ses maisons est le résultat de l'habileté et de l'expérience des constructeurs et des artisans de ce temps révolu, ainsi que des besoins et des goûts des citoyens pour qui ils travaillaient.

Le traitement aérobie des eaux-vannes

par L. A. Campbell et D. K. Smith
de l'Ontario Research Foundation, Toronto.

La Société centrale d'hypothèques et de logement, organisme chargé d'appliquer la Loi nationale sur l'habitation du Canada, s'intéresse depuis quelque temps à l'évacuation des eaux résiduaires provenant des centres domiciliaires. En vertu de l'article VIB de la loi, la Société a été autorisée à consentir aux municipalités des prêts à intérêt modéré pour la construction d'égouts sanitaires principaux et d'installations d'évacuation des eaux résiduaires.

La Société s'intéresse également aux régions en cours d'aménagement, comme de nombreuses régions suburbaines qui ne sont pas actuellement raccordées aux réseaux d'égouts existants. Le sujet intéresse d'autre part certaines zones déjà aménagées en terrains rocheux ou montagneux où la construction de canalisations d'égout offre des difficultés particulières. Pour éviter la pollution du sol par la multiplication des fosses septiques dans les agglomérations denses, la Société a chargé l'Ontario Research Foundation d'étudier le problème. Les études effectuées ont permis de mettre au point un système ouvert, ou à percolation des boues activées, adapté aux habitations séparées. Ces dernières étaient évidemment l'objet primordial de l'étude entreprise par la Société.

Les résultats des recherches portant sur le système ouvert dénotent que, même si l'installation nécessaire n'est guère plus compliquée que la fosse septique, la qualité de l'effluent produit est de beaucoup supérieure et que celui-ci possède des propriétés de percolation qui peuvent sensiblement favoriser le processus d'évacuation. Il semble que les installations de ce genre pourraient être largement utilisées dans les endroits où le sous-sol est très peu profond, et que leur emploi pourrait permettre l'aménagement de lots à bâtir plus petits dans les endroits non desservis par des égouts et où les conditions du sous-sol seraient satisfaisantes.

Construction de l'installation

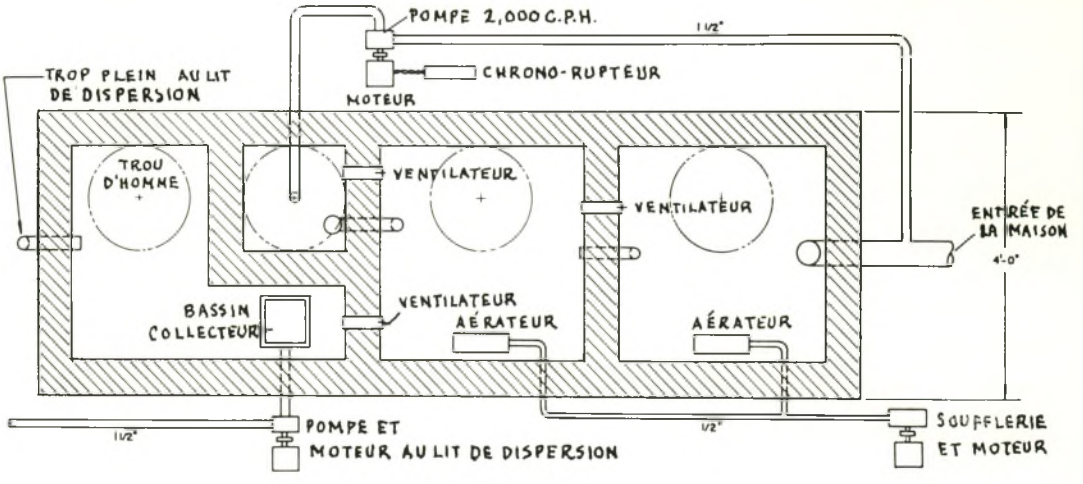
Le modèle d'installation expérimentale est présenté dans les figures 1 et 2. Il est en béton et comprend essentiellement quatre compartiments en série. Les deux premiers servent à l'aération, le troisième à la décantation et le quatrième est un collecteur de l'effluent.

LES COMPARTIMENTS D'AÉRATION

Ces compartiments, pouvant contenir chacun 280 gallons, sont reliés en série par un tuyau de cuivre de deux pouces, en L renversé. La raison de ce dispositif, par opposition à celui à un seul compartiment de contenance double, est de: (a) diminuer les possibilités de court-circuiter l'affluent en utilisant les avantages de la dilution en série, et (b) prolonger la durée pendant laquelle les eaux affluentes sont sous aération.

Les deux compartiments sont aérés par un seul compresseur, dont la tuyauterie doit être disposée de manière à permettre aux deux injecteurs de recevoir le même volume d'air. Ces injecteurs sont constitués de plaques correspondantes en carborundum (qu'on trouve dans le commerce), de 12 po. x 4 po. x ½ po., logées dans des auges en métal. Ces plaques sont placées aussi près que possible du fond des compartiments d'aération, parallèlement à leur long côté, et à proximité de la paroi latérale. De cette manière, le roulement du liquide produit par la colonne de bulles d'air ascendantes est perpendiculaire au sens de cir-

Figure 1



Vue en plan.

culation du liquide dans le système.

Le compresseur utilisé dans le modèle est du type volumétrique positif à ailettes en charbon, débitant quatre pieds cubes par minute et actionné par un moteur de ¼ CV. L'air y est épuré dans des filtres en feutre placés à l'entrée et à la sortie du compresseur.

COMPARTIMENT DE DECANTATION

Ce compartiment a une contenance de 45 gallons. Il est composé de sections transversales carrées avec un fond en cône renversé, pourvu à son sommet d'un raccordement de 1½ po. D.I. Ce dernier est relié à l'entrée d'une pompe centrifuge de 2000 gal./h., actionnée par un moteur de ¼ CV. La sortie de cette pompe retourne les boues au conduit d'entrée des eaux résiduaires du premier compartiment d'aération. La pompe est mise en marche par une minuterie toutes les 24 heures, pendant environ trois minutes, soit à deux heures du matin environ. Ainsi, les boues déjà déposées et les boues flottantes sont renvoyées à intervalles réguliers dans le premier compartiment d'aération.

Des études considérables ont précédé l'adoption de ce genre de traitement pour les boues de renvoi. Le procédé a fait l'objet du brevet canadien No 653,198 et du brevet américain No 3,135,686, tous deux au nom de la Société centrale d'hypothèques et de logement. Une installation complète (figure 3), conforme aux brevets, est actuellement construite et vendue par la Converto Co. Ltd., de Montréal.

COMPARTIMENT COLLECTEUR DE L'EFFLUENT

Ce compartiment est alimenté par un tuyau provenant du compartiment de décantation et placé en dessous du niveau inférieur prévisible des boues flottantes. Dans le modèle expérimental, le compartiment collecteur avait une contenance de 250 gallons et se vidait dans les tuiles de déperdition par l'entremise d'une pompe. Dans les installations commerciales, un siphon ferait aussi bien l'affaire, ce qui n'exigerait pas un volume aussi considérable. Expérimentalement, nous avions besoin d'une pompe pour obtenir des échantillons quotidiens, ceux-ci étant prélevés à un robinet dans le conduit de vidange, peu après le début du pompage.

NOTES SUR LA CONSTRUCTION GÉNÉRALE

Des orifices d'aération étaient prévus dans chaque mur transversal, l'air introduit s'échappant ensuite par un tuyau d'évent en cuivre, à hauteur de l'avant-toit, et branché dans le conduit d'entrée des eaux résiduaires. Chaque compartiment possède une bouche d'accès avec couvercle. Les deux pompes et le compresseur sont logés dans le sous-sol de l'habitation.

Les côtés de l'installation portaient un revêtement de Transite de ¼ pouce, utilisé pour maintenir le câble chauffant du sol contre le mur extérieur en béton. Ce câble avait été posé pour permettre d'étudier les effets de la température, en hiver. Toute l'installation était enfouie à une profondeur telle qu'une fois recouverte d'une couche isolante de 2 pouces en mousse de verre, d'un revêtement de Transite de ¼ pouce et d'un dallage en béton de 2 pouces d'épaisseur, on obtenait une surface unie au niveau du gazon environnant.

Fonctionnement de l'installation

Les deux compartiments d'aération et le compartiment de décantation communiquent entre eux et, à l'état statique, le niveau du liquide reste constant de l'un à l'autre. Au moment où les eaux résiduaires venant de l'habitation par-

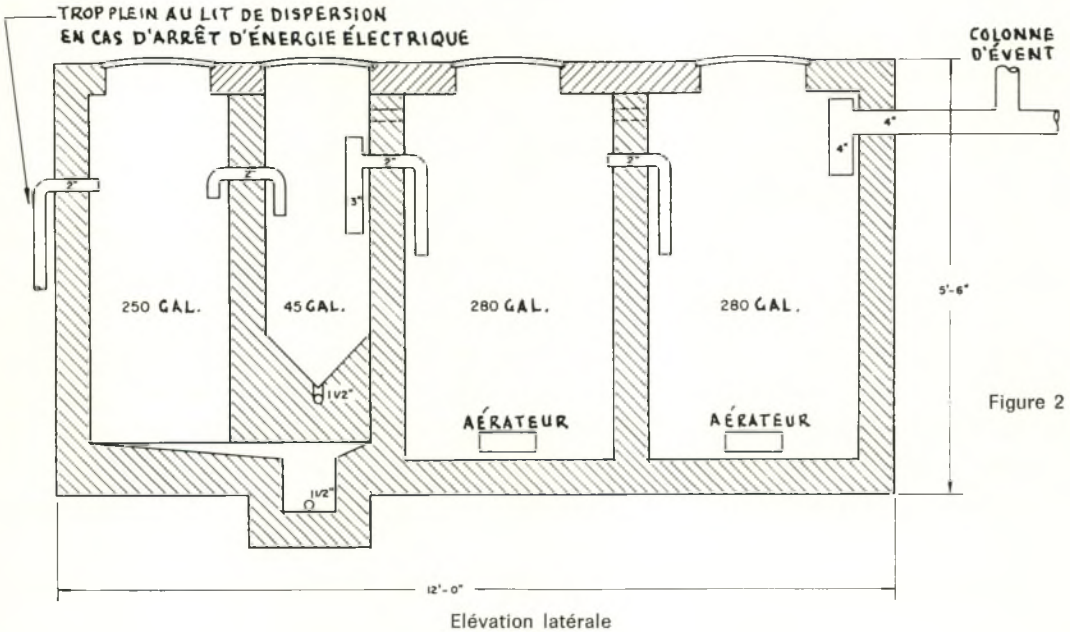


Figure 2

Elévation latérale

viennent au premier compartiment d'aération, le niveau de celui-ci est modifié et un volume équivalent se transfère dans le second compartiment et, de là, dans le compartiment de décantation. Un volume équivalent d'effluent clarifié s'écoule alors dans le collecteur d'effluent. Chaque arrivée d'eau résiduaire est généralement assez faible pour ne modifier que légèrement le niveau du liquide dans le premier compartiment. Cette faible modification de niveau, combinée avec l'action restrictive des tuyaux de raccordement, règle la cadence de la sortie de l'effluent clair. Cette cadence, tout en reflétant nécessairement les variations de déplacement des eaux résiduaires reçues à l'entrée, réduit considérablement l'amplitude de ces variations. Cette caractéristique est particulièrement avantageuse quand des charges de choc s'écoulent dans le compartiment, comme au moment où l'on vide une lessiveuse.

A deux heures du matin, la pompe de renvoi des boues est mise en marche par sa minuterie automatique. En 1½ minute approximativement le compartiment de décantation se vide alors de son contenu, qui est renvoyé à l'entrée du système. Il s'agit là à peu près du temps nécessaire pour que ce contenu, s'ajoutant à celui du premier compartiment, déclenche un écoulement prononcé du deuxième compartiment d'aération dans celui de décantation. La minuterie est réglée de manière que le pompage se poursuive pendant une minute et demie après la vidange du compartiment de décantation. Pendant cette période supplémentaire, les murs du compartiment sont rincés, afin d'éviter que les boues non retournées ne bloquent le conduit de renvoi.

Après que la minuterie a arrêté la pompe, le réservoir de décantation se remplit et tout le système est mis au repos complet pendant à peu près cinq heures, jusqu'au moment où recommence l'activité matinale des occupants de la maison. Ce délai permet à la plus grande partie des boues de se déposer. D'une manière générale, la conception de cette installation est conforme aux critères établis par la National Academy of Sciences (1).

Conditions dans lesquelles l'installation a servi

L'installation avait été placée dans l'habitation d'un de nos collègues, M. S. G. Reid, située dans une zone pourvue de fosses septiques du district de North York, faubourg de Toronto. Nous exprimons notre gratitude pour leur collaboration, non seulement à M. Reid et à sa famille mais au Dr. N. P. Hill, officier de santé de ce district, qui a participé à cette étude.

La famille comprenait le père, absent pour le repas de midi, la mère qui ne travaille pas à l'extérieur, et deux enfants d'âge scolaire qui prennent leur repas de midi à la maison. L'habitation ne possède pas de broyeur de déchets, ceux-ci étant ramassés par la municipalité. On y trouve une salle de bain avec cabinet à chasse normale par gravité avec réservoir de cinq gallons. La lessive se fait à la maison dans une lessiveuse automatique. L'installation a été mise en marche le ler septembre 1961. On n'a pas ajouté de boue activée.

Caractéristiques de l'effluent

Les données analytiques figurent dans le tableau. Elles comprennent les moyennes, par mois, d'échantillons prélevés de deux à cinq fois par semaine pendant deux années consécutives.

Appréciation générale

Notre expérience nous permet d'avancer que des installations du genre décrit dans ces pages possèdent de vastes possibilités d'application (2). Elles ne coûtent guère plus qu'une fosse septique et, à condition d'être bien équipées dès le début, ne demandent pas plus d'entretien qu'un système domestique de chauffage à l'huile.

Dans les conditions les plus défavorables, l'effluent est beaucoup meilleur que celui d'une fosse septique; dans les meilleures conditions, il atteint presque la qualité de l'eau potable. Il est légèrement trouble, avec une légère odeur rappelant celle de la terre fraîchement remuée, au printemps. Il se conserve indéfiniment dans un récipient hermétique sans devenir septique. Versé sur de la terre cuite fraîche, en laboratoire, il s'infiltre rapidement, à l'inverse de l'effluent de fosse septique qui reste à la surface. Ce fait dénote sans doute d'excellentes propriétés de percolation dans la terre.

En aucune circonstance l'écume n'a causé d'ennuis, bien que l'on ait fait un grand usage de détergents. L'installation a fonctionné de façon satisfaisante après des périodes de trois semaines d'inactivité, l'aération normale étant ininterrompue. Dans de telles circonstances, le degré de saturation d'oxygène dans le premier compartiment d'aération atteint environ 90 p. 100 du maximum. En marche normale, la proportion tombe à 48 p. 100 environ.

Références

1. Report on Individual Aerobic Sewage Treatment Systems — National Academy of Sciences — National Research Council, Washington, D.C. Fascicule 586, 27 février 1958.
2. Thomas, H. A., Jr., Coulter, J. B. Bendixen, T. W. et Edwards, A. B. "Technology and Economics of Household Sewage Disposal Systems". Jour. Water Pollution Control Federation, 32, 113 (1960).

A HOUSE ON RIVERSIDE DRIVE

by Molly Laws

Mrs. Laws was born in Milton, Ontario. She was educated at Brown School and Bishop Strachan School, Toronto and subsequently worked for the T. Eaton Company. In 1935 she was married to R. Bollin Laws who was later, for a time, Commandant of the Canadian Small Arms School. Mr. Laws received the M.B.E. for his war services. Mr. and Mrs. Laws farmed for a while in Oakville, Ontario before moving to Ottawa, where they now live.

SKETCH BY R. BOLLIN LAWS

Five years is a long time to live in an apartment when one is used to a garden, with trees and plenty of open space. We wanted a home where we could step outside the door on to grass and good earth that was ours. We looked forward to the day when we could plant trees, hang a swing from a branch and lunch in their shade. A hill to lend interest, stone to build a chimney and low walls, water close by, and possibly even a wood. We hoped to find an old house, preferably of stone or log, no matter how dilapidated, whose basic construction was sound. We required a location with good schools nearby.

It was a lot to ask for and during our five years as apartment dwellers we roamed the countryside near Ottawa looking for the perfect spot. Some were lovely, with great possibilities. There was an old stone house we named Wuthering Heights built on top of a windy hill by an early settler granted crown land. Although there was still beauty in its proportions and deeply recessed windows, we sadly relinquished our dreams of this proud home as being too far from Ottawa for a couple with growing children. Another old farm on the Rideau River had too much land, the next was too remote and still another was too expensive for us. Sometimes there was a beautiful location with the house gone and only ancient lilac bushes marking the spot where the doorway had been. We had never built a house before but the determination was there as we continued to search for a sound shell with which to begin our operations.

One evening, late in November, my husband spotted an advertisement describing a house for sale on the River Road. He passed the place four times each day and recalled a very ordinary old frame house set well back from the road. The advertisement, however, was for a modern bungalow on the other side of the property. We soon realized the land met almost all our requirements and although the house was anything but beautiful we contacted the agent and drove out the next day.

The land proved more interesting as we walked over it. It was triangular in shape with huge old elms along one side. In front was the Rideau River. A hill stretched far along the rear of the property. The banks, although dotted here and there with houses of various styles, were owned by the NCC and earmarked for Parkways. Schools were not too distant, buses served the area and Ottawa South was a short fifteen minute walk away.

We asked the agent to look inside the rather pathetic looking old house and he replied it was useless and would have to be torn down. However, he reluctantly agreed and once inside our attention was taken by the most beautiful hand hewn beams in the ceiling. True, they were covered with white wash but there was no doubt they were authentic. The axe marks showed clearly. Those beams hadn't been hewn in less than 100 years and were set in place to last. A very steep enclosed stairway with the treads worn in dips and hollows rose to the steeply gabled second floor. It spoke its age.

We suggested the owner might be willing to sell the land apart from the new bungalow although we were afraid to show too much interest in the old place since the agent had called it worthless. We said goodbye and climbed the hill behind to get a better view of the roofline. The ridgepole was as straight as a die.

That night we visited the owner with the agent and after some bickering found ourselves very proud but frightened land owners.

We only went in our house once that winter and from hurried measurements taken by my husband set about drawing plans for its renovation. While looking into a cupboard under the steep stairs we noted what seemed

to be very uneven boards about 20 inches wide at least. Later we met someone whose grandparents had lived in this house. The boards, we were told, had been hand hewn although it was not evident from the outside. This was very exciting as it appeared we had unknowingly acquired a genuine log house. We could hardly wait for spring.

In the meantime the plans were coming on well. We decided we must be cautious and do as much as possible ourselves. Consequently the plans were drawn and blueprinted and we were able to raise the necessary mortgage for work to begin in the spring.

Our plan was to take all the partitions out of the house. This would make the entire lower floor a combination living-room, dining-room and hall measuring 22′ by 24′. An addition, to be built on the back, was to give us a good sized bedroom, small connecting hall, a bathroom and a kitchen. The latter would have small paned casement windows on two sides and a dutch door with matching windows on a third. I intended washing dishes while looking across the envisaged lawn and up into our wooded hill and to put them away while looking in the opposite direction to the river.

On May 24 we took possession. A kindly builder, who knew the district well, arranged to be a partial contractor, chief carpenter and general boss. His vast store of knowledge proved a wonderful help to us amateurs.

Our first step was to remove the banks of earth that had been piled around the house to keep out draughts. On doing this we found the sills on the south side, particularly, to be in poor condition. It was then decided to jack up the house and replace the sills on three sides with concrete. On the fourth side where the addition was to be made we had a mechanical shovel dig out a basement and partially excavate another one where the furnace was to go. As the partitions came down, no less than 18 layers of wallpaper were pulled off the log walls. All this debris was tossed out of the upstairs windows and trundled off to a bonfire. With pinch bars we pulled off the remaining old boards and battens revealing ancient hewn timbers ranging in width from 12 to 20 inches. The timbers were beautifully morticed together and were chinked inside and out with split log wedges. All these had to come out, letting light stream through our walls.

The plank floor boards, which were 2″ tongue and groove, had to be removed as well. We felt the ten-foot ceiling was really too high so the 18″ tree trunks, with bark still on them, under the floor were raised one foot. The original floor boards were reversed and laid again, diagonally this time to make a strong sub floor. It was not long until we had the addition finished and roof complete, so we said goodbye to our carpenter helpers and under the guidance of our contractor took on from there ourselves.

Beams supporting the floor were 18″ dia. tree trunks with the bark still on.

It was essential to have an open fireplace, so a small window on the north side was done away with and two beautiful logs below it removed to make the opening. We arranged to have a mason build our chimney in the evenings and in his time off. In the space where the window had been and to one side of the fireplace we set in our parsons cupboard, an attractive and much used hideyhole.

One of the old logs removed from under the window was split down the middle to make our solid, substantial mantle. The old stairway we removed and used as the stairs to our new basement. Partial partitions upstairs came out and proper ones, once put in, gave us one large bedroom complete with a dressing room and another small bedroom. At the head of the stairs a square hall, with built-in bookshelves, was furnished as a small sitting-room. Each of the bedrooms on the south side had a dormer window put in, giving added space and sunshine.

Our next step was to rechink the old log walls. First, the inside was filled with rough wool and then wooden chinks were fitted in place. The same plan was followed on the outside but with metal lasts nailed over the cracks. On the inside, all the chinks were roughly covered with plaster but the outside was finished smoothly. Here, the art of handling a hook and trowel was quickly learned and it proved to be a back breaking job indeed. All the old walls now had to be furred. This nearly proved to be our

"A very ordinary old frame home set well back from the road."

Removal of the exterior wood framing showed the log walls beneath.

The living room as it is today. "For $1.00 we were able to purchase a wheel from an old buggy which, when scraped and stained, made an interesting light fixture."

The House on Riverside Drive — 1966.

undoing but it was quite necessary because this provided true uprights on which to apply plaster board. Now the house was really taking shape.

An electrician, plumber, and furnace man had to be brought in at this point for their respective jobs but apart from this nearly all the work along the way had been done by ourselves.

Oak flooring was our next step. Subsequent days were spent with the help of friends in selecting random oak board and pegging it down with walnut pegs. The new floor took on an admirable shine after a coat of walnut stain was applied.

It was now necessary to cover the outer walls of the addition and for this purpose we chose B.C. shingles because they fit in beautifully with the shingled gable ends of the old house. Finally the whole structure was sprayed with Solignum to protect the wood and please the eye. All the trim, including the shutters, was painted white.

We were most anxious to have long wrought iron hinges on our doors but found the price prohibitive. My husband finally drew a templet from an original hinge and cut them out of masonite. Once painted, with two coats of flatboard paint, it was difficult to believe they were not wrought iron. The cost of these was so negligible that we now have them on all suitable doors, inside and out, where they have stood up to years of wind and weather.

Exactly six months after taking possession we moved in. There was still interior decorating to be done but this was accomplished gradually throughout our first year.

Tile floors in the kitchen and bathroom were the first step, with arborite counter tops running a close second. Papering and painting was a gradual process during the first winter. Wallpaper was carefully chosen because it was important to have material suitable to the age of our house. The old beams that had attracted us in the first place were scrubbed until all vestiges of whitewash disappeared. After a coat of linseed oil and a thin coat of shellac the beams became tawny brown to match our floors and mantle. The walls were covered with an old fashioned creamy-grey paper and the woodwork was finished to match.

For a dollar we were able to purchase a wheel from an old buggy which, when scraped and stained, made an interesting light fixture. The candle light bulbs were enhanced with hand hammered copper saucers.

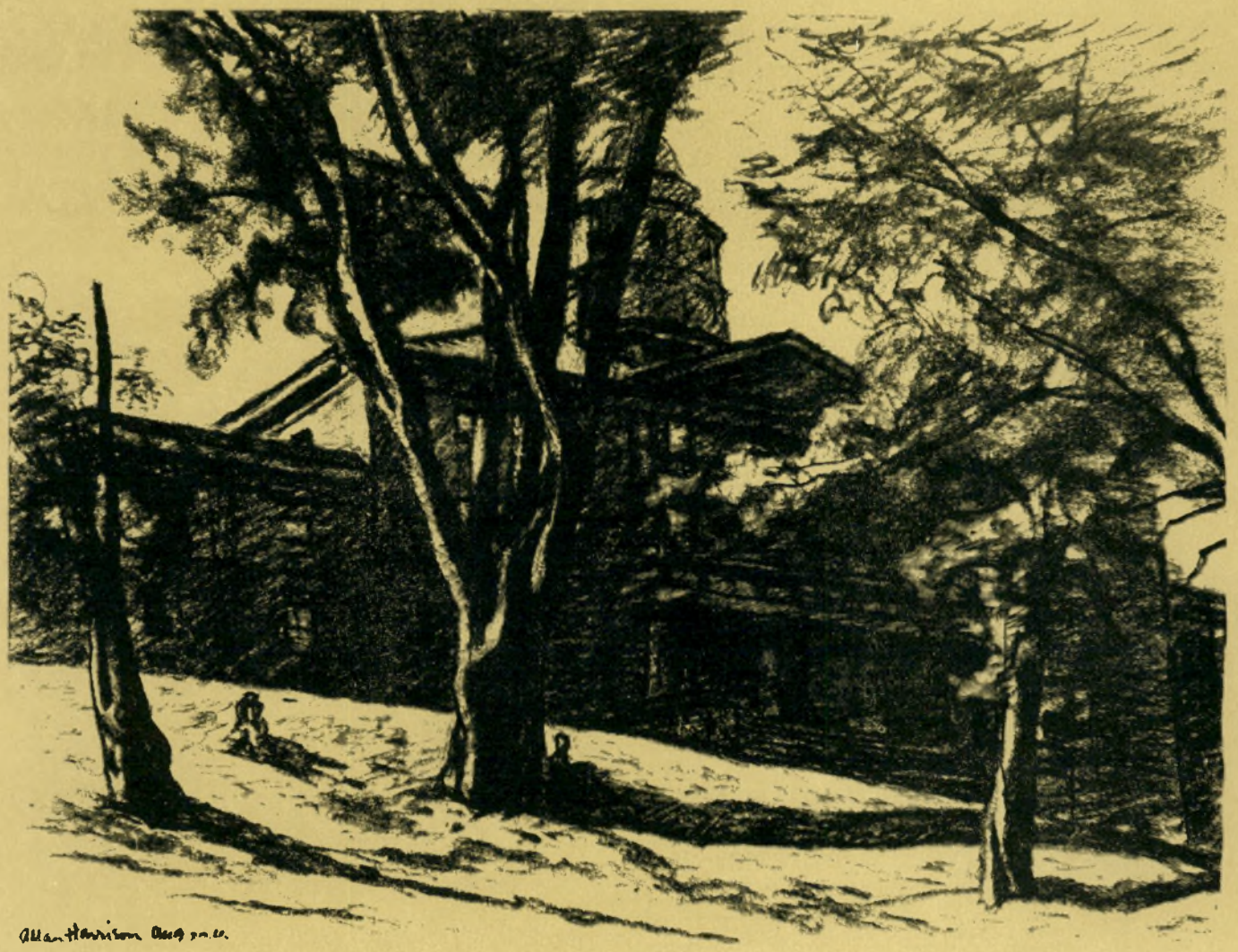
It wasn't until the following summer that we were able to finish the fireplace. From the garden we brought in boulders of various sizes and shades of grey which my husband fitted into place with mortar greyed with lampblack. After designing our own andiron and mantle supports, a Danish blacksmith forged them for us. The whole structure had a certain solid look of belonging to our house.

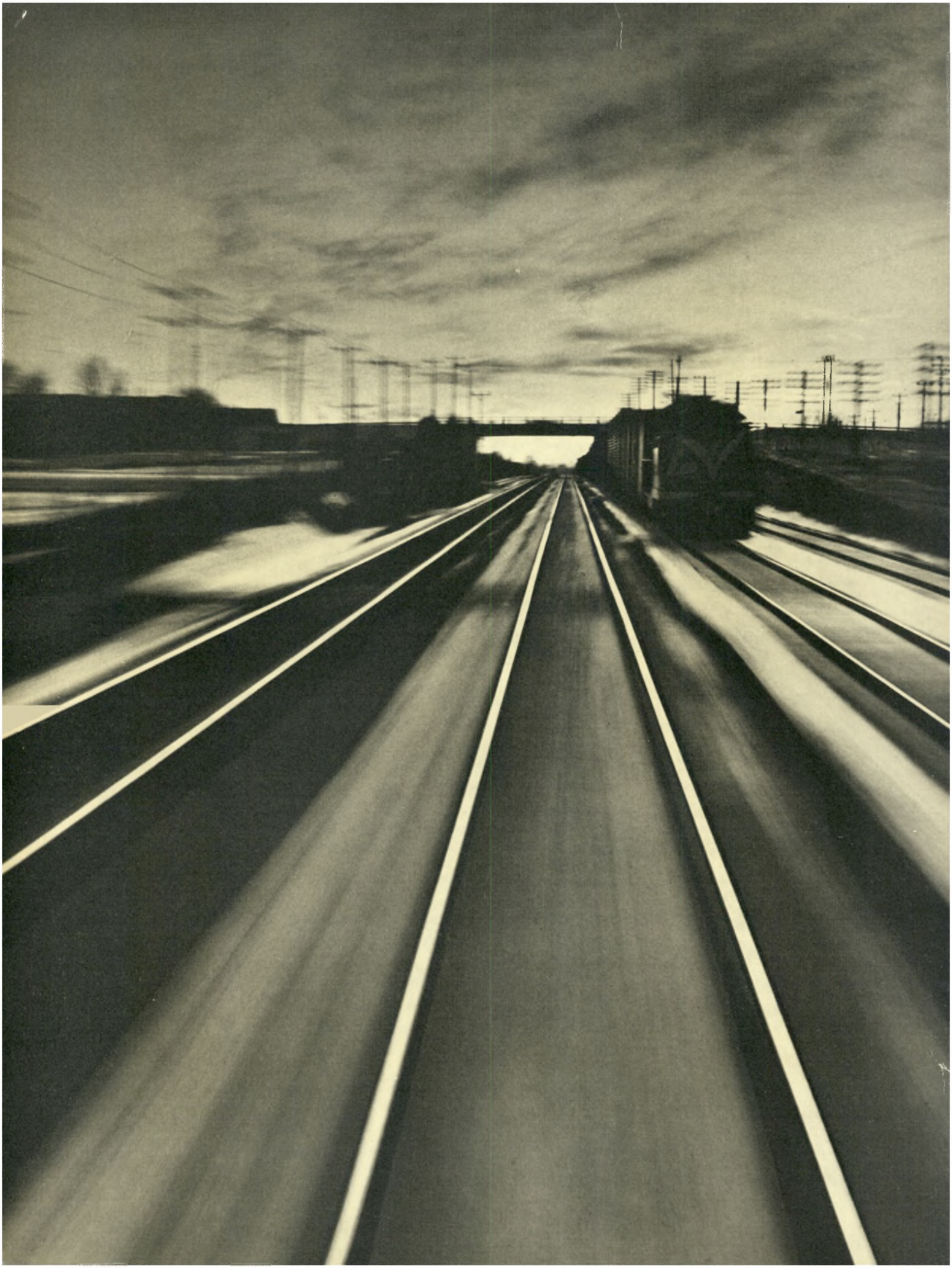
Despite the fact this all was done over fifteen years ago, we enjoy our home and garden more as each season passes. It was, indeed, a labour of love.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA

HABITAT

MAY, JUNE, JULY, AUGUST/1966





HABITAT

VOLUME IX
NUMBER 3 AND 4

HABITAT, a bimonthly publication of Central Mortgage and Housing Corporation, is listed in the Canadian Periodical Index and authorized as second class matter by the Post Office Department and for payment of postage in cash.
Opinions expressed by the authors are not necessarily those of CMHC. All communications should be addressed to the Editor, E. H. Q. Smith.

CONTENTS — MAY, JUNE, JULY, AUGUST/66

FRONT COVER: *The Arts Building, McGill University by Allan Harrison*

INSIDE FRONT COVER: *"Crescendo"—by R. O. Lundgren, Ottawa*

"TWENTY YEARS OF HOUSING"

The story of Canada's housing since World War II is rarely told. There are many who have never heard it at all. Two-thirds of a generation has since passed and housing in Canada has undergone expansion and evolution to a remarkable degree.

Twenty years is also a good span in the life of any organization, an appropriate time to chronicle past accomplishments. To note the occasion Mr. R. G. Lillie, Special Assistant to the Corporation's Ontario Regional Supervisor, has written a series of articles detailing the attainments of C.M.H.C. since its inception. He describes the various changes to the National Housing Act approved by Parliament over the years and sets these against the economic background of their times.

The first of Mr. Lillie's articles appears in this issue. They represent time and hard work. They also commemorate the industry and imagination of countless Canadians in many spheres of activity who have helped develop urban Canada as we enjoy it to-day.

* * *

The relay-race is a reflection of our daily activities—the transfer of baton, ideas or work takes place everywhere. So it is with Habitat.

Over the last six years many excellent articles have been published under H. R. B. MacInnes' editorship, including the presentation of some ideas and sketches that led to the Habitat 67 project now being constructed in Montreal. Habitat over these years has blossomed, prospered and won awards.

The change-over will allow Mr. MacInnes to give full time to his supervisory responsibilities, and he will be on the side of the track to encourage the next runner as he sets off with the baton.

1867 | 1967

Twenty Years of Housing
CMHC 1946-1966

by R. G. Lillie

Mr. Lillie was born in Toronto and received his early education there. He obtained a degree in Economics at McMaster University in 1934. He entered the real estate business the same year as an assistant to B. A. Lillie in Toronto and after three years he resigned to accept a post with the National Trust Company Limited.

At the outbreak of World War II, Mr. Lillie enlisted in the Army and saw service in Canada, Iceland, England, France and Germany. He was retired with the rank of Major and rejoined the National Trust, where he remained as a Property Manager and Appraiser until joining the Corporation in 1946 as Secretary of the Ontario Regional Office.

The following year Mr. Lillie was named Branch Manager in Calgary, Alberta then Assistant Regional Supervisor, Maritime Region in 1952 and Assistant Regional Supervisor of the Prairie Region in 1955. In 1958 Mr. Lillie was named Manager of the Toronto Branch Office, where he remained until appointed to his present post as Special Assistant to the Regional Supervisor, Ontario Region.

Mr. Lillie is a member of the Military Institute and also the Canadian Appraisal Society.

In 1945 when the Minister of Finance the Hon. H. J. Ilsley, introduced to Parliament the legislation which created Central Mortgage and Housing Corporation, he said, " . . . There is no problem before the country today more important than the provision of additional housing accommodation . . . nor . . . is there any problem which presents so many practical difficulties in reaching a speedy and satisfactory solution." The story of these difficulties and the efforts made towards their solution, is the story of the Corporation.

THE BACKGROUND

This country has changed so very drastically in twenty years that the problems of 1946 cannot be described without trying to set the atmosphere prior to that time.

During the decade before the outbreak of World War II Canada, like the rest of the world, suffered an economic depression so dreadful it now seems slightly unreal even to those who were part of it. The world financial system crumbled in the '30s and the Canadian economy collapsed with it. Canadians, in the words of a Royal Commission, "staggered under a burden of debt which, in relation to their incomes, was the highest in recorded history." From 1929 to 1933, the decline in real estate prices was about forty per cent and heavy unemployment caused so many foreclosures on mortgaged homes that all provinces introduced "moratorium" (delay) legislation which in general allowed the mortgage borrower to remain in possession if he could pay mortgage interest and taxes — repayment of principal was put off until a better day should come.

Land became virtually unsaleable. In Winnipeg, for instance, more than one-third of the land area was in municipal ownership by 1937, largely because of nonpayment of taxes on vacant building lots. Some provinces, and many municipalities, were bankrupt as tax revenues declined but debt charges went on.

Under such conditions, the effective demand for new housing was low. Housing completions in 1933 were only a third of the completions in 1929, totalling less than 22,000 units. This drop in residential construction activity naturally resulted in unemployment in the construction trades; unemployment caused lower effective demand; it was a cycle which had to be arrested.

EARLY FEDERAL HOUSING LEGISLATION

One of the reasons for decreasing effective demand was that the sources of second mortgage money dried up completely. In an effort to overcome this problem the Dominion Housing Act was introduced by the Federal Government in 1935.

Under the Act, the Government added 20% of the lending value to the 60% loan made by insurance and trust companies, thus covering a gap in home financing which had traditionally been covered by private second mortgage funds.

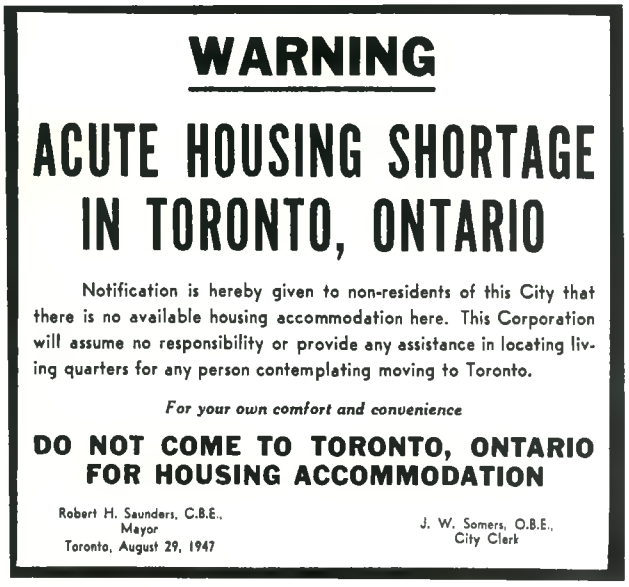
The Department of Finance administered the Act which remedied one of the points of weakness in the mortgage structure, but there were too many economic factors working against its success and less than 5,000 loans were made in the three years before the Act was superseded by the National Housing Act in 1938.

This new legislation included the 1935 provisions, with some changes encouraging the lending companies to be more active outside the large urban centres and with people of lower incomes. This Act included provisions for low rental housing but these never became operative because of the War in 1939. The Act also assisted mortgage borrowers, under certain circumstances, with their property taxes. This was necessary because the cost of relief for the unemployed raised property taxes to a level which became a major deterrent to new house building.

These new provisions under the Act were effective to a degree and combined with a gradual economic improvement, house building increased considerably. While only 2,000 NHA mortgage loan approvals were given in 1938, there were more than 6,000 in 1939.

From the low point of 1933, the volume of overall completions increased from some 21,000 to more than 52,000 in 1939.

During this period when measures were being taken to stimulate new house building, it was becoming more and more obvious that the readjusted income levels of the country could not sustain the existing mortgage debt, which had been based on grossly inflated land values. This was especially critical in the area of farm mortgage debt.



By 1947 the lack of housing in Toronto had become so severe the City was obliged to issue warnings of this kind.

Accordingly, in 1939, the Government introduced legislation to create a Central Mortgage Bank, as a subsidiary organization of the Bank of Canada. It was proposed the lending institutions reduce their existing mortgage loans on farms and homes to 80% of a new appraisal, with the Government absorbing half the cost of this write-down. The Central Mortgage Bank would also offer discounting facilities to the lending institutions so, if necessary, they could maintain liquidity by pledging mortgages to the Central Mortgage Bank.

The Central Mortgage Bank Act was passed in June 1939, but war broke out before it was proclaimed and the Bank never came into operation.

THE WAR YEARS

The outbreak of war introduced a completely new set of national considerations. Housing could only be dealt with as one of the many problems and activities comprising the war effort. In general, residential construction had to take a low place in the priority of demands on available construction capacity.

On the other hand, it became clear that some housing had to be created quickly in various specific locations to house the workers producing war materials. A new Crown Corporation, Wartime Housing Limited, was set up in 1941 and by the end of 1943 had built close to 20,000 houses.

A number of factors, including rising personal incomes and the shift of population from rural areas to the cities, put a tremendous squeeze on urban housing. A survey of 15 major centers made by the Post Office in 1942 showed only one city with a vacancy rate as high as one-half of one per cent. For practical purposes there were no vacant dwellings in Canadian cities.

In 1943 the Home Conversion Plan was introduced in an effort to cope with this situation. The Department of Finance was enabled to lease large houses and convert them into apartment units. This was a successful operation, but was necessarily a small scale one, and only about 2,000 units were created in this manner between 1943 and 1946.

By the end of 1941 rents were frozen and it was not until 1950 that all Federal rental controls were removed.

THE "CURTIS REPORT"

Even while the country was waging war with great vigor, thought was being given to the problems which would exist after the cessation of hostilities. An Advisory Committee on Postwar Reconstruction was formed as early as 1941 and in 1942 a Subcommittee on Housing and Community Planning was created, under the Chairmanship of Professor W. A. Curtis. The report of this Subcommittee, presented in the spring of 1944, spelled out the postwar housing problems, as they could then be seen.

The Curtis Report is a significant benchmark in the story of housing in Canada. It gathered together the best available data, surveyed the situation throughout the country, made bold and specific recommendations for the short run and long run, as well as dealing with Community Planning, a neglected art which was to grow in importance.

The Report was necessarily long and cannot be summarized here. It defined a total urban deficiency of 320,000 houses at that time, and estimated current annual needs in the postwar years as requiring 23,000 houses in 1946 with annual increases of 6,000 houses in succeeding years. A ten-year programme to meet current needs and to reduce the backlog would obviously require a greater sustained housing effort than had ever been made before.

POST-WAR LEGISLATION

When, a few months later in 1944, the National Housing Act was passed, it largely consolidated all existing housing legislation, as the Curtis Report had recommended, as well as embodying some of the Report's other points. The Act was sub-titled " . . . to promote the construction of new houses, the repair and modernization of existing houses, the improvement of housing and living conditions, and the expansion of employment in the postwar period."

The new Act was much broader in scope than the former Housing Acts, and it was made evident the Federal Government was now to be permanently involved in the housing and planning fields.

The following year, in 1945, the Central Mortgage and Housing Corporation Act was passed by Parliament

PAUL HORSDAL

D. B. Mansur, the first President of Central Mortgage and Housing Corporation, 1946-54.

and the Corporation was subsequently formed on January, 1, 1946. Federal involvement under the National Housing Act 1944 was of a semi-commercial character. The Government was in the housing business and it was clear that bargaining, negotiation and the appraisal of risk could all be better done by a Crown Corporation than by a Government department.

The basic functions of the Corporation were to administer the National Housing Act, the Home Improvement Loans Guarantee Act, and provide discounting facilities for loan and mortgage companies. In addition to the National Housing Administration (Department of Finance), The Emergency Shelter Administration (Wartime Prices and Trades Board) was also transferred to the new Corporation.

The Corporation is wholly owned by the Crown, and the Board of Directors is appointed by the Government. At its formation, the Board consisted of a President, Vice-President, the Governor of the Bank of Canada, the Deputy Minister of Finance, the President of Wartime

Maj.-Gen. H. A. Young (on right) Vice-President, CMHC 1946-1950, at a Veterans Rental Housing project, Red Rock, B.C.

Housing Limited, and five directors drawn from outside the Civil Service, representing the main geographical regions of Canada.

The first President of the Corporation was D. B. Mansur, who had been named in 1939 to be General Superintendent of the Central Mortgage Bank. As that organization never became active, Mr. Mansur served during the war years as Assistant Chairman of the National War Finance Committee. The Vice-President was Major-General H. A. Young, D.S.O. who had recently retired as Quartermaster General of the Canadian Army.

The capital of the Corporation was set at $25,000,000 and a reserve fund of $5,000,000 was authorized to be accumulated from profits. Any additional net income was to be turned over to the Receiver General. This requirement and capital structure is still in effect.

It was essential no pause should occur in the housing program while the Corporation was being formed. The centralized operation of the former National Housing Administration was carried on at Head Office during the first months; at the same time, plans were made, people hired and personnel trained to enable the effort to be decentralized.

The principal departments formed at Head Office were the Joint Loans Division, the Emergency Shelter Division and the Projects Division. There were also a Personnel Division, a Legal Division, and a "Secretary's Division" with the latter providing necessary services of administration and accounting. Two other divisions which were to grow in importance were set up — an Economic Research Division and an Information Division. Five Regional Offices were also established during the first year, at Halifax, Montreal, Toronto, Winnipeg and Vancouver.

It is difficult to deal with the development of the Corporation, and with the housing problems of the country, on a yearly basis. The complex picture can be seen in better perspective by considering the years be-

tween 1946 and 1949 as a stage which dealt with immediate postwar problems, and during which preparations were made to cope with the long-term ones. As the temporary difficulties were cleared away the long-term problems could be seen more clearly.

THE SHORTAGE OF CONSTRUCTION MATERIALS

A pervasive difficulty during this phase of operations was a critical and frustrating shortage of building materials. Because lending institutions were encouraged to make more mortgage loans and municipalities encouraged to enter into Emergency Shelter and Veterans Rental Housing arrangements, the squeeze on materials became worse.

All building stocks were under the control of the Minister of Reconstruction and Supply. In general, priority was given to housing but factories and other employment-producing facilities could not be refused. In housing, the returning veterans had to be given preference. Priorities within the housing field were largely determined by the Corporation, and for some time its field offices actually issued priority certificates to individual users of cement, plumbing material and other critical goods . At one time the Corporation even maintained large stocks of nails in the field offices and sold them directly to priority holders.

This shortage of materials was so acute that in 1946 and 1947 a large scale programme was carried on in which abandoned military installations were demolished and the reclaimed materials — largely lumber and plumbing — were sold to priority holders. The Corporation field offices, working in close co-operation with the War Assets Corporation, were responsible for the success of this operation which is estimated to have helped in the construction of 10,000 homes. After 1949 the supply of materials was never more than an occasional local difficulty and these special efforts were terminated.

"EMERGENCY" HOUSING PROGRAMMES

The shortage of materials had a significant influence on future programmes. The Corporation took over the operation of the Home Conversion Plan of slightly more than 2,000 units, but reported no new projects were being negotiated at the end of 1946, because of the lack of suitable buildings and high costs of conversion. Arrangements were made for the owners to buy out the Crown leasehold interest if they wished to do so, and as the leases were purchased, or expired, this wartime emergency scheme was allowed to terminate.

The administration of the Emergency Shelter Order was in general carried out as a Head Office operation. By the end of 1948 there were about 10,000 units, mostly made up of converted buildings. This was basically a municipal venture with financial assistance from the Government. The emergency shelter units were never designed to be more than the name implies; the programme was, in fact, a "necessary evil" and no effort was made to expand or perpetuate it beyond the emergency period. The scheme was also used to supply some 1,600 units for veterans attending universities under the veterans rehabilitation programme.

Another interesting but brief effort was that of Housing Enterprises of Canada Limited, formed by a group of life insurance companies in 1945. They provided its equity capital with the object of building and managing rental housing projects under the "limited-dividend" section of the National Housing Act.

Provision for "limited-dividend" housing had been made in the 1938 Act and continued in the 1944 Act (and also the later 1954 Act). The principle is simple — a company is set up to build and manage rental housing for people of low or moderate income at rents approved by the Corporation. A larger loan, with a longer amortization period, and at a lower rate of interest than ordinary NHA mortgage loans, may be obtained from CMHC, provided the company agrees to limit its financial return from the property — hence the term "limited-dividend".

Housing Enterprises undertook projects in 28 centres, providing more than 3,300 units, including several apartment house projects. The Company received priority for building materials because it gave rental preference to veterans.

The conception was a good one. The companies participating looked forward to a safe, if low, return on their investment of a 10% equity, and at the same time they would be providing a useful public service. But the conditions of the immediate post-war period, particularly the shortage of materials, created great difficulties for a brand-new, large scale operation. Between 1944 and 1948 the cost of building goods increased by almost 50%, while

wages in the building trades rose about 30%. The costs of setting up the organization were necessarily high.

It proved impossible to maintain the low rent characteristic in view of these rising costs, and no new projects were built after 1946. In 1947, the participating companies asked CMHC to take over and the Corporation assumed responsibility for completing some 1,400 unfinished units and eventually adding them to its stock held for rental to veterans. The houses were gradually sold off over a period of years, mostly to the tenants.

VETERANS RENTAL HOUSING

When the Corporation was established only one major housing activity remained outside its orbit — Wartime Housing Limited, a Crown Corporation. It had been formed in 1941 to build housing for munitions workers and later turned to the production of houses for returning soldiers. From early in 1946 a very close co-ordination was maintained between Wartime Housing and the Corporation but it quickly became evident that complete integration was necessary.

On January 1st, 1947, the Corporation took over the administration of Wartime Housing. This involved large construction and property management responsibilities increasing the Corporation staff from 308 to 1,172. There were also some 500 persons engaged on a part-time or temporary basis.

Wartime Housing had completed about 26,000 units up to the end of 1946. From 1947 to 1950 the Corporation continued the programme and constructed about 24,000 Veterans Rental units.

It had been decided in 1947 that under certain circumstances and at the request of a municipality, these houses could be sold either en bloc to a municipality, or directly to veterans and by the end of 1949 more than 8,000 units had been disposed of in this way.

CORPORATION ORGANIZATION

The Corporation's policy of a decentralized organization proved its merit in this huge construction, management and sales programme, as well as in the more important field of mortgage lending. By the end of 1949, twenty branch offices had been established, in addition to the five regional offices. There were also a large number of District Rental Offices but these were only concerned with the management and sale of completed Veterans Rental units.

This large network of field offices, each under a Branch Manager having ample authority and assisted as well as supervised by a strong Regional staff, had considerable advantages over the more centralized organization of the former National Housing Administration and Wartime Housing Limited. Policy decisions made at Ottawa could become effective at the local level without delay; conversely, the officials at Ottawa received a constant flow of information and suggestions from the field offices, through the Regional Supervisors, and all this greatly assisted the policy-making process.

In particular, the field offices performed a most useful function of liaison and negotiation with municipalities during the Veterans Rental Programme. While housing in general lies constitutionally within the provincial field, the problem of housing the returning veterans was recognized as a proper area for direct Federal action, and the Provinces were quite willing to have Corporation officials negotiating directly with their municipalities.

FARM HOUSING

In 1947 a section was added to the Act providing for the financing of new homes on farms. This was an interesting variation from normal mortgage practice. It was decided the repayment terms of these loans should be related to crop yields, bearing in mind the fluctuating history of yield and crop values, especially in Western Canada where grain production is one of the chief sources of income, and remembering the sad history of farm loans generally. A crop payment formula was established whereby the annual payment on the mortgage was to be one-half the yield in excess of six bushels per acre of No. 2 Northern.

This plan could not be introduced into Saskatchewan because it conflicted with Provincial legislation. A few loans were made in Alberta, British Columbia, and Nova Scotia, but the plan never accounted for more than a handful of houses. Perhaps this was because the farmers had longer memories of the miseries that may arise from mortgage debt, than did their city cousins.

These important programmes and activities severely tested the policies and skills of the new Corporation. However, they were direct operations, and by their nature were emergency measures to meet immediate and acute

postwar problems.

The houses completed under these various schemes were by no means the greater proportion of all units being built in Canada. In the years 1946 to 1949 almost 320,000 new dwellings were completed; more than one-seventh of these through the direct construction programmes of the government. A larger number were the result of private initiative with financial assistance under the National Housing Act.

NHA MORTGAGE LENDING

The implementation of the ordinary joint-loan mortgage provisions of the National Housing Act was of primary importance in the Corporation during this period. Not only would houses built through private initiative with this assistance help to meet the immediate need for new units, but this was the area where the long-term solution of the country's housing problem must lie. An efficient and confident house-building industry must be encouraged and provision assured for an adequate supply of mortgage funds.

The principal mortgage lenders were the large insurance companies, and in spite of the desperate events of the pre-war years they were able to lend, particularly on the basis of the generous guarantees offered them by the Act. It was good business for them. Under the joint-loan technique, the lending company put up three-quarters of the loan and the Corporation supplied one-quarter; the borrower paid 4½% and since the Corporation only charged 3%, the company had a return of 5% on the loan.

The Corporation took steps to publicize the facilities of the Act and here again, the decentralized field organization was of great assistance. Every effort was made to have loan applications processed as quickly as possible. Meetings were held with builders organizations, realtors, local lenders, and anyone else who cared to listen.

The encouragement of builders was a key concern. A house-building industry had scarcely existed in the immediate pre-war years. It must be remembered, too, that the general outlook in the immediate postwar years was by no means a "boom psychology". The immediate need for housing was plain for all to see, but many thought that as soon as the pressing demand was filled, house construction would again lapse into a minor industry.

After experiences in the great depression no one looked on real estate as a desirable investment. The demand for home ownership was mostly from people who despaired of being able to find a house to rent, or from those who felt ownership would be cheaper than renting. In 1949, towards the end of the immediate post-war phase, the Financial Post called the housing problem "almost, if not already, solved" and added, "it may take a few more months for the law of supply and demand to assert itself, but at the present rate of building the days of the sellers' market are limited". The early growth of the present house-building industry did not occur in an era of buoyant optimism. Most of the experienced builders were not too willing to become over extended in a field in which they felt no great confidence; and their bank managers were not at all inclined to encourage any very large-scale ventures. However, there was a market, no matter how reluctant, and there was a supply of vacant serviced land as a legacy from the depression.

Between 1946 and 1949 the joint loan provisions of the Act financed the construction of more than 50,000 houses. Previously the greatest number of NHA units financed in any single year had been about 5,000 units exclusive of loans for rental housing. Of the 50,000 units for homeownership, about 15,000 were by or for individual owners on contract, and 35,000 were built for speculative sale by builders. This was a big programme for an under-capitalized building industry.

Almost half of the speculative building was made possible by the Integrated Housing Plan. This was a well designed arrangement to encourage increased production from small builders. The builder agreed to sell to veterans only, at a sale price approved by the Corporation, and received a maximum mortgage loan and an undertaking that if he should be unable to sell the house, CMHC would purchase it at a figure slightly below the agreed market price. This "buy-back" arrangement made it much easier for small builders to make bank arrangements for working capital, since the only amount at risk was, in effect, the builder's own profit. The idea served a very useful purpose at a critical time. However, as confidence in the real estate market grew, and as builders got on a more solid financial basis, the disadvantage of the pre-set sale price overcame any advantages of the "buy-back" procedure and activity under this plan

An Integrated Housing project in Edmonton, Alberta.

A project of Housing Enterprises of Canada Ltd. in London, Ontario.

gradually ended.

The Corporation could be reasonably satisfied with the operation of the Act as it applied to home ownership. The effective demand, if not the underlying basic need, was being met. There seemed to be no shortage of mortgage funds, institutional or private, and for most of this four-year period it appeared that residential units were being built up to the limits imposed by the shortage of materials.

HOUSING FOR RENT

Nevertheless, a large number of people wanted, or needed to have rental accommodation and during the period a disproportionately small number of rental units were built. While 50,000 units were being financed under the Act for home-ownership, only 8,500 were for rental purposes, excluding Housing Enterprises of Canada Limited projects and units under the Rental Insurance Plan.

It is easy to see why there was so little activity in rental housing. During the depression vacancies had been very high and rents very low. Scarcely any of the public companies formed before the depression to hold rental units had been able to maintain their bond obligations and many private investors had fared just as badly. The vacancy problem had cleared up during the war, but the imposition of rental controls had prevented the landlords from recovering their past losses. Rental controls had now been removed from new construction, but a rental project still appeared to an investor as a "heads you win, tails I lose" proposition. General rent levels set in depression years and maintained under rent control were not realistic in view of rising costs. Potential mortgage lenders were, of course, no more enthusiastic than potential investors.

To overcome this situation, the Corporation devised the Rental Insurance Plan and its implementation was authorized by an amendment to the Act in 1948. In outline, the plan permitted the Corporation to guarantee owners a return of rentals sufficient to pay all carrying charges as well as a small return on equity. The guarantee took the form of a rental insurance policy for which the owner paid the Corporation an annual premium.

The impact of this plan was immediate. More private rental units were initiated in 1949 than in the three previous years combined, and before the plan had finally run its course, 20,000 units had been created.

It was particularly important and useful in the Province of Quebec where rental tenure has traditionally been more popular, particularly in the large urban centres, than in other parts of Canada. As soon as the Rental Insurance Plan was introduced and the inhibitions against investment in rental property removed, a very strong response was noticed, particularly in Montreal.

INFORMATION PROGRAMMES

One measure of the Corporation's effectiveness in administering the Act during its first four years of operation, can be seen by the statistic that more than one-fifth of all units built were NHA assisted. Part of the reason for this was a vigorous information effort. The postwar housing situation was confusing for the ordinary citizen. If he owned and occupied a house he had no problem. If he was renting, he had several. How long would his rent be protected by rent control? How long would his tenancy be protected? Would he be wise to try to build a house and end these uncertainties? For a returning veteran, or a person displaced for any reason, the problem was much more complicated. Could he, or should he, try to get a house from Wartime Housing. From Housing Enterprise? A Home Conversion unit? An Emergency Shelter unit? Or should he try to build or buy?

From the beginning, the Corporation's Information Division realized these problems. A flow of appropriate information was sent to newspapers and radio stations. It is evident from some of the newspaper comments that editors could be just as confused as other citizens. While this information was being sent out from Ottawa, officials of the Information Division were also active in travelling the country, talking to editors and finding out what matters required clarification.

Besides providing broad coverage, specific information was also circulated. Negotiations for a mortgage loan might appear formidable to a young veteran; but a series of pamphlets explaining the mechanics of obtaining a loan reduced it to a fairly simple operation. Such material was widely circulated, not only by the Corporation field officers, but by lenders, builders and others. In addition, NHA literature and forms were made available in French for the first time.

QUALITY OF DESIGN AND CONSTRUCTION

During this postwar phase the emphasis was on the

quantity of housing produced, but it was inherent in the Act that the quality of housing was equally important and this aspect was never forgotten, even in the strains of this period. In 1946 the Corporation sponsored, under the auspices of the Royal Architectural Institute of Canada, a "small house" competition to obtain housing plans to the varying needs of Canada's major regions. A booklet of housing designs was made available and sets of complete working drawings were sold by the Corporation at nominal cost. By 1949, one-sixth of the houses financed under NHA loans were using designs supplied by the Corporation. Quality of design and construction was heavily emphasized.

A great problem in house-building in Canada had been a lack of uniformity in Provincial and municipal building codes. The National Housing Administration had been instrumental in issuing a National Building Code in 1941. This was only an advisory document, but it was adopted by many municipalities. Houses financed under the Act were, however, required to be built in accordance with the Code and if the requirements differed from those of the municipal code, the stiffer requirements would govern.

There was some objection by builders that the Corporation's requirements were too high, but this could always be matched with an objection by some of the public that standards were too low. Each unit being built under the Act was inspected by the Corporation, and mortgage advances could not be made until the standards had been met. The improvement and enforcement of the Corporation's building standards has, from the very first, been a worthwhile effort.

RESEARCH ACTIVITIES

Besides the day-to-day enforcement of proper standards, the Corporation was active in research aimed at long-term improvements in building methods. A financial and operating arrangement was made in 1946 whereby the National Research Council, financed by the Corporation, would undertake technical investigations into new methods and materials, while CMHC would act in an advisory capacity and provide liaison with lenders, builders, manufacturers and users.

It was hoped some major technological "breakthrough" could be made which would improve on the old-fashioned methods of building houses, from the ground up, by hand. Disparaging comments on house-building techniques compared say, with automobile assembly lines, were commonplace. Various individuals and companies made bold efforts. There were several systems proposed, and tried out, for houses to be erected from concrete sections poured on-site in special forms. There was an ambitious undertaking, by a company which had manufactured airplanes during the war, to make prefabricated aluminum houses. Sympathetic encouragement and NHA mortgage financing was made available for these efforts but the break-through did not come, nor has it yet, although the research has been steadily continued.

Another very significant effort was begun in economic research. It was surprising in 1946 to realize how little was actually known about housing in Canada. There was not even a satisfactory way of knowing how many houses had been started or completed in any year. Many statistics, previously considered reliable, broke down on examination. Municipal building permit figures proved quite unreliable for various reasons. Data on building costs were arrived at from fragmentary evidence and there were virtually no statistics on house sales or prices.

In co-operation with the Dominion Bureau of Statistics and other organizations, the Economic Research Division of the Corporation moved to correct these deficiencies. In the last week of 1946 the mortgage lending companies joined the Corporation's field staff in a comprehensive census of all housing under construction in the country; from January 1st, 1947, the Corporation's own staff began a meticulous count of all new dwelling starts, and noted all completions. This "count of front doors" has been continued ever since and supplies the basic figure for measuring quantitative progress.

Statistical series were also begun on NHA and conventional mortgage lending, on types of borrowers, on types and sizes of houses financed under the NHA, and from this early effort has grown the excellent body of housing statistics. For some years these were published in a quarterly CMHC publication "Housing in Canada". To-day the Corporation puts out an annual called "Canadian Housing Statistics" with monthly supplements.

Besides the accumulation of statistical series, more basic economic research was begun. Enquiry was made

"Land Assembly Problems".

into living conditions — particularly with regard to overcrowding. Labor and building costs were examined. Property management data were acquired from the records of the Corporation and from a sample of real estate companies.

Studies were initiated to find methods of estimating housing demand with reasonable accuracy, and a statistical series begun on family formation which was to prove one of the key indicators. Besides the research done within the Corporation, university grants were made to stimulate the decentralization of housing research and to encourage regional and local studies.

The whole field of residential mortgage lending was put under scrutiny, as well as sources of equity financing. This also enabled the Corporation to publish "Mortgage Lending in Canada" each year from 1947 until 1954.

A regular exchange of information and ideas with other countries was established, and for several years a bi-monthly booklet, "Housing Progress Abroad", was distributed.

COMMUNITY PLANNING

The Curtis Report had shown that community planning, and public awareness of its principles and problems, was indispensable to a successful long-term housing programme, and had recommended the Federal Government should take a leading part in promoting this idea.

In 1945 and 1946 community planning was discussed at several Dominion-Provincial Conferences, and in June 1946 a conference, convened by the Corporation, was attended by Provincial representatives and by delegates from the Royal Architectural Institute of Canada, the Town Planning Institute of Canada, the Federation of

Mayors and Municipalities and others. As a result, the Community Planning Association of Canada was formed. CMHC supplied the new Association with a Secretary and office space. For a number of years the Association was mainly supported by grants from the Corporation. Its influence in creating and channelling public interest in all aspects of community planning has been great and will undoubtedly be even greater as time goes on.

The Corporation during this period also made other contributions towards the promotion and improvement of community planning. Studies were undertaken on land use and also on the use of aerial mapping for planning purposes. Scholarships were granted for graduate study in planning and related disciplines while the Corporation also supported a summer school for planning technicians at McGill University in 1948.

While these broadly based efforts were being made to arouse and maintain public awareness of the importance of planning, the Community Planning Division at Head Office was also using the Corporation's experience in Veterans Rental Housing projects, Integrated Housing projects and others, to study project and subdivision planning as part of the larger picture.

Canada's emergency postwar phase and shortage of housing more or less ended in 1949, but another phase of different but still very complicated problems began and they had important long-term implications.

Starts in 1946, 1947 and 1948 showed successive increases but in the following year they were slightly less than in 1948. This was the first year the number of completions significantly exceeded net family formation. About 11,000 more houses were completed than the net increase in the number of families; it was a substantial reduction in the backlog of demand. Housing costs also levelled out during the year, although this proved to be only a pause in a steadily rising graph.

SERVICED LAND PROBLEM

Another major problem now clearly emerging was a shortage of serviced land. Many municipalities had been crippled through the depression years by debt charges incurred from servicing land well ahead of effective demand, and few were willing to take gambles of this sort again. Builders were being forced to finance the services and this was a very great strain on an under-capitalized industry.

The Act permitted lending institutions to undertake land assembly projects and it provided guarantees of capital recovery. Six projects providing 1,500 lots were undertaken under this plan in 1949. Great hopes were held for the programme, but it never proceeded much further.

Land assembly, from the acquisition of "raw" land through the stages of planning, installation of water and sewer, the construction of roads and sidewalks, through the final sale to people who thought the price much too high, proved tedious and administratively expensive for the lending institutions.

The Corporation during 1949 also undertook some land assembly projects on its own. However, direct land assembly by a Federal agency was not the answer to this important problem and the difficulty was to continue.

SLUM CLEARANCE

Another element of the overall housing problem, which began to grow in importance in 1949, was slum clearance, the forerunner of what is today more euphemistically termed urban renewal. The existence of slums, and the necessity for clearing them out, had been clearly recognized between the wars, and in various cities citizens committees had been active in trying to promote slum clearance. However, in the depression, no municipal funds had been available for this purpose. The Curtis Report had been very definite in stating the need, and the means of Federal financial assistance were included in the Act of 1944.

During the most acute shortage of housing immediately after the war, it was not feasible to pull down even the meanest slum dwelling when, for short periods, veterans families were forced to live in garages. But the imperative social need was still there and recognized.

In 1948 the City of Toronto moved to clear a slum area which had been the object of great concern since the early thirties. A grant of more than $1,000,000 was made by the Federal Government to assist the City acquire and clear 42 acres of land, on which over 1000 new units were subsequently built by a municipally owned limited-dividend corporation. This was the start of a programme of urban renewal which was to grow vastly in scope and importance.

Vingt années d'habitation
la SCHL de 1946 à 1966

par R. G. Lillie

Monsieur Lillie est né à Toronto où il a aussi fait ses premières études. Il a obtenu par la suite un grade en sciences économiques à l'Université McMaster, en 1934. La même année, il s'intéressa à l'immeuble comme adjoint de B. A. Lillie, à Toronto. Après trois ans, il donna sa démission pour accepter un poste auprès de la National Trust Co. Ltd.

Lorsque la Deuxième Grande Guerre éclata, M. Lillie s'enrôla dans l'armée et fit du service au Canada, en Islande, en Angleterre, en France et en Allemagne. Il avait le grade de major au moment de sa démobilisation et il retourna au service de la National Trust où il resta comme gérant des propriétés et évaluateur jusqu'à ce qu'il arrive à la Société en 1946 pour occuper le poste de secrétaire du bureau de la région de l'Ontario.

L'année suivante, M. Lillie fut nommé gérant de la succursale de Calgary, puis surintendant régional adjoint du bureau de la région des Maritimes en 1952 et surintendant régional adjoint du bureau de la région des Prairies en 1955. En 1958, il fut nommé gérant de la succursale de Toronto, poste qu'il a occupé jusqu'à sa nomination à son poste actuel d'adjoint spécial au Surintendant du bureau régional de l'Ontario.

M. Lillie est membre du Military Institute et de l'Institut canadien des Evaluateurs.

Lorsque le ministre des Finances, l'honorable H. J. Ilsley, a présenté au Parlement en 1945 la législation qui a établi la Société centrale d'hypothèques et de logement, il a déclaré: ". . . Il n'existe aujourd'hui dans notre pays aucun problème plus important que celui de la construction de logements . . . il n'existe pas non plus de problème dont la solution rapide et satisfaisante présente dans la pratique un si grand nombre de difficultés." L'histoire de ces difficultés et des efforts qu'on a faits pour en obtenir la solution est l'histoire de la Société.

L'AMBIANCE

Notre pays a subi des changements si incroyables durant les vingt dernières années, qu'il est impossible de décrire les problèmes de 1946 sans essayer de brosser un tableau de l'ambiance qui a précédé cette époque.

Durant les dix années qui ont précédé la Seconde Grande Guerre, le Canada, à l'instar du reste du monde, a subi une crise économique si terrible qu'elle semble maintenant un peu irréelle même pour ceux qui ont vécu à cette époque. Le système financier du monde, qui s'est écroulé durant les années 30, a causé l'effondrement de l'économie canadienne. Les Canadiens, selon une Commission royale, "chancelaient sous le poids de dettes, qui étaient les plus lourdes de l'histoire, compte tenu de leurs revenus." De 1929 à 1933, la baisse de la valeur de l'immeuble a été d'environ 40 p. 100 et le chômage massif a été la cause d'un si grand nombre de saisies de propriétés hypothéquées, que toutes les provinces ont adopté une législation permettant un moratorium qui, en général, autorisait l'emprunteur sur hypothèque à demeurer en possession de sa propriété, s'il pouvait payer l'intérêt de l'hypothèque et les taxes — le remboursement du principal étant remis à une époque plus prospère.

Le terrain était en pratique invendable. A Winnipeg, en 1937, par exemple, la municipalité était propriétaire de plus d'un tiers du terrain, surtout parce que les taxes sur les terrains vacants à bâtir étaient impayées. Certaines provinces et un grand nombre de municipalités étaient en banqueroute parce que le revenu provenant des taxes diminuait tandis que l'intérêt sur les dettes continuait de s'accumuler.

Dans de telles circonstances, on n'avait besoin que d'un petit nombre de nouveaux logements. Le nombre des logements parachevés en 1933 n'équivalait qu'au tiers du chiffre enregistré en 1929, soit moins de 22,000 logements. Cette baisse de la construction de logements a naturellement causé du chômage dans les métiers de la construction; le chômage a entraîné une diminution de la demande, ce qui a créé un cycle qu'il fallait arrêter.

LES PREMIERES LOIS SUR L'HABITATION

Une des raisons qui expliquent la baisse de la demande de logements était que les prêteurs ne consentaient plus de prêts sur deuxième hypothèque. Afin de corriger cette situation, le gouvernement fédéral a adopté la Loi du Dominion du logement en 1935.

Aux termes de cette Loi, le gouvernement ajoutait 20

p. 100 de la valeur d'emprunt au prêt de 60 p. 100 consenti par les compagnies d'assurance et de fiducie, fournissant ainsi ce qui manquait au financement des logements et qui faisait depuis toujours l'objet des prêts sur deuxième hypothèque.

L'application de la Loi, qui incombait au ministère des Finances, apportait un remède à l'un des points faibles de l'appareil hypothécaire. Toutefois, à cause du trop grand nombre de facteurs économiques qui allaient à l'encontre du succès de cette Loi, on a consenti moins de 5,000 prêts durant la période de trois années qui a précédé 1938, alors qu'on a substitué à cette Loi la Loi nationale sur le logement.

Cette nouvelle Loi comprenait certaines dispositions de la Loi de 1935 ainsi que des modifications qui encourageaient les compagnies prêteuses à consentir plus de prêts en dehors des grands centres urbains et favorisaient les personnes à revenu modique. La Loi comprenait des dispositions relatives aux logements à bas loyer, qui n'ont toutefois jamais été mises en vigueur à cause de la guerre de 1939. Cette Loi prévoyait également dans certaines circonstances une aide aux emprunteurs sur hypothèque pour payer leurs taxes foncières. Cette mesure était nécessaire parce que l'aide accordée aux chômeurs avait fait augmenter les taxes foncières à un niveau qui constituait un empêchement important à la construction de logements.

Ces nouvelles dispositions contenues dans la Loi eurent une certaine efficacité qui, ajoutée à une amélioration graduelle de l'économie du pays, a entraîné une augmentation considérable du volume de construction de maisons. Alors qu'on n'avait approuvé que 2,000 prêts LNH en 1938, on en a approuvé plus de 6,000 en 1939.

Le nombre global de logements parachevés, qui était au plus bas point en 1933, est passé de quelque 21,000 à plus de 52,000, en 1939.

Durant la période où l'on prenait des mesures afin d'augmenter le volume de la construction de logements, il devenait de plus en plus évident que le redressement du revenu au pays ne pouvait supporter la dette hypothécaire existante, qui était en fonction de valeurs de terrains majorées outre mesure. Cette situation était particulièrement grave en ce qui concernait les fermes hypothéquées.

En conséquence, en 1939, le gouvernement a adopté une législation qui établissait la Banque hypothécaire centrale, à titre d'organisme auxiliaire de la Banque du Canada. On a proposé que les institutions prêteuses réduisent la valeur des prêts hypothécaires qu'elles détenaient sur les fermes et les maisons à 80 p. 100 d'une nouvelle estimation, tandis que le gouvernement paierait la moitié de cette réduction. La Banque hypothécaire centrale devait aussi offrir un service d'escompte aux institutions prêteuses afin de leur permettre, au besoin, de disposer de capitaux en offrant des hypothèques en gage à la Banque hypothécaire centrale.

La Loi sur la Banque hypothécaire centrale fut adoptée en juin 1939, mais la guerre a éclaté avant qu'elle ne soit proclamée, ce qui explique que la banque n'a jamais fonctionné.

LA GUERRE

La guerre a créé toute une série de nouvelles considérations pour tout le pays. Le logement ne constituait plus qu'un des nombreux problèmes et une des formes de l'activité qui composaient l'effort de guerre. En général, la construction de logements devait occuper un rang inférieur

Application de l'assurance-loyer à Montréal.

dans la priorité des exigences relatives à la capacité de construction.

D'un autre côté, il devint évident qu'il fallait construire sans délai des logements en des endroits déterminés afin de loger les travailleurs qui manufacturaient les matériaux de guerre. Le gouvernement fédéral créa donc en 1941 une nouvelle société de la Couronne, Wartime Housing Limited, qui à la fin de 1943 avait construit près de 20,000 logements. Il sera question un peu plus loin de cette entreprise.

Un certain nombre de facteurs, y compris l'augmentation du revenu personnel et l'exode de la population rurale vers les grandes villes, ont fait naître des problèmes très graves de logement dans les villes. Une enquête entreprise par les Postes en 1942 dans 15 centres importants a révélé qu'une seule ville comptait un pourcentage de ½ p. 100 de logements libres. A toutes fins pratiques, il n'y avait pas de logements libres dans les grandes villes du Canada.

En 1943, on a institué le programme de transformation des maisons afin de remédier à cette situation. On autorisa le ministère des Finances à louer de grandes résidences et à les transformer en appartements. Cette entreprise fut couronnée de succès, mais sur une petite échelle seulement, par la force des choses; on aménagea seulement 2,000 logements de cette façon, de 1943 à 1946.

A la fin de 1941, tous les loyers étaient soumis à une régie que le gouvernement fédéral n'a abolie qu'en 1950.

LE RAPPORT CURTIS

Alors que le pays livrait une guerre acharnée, on se souciait déjà des problèmes que l'on aurait à résoudre après la cessation des hostilités. Un comité consultatif pour la reconstruction après la guerre fut formé dès 1941 et, en 1942, on institua un sous-comité du logement et de l'urbanisme sous la présidence du professeur M. W. A. Curtis.

Le rapport de ce sous-comité, présenté au printemps de 1944, exposait les problèmes de logement de l'après-guerre, tels qu'on pouvait les comprendre alors.

Le rapport Curtis est un point de repère important dans l'histoire du logement au Canada. On y trouve compilées les meilleures données disponibles et une étude générale de la situation qui existait dans tout le pays ainsi que des recommandations franches et précises dont l'application était prévue à court terme et à long terme. Ce rapport touchait aussi la question de l'aménagement des collectivités qui avait été jusque là fortement négligée mais qui devait prendre une importance toujours grandissante.

Il est impossible de résumer dans le présent article ce rapport qui était nécessairement volumineux. Il révélait une pénurie de logements dans les villes, qui se chiffrait au total par 320,000 à ce moment-là et estimait le besoin courant de logements dans les années d'après-guerre à 23,000 maisons en 1946, tout en prévoyant des augmentations annuelles de 6,000 maisons au cours des années suivantes. Il était évident qu'un programme de dix ans pour répondre aux besoins courants et pour réduire l'arriéré de production, exigerait un effort plus considérable et plus soutenu que jamais auparavant.

Lorsque, quelques mois plus tard, en 1944, la Loi nationale sur l'habitation fut adoptée, elle groupait en grande partie toutes les lois fédérales sur l'habitation qui existaient déjà, suivant la recommandation du rapport Curtis, et tenait compte également de certains autres points mentionnés dans le rapport.

LÉGISLATION DE L'APRÈS-GUERRE

L'une des principales recommandations du rapport Curtis était que l'on codifie toutes les législations fédérales qui existaient alors sur le logement. La Loi nationale de 1944 sur l'habitation qui fut adoptée quelques mois plus tard, tout en étant une codification des lois existantes, tenait compte d'un certain nombre d'autres recommandations du rapport mais non de toutes. Le préambule de cette loi se lisait comme suit: ". . . loi favorisant la construction de nouvelles maisons, la réparation et la modernisation de maisons existantes, l'amélioration des conditions de logement et de vie et l'expansion de l'emploi au cours de l'après-guerre".

La nouvelle loi avait donc une portée beaucoup plus vaste que les lois antérieures sur l'habitation et il devenait évident que le gouvernement fédéral serait à partir de ce moment-là engagé d'une façon permanente dans les domaines de l'habitation et de l'urbanisme.

L'année suivante, soit en 1945, le Parlement adoptait la Loi sur la Société centrale d'hypothèques et de logement, ce qui entraîna l'établissement de la Société au mois de janvier 1946. L'activité du gouvernement fédéral

en vertu de la Loi nationale de 1944 sur l'habitation revêtait un caractère semi-commercial. Le gouvernement se lançait dans le domaine de l'habitation, mais il était clair qu'une compagnie de la Couronne pourrait, beaucoup plus facilement qu'un ministère du gouvernement, s'occuper des transactions, des négociations et de l'évaluation des risques qui se rattachent à ce genre d'activité.

Essentiellement, les fonctions de la Société consistaient à faire appliquer la Loi nationale sur l'habitation, la Loi garantissant les prêts pour l'amélioration de maisons et à fournir des facilités d'escompte aux compagnies de prêts et d'hypothèques. En plus de la National Housing Administration (qui relevait du ministère des Finances) on confia aussi à la nouvelle Société l'administration des logements d'urgence (qui relevait de la Commission des prix et du commerce en temps de guerre).

La Société appartient entièrement à la Couronne et son conseil d'administration est nommé par le gouvernement. Lors de son établissement, le conseil était composé d'un président, d'un vice-président, du gouverneur de la Banque du Canada, du sous-ministre des Finances, du président de Wartime Housing Limited et de cinq directeurs choisis en dehors de la fonction publique, pour représenter les cinq principales régions géographiques du Canada (voir le cadre).

Le premier président de la Société fut M. D. B. Mansur, qui avait été nommé, en 1939, surintendant général de la Banque hypothécaire centrale. Etant donné que cet organisme n'a jamais fonctionné, M. Mansur a occupé, durant les années de guerre, le poste de président adjoint du Comité national des finances de guerre. Le vice-président était le major-général H. A. Young, D.S.O., qui a récemment pris sa retraite comme quartier-maître général de l'armée canadienne.

Le capital de la Société fut fixé à 25 millions de dollars; on a aussi autorisé l'accumulation à même les profits d'un fonds de réserve de cinq millions. Tout revenu net supplémentaire devait être versé au compte du Receveur général. Cette exigence ainsi que cette répartition du capital sont encore en vigueur. Il était essentiel qu'il ne se produise aucun arrêt dans l'exécution du programme de logement, pendant l'établissement de la Société. Le fonctionnement centralisé de l'ancienne National Housing Administration s'est donc poursuivi au Siège social durant les premiers mois pendant que l'on dressait des plans, que l'on embauchait du personnel et que l'on formait des employés en vue de la décentralisation que l'on voulait effectuer.

Les principaux services que l'on a établis au Siège social ont été la Division des prêts conjoints, la Division des logements d'urgence et la Division des projets. Il y avait également une Division du personnel, une Division du contentieux et une Division dite "du secrétaire" qui assurait les services nécessaires d'administration et de comptabilité. On établit aussi alors deux autres divisions dont l'importance devait s'accroître considérablement — soit une Division de la recherche économique et une Division de l'information. Au cours de la première année d'activité, on établit cinq bureaux régionaux, soit à Halifax, Montréal, Toronto, Winnipeg et Vancouver.

Il est difficile de suivre le développement de la Société et la question du logement avec toutes ses difficultés dans tout le pays, d'année en année. En effet, on obtient une meilleure perspective de ce tableau complexe en considérant les années de 1946 à 1949 comme une époque où il a fallu s'occuper des problèmes qui se sont présentés immédiatement après la guerre et une époque durant laquelle on a pris des dispositions pour s'occuper des problèmes à long terme. En réalité, à mesure qu'on a surmonté les difficultés temporaires, on a pu discerner plus clairement les problèmes à long terme.

LA PÉNURIE DES MATÉRIAUX DE CONSTRUCTION

Une des difficultés les plus graves durant cette phase de fonctionnement, a été la pénurie critique et même décourageante des matériaux de construction. Parce qu'on encourageait les institutions prêteuses à consentir plus de prêts hypothécaires et parce qu'on encourageait les municipalités à conclure des ententes relatives aux logements d'urgence et aux logements à loyer pour les anciens combattants, la rareté des matériaux s'est aggravée.

Toutes les quantités disponibles de matériaux étaient sous la régie du ministère de la Reconstruction et des Approvisionnements. En général, on accordait la priorité aux logements mais d'autre part, on ne pouvait pas refuser ces matériaux aux manufactures ni aux autres installations qui fournissaient de l'emploi. En ce qui concerne le logement, il fallait accorder la préférence aux militaires qui

revenaient de la guerre. La Société était surtout chargée de déterminer les priorités dans le domaine du logement; aussi, pendant quelque temps, les bureaux locaux ont réellement émis des certificats de priorité à des usagers particuliers de ciment, de matériaux de plomberie et d'autres articles rares. Il fut même un temps où la Société gardait de grandes quantités de clou dans ses bureaux locaux pour les vendre directement aux détenteurs d'une priorité.

Cette pénurie de matériaux était si grave qu'en 1946 et en 1947, on a mis en oeuvre un vaste programme qui consistait à démolir les installations militaires désaffectées et à vendre aux détenteurs d'une priorité les matériaux ainsi obtenus — surtout du bois de construction et des articles de plomberie. Les bureaux locaux de la Société, travaillant en étroite collaboration avec la Corporation des biens de guerre, étaient chargés d'assurer le succès de ce programme qui, selon les estimations, a permis d'aider à la construction de 10,000 maisons. Après l'année 1949, la disponibilité des matériaux n'a jamais créé que des difficultés locales, ce qui a permis de mettre fin à ce programme spécial.

PROGRAMME DES LOGEMENTS D'URGENCE

La pénurie de matériaux a exercé une influence importante sur les programmes qui ont suivi. La Société a pris en main le fonctionnement du programme de transformation des maisons qui représentait un peu plus de 2,000 unités; on a rapporté, toutefois, qu'on n'avait négocié aucun nouveau projet à la fin de 1946, à cause du manque de bâtiments convenables et du coût élevé des travaux de transformation. On a pris des arrangements pour que les propriétaires puissent acheter, s'ils le désiraient, les logements à loyer détenus par la Couronne et, à mesure que les baux ont été achetés ou ont pris fin, ce programme de logements d'urgence en temps de guerre a pu également prendre fin.

L'application de l'ordonnance visant les logements d'urgence, s'est faite en général au Siège social. Au terme de l'année 1948, on comptait environ 10,000 unités de ce genre, la plupart résultant de la transformation de bâtiments. Ces réalisations ont été fondamentalement l'oeuvre des municipalités qui ont obtenu une aide financière du gouvernement. Les logements d'urgence n'ont jamais été autre chose que ce que leur nom indique; l'application de ce programme était en réalité un "mal nécessaire" et c'est pourquoi on n'a fait aucun effort pour le propager où le perpétuer au delà de la période d'urgence. Ce programme a aussi servi à fournir environ 1,600 logements aux anciens combattants qui étaient inscrits aux universités, en vertu du programme de rétablissement des anciens combattants.

Un autre effort intéressant mais de courte durée qu'il convient de signaler a été celui de Housing Enterprises of Canada Limited, organisme constitué en 1945 par un groupe de compagnies d'assurance sur la vie. Ces compagnies ont fourni la mise de fonds initiale en vue de construire et de gérer des ensembles de logements à loyer en vertu de l'article de la Loi nationale sur l'habitation visant les prêts aux compagnies à dividendes limités.

Cette disposition relative aux logements des compagnies à dividendes limités, était comprise dans la Loi de 1938 et avait été maintenue dans la Loi de 1944, de même que dans la Loi de 1954 qui a suivi. Le principe en est simple: une compagnie se forme pour construire et gérer des logements qu'on loue à des personnes à revenu modique à des loyers approuvés par la Société. Ces compagnies peuvent obtenir de la SCHL un prêt plus élevé, une période d'amortissement plus longue et un taux d'intérêt plus bas que s'il s'agissait de prêts hypothécaires LNH ordinaires, à condition qu'elles consentent à limiter leur revenu financier à 5 p. 100 de leur investissement — d'où l'expression "dividendes limités."

Housing Enterprises a entrepris de réaliser des ensembles de logements dans 28 centres, ce qui a permis de construire plus de 3,300 unités de logement, dont plusieurs ensembles de maisons d'appartements. La compagnie bénéficiait d'une priorité pour l'obtention de matériaux de construction, étant donné qu'elle louait ses logements de préférence aux anciens combattants.

La conception de ce programme était bonne. Les compagnies qui y ont participé, pouvaient s'attendre à un revenu peu élevé mais sûr de leur mise de fonds de 10 p. 100 et en même temps, elles rendaient à la population un service très utile. Toutefois, la situation qui a prévalu durant la période immédiate de l'après-guerre, particulièrement la rareté des matériaux, a créé de grandes difficultés qui n'ont pas permis que ce nouveau programme prenne beaucoup d'ampleur. De 1944 à 1948, le coût des matériaux de construction a augmenté de près de 50 p.

100, alors que les gages payés aux artisans de la construction ont augmenté d'environ 30 p. 100. Le coût de la mise sur pied de l'organisation nécessaire était donc forcément élevé.

Il s'est avéré impossible de conserver aux logements de ce genre leur caractère de logements à bas loyer à cause des coûts qui ne cessaient d'augmenter; aucun nouveau projet ne fut donc réalisé après l'année 1946. En 1947, les companies qui s'étaient engagées dans ce genre d'activité, ont demandé à la SCHL d'en assumer la responsabilité et c'est ainsi que la Société s'est chargée de parachever environ 1,400 logements qu'elle a ajoutés éventuellement aux logements dont elle disposait pour les louer aux anciens combattants. Au cours des années, la Société a vendu ces maisons graduellement, la plupart aux personnes qui les occupaient.

LOGEMENTS À LOYER POUR LES ANCIENS COMBATTANTS

Au moment de la formation de la Société, un élément important de l'activité dans le domaine de l'habitation était resté en dehors de sa juridiction; il s'agissait de Wartime Housing Limited, une autre compagnie de la Couronne. Cet organisme avait été constitué en 1941 en vue de construire des logements destinés aux ouvriers employés à la production de munitions. Un peu plus tard, son activité a porté sur la production de maisons destinées aux soldats revenant de la guerre. Dès le début de l'année 1946, il s'était établi une très étroite coordination de l'activité de Wartime Housing et de celle de la Société, mais il devint rapidement évident qu'une intégration complète de ces deux organismes était nécessaire.

C'est ainsi que le 1er janvier 1947, la Société a pris en main l'administration de Wartime Housing. Cette nouvelle fonction ajoutait à la Société des attributions assez considérables relativement à la construction et à l'administration des propriétés. Le personnel de la Société augmenta alors de 308 à 1,172 employés auxquels il faut ajouter environ 500 personnes employées d'une façon intermittente ou temporaire.

Wartime Housing avait parachevé environ 26,000 logements au terme de l'année 1946. De 1947 à 1950, la Société, poursuivant l'exécution de ce programme, a construit environ 24,000 logements à loyer pour les anciens combattants.

On avait décidé, en 1947, que dans certaines circonstances et à la demande d'une municipalité, on pourrait vendre ces maisons en bloc à une municipalité ou directement à des anciens combattants. Vers la fin de 1949, on avait ainsi disposé de plus de 8,000 logements.

ORGANISATION DE LA SOCIÉTÉ

La ligne de conduite adoptée par la Société pour établir un organisme décentralisé s'est avérée efficace pour la réalisation de ce vaste programme de construction, d'administration et de vente ainsi que dans le domaine plus important des prêts sur hypothèque. A la fin de 1949, la Société avait établi vingt succursales en plus de ses cinq bureaux régionaux. Elle comptait aussi un grand nombre de bureaux de location qui ne s'occupaient toutefois que de l'administration et de la vente des logements à loyer parachevés pour les anciens combattants dans un district donné.

Ce vaste réseau de bureaux locaux, dont chacun, sous la direction d'un gérant de succursale, était investi d'une autorité suffisante et bénéficiait de l'aide et de la surveillance des bureaux régionaux, offrait des avantages considérables par rapport à l'organisation plus centralisée de l'ancienne National Housing Administration et de Wartime Housing Limited. Les décisions prises à Ottawa relativement à la ligne de conduite pouvaient être mises en vigueur sans retard au niveau local; inversement, les hauts fonctionnaires à Ottawa recevaient constamment des renseignements et des recommandations des bureaux locaux, par l'entremise des surveillants régionaux. Tout cela a beaucoup aidé à établir graduellement la ligne de conduite à suivre.

En particulier, le représentant de la Société au bureau local remplissait le rôle très délicat d'agent de liaison et négociait avec les municipalités durant la mise en oeuvre du programme de logements à loyer pour les anciens combattants.

Alors que d'une façon générale, l'habitation relève du domaine provincial en vertu de la Constitution, on a reconnu que le problème de loger les militaires revenant de la guerre exigeait une action directe du gouvernement fédéral; aussi, les provinces ne s'opposèrent nullement à ce que les fonctionnaires de la Société entament directement des négociations avec les municipalités.

MAISONS DE FERME

En 1947, un article ajouté à la Loi prévoyait le financement de la construction de maisons sur les fermes. Cela constituait une variation intéressante dans la façon ordinaire de prêter sur hypothèque. Il fut décidé, en effet, que dans l'établissement des conditions relatives au remboursement de ces prêts, il faudrait tenir compte du produit des récoltes sans oublier l'histoire changeante de la valeur de ces récoltes, particulièrement dans l'Ouest du Canada, où la production du blé est l'une des principales sources de revenu; il ne fallait pas oublier non plus les antécédents plutôt tristes des prêts de ferme d'une façon générale.

On détermina donc une formule de paiement relative à la récolte, selon laquelle le remboursement annuel du prêt hypothécaire devait être équivalent à la moitié du produit de la récolte en excédent de six boisseaux de grain No 2 Northern par acre.

Ce plan ne pouvait pas être adopté en Saskatchewan parce qu'il venait en conflit avec la législation de la province. Quelques prêts furent consentis en Alberta, en Colombie-Britannique et en Nouvelle-Ecosse; toutefois, dans l'ensemble, on n'a construit qu'un petit nombre de maisons en vertu de ce régime. Sans doute était-ce parce que les fermiers se souvenaient mieux que leurs cousins de la ville de la misère que peut causer une dette hypothécaire.

Ces programmes importants et ces formes d'activité ont mis sérieusement à l'épreuve l'orientation et la compétence de la nouvelle Société. Cependant, il s'agissait de réalisations directes qui, de fait, étaient des mesures d'urgence que l'on prenait pour surmonter les difficultés immédiates et très sérieuses de l'après-guerre.

Les maisons parachevées en vertu de ces divers programmes ne représentent aucunement la plus forte proportion de toutes les maisons construites au Canada. De 1946 à 1949, on a parachevé près de 320,000 nouveaux logements, dont plus d'un septième, grâce aux programmes de construction directe du gouvernement. Un plus grand nombre ont par ailleurs été parachevés par l'initiative privée, grâce à une aide financière obtenue en vertu de la Loi nationale sur l'habitation.

ACTIVITÉ HYPOTHÉCAIRE EN VERTU DE LA LNH

La mise en vigueur des dispositions de la Loi nationale sur l'habitation relatives aux prêts hypothécaires conjoints a été d'une importance primordiale pour la Société au cours de cette période. En effet, non seulement les maisons construites grâce à une aide financière fournie par des particuliers ont contribué à répondre aux besoins immédiats de nouveaux logements, mais cette époque a été celle où la solution à long terme aux problèmes de logement de notre pays a commencé à se dessiner. C'est alors qu'on a décidé qu'il fallait encourager l'établissement d'une industrie de la construction qui soit efficace et sûre et faire le nécessaire pour assurer une disponibilité suffisante de deniers hypothécaires.

Les principaux prêteurs sur hypothèque étaient les grandes compagnies d'assurance qui, en dépit de la situation désespérée qui existait durant les années d'avant-guerre, étaient en mesure de prêter, particulièrement à cause des généreuses garanties que leur offrait la Loi. Ce genre d'activité était avantageux pour elles. En vertu du programme de prêts conjoints, la compagnie prêteuse fournissait les trois quarts du montant du prêt tandis que la Société fournissait l'autre quart; l'emprunteur payait un intérêt de 4½ p. 100 et vu que la Société n'exigeait que 3 p. 100, la compagnie prêteuse avait un revenu de 5 p. 100 sur le prêt.

La Société a pris des mesures pour faire mieux connaître les avantages de la Loi et encore là, l'organisation décentralisée de la Société par ses bureaux locaux, fut très utile. On s'efforçait de donner suite aux demandes de prêts le plus tôt possible. On organisait des rencontres avec les associations de constructeurs, les courtiers en immeuble, les prêteurs locaux et toutes les autres personnes ou autres groupes qui paraissaient intéressés.

Il était absolument important d'obtenir l'encouragement des constructeurs. Au cours des années qui avaient précédé immédiatement la guerre, on pouvait à peine dire qu'il avait existé une industrie de la construction de maisons. Il faut se rappeler également que la situation générale durant les premières années de l'après-guerre ne se prêtait aucunement à une "psychologie de prospérité." Le besoin pressant de logements était évident pour tous mais d'aucuns croyaient que dès qu'on aurait satisfait les demandes les plus pressantes, la construction de maisons redeviendrait encore une industrie de peu d'importance.

Après les expériences malheureuses qu'on avait vécues durant les années de la grande dépression économique, personne n'envisageait l'immeuble comme un placement désirable. La demande de maisons pour propriétaires-occupants provenait surtout de personnes qui désespéraient de pouvoir trouver une maison à louer, ou de celles qui croyaient qu'il leur coûterait moins cher de posséder un logement que d'en louer un. Vers la fin de la période initiale de l'après-guerre, le Financial Post proclamait que le problème de l'habitation était "presque sinon déjà résolu." Il ajoutait: "Il est possible qu'il faille attendre encore quelques mois avant que l'offre et la demande soient à leur niveau le plus bas, mais si le volume actuel de construction se maintient, les beaux jours des vendeurs sont comptés." L'expansion rapide de l'industrie de la construction d'habitations que nous connaissons présentement ne s'est donc pas produite dans une ère d'optimisme exubérant. La plupart des constructeurs d'expérience n'étaient pas trop disposés à s'engager plus qu'il ne fallait dans un domaine qui ne leur inspirait pas beaucoup confiance; d'autre part, les gérants de banque n'étaient pas du tout disposés à les encourager à s'aventurer dans ce domaine sur une grande échelle. Cependant, le marché de l'habitation existait même s'il inspirait des réticences, et de plus, il existait, par suite de la dépression économique, une certaine disponibilité de terrains vacants pourvus des services.

De 1946 à 1949, les dispositions de la Loi relatives aux prêts conjoints ont permis de financer la construction de plus de 50,000 maisons au total. Jusqu'à ce moment-là, le nombre le plus élevé de logements financés aux termes de la LNH en une seule année avait été d'environ 5,000, à l'exclusion des prêts consentis pour des logements à loyer.

De ces 50,000 logements construits pour les propriétaires-occupants, environ 15,000 ont été construits par ou pour des propriétaires particuliers, en vertu d'un contrat, et 35,000 par des bâtisseurs à des fins de spéculation. Il s'agissait là d'un programme considérable pour une industrie de la construction qui disposait de si peu de capitaux.

Près de la moitié de la construction, exécutée à des fins de spéculation, a été rendue possible grâce au programme qui avait été conçu en vue d'encourager une production accrue de la part des plus petits constructeurs. Le constructeur s'engageait à ne vendre ses maisons qu'à des anciens combattants, à un prix de vente approuvé par la Société; il recevait un prêt hypothécaire maximal ainsi qu'une promesse, selon laquelle s'il était incapable de vendre ses maisons, la SCHL les achèterait à un prix légèrement inférieur au prix courant convenu. Cette entente visant le rachat des propriétés a permis aux petits constructeurs de prendre beaucoup plus facilement des arrangements avec les banques en vue d'obtenir du capital d'exploitation, vu que le seul montant risqué était en réalité le profit du constructeur. La mise en oeuvre de cette idée a été très utile à un moment critique. Cependant, à mesure que la confiance a grandi à l'égard du marché de la propriété immobilière et que les constructeurs ont amélioré leur situation financière, le désavantage du procédé de rachat et celui que présentait l'établissement du prix de vente à l'avance ont contrebalancé tous les autres avantages; c'est pourquoi on a abandonné graduellement ce programme.

La Société pouvait être raisonnablement satisfaite du fonctionnement de la Loi et de son application aux propriétaires-occupants. En effet, on répondait à la demande effective de logements si on ne satisfaisait pas le besoin fondamental dissimulé. Il ne semblait exister aucune rareté de deniers hypothécaires de la part des institutions ou des particuliers et pendant la plus grande partie de cette période de quatre années, il a semblé que l'on construisait autant de résidences que le permettait la rareté des matériaux.

LOGEMENTS À LOYER

Néanmoins, un grand nombre de personnes désiraient des logements à loyer ou en avaient besoin et pendant la période précitée, on n'en a construit qu'un nombre très inférieur par rapport à celui des logements pour propriétaires-occupants. En effet, alors que les dispositions de la Loi avaient permis de financer 50,000 logements en vertu de la Loi, à l'intention des propriétaires-occupants, seulement 8,500 avaient été financés à des fins de location, à l'exclusion des ensembles de logements réalisés par la Housing Enterprises of Canada Limited et des logements construits en vertu du programme d'assurance-loyer.

Il est facile de comprendre pourquoi on a réalisé un si petit nombre de logements à loyer. Durant la dépression économique, les logements vacants avaient été très nom-

breux et les loyers très bas. Rares étaient les compagnies publiques formées avant la dépression pour posséder et administrer des logements à loyer qui avaient pu honorer leurs obligations; la même chose s'était appliquée à un grand nombre de particuliers qui avaient investi de l'argent aux mêmes fins. Le problème des logements vacants s'était allégé durant la guerre, mais l'imposition de la régie des loyers avait empêché des propriétaires de recouvrer les pertes subies dans le passé.

On avait aboli la régie des loyers à l'égard des nouveaux logements mais les investisseurs jugeaient toujours qu'un projet de construction de logements à loyer était une entreprise hasardeuse. L'échelle générale des loyers établie durant les années de dépression et maintenue en vertu de la régie des loyers n'était pas réaliste, étant donné l'augmentation des coûts. Evidemment, les prêteurs hypothécaires possibles n'étaient guère plus enthousiastes que les investisseurs possibles.

Pour remédier à cette situation, la Société a imaginé le régime d'assurance-loyer dont l'application fut autorisée par suite d'une modification apportée à la Loi, en 1948. Dans ses grandes lignes, ce plan autorisait la Société à garantir aux propriétaires un revenu-loyer suffisant pour payer tous les frais d'administration et leur assurer un petit revenu sur leur mise de fonds. Cette garantie a pris la forme d'une police d'assurance-loyer dont les propriétaires payaient la prime annuelle à la Société.

L'effet de ce programme fut immédiat. En effet, on a construit en 1949 un plus grand nombre de logements à loyer appartenant à des particuliers qu'au cours des trois années antérieures mises ensemble; aussi, au moment où l'on abandonnait l'application de ce programme, on avait construit 20,000 logements de ce genre.

Ce programme a été particulièrement utile et important dans la province de Québec où les logements à loyer étaient par tradition plus populaires, surtout dans les grands centres urbains, que dans d'autres parties du Canada. Dès que le plan d'assurance-loyer eût été adopté et qu'on eût aboli les empêchements aux placements dans les propriétés à loyer, on a fait un usage considérable de ce plan, particulièrement à Montréal.

PROGRAMMES D'INFORMATION

Le fait qu'un cinquième de tous les logements construits aient été financés aux termes de la LNH, indique bien l'efficacité de la Société dans son application de la Loi, durant les quatre premières années de son existence. Le travail sérieux d'information effectué par la Société explique en partie ce résultat. La situation du logement durant l'après-guerre était un peu confuse pour l'homme de la rue. En effet, celui qui possédait et occupait une maison n'éprouvait aucune difficulté. Par ailleurs, celui qui louait un logement en avait plusieurs. Pendant combien de temps son loyer serait-il maintenu au même niveau par la régie? Pendant combien de temps pourrait-il compter d'occuper le même logement? Serait-il sage d'essayer de construire une maison et de mettre fin à ces incertitudes? Dans le cas d'un militaire qui revenait de la guerre ou d'une personne déplacée pour une raison quelconque, le problème était beaucoup plus compliqué. Pourrait-il ou devrait-il essayer d'obtenir une maison de Wartime Housing? De Housing Enterprises? Un logement transformé? Un logement d'urgence? Ou encore, devrait-il essayer de construire ou d'acheter?

Dès le début, la Division de l'information de la Société s'est rendu compte de ces problèmes. Elle s'est occupée de faire parvenir aux journaux et aux postes de radio tous les renseignements appropriés aux circonstances. Il est évident, d'après les commentaires publiés par certains journaux, que les rédacteurs ou éditorialistes étaient aussi peu renseignés que les citoyens ordinaires. Alors que ces renseignements étaient distribués du Siège social à Ottawa, les fonctionnaires de la Division de l'information se sont imposé de parcourir le pays, de s'entretenir avec les rédacteurs des organes d'information et de découvrir les questions qu'il était nécessaire de clarifier.

En plus de fournir des renseignements à caractère général, on a aussi fait circuler des renseignements précis sur certains points. Les démarches à faire pour obtenir un prêt hypothécaire pouvaient paraître une tâche formidable pour un jeune militaire qui quittait le service; mais une série de dépliants expliquant le mécanisme de l'obtention d'un prêt ont réduit cette difficulté à un procédé relativement simple. Des renseignements de ce genre ont été distribués partout, non seulement par les bureaux locaux de la Société, mais aussi par l'entremise des prêteurs, des constructeurs et d'autres groupes de personnes.

De plus, pour la première fois, la documentation et les

formules relatives à la LNH ont été publiées en français.

QUALITÉ DES PLANS ET DE LA CONSTRUCTION

Durant cette période de l'après-guerre, on se souciait surtout de la quantité des logements construits, mais il était compris dans le sens de la Loi que la qualité des logements était également importante; aussi, cet aspect n'a jamais été oublié même durant les moments difficiles de cette période. En 1946, sous les auspices de l'Institut royal d'architecture, la Société a lancé un concours de la "petite maison" afin d'obtenir des plans de maisons qui conviendraient aux besoins changeants des principales régions du Canada. La Société a publié une brochure de modèles de maisons et a vendu à un prix nominal des jeux complets d'épures. En 1949, un sixième des maisons financées au moyen de prêts prévus par la LNH étaient construites d'après des plans fournis par la Société. On a beaucoup insisté sur la qualité des plans et sur la qualité de la construction.

Une grande difficulté qui s'était révélée dans la construction de maisons au Canada avait été un manque d'uniformité dans les codes de construction des provinces et des municipalités. La National Housing Administration avait contribué, en 1941, à la publication du Code national du bâtiment. Ce code n'était en somme qu'un document consultatif, mais il fut adopté par un grand nombre de municipalités. Cependant, on exigeait que les maisons financées en vertu de la Loi soient construites conformément au Code et si toutefois les exigences de ce code différaient de celles du code municipal en cause, il fallait tenir compte des exigences les plus strictes.

Un certain nombre de constructeurs objectaient que les exigences de la Société étaient trop élevées mais par contre une partie du public objectait que les normes ne l'étaient pas assez.

La Société se chargeait de faire l'inspection de chaque logement construit en vertu de la Loi, de sorte qu'aucune avance n'était versée aux comptes hypothécaires si on ne s'était pas conformé aux normes. L'amélioration et la mise en vigueur des normes de construction de la Société se sont avérées dès le début un effort qui en valait la peine.

TRAVAUX DE RECHERCHES

En plus de s'occuper quotidiennement de faire observer des normes convenables, la Société a entrepris ou fait entreprendre des travaux de recherches destinés à améliorer éventuellement les méthodes de construction. Une entente financière et habilitante fut conclue en 1946, selon laquelle le Conseil national de recherches devait entreprendre des enquêtes techniques relativement à de nouvelles méthodes et à de nouveaux matériaux de construction, alors que la SCHL devait fournir un service de consultations et assurer la liaison avec les prêteurs, les constructeurs, les fabricants et les usagers.

On espérait, grâce à quelques découvertes technologiques importantes, pouvoir se départir des anciennes méthodes employées pour construire les maisons à la main, depuis la fondation jusqu'au toit. Il est arrivé souvent alors d'entendre des commentaires peu flatteurs à propos des techniques de construction de maisons que l'on a comparées, par exemple, aux lignes de montage des automobiles. Diverses personnes et certaines compagnies ont fait des efforts audacieux. On a proposé et mis à l'épreuve plusieurs systèmes en vue d'édifier des maisons en utilisant des éléments de béton fabriqués à pied d'oeuvre dans des coffrages spéciaux. Il y a eu en particulier l'entreprise ambitieuse d'une compagnie qui avait fabriqué des avions durant la guerre en vue de préfabriquer des maisons d'aluminium. La Société a accordé son appui à tous ces efforts ainsi qu'une aide financière prévue par la LNH, mais on n'a pas encore découvert cette formule magique bien que les travaux de recherches se poursuivent sans interruption.

On a fait aussi un autre effort considérable dans le domaine de la recherche économique. Il était étonnant, en 1946, de constater combien on possédait peu de connaissances au sujet de l'habitation au Canada. Il n'y avait même pas une façon satisfaisante de savoir combien de maisons on avait mises en chantier ou parachevées au cours d'une année. Un bon nombre de données statistiques qu'on avait jusqu'à ce moment-là jugées exactes ont perdu de leur valeur, une fois examinées de plus près. Les données relatives aux permis de construction accordés par les municipalités se sont avérées peu sûres pour diverses raisons. On obtenait des données sur les coûts de construction d'après des renseignements fragmentaires et on ne possédait à peu près aucunes données statistiques sur les ventes de maisons ou sur les prix exigés pour ces maisons.

En collaboration avec le Bureau fédéral de la statis-

tique et d'autres organismes, la Division de la recherche économique de la Société a pris des mesures pour corriger ces déficiences. Au cours de la dernière semaine de 1946, les compagnies qui prêtaient sur hypothèque se sont jointes au personnel des bureaux locaux de la Société pour effectuer un recensement complet de tous les logements en voie de construction dans le pays; à partir du 1er janvier 1947, le personnel de la Société a commencé à tenir compte méticuleusement de tous les logements mis en chantier ainsi que de tous les logements parachevés. Ce recensement qui n'a pas cessé depuis ce temps a servi à fournir des chiffres de base qui ont permis d'évaluer le progrès réalisé du point de vue quantitatif.

On a aussi établi des séries de données statistiques sur les prêts hypothécaires consentis aux termes de la LNH et sur les prêts conventionnels, sur les genres d'emprunteurs, sur les genres et les dimensions des maisons financées en vertu de la LNH; de ce premier effort, on est arrivé à l'excellent ensemble de données statistiques que la Société possède maintenant. Pendant un certain nombre d'années, on a publié ces données dans une revue trimestrielle de la SCHL, qui s'intitulait "Habitation au Canada." Depuis quelques années, la Société publie un rapport statistique annuel qui s'intitule "Statistique du logement au Canada" ainsi que des suppléments mensuels.

En plus d'accumuler les données statistiques, on a commencé des recherches économiques fondamentales. On a enquêté sur les conditions de vie — particulièrement en ce qui concerne le surpeuplement. On a étudié le coût de la main-d'oeuvre et de la construction en général. On a compilé des données sur l'administration des propriétés en prenant pour sources de renseignements les dossiers de la Société et en faisant un échantillonnage des compagnies d'immeuble.

On a entrepris des études afin de découvrir des façons d'évaluer avec assez de précision le besoin de logements. On a enfin établi une série de données statistiques sur la formation des familles, qui devait s'avérer l'un des principaux éléments indicateurs. On a examiné avec soin tout le domaine des prêts hypothécaires consentis sur propriétés résidentielles ainsi que les sources qui servaient à financer la mise de fonds. Toute cette étude a permis à la Société de publier chaque année, de 1947 à 1954, une autre brochure qui s'intitulait "Prêts hypothécaires au Canada."

En plus des recherches effectuées au sein même de la Société, on a versé des subventions à des universités afin de stimuler la décentralisation des recherches sur l'habitation et d'encourager les études sur le plan régional et local.

On a établi un échange régulier d'informations et d'idées avec d'autres pays; aussi, pendant plusieurs années, la Société a publié une brochure bimestrielle intitulée "Progrès de l'habitation à l'étranger."

AMÉNAGEMENT DES COLLECTIVITÉS

Le rapport Curtis avait indiqué que l'aménagement des collectivités ainsi qu'une prise de conscience des principes et des problèmes relatifs à cette forme d'activité de la part du public étaient indispensables à la réalisation et à la réussite d'un programme à long terme de construction de maisons. Le rapport recommandait que le gouvernement fédéral joue un rôle de premier ordre dans la propagation de cette idée.

En 1945 et en 1946, au cours de plusieurs conférences fédérales-provinciales, on avait parlé d'aménagement des collectivités. Au mois de juin 1946, une réunion organisée par la Société groupait des représentants des provinces ainsi que des délégués de l'Institut royal d'architecture, de l'Institut d'urbanisme, de la Fédération des maires et d'autres associations. De cette réunion est née l'Association canadienne d'urbanisme. La SCHL a fourni à la nouvelle association un secrétaire ainsi qu'un bureau. Pendant un bon nombre d'années, l'association a été appuyée en grande partie par des contributions que lui versait la Société. Son influence, qui a suscité et dirigé l'intérêt du public dans tous les aspects relatifs à l'aménagement des collectivités, a été très grande et va sans doute continuer de s'agrandir à mesure que le temps passe.

Durant cette période, la Société a aussi contribué d'autres façons à favoriser et à améliorer l'aménagement des collectivités. On a en effet entrepris des études sur l'utilisation du terrain ainsi que sur l'utilisation de la cartographie aérienne à des fins d'aménagement. La Société a accordé des bourses pour faire entreprendre des études en urbanisme ainsi qu'en des disciplines connexes et elle a patronné des cours d'été pour étudier des techniques d'aménagement, à l'Université McGill, en 1948.

Alors que l'on prenait toutes ces dispositions pour rendre la population consciente de l'importance de l'urba-

nisme, la Division de l'urbanisme, au Siège social, mettait à profit l'expérience acquise par la Société dans la réalisation des ensembles de logements à loyer pour les anciens combattants et d'autres genres de programmes, pour étudier l'aménagement des ensembles de logements et des lotissements comme une partie intégrante de son activité générale.

En 1946, 1947 et 1948, le nombre de logements mis en chantier a accusé des augmentations successives mais l'année suivante, soit en 1949, le nombre de ces logements fut légèrement inférieur à celui de 1948. Ce fut la première année où le nombre de logements parachevés a dépassé sensiblement le nombre net de familles formées. En effet, cette année-là, le nombre de maisons parachevées a été supérieur d'environ 11,000 à l'augmentation nette du nombre de familles, ce qui constituait une réduction considérable dans le retard apporté à répondre à la demande. Le coût de l'habitation s'est aussi stabilisé durant cette année bien que cela se soit avéré seulement une pose dans une courbe qui n'avait pas cessé d'être ascendante.

LE PROBLÈME DE L'AMÉNAGEMENT DES TERRAINS

Un autre problème important, soit la rareté des terrains pourvus des services, se fait maintenant sentir. Un bon nombre de municipalités avaient été grevées, au cours des années de dépression, de frais de dettes considérables occasionnés par l'aménagement des services sur des terrains, bien avant qu'il soit nécessaire d'utiliser ces terrains et très peu d'entre elles étaient disposées à se lancer encore une fois dans des entreprises de ce genre. Les constructeurs se voyaient donc obligés de financer l'installation des services, ce qui surchargeait une industrie déjà à court de capitaux.

La Loi a permis aux institutions prêteuses d'entreprendre des programmes d'aménagement de terrain; à cette fin, elle a fourni des garanties prévoyant le recouvrement des capitaux engagés. Six projets prévoyant l'aménagement de 1,500 terrains à bâtir ont été entrepris en vertu de ce programme, en 1949. On entretenait de grands espoirs pour l'avenir de ce programme qui n'a cependant jamais fait beaucoup plus de progrès.

En effet, l'aménagement de terrain, à partir du terrain vague dont on faisait le lotissement, l'installation des services d'aqueduc et d'égout, la construction de routes et de trottoirs et enfin la vente de ces terrains se sont avérés pénibles et coûteux du point de vue administratif pour les institutions prêteuses.

Au cours de 1949, la Société a aussi entrepris de son propre chef de réaliser certains projets d'aménagement de terrain. Cependant, ce genre d'activité entreprise directement par un organisme fédéral ne constituait pas une réponse à cet important problème que l'on continue à ressentir.

ÉLIMINATION DES TAUDIS

Un autre élément qui n'a pas tardé à prendre une certaine importance en 1949, en particulier dans la situation générale du logement, fut l'élimination des taudis que l'on désigne de nos jours pas un euphémisme, soit la rénovation urbaine. L'existence des taudis et, par conséquent, la nécessité de les éliminer, avait été nettement reconnue entre les deux guerres au point que dans certaines villes, des comités de citoyens s'étaient mis à l'oeuvre pour essayer d'encourager l'élimination des taudis. Cependant, durant les années de dépression, les municipalités ne disposaient d'aucuns fonds à cette fin. Le rapport Curtis avait souligné le besoin d'une façon très précise et la Loi de 1944 avait prévu des moyens dont le gouvernement fédéral pourrait aider financièrement à réaliser cette activité.

Immédiatement après la guerre, alors que les logements étaient le plus rares, il n'était pas possible de démolir même les pires taudis, alors que pendant de courtes périodes de temps, certaines familles d'anciens combattants étaient obligées de vivre dans des garages. Toutefois, le besoin social impérieux se faisait toujours sentir et reconnaître.

En 1948, la ville de Toronto décida de déblayer un secteur de taudis qui avaient occasionné beaucoup de soucis depuis le début des années trente. Le gouvernement fédéral accorda une subvention d'un million de dollars pour aider la ville à faire l'acquisition et le déblaiement de 42 acres de terrain où, par la suite, une compagnie à dividendes limités appartenant à la municipalité a construit 1,000 nouveaux logements. Ce fut le début d'un programme de rénovation urbaine qui devait prendre une importance et des proportions considérables.

Mr. Safdie recently attended an architectural symposium at Roorkee in India. In the first of two articles, he gives his impression of the country and writes about the difficulties confronting India as it attempts to provide housing for an immense population.

WHY NOT UTOPIA?

Part I: Impressions of India by Moshe Safdie

Our concepts of urbanism are acutely tested in India. We talk of the need to meet great volumes of construction; India must house 700 million people in 30 years. We talk of the need for regional and national planning; India must decide where to settle 700 million people, shifting from rural to urban regions and where to create new metropolitan centres and where to establish industry.

We talk of the need for industrialization and mass production, yet India must build physical plant and a livable environment for numbers beyond our comprehension and without existing industrial plants. Decisions on economic priorities must be made: should capital be used for the heavy industry and plant vital to the economic life of the country or directed to increased living standards that will mean the end of survival and starvation. India must also find a balance between production for consumer needs and production for industrial requirements.

All our political convictions and the conflict between the have's and have not's—which have evolved in the West on a national basis are now confronted on a world-wide basis. Concepts of wealth distribution and social security that are now accepted within national boundaries, disintegrate when the West confronts the East, when the standard of living in India confronts that of Canada or the United States.

The existing urban scene in India can be likened to a street scene next to a stadium following a football game. Tens of thousands of people streaming down the streets, filling sidewalks and roadways, interfering with traffic. This is the urban and even the rural scene along highways. Tens of thousands of men, women and children on carts, trucks, animals and on foot, endlessly moving.

If we have come to accept minimum standards of living in the West, they are shattered when we tackle the urban housing problem of India. The problem is the portion of the gross national product of India which can be diverted to the construction of the environment, divided by the number of people that must be housed. It means the resources available for the housing of a single family will result in a type of shelter and urban settlement formerly unknown to us. It means the technical ingenuity which is available today will have to be directed towards making this minimum as livable as possible. The problem of a single room housing ten people, with minimal hygienic services, built out of materials available within the land, constructed with ingenuity and permitting improvement

with time, is the problem India faces.

I have driven on highways under construction sometimes 200 or 300 miles in length. Piles of rocks along them are broken down into gravel by women using small hammers, mile after mile. The rocks become gravel, eventually to become a paved road.

I have seen 10-storey reinforced concrete buildings, scaffoldings of bamboo, with concrete mixed by hand and carried to the top by women, babies hanging in the structure while the mothers and fathers work. Large buildings with bricks made by hand and stones cut by human effort, laboriously growing. Four rupees a day for labour, eight a day for a craftsman and even that is four or five times the daily pay a few years back.

How does India go about providing for the numbers it must? At Roorkee, this was a central controversy. If capital is to be diverted to industrialize building, the immediate result would be mass unemployment. A single mechanized concrete conveyor might replace 100 workers. Mechanical gravel crushers for highway construction might put thousands of women out of work. The problem is similar to that of automation in the West, yet the housing needs cannot be met with the present methods. In the transitional period, millions of people would have to be re-established in other growing industries and services with the overall result of the gradual raising of the standard of living.

I take the view that India must continue developing the crafts and that construction must continue to be a hand operation, is a limited and narrow one which does not look beyond the immediate period of the next 5 or 10 years. In Roorkee, most of the Indian architects argued that India was capable of producing good brick and good adobe and these methods of construction should be explored and improved. Without denying this, the problem is how the pace of construction can be increased with a minimum of investment in machinery. This will necessitate a rigidly planned economy and India is moving towards it now. Otherwise, a catastrophe will take place.

It was ironical to visit India and speak about, "Why not Utopia?". We have not achieved Utopia in the West where we have the wealth and the means. Utopia in India seems like sarcasm, but it was said with the conviction that living standards globally are becoming even, that world politics and hence the world economy is moving towards balanced living standards. Our Utopia must be India's Utopia, and by striving to achieve it here we are, at the same time, striving to achieve it in India. Certainly, without the political conviction that we are moving towards equilibration of world economy, the paradox of India's living urban environment is unanswerable, for the population growth rate overshadows the means. A concrete mixer amortized against equivalent labour at four rupees a day may make sense yet, but then this is the measure of one economic system applied against another, to appear as a logical answer to an illogical situation.

India is a country of concentrated beauty. The beauty of its people is magnified by the beauty of artifacts, the beauty of clothes, the beauty evolved through centuries. A vernacular has evolved — the lota, the sari, the adobe village, a sense of colour and form, and a sense of the use of material which is the extreme of economy and perfection of form.

What India is building today is a conglomeration of bastardized monstrosities of the worst of Western architecture. India must extend its tradition to evolve its own building vernacular based on its climate, on its economy, on the structure of its society, of the materials available to it, expressing the severity of the economy which it must satisfy.

Mr. Safdie, born in Israel, is a graduate in architecture of McGill University. He was awarded nine prizes and scholarships including the Lieutenant-Governor's Gold Medal, The Hugh McLennan Memorial Travelling Scholarship, the Louis Robertson Prize for Design, the Turnbull Elevator Prize for a Technical Paper and the Central Mortgage and Housing Corporation Travelling Scholarship. The CMHC Scholarship enabled him to make a study of U.S. and Canadian housing. He has also travelled extensively in Europe studying the living environment. In 1962, he worked for Louis I. Kahn in Philadelphia. He returned to Canada in 1963 and joined the Canadian Corporation for the 1967 World Exhibition. He entered his own practice in 1964 and was also associated with the firm of David, Barott, Boulva in a joint venture for Habitat '67.

M. Safdie a pris part récemment à un symposium sur l'architecture à Roorkee, en Inde. Dans le premier d'une série de deux articles, il nous transmet ses impressions de ce pays et nous fait part des difficultés auxquelles l'Inde doit faire face pour tenter de trouver une solution au problème du logement de son immense population.

POURQUOI PAS L'UTOPIE?

1ère Partie: Impressions laissées par l'Inde: par Moshe Safdie

Nos concepts de l'urbanisme tels que nous les comprenons de nos jours, sont sérieusement mis à l'épreuve en Inde. Alors que nous parlons du besoin de réaliser des volumes considérables de construction, l'Inde doit loger 700 millions de personnes d'ici 30 ans. Alors que nous parlons du besoin d'aménagement régional et national, l'Inde doit décider des endroits où elle doit établir 700 millions de personnes qui se déplacent des régions rurales vers les régions urbaines, déterminer des endroits où elle doit créer de nouveaux centres métropolitains et choisir des emplacements pour y établir des industries.

Alors que nous parlons du besoin d'industrialisation et de production massive, l'Inde doit édifier des usines et créer de toutes pièces un milieu habitable pour des quantités de personnes que nous pouvons à peine imaginer et sans qu'il existe, en ce moment, aucun genre d'usine industrielle. L'Inde doit prendre des décisions relatives aux priorités économiques, à savoir: devrait-on employer les capitaux disponibles pour installer des industries lourdes et des usines qui sont essentielles à la vie économique du pays ou devrait-on les employer à augmenter les normes de vie qui mettraient fin à cette lutte pour la survie et contre les privations? L'Inde doit aussi trouver un juste milieu entre la production pour répondre aux besoins des consommateurs et la production pour répondre aux exigences des industries.

Toutes nos convictions politiques ainsi que le conflit qui existe entre posséder et ne pas posséder — qui se sont développés en Occident sur le plan national sont maintenant répandus dans le monde entier. Les concepts de la répartition des richesses et de la sécurité sociale que l'on a maintenant acceptés à l'intérieur des limites d'un pays, se désagrègent lorsque l'Occident rencontre l'Orient, lorsque l'on compare les normes de vie en Inde à celles du Canada ou des Etats-Unis.

On peut comparer la situation qui existe en ce moment dans les villes en Inde à une scène de rue à la sortie d'un stade après une partie de football. En effet, des dizaines de milliers de personnes remplissent les rues, les trottoirs et les voies publiques et nuisent évidemment à la circulation. Telle est la scène qui se reproduit dans les villes et même à la campagne le long des routes principales. On retrouve là aussi des dizaines de milliers d'hommes, de femmes et d'enfants sur des chariots, des camions, à dos d'animal et à pied, qui défilent sans interruption.

Si nous sommes arrivés à accepter des normes minimums de vie en Occident, ces normes n'ont plus de sens lorsque nous nous attaquons au problème du logement dans les villes de l'Inde. Le problème consiste à déterminer la portion de la production nationale brute de l'Inde que l'on peut affecter à la construction du milieu, divisée par le nombre de personnes à loger. Le résultat indique que les ressources disponibles pour loger une seule famille vont permettre de construire un genre d'abri et d'aménager un genre de milieu urbain jusqu'à maintenant inconnus de nous. Il indique également que l'habileté technique dont nous disposons de nos jours, devra être employée de façon à rendre ce minimum aussi habitable que possible. La possibilité de réaliser une seule pièce pouvant loger dix personnes, pourvue des services hygiéniques minimums, en utilisant les matériaux disponibles au pays même et que l'on puisse améliorer éventuellement, tel est le problème auquel l'Inde doit faire face en ce moment. J'ai pu voir tout le long de ces routes sur des distances de 200 à 300 milles des femmes occupées à réduire en gravier des monceaux de pierres à l'aide de petits marteaux. Ces pierres, devenues gravier, serviront éventuellement à paver la route. J'ai aussi vu des bâtiments de béton armé de dix étages en voie de construction, où les échafaudages étaient de bambou, où le béton était malaxé à la main et transporté jusqu'au sommet par des femmes alors que les bébés étaient accrochés à l'intérieur du bâtiment pendant que le père et la mère travaillaient. Ainsi, de grands bâtiments dont les briques sont fabriquées à la main et les pierres sont taillées également à la main prennent forme laborieusement sur le sol de l'Inde. Les manoeuvres reçoivent quatre roupies par jour et les hommes de métier huit roupies; mais ce faible montant représente quand

même quatre ou cinq fois les gages que l'on payait il y a quelques années.

Que fait l'Inde pour procurer tous les logements qui sont nécessaires? A Roorkee, cette question a fait l'objet d'une polémique importante. Si on employait des capitaux pour industrialiser la construction, il en résulterait immédiatement une situation de chômage massif. Un simple tapis roulant pour transporter le béton pourrait remplacer cent ouvriers. L'emploi d'un concasseur mécanique à gravier pour la construction des grandes routes pourrait priver d'emploi des milliers de femmes. Le problème est donc semblable à celui de l'automatisation en Occident; d'autre part, on ne peut pas répondre aux besoins de logements en utilisant les méthodes actuelles. Au cours de la période de transition, il faudrait rétablir des millions de personnes dans d'autres industries et services en voie de développement, ce qui aurait comme résultat général d'élever graduellement les normes de vie.

Je suis d'avis que l'opinion suivant laquelle l'Inde doit continuer à mettre en valeur ses métiers manuels et s'en servir pour réaliser la construction nécessaire est une conception bornée et étroite de la situation qui ne voit pas au delà de la période immédiate des cinq ou dix prochaines années. A Roorkee, la plupart des architectes indiens ont soutenu que l'Inde était capable de produire de la bonne brique et un bon adobe et qu'il faudrait étudier davantage les moyens d'améliorer ces méthodes de construction. Tout en admettant ce fait, il reste à établir comment on peut accélérer le rythme de la construction en n'affectant qu'un minimum d'argent à l'achat de la machinerie. Il faudra nécessairement établir une économie planifiée avec beaucoup de rigidité vers laquelle d'ailleurs l'Inde s'achemine en ce moment. Autrement, il va se produire une catastrophe.

Il était plutôt ironique de visiter l'Inde et de parler d'utopie. Nous n'avons réalisé aucune utopie en Occident où nous possédons des richesses et beaucoup de moyens. La mention d'utopie en Inde semble être du sarcasme, mais on l'a faite avec la conviction que dans l'ensemble, les normes de vie deviennent de plus en plus les mêmes pour tous, que la politique mondiale et, partant, l'économie du monde entier, contribuent petit à petit à établir des normes de vie mieux équilibrées. Notre utopie doit être l'utopie de l'Inde et en nous efforçant de la réaliser chez nous, nous nous efforçons en même temps de la réaliser en Inde. Il est certain que sans la conviction politique que nous nous acheminons vers un équilibre plus stable de l'économie dans le monde entier, il n'est pas possible de résoudre le paradoxe du milieu de vie urbain en Inde, car l'augmentation de la population surpasse les moyens disponibles. L'amortissement du prix d'une bétonnière par rapport à la main-d'oeuvre équivalente, à raison de quatre roupies par jour, peut bien ne pas paraître sensé; mais alors, on ne fait que comparer la mesure d'un système économique à une autre, ce qui semble être une réponse logique à une situation illogique.

L'Inde est un pays de beauté concentrée. La beauté de son peuple est amplifiée par la beauté de ses produits ouvrés, la beauté des vêtements, beauté qui s'est développée au cours des siècles. On y retrouve un ensemble de traditions propres à ce pays — le lota, le sari, le village d'adobe, un sens des couleurs et des formes ainsi qu'un sens de l'utilisation des matériaux qui tient compte en même temps de mesures extrêmes d'économie et d'une perfection de la forme.

Ce que l'Inde construit de nos jours est une conglomération de monstruosités abâtardies imitant les pires exemples de l'architecture occidentale. L'Inde doit faire en sorte que ses traditions se manifestent dans une façon propre de construire ses bâtiments en tenant compte de son économie, de la structure de la société, des matériaux dont elle dispose, tout en exprimant l'austérité de l'économie qu'elle doit satisfaire.

M. Safdie, qui est né en Israël, est diplômé en architecture de l'Université McGill. Il a déjà mérité neuf prix et bourses d'études dont la médaille d'or du Lieutenant-Gouverneur, The Hugh McLennan Memorial Travelling Scholarship, le prix d'esthétique Louis Robertson Prize, le Turnbull Elevator Prize pour la rédaction d'un ouvrage technique ainsi qu'une bourse de voyage d'étude de la Société centrale d'hypothèques et logement. Cette bourse lui a permis de faire une étude de l'habitation dans certains milieux aux Etats-Unis et au Canada. Il a aussi beaucoup voyagé en Europe où il a étudié la situation du logement. En 1962, il a été au service de Louis I. Kahn de Philadelphie. Il est revenu au Canada en 1963 où il est entré au service de la Compagnie canadienne de l'Exposition universelle de 1967. En 1964, il a établi son propre bureau et s'est associé au bureau de David, Barott, Boulva pour réaliser avec eux "Habitat 67".

An example of "half-timber" work on an English town house.

PEN DRAWINGS BY JANET L. MARTZ

THE PAST IN THE PRESENT

The old single-family dwelling in Western Europe

by Roger H. Charlier and Patricia S. Charlier

Europe probably offers a larger range of habitations than any other continent. Each dwelling is typical of its own country yet each shows striking similarities of architectural design.

The old Europe is still heavily concentrated along the harbor installations and river banks; true, the skyscraping apartment complexes of sober and sleek modern design with over-abundance of glass have sprouted up in the heart of the city, at its fringe and in the suburbs. But equally true is a move to shorten commuting distances and to have privacy in one's single-family house if one can afford it, because the old way may prove far more expensive than the modern way of living.

We have often been asked: "Where would you rather live?" There is no answer to that question because each place, each area, each country has its own poles of attraction, its own charm, its own "cachet" as the French call it — and, of course, its own drawbacks. Similarly, there is

no single formula to describe the European dwelling — each has its own "cachet". England with its small modest countryside cottage and its imposing city houses; France with the nonchalant air of neglect throughout the countryside and the magnificent châteaux of the wealthy; Italy with gaily colored modest homes all along the streets and its huge villas with magnificent gardens; lastly, Switzerland with the clean, fresh air and the houses expressing the decorative design and the Swiss love for nature.

Many, before visiting England, think of old English homes with nestling roofs of thatch; others have visions of beautiful half-timbered walls; still others consider brick or stone as typically old English. Actually, all are correct in their thoughts for there is a wide difference in English country-houses. Some are medieval in character while others lean toward the classic; some are both. They are the immediate forerunners of our early American homes.

Some characteristics are common to all English cottage homes: the use of entirely local material, for example. "They are buildings of the soil; they belong where they are built; and they appear to have grown out of the surroundings."[1]

All are built on a small scale; the windows are small; the doors are low, not larger than is necessary to pass through; the main floor is practically on a level with the ground; the ceiling is often within the reach of an upstretched hand; the roofs slope down for protection, often to the tops of the first storey windows.

The windows of the English cottages are usually units of the same size. Instead of making larger windows for more light, the builder added extra units. The roofs have long unbroken slopes and dormers are seldom used. If light were needed in an upper storey, the roof was usually lifted to make room for the window and the thatch was shaped around it. The chimneys are large, usually massed and display many varieties.

The English village carpenter and mason was the pride of the village, an artist unworried by such problems as water dripping over the doorway. He was always inspired by a natural fancy and invention for distributing the materials at hand, in just the right proportions.

The great variety of cottage types throughout England is due to the different local building materials available, both natural and manufactured. The southeast part of England was heavily wooded and the houses were built of tree trunks. Forest depletion, due to the misuse of wood, led to the omission of timbers in the construction of the walls and their use only as support against the wind and as wall braces. Instead of timber, plaster and boughs were called upon, sometimes stone and brick. From this stage of building came the name "half-timber" work, which was literally exact, half timber and half a filling of some type.

Thatch, brick and large chimneys are often ingredients of the English cottage.

[1]*Marcia Mead, 1926, "Homes of Character": Dodd, Mead, and Company, New York, pg. 104.*

The southern region of England attained a high degree of prosperity through the iron industry and became famous for its ornamental work. The eastern region became known for its manufacture of tile and brick. The smelters of the iron industry and the tile and brickmakers were cutting down trees for fuel thereby compounding the depletion of forests.

As wood became scarcer timber was used only as a frame for bracing the house against the wind. Tile was more extensively used and soon began to affect the outlines of the buildings by requiring construction of flatter, hipped roofs instead of high pitched gables. Tile was also used inside and outside the house for wall coverings.

In the counties of southeast England, Kent, Sussex, and Hampshire, many of the cottages are built of as many as five different types of materials — brick, stone, plaster, tile and timber. This is because different parts of the house were built at different times and of material available at the time each part was built.

Thatched cottages are found throughout the countryside of England, most often in Norfolk and Suffolk. Even though the thatch of the roofs is beautiful, it is impractical for it is difficult to make roofs watertight and is a serious fire menace as well.

Throughout history England has nurtured a jealous regard for social class and this has brought about distinctions in an ascending scale of elegance, from the humble farmhouse to the imposing manor; the higher the rank the loftier the rooms and more elaborate the features. The English Georgian style has an air of elegance and a sort of proudness; it shows perfect workmanship yet lacks any spirit of daring. Brick was a good, substantial material and the one most often used; chimneys appear extensively, sometimes four or five in a house, an indicator of comfort in the home in those days.

The Georgian style embodies the Roman arch, used for doorways and windows, often elaborately decorated according to the owner's social class. Roofs in the town houses were carried to such an extent that they were at times almost vertical, although some roofs are perfectly flat resembling a deck. Georgian dormers were kept simple with only enough eave to form a dip; the tops of the dormers were often curved making them seem as part of the roof.

A characteristic feature of the Georgian house is the garden wall. Family privacy has always been sacred to the Englishman and these walls help to insure it, for the wall actually seems to be part of the house.

Later, balconies made of light iron began to be added, usually for decoration, seldom for direct use. Iron was also used on the entrances of the houses in the form of trellises.

Many modifications have been incorporated in the newer houses but the style is very much the same. The thatch roof is often seen but because of its impracticability is becoming a thing of the past, though in continental Europe it is undergoing a revival.

FRANCE

The French house often creates an impression of neglect and utter lack of anything resembling neatness, particularly in the country farmhouse and, to some extent, in the city dwelling. The château remains the most impressive house.

The French château is rather mediaeval in character. It is usually rectangular in plan and often built around a hollow square or courtyard. The characteristic circular defense towers at the corners were originally used, but were later built square and were the origin of the pavilion which became so important in later centuries. A courtyard open on one side leaves the main portion of the building in the center, with advancing wings on either side.

The valley of the Loire produces an abundance of pleasantly colored rock, and this was used for ornamental purposes and delicate details. Nature also provides beautiful slate, almost black in color, and when used on the lofty roofs of the châteaux it produced a striking effect. Because of availability and easy handling this rock was used for walls in the châteaux, being varied occasionally with stucco and brick. The heights of the different storeys are usually indicated on the façade by molded belts of stone.

The windows of the château are large with many small panes of glass, and when very large there are two openings or transoms. Both the windows and the doors are usually square in form. Walls and openings of the château give an horizontal effect, yet roofs are decidedly vertical; in fact, everything about the roofs is pointed. The tips of the gables are topped off with iron workings and numerous chimneys are also pointed.

Many forms of elaborate and decorative molding are

Simplicity of design is shown in this example of a small French Manor.

found on the walls of the château; the dormer windows are square at the top and also decorated with carved wood. Against imposing entrance gateways are usually opposed small doors of the houses, their greater or lesser importance being indicated by the character and elaborateness of the molding and trim, often with some symbol, perhaps a monogram, or an item of personal family interest, giving this huge construction a personal touch otherwise lacking.

What a contrast with the small village dwellings in the French countryside. Houses are suited to the environment and to the geographic location; in the villages high in the Alps around Nice, houses are several storeys high made mostly of stone, because land suitable for building is not available. On the French farms the houses are often made of part wood and part stucco with roofs of a U-shaped tile. Simplicity is their dominant feature. In the south of France houses resemble those of the Italian; in eastern France, particularly in the Alps, they resemble the Swiss. Styles overlap with, at best, a gradual change of characteristics.

As the family bond in France is strong, especially in the countryside, houses are used for several activities: entertainment and stabling, for example. Barn and stable are often connected to the house and in this way all the family, livestock and products are under a single roof. In such cases, there are several entrances, one to the stable and two or three to the house proper. Thatched roofs are common on houses and even more so on sheds and barns.

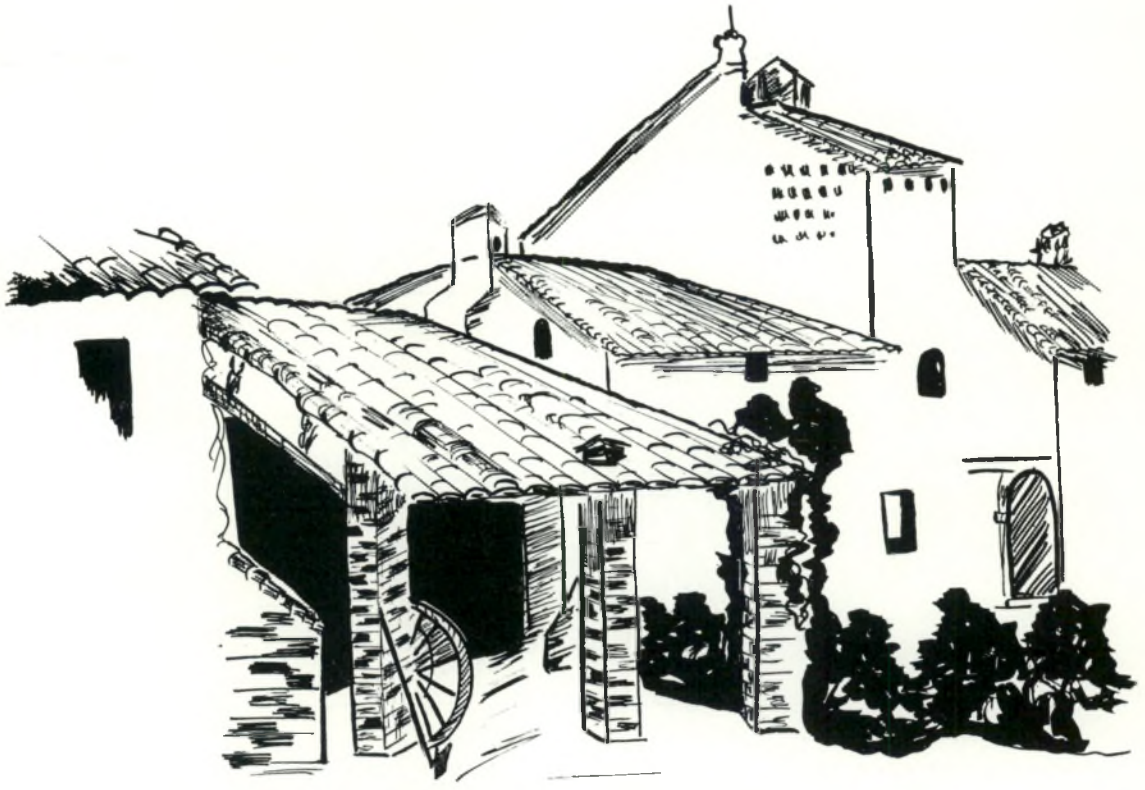
In the ports, fishermen's cottages are modest and made of timber, usually consisting of only two or three small rooms.

The French do not seem to have been as resourceful as the English in using all the available materials. The main supply source is wood and they use timber as the usual material for construction. Occasionally we find brick, stone and plaster in the smaller houses, although more often the châteaux are built of stone. The most important contribution to America by the French country home is the art of decorating walls on the inside of the house. This eventually led to the manufacture of wallpaper, and to-day manufacturers are working on old French designs for the industry.

ITALY

The influence of the Renaissance is seen in the homes as well as in cathedrals and castles. Gothic architecture is common throughout Italy with a fine balance between the vertical and horizontal lines.

In past days the place of business was built below the house, on the first floor, with living quarters above. In



The broken horizontal lines shown in this sketch are typical of the Italian Villa.

towns, the houses were built close together and the different heights caused an irregular gable line.

A distinguishable feature of Renaissance influence is the use of brackets and braces. Although a protective balcony adorned the second storey over the main entrance it became useful for practical living.

Builders for the wealthier class in Italy raised the heights of their houses to such an extent it became necessary to limit the height to which they could be built. Some had already built past this limit and had to "shave" off their towering roofs: thus came into being the projecting tile roofs, leading to the use of broad overhanging roofs supported by large carved brackets. Unfortunately, as the houses could no longer extend upward they began to extend outward, overhanging the street in bays or galleries.

The same demand for added space led the shopkeeper to build a deep projecting roof over his shop door, supported first by braces and later by posts or columns; these covered portions were used for social functions as well as business transactions.

The masonry work of the first storey was usually rustic, carefully jointed, the entrance being arched with wedge-shaped stone. The upper storeys were of brick covered with polychrome stucco, work in which the Italians excelled. Examples of these colored buildings are seen all over Italy, especially in the sunnier southern climate where the colors seem even gayer. In Rome, deep orange tones are found and in the northern part of Italy, browns and shades of brown are more extensively used.

The small, modern Italian villa retains many traditional features; the low-pitched, tower-topped roof with wide timbered projections over the higher part; the dignified entrance arched with stone or stucco; the attractive window balcony with simple stone or plaster trim around the windows of the main rooms; small columns and the garden porch at the rear of the house.

Because the Spanish style is well known, one often hears it said that every house with a tile roof and a wall of stucco is "Spanish". The French and Italian homes along the Riviera and the homes of the Spanish peasants reflect similarity in styling, which, for lack of a better word, might be called Latin. But the more pretentious home shows a

characteristic peculiar to locality and people.

SWITZERLAND

Swiss villages consist of a dozen or two brown, wooden houses. A house is two storeys high and has a picturesquely carved balcony overlooking the village street; some have them on all four sides and multiple storeyed houses may even have a balcony on each storey above the first. The gabled roof is covered with shingles and the front of each roof extends far out from the house to protect the balcony from the snow. Where the house is in the direct path of the wind, the Swiss put huge rocks on each side of the roof, about a foot from the edge, to hold the roof down. Flower boxes adorn the balconies. The contrast of the brown house, the colored flowers and the white snowcapped mountains in the background is stunning.

In the Spring these little Swiss villages come awake. The cattle and the goats are collected from the field and stable and formed into a long procession led by the village herdsman, who will take them into the mountains for summer pasture; while there the herdsman lives in a low stone hut, usually of not more than one room. This semi-nomadic life with its seasonal movement of livestock is known as transhumance. The huts in which the herdsmen stay are also useful in the winter if anyone gets lost or needs shelter from the snow.

A typical Swiss house is made of wood, colored yellow, with brown bracing along the walls of the building. The first floor might be commercial, the second storey has many windows topped with a decorative design on brown wood and window boxes brimming with gaily colored flowers. The third storey has a balcony, again with window boxes filled with flowers. The two huge windows might have brown shutters and window boxes. The roof may overhang quite a bit at this level; very wide, it may have a very steep slope at first and then gradually taper off to a lesser slope. Often there is only one chimney on the roof for heating the entire building.

CONCLUSION

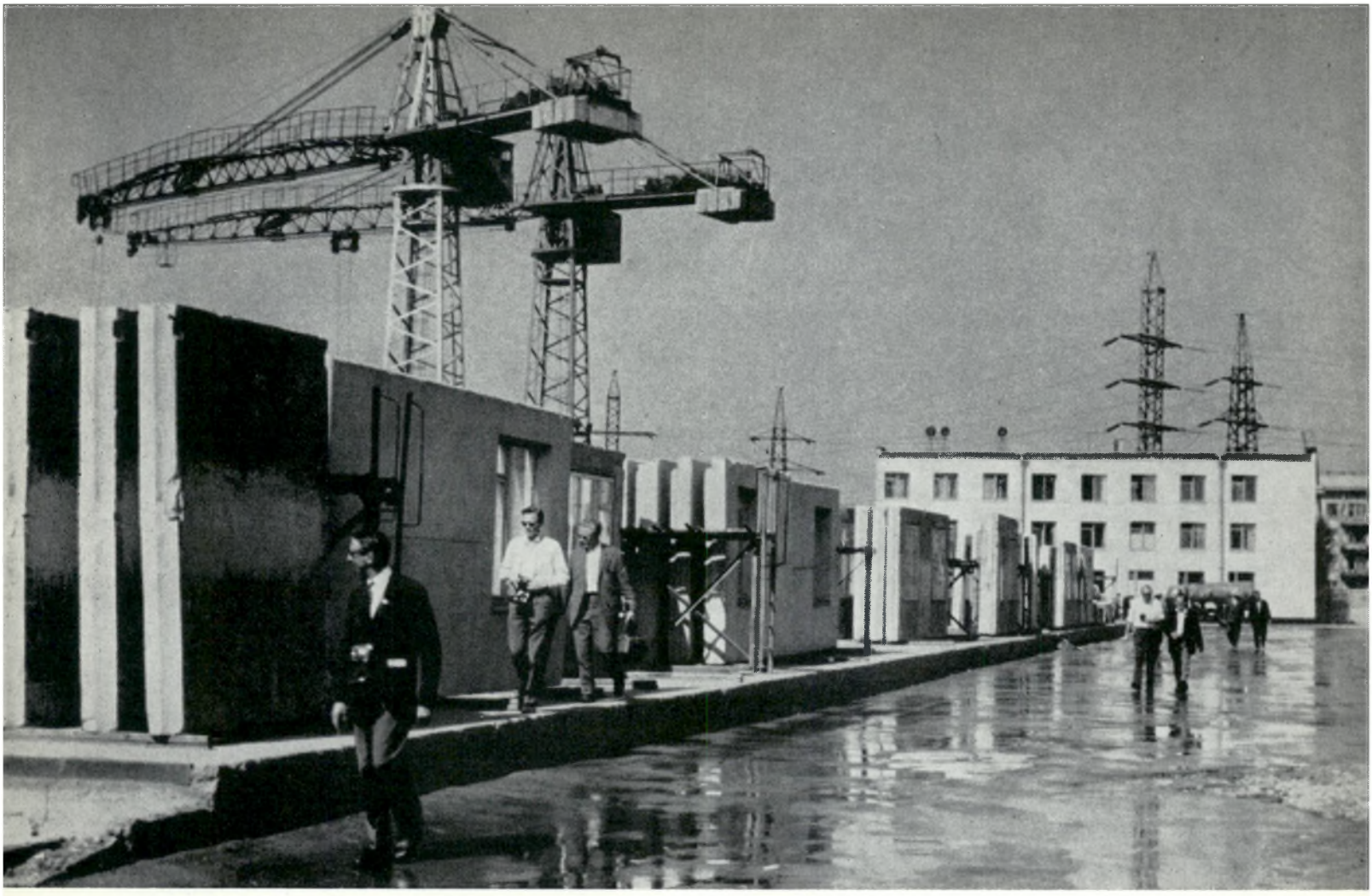
The environmentalist will be led to draw conclusions linking people and trends: the English home, he will hold, reflects the conservatism of the British, and their practicality; the French châteaux and houses mirror the love for grandeur and the "devil-may-care" attitude of the farmers; the Italian homes show the happy attitude with which they were built; in Switzerland, cleanliness of design and gaiety proclaim an atmosphere of contentment.

History has had its effects on the architecture of these countries and this, in turn, has influenced us and our building styles in North America. The charming small homes of the English countryside compared with the haphazardness of our modern day developments, suggest the English homes have grown out of national character while those in North America have grown out of necessity and the basic need for shelter.

Dr. Roger H. Charlier was born in Antwerp, Belgium, in 1921. He has studied in Belgium, France, Germany and America and among his degrees he has his Ph.D. (phys. geog.) Friedrich-Alexandra University, Germany, 1947; Litt.D.—1957 and Sc.D.—1958, Paris. His travels have taken him constantly to Europe, Asia, Pacific and South America and he speaks seven languages including Swahili, Flemish, Italian and Dutch. A frequent contributor to journals around the world, Dr. Charlier has published more than 480 articles to date, including nearly 100 appearing in scholarly periodicals. He is currently Director of Educational Travel Vocations International Incorporated and Professor of Geography and Oceanography, Illinois Teachers College, Chicago-North.

Professor Patricia Charlier was born in Enderlin, North Dakota. She graduated from Minnesota in 1944, obtained her doctorate in 1960 and has studied at the Universities of Aix-Marseilles and Paris. She also holds a permanent certificate as Principal and high school lecturer of English and Social Science.

Professor Charlier's subjects are comparative education, teachers training, the psychology of education and educational statistics. Her recent appointments include Visiting Professor at Western New Mexico University; Visiting Professor, Loyola University in Chicago 1964-65 and Associate Professor, University of Illinois—Chicago, the position she now holds.



Precast concrete wall sections such as these, are fabricated mainly for apartment buildings and are produced complete with windows or door openings.

Construction in the U.S.S.R.

by P. J. Sereda and E. G. Swenson

Mr. Sereda is Head, Inorganic Materials Section, Division of Building Research, National Research Council, Ottawa. Mr. Swenson is Research Officer, Inorganic Materials Section of the same Division.

Some time ago we had the privilege of visiting the Soviet Union. Our purpose was to learn something of Soviet development in pure and applied research on cement, concrete and related building materials and the great emphasis placed on the acceleration of processes and procedures. We were also able to observe the performance of these materials in actual construction, particularly housing developments.

Today, construction in the U.S.S.R. is proceeding on a vast scale. In Kiev, for example, more than 40 per cent of all buildings destroyed during the war have been cleared to make way for new construction. Many slum areas are being rebuilt and we saw some examples in old, pre-revolutionary housing that could be called tenement slums. Their condition appeared grim and they were scheduled to be rebuilt. Houses in the State farms, although only seen from a distance, appeared to date back to the early 1900's.

An outstanding characteristic of this new housing in the U.S.S.R. is the complete absence of the single-family dwelling. Everyone lives in an apartment block complete with schools, stores and other facilities. These blocks may contain up to 10,000 people and extend for miles along a particular street, the Lenin Boulevard in Moscow, is an example.

Apartment unit design is simple and functional, although the first impression is one of monotony and drabness, judged by Western standards. However, by varying the color of balconies, adopting various exposed aggregate panels and by using mosaics, an attempt is being made to render a pleasanter design.

All aspects of the building industry are controlled by the State. At the top is the Council of Ministers. From them originate the All Union Supreme Economic Council, followed by the State Committees in charge of building itself. The most important are: Gostroy (building construction) and Gosplan (home building planning). These particular State Committees are in charge of the factories, site organizations and research institutions. There is also the relatively new State Committee for the Co-Ordination of Scientific Research. It has a staff of 600, and appears to determine whether there is any duplication or waste between the many large research institutes.

One of the major characteristics of new Soviet housing is the predominance of precast concrete and the development of full scale wall units of standard dimension.

These apartment blocks are typical of the large Russian developments which, complete with schools, stores and other facilities, may house up to 10,000 people.

Wood, brick and other materials are used to a much smaller extent than in Canada. However, in Lvov, the raw materials available favour the use of clay brick found in the area. Surprisingly, two very important items common to the Canadian building industry were totally absent in the U.S.S.R. — ordinary concrete blocks and ready mixed concrete.

In Moscow and Leningrad we visited three factories which produced precast concrete units. These are designed mainly for the construction of apartment housing. From the start of the operation to the time the panel could be installed, the main criterion was speed. Complete wall sections, with window or door openings, were precast as a single unit. Some of the wall panels were made with exposed aggregate, some with smooth surfaces for interior paint or wallpaper application, and others for normal stucco rendering. Although quality did not appear to suffer to any great extent, the methods used to achieve speed did not always conform with Western economic requirements. Dense ordinary concrete is used for most elements, while lightweight concrete is used for many precast wall sections. The latter is a cellular and lightweight aggregate type used primarily for insulation purposes. Floor and roof sections are often precast in waffle, ribbed and multi-cored designs.

Special attention is given to the use of local and waste materials. For example, in the Ukraine much research has been done on the use of the perlite which is mined in the area. And when we were there we saw such products as a lightweight bitumen-perlite roofing slab and an experimental house made largely of strawboards. Much daring was shown in trying new materials, processes and combinations, although it was evident that Soviet builders are not so limited as we are by competitive economics.

Plant capacity was hard to assess from the figures given to us. In the most highly automated plant we saw in Moscow, each of the two assembly lines produced 500,000 sq.m. of wall slabs per year (in various thicknesses). These external loadbearing panels were made from cellular concrete about 10 inches thick. Partition walls are made from normal, dense concrete and serve also as bearing walls for the floors. Roof and floor slabs are made from normal reinforced concrete. The outside wall panels are 18 ft. long and the full wall height is about 8½ ft.

At another Moscow plant some 315 employees, including 50 engineers and 30 administrative staff, produce 360 to 400 panels per day, in three shifts. At least half of these workers were women. Radio announcements and large signs constantly reminded the worker of his duties, his privileges, and his important place in the national effort. However, safety and cleanliness in these factories could not be classified as particularly good by Canadian standards.

An outstanding feature of the Leningrad factory was the combination, under one management, of manufacturing and site construction operations. The 2500 employees were split evenly between these two operations and produced all the major elements for housing construction.

SITE CONSTRUCTION

This combined operation in Leningrad has already built 250 apartment houses in the city, with a total of 14,000 flats. The rate of construction is 8 apartment houses, or 400 to 450 flats, per month. On one vast development, twenty to twenty-four apartment buildings were being constructed simultaneously, and they were scheduled to take only 3 months. There are 10 apartments per storey and the units themselves were either 5, 7 or 9 storeys in size. Throughout this operation speed of erection was the theme and, as far as we could see, quality was satisfactory but not outstanding.

We also visited one of the many large housing developments in Moscow. It was called an "experimental district" because of the various materials and techniques being tried out here. A large array of apartment blocks, each from 6 to 16 storeys, were designed to house 10,000 people. An interesting feature of the construction was the building of one storey per night, from 11 p.m. to 7 a.m. Each development or "district" is self-sufficient, with stores, schools, theatres contained within the development, and other services such as park areas and playgrounds including a large kindergarten school for the children of working mothers. An example of a very large precast site-assembled concrete building is the Russia Hotel which, it is reported, will be the "largest" hotel in the world.

In Leningrad the larger developments are being constructed in the marshy wasteland common to this coast on the Gulf of Finland. In Kiev, a major development is being built on an island in the Dnieper River. The island is being enlarged by dredging sand from the main channels and apartment houses are being constructed here on concrete pads rather than on piles.

APARTMENT UNITS

A typical apartment house generally consists of a precast concrete frame, with the full wall panels set in these frames and fastened by welding. The frame is built up just ahead of the wall and partition slabs and is not designed to take the full loads, these are carried mainly by the partition and interior wall sections. Besides window and door openings, holes and grooves are provided to permit the easy installation of building services. While exterior walls were given a cement-type wash, others were stuccoed, and some were made with exposed aggregate and mosaic inlays for decorative purposes. But attractive features were generally obtained more by trees and landscaping rather than by the use of architectural techniques. Entrances were simple and entirely functional. In Kiev and Lvov there seemed to be a greater tendency to adornment than was noted in Moscow and Leningrad.

We were given the opportunity of seeing the inside of several new apartments in both Moscow and Kiev. In Moscow we saw one-, two- and three-bedroom apartments in a block. The walls were finished with paper applied directly on the concrete and windows were double-glazed with wood frames which appeared a bit rough. Parquet floors were the rule, although in the hall and kitchen a linoleum tile was use with ceramic tile in the bathroom and hallway. Room sizes were small by our standards — the ceiling height was about 8 ft. Sinks and bathtubs were not built-in. The kitchens were quite small with a range similar to our small, cottage types. Space was allotted or estimated on the basis of 26 to 35 sq.m. per family or 9 sq.m. per person. Heating was by electricity, air or hot water, as this was in an "experimental district".

In Kiev we were shown a three-room apartment with a total area of 50 sq.m. and intended for five persons. It had parquet floors with lime plaster on the walls and ceiling. The rent was 12 to 15 roubles per month but this was expected to increase.

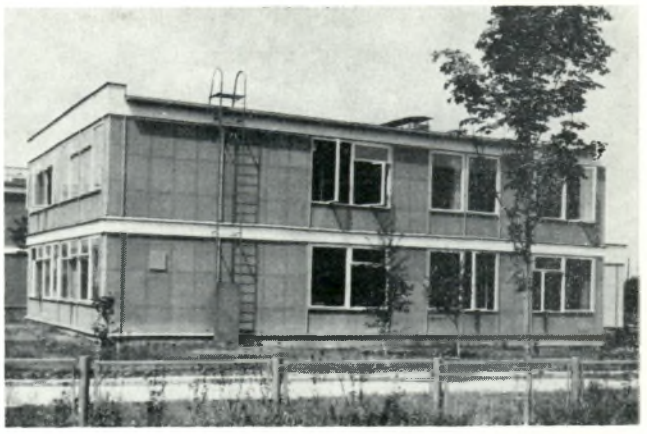
Again, these apartments would be considered small by Canadian standards and in the cast of some items, such as the wood furnishing, the workmanship was not of the best. Otherwise, they were quite attractive and modern although they would be required to accommodate more people per unit area than in North America. Such crowding in new quarters can only be tolerable while slums and tenement-type buildings exist. The Soviet efforts to eliminate such conditions are probably as well-intentioned and as slow as our own.

As for rents, the rouble is equivalent to the American dollar. Most goods on sale in stores are generally priced in roubles in the manner they are priced in our stores. Salaries in the U.S.S.R. for the majority of workers run from 60 to 100 roubles per month. So it would appear the Soviet citizen is paying up to four times as much for normal articles as we would, relative to respective incomes. Therefore, the very low rentals of 12 to 15 roubles must be evaluated accordingly.

The apartment buildings and developments described were recent ones of the last eight to ten years, but we examined older ones as well. It was evident that Soviet building practice, like ours, has been subject to mistakes and bad judgments. We noted an extensive use in the older buildings of a large clay or shale exterior facing tile. These were placed over a back-up brick wall. A large number of these had clearly been replaced, and we observed serious deterioration in progress on much of the tile on these walls. The newer tiles appeared to be of better quality.

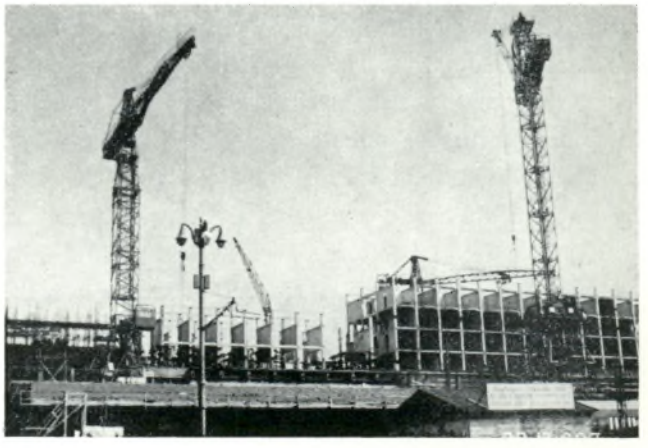
In Kiev the apartment blocks built about fifteen years age were somewhat ornamented. The newer ones are much simpler in design. There is now an obvious effort to achieve attractiveness by other means. Today, some of the new hotels, including those under construction are modern in design, with glass curtain-wall construction as a prominent feature.

Although the new housing and industrial developments are located in suburban areas with spaciousness a standard feature, the rebuilding of the built-up sections of the cities has not been restricted too much by pre-existing buildings. Many miles of streets have been broadened, and it was evident that old sections had been ruthlessly demolished.



A kindergarten school of the kind found in the large, self-sufficient, apartment complexes. The school is for the children of working mothers.

A major development in Kiev is being built on an island in the Dnieper River. On sand beds as deep as 100 feet, apartment homes are being constructed on concrete pads rather than piles.



This very large, precast, site-assembled, concrete building will be the Russia Hotel when completed.

Ornamented apartment blocks in Kiev. These buildings were constructed about fifteen years ago. The newer ones are less ornate in design.

RESEARCH INSTITUTES

Research in building and materials in the Soviet Union appears to be organized on a greater scale when considered against Western countries. The main Cement Research Institute has a staff of over 400, while in Moscow there is the Institute for New Building Materials with a staff of about 500. This Institute, while engaged partly in development work, is mainly interested in the evaluation of materials in relation to end use. The All-Union Research Institute of Factory Technology in Manufacturing Precast Structures has a staff of 700 and serves the whole precast industry in the U.S.S.R., directing the activities of all other concrete research institutes.

The research activities of these Institutes embrace not only the technical aspects, but also the economic and social aspects, including, somewhat surprisingly, the relation between the labour unions and the factory management. Other important functions of these state Institutes are standardization, modular co-ordination, processing of literature, sponsoring of technical meetings, and the fostering of theoretical research.

The Institute for Concrete and Reinforced Concrete Research in Moscow is a regional group, with a staff of 1200. Of the 18 laboratories here, at least half of them are of hangar size: about 60 ft. by 200 ft. and 40 ft. high. In Kiev, the local Institute of Building Materials has a staff of over 600 and it is associated with a combination pilot plant and factory. This continuity between applied research and production is a highly developed feature in these Institutes. In Lvov, a similar Institute to the one in Kiev had a staff of 350. This organization and one of the Moscow Institutes visited had a woman as head; we found many women heads of departments as well as workers.

One of the showplaces in Moscow is the permanent Exhibition of Economic Achievement, consisting of over seventy ornate pavilions extending over 500 acres. Each pavilion shows the development of industry or culture and no effort has been spared in the design and construction of unusual architecture. Among the many exhibits are models of apartment buildings, construction details and housing developments.

CONCLUSION

It is clear the U.S.S.R. is achieving noteworthy progress in housing, not only in providing adequate housing for its rapidly growing population, but also in the technology and science of building. The wide use of precast concrete is probably not matched anywhere else in the world. It is often difficult to judge the relative merits and weaknesses in relation to North American housing because of the differences in goals and in assessing economics. The Soviet citizens we talked with freely admitted that they had not yet quite reached our standards but were proud of the fact that they soon would. They are clearly not ashamed of copying many of our Western methods and products. For our part, we found a number of things which we could do well to copy or adapt to Canadian conditions, the international aspect of building technology being evident again, even between such widely differing economies.

CENTRAL MORTGAGE AND HOUSING CORPORATION
SOCIÉTÉ CENTRALE D'HYPOTHÈQUES ET DE LOGEMENT
OTTAWA, CANADA