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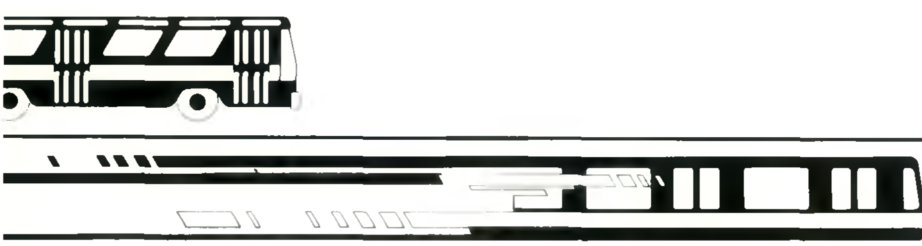

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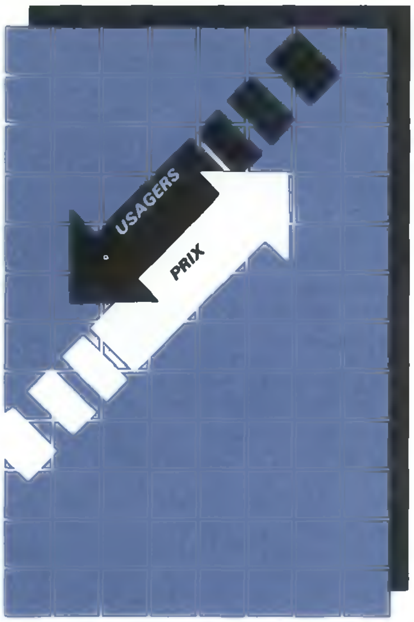
Les vraies causes de l'inflation des coûts du transport collectif urbain



par Jean-Pierre Dagenais

À Montréal, comme partout dans les grandes villes d'Amérique, les coûts et surtout les déficits du transport collectif n'ont cessé d'augmenter au fil des années. Curieusement, cependant, la plupart des explications avancées jusqu'à ce jour évitent d'aborder les causes fondamentales d'un tel phénomène. Encore tout récemment, un document du ministère québécois des transports attribue à des facteurs d'ordre conjoncturel la hausse des coûts du transport public dans la région de Montréal.

La hausse rapide du coût des carburants, les taux d'intérêts élevés, l'importance de la masse salariale des employés (environ 70 pour cent du coût d'exploitation), l'expansion des territoires desservis et certaines déficiences au chapitre du contrôle des dépenses constituent autant de facteurs explicatifs.[1]

Certes, on ne peut nier que ces facteurs aient eu leur importance depuis quelques années. Cependant, on devrait s'interroger sur le poids relatif de ces causes dans un contexte plus général d'emballement des coûts. Ainsi, bien qu'elle ait pris un aspect spectaculaire au cours des dix dernières années, la hausse des coûts du transport collectif dans la région de Montréal a commencé bien avant la dernière décennie. Le tableau suivant en fait foi.

Evolution des coûts globaux du transport collectif sur l'île de Montréal (1948-1980)[2]
en millions de dollars

Année	*Dépenses en $ courants*	*Indice des prix*	*Dépenses en $ constants de 1980*	*Achalandage en millions de passagers*
1948	20 approx.	56.3	75 approx.	398
1954	32	67.3	100	328
1962	38	75.9	105.4	283
1966	51	83.5	128.6	259
1971	94.4	100.0	198	264
1976	209.5	148.9	296.3	304
1980	403.2	210.6	403.2	314

Comme l'illustre ce tableau, la hausse des coûts du transport collectif est d'abord et avant tout un processus de longue durée. N'y a-t-il pas lieu de croire que, dans le domaine du transport en commun, des causes structurelles alimentent une dynamique inflationniste?

Transport et emploi

À notre avis, la raison première de l'augmentation des coûts du transport urbain, qu'il soit privé ou public, résulte de la concentration croissante des emplois au coeur des grandes villes.

C'est ainsi qu'à Montréal, par exemple, en laissant se concentrer l'activité économique au centre-ville, principalement les activités tertiaires, il a fallu bâtir un système de transport en commun presqu'entièrement orienté vers ce point du territoire montréalais. Pour acheminer les centaines de milliers d'usagers qui travaillent au centre-ville, il a fallu doter Montréal d'un métro et sacrifier des modes de transport plus conventionnels, mais par ailleurs nettement plus économiques, tels le tramway et le trolleybus.

Pour s'en convaincre, il suffit d'examiner les archives photographiques de la Commission de transport de la communauté urbaine de Montréal (CTCUM): les longues filées de tramways, en provenance ou en direction du centre-ville, montrent à quel point la concentration des emplois compliquait le travail de la défunte Compagnie des tramways de Montréal. Aussi, dès le milieu des années 40, il devenait évident que le système de tramways ne parvenait plus à assurer une desserte convenable du centre-ville. C'est ainsi que la concentration croissante des emplois condamnait irrémédiablement le tramway.

[1] **Gouvernement du Québec.** Ministère des transports. *Proposition gouvernementale concernant l'organisation et le financement du transport en commun dans la région de Montréal.* Québec, juin 1982, p. 19.

[2] **Transport 2000 Québec.** *Mémoire présenté à la Commission parlementaire sur la proposition gouvernementale concernant l'organisation et le financement du transport en commun dans la région de Montréal,* in *Ironie du char,* Jean-Pierre Dagenais, Décembre 1982, p. 187.

Dans le cas du transport privé, il s'est produit un phénomène semblable. Après la dernière guerre mondiale, comme les boulevards urbains ne parvenaient plus à contenir le flot croissant des voitures se dirigeant vers le centre-ville, l'État québécois et la ville de Montréal se sont tous deux lancés dans la construction d'un réseau urbain d'autoroutes. Ainsi, quand les autoroutes succédèrent aux routes et que le métro remplaça le tramway, l'ordre de grandeur des dépenses devait fatalement s'enclencher vers la hausse.

L'explication en est simple. Les investissements énormes qu'exige la construction des systèmes de transport rapide – autoroutes ou métro – impliquent nécessairement des coûts supérieurs par comparaison aux infrastructures moins lourdes, requises auparavant par le tramway ou l'automobile. À titre d'exemple, "le tramway", explique l'ingénieur français Guy Jarousseau, "est huit fois moins cher à construire chez nous que le métro (12 millions de francs le kilomètre contre 100 millions)".[3] On trouve ailleurs la confirmation de cette économie: "En termes d'investissements, le tram est environ sept fois plus économique que le métro et au moins deux fois plus que l'autobus."[4]

Périodes de pointe et rentabilité

Par ailleurs, en raison de la contrainte exercée par la période de pointe, il devient virtuellement impossible de rentabiliser le transport public en milieu urbain. En effet, les équipements de transport ne servent réellement qu'aux heures de pointe, soit de 4 à 5 heures par jour et seulement 5 jours par semaine.

Ce n'est pas tout. Un examen plus attentif des déplacements en période de pointe démontre que le potentiel de charge du métro est employé de façon encore moindre qu'il y paraît à première vue.

À l'heure de pointe, les déplacements se font en majorité dans un seul sens – soit vers le centre-ville, le matin et en provenance de celui-ci, le soir. Au départ, les rames de métro sont bondées de monde. À leur retour, cependant, ces rames sont passablement désertes, laissant ainsi un potentiel de charge inexploité. Par exemple, en supposant que cette capacité de charge soit employée à 85 pour cent à l'aller et à

CTCUM

1


CTCUM

2


Ville de Montréal

3

1 À l'angle des rues Ontario et Leclaire, à Montréal, en 1942.
2 Rue Craig, aujourd'hui Saint-Antoine, à l'ouest de Berri.
3 À l'angle des rues Sainte-Catherine et De La Montagne, en 1953.

Au cours des années 40 et 50, les longues filées de tramways – en provenance ou en direction du centre-ville – trahissaient la concentration croissante des emplois au coeur de Montréal. À cause de celle-ci et aussi, en raison des impératifs liés à une circulation privée de plus en plus envahissante, le tramway se voyait irrémédiablement condamné.

[3] **Stehli, Jean-Sébastien.** "Le tramway remis sur le rail" in *Le Point*, no 478, 16 novembre 1981, p. 106.

[4] **Latouche, Daniel.** *À la remorque des transports*. Ed. Québec-Science, 1980, p. 176.

15 pour cent au retour[5] nous obtenons une moyenne d'utilisation de 50 pour cent pour tout le réseau souterrain et ce, même aux heures de pointe.

Si les déplacements étaient mieux équilibrés dans les deux sens de la ligne de métro, ce qui favoriserait une meilleure distribution spatiale des emplois, le transporteur aurait alors la possibilité de réduire et son matériel roulant et le nombre d'employés requis pour manoeuvrer ce matériel.

En simplifiant à l'extrême, nous pourrions poser le problème de la manière suivante: au lieu de recourir à 10 rames de métro pour véhiculer 100 000 usagers dans une seule direction, soit vers le centre-ville, le transporteur pourrait–advenant une certaine décentralisation de l'emploi–n'employer que 5 rames pour déplacer 50 000 usagers vers le centre-ville et 50 000 en direction opposée.

Par ailleurs, si l'on tient compte des contraintes déjà mentionnées relatives aux heures de pointe (auxquelles s'ajoutent le faible taux d'utilisation aux heures creuses et celui, presque nul, des heures mortes pendant la nuit), nous obtenons une moyenne d'utilisation de 25 à 30 pour cent du potentiel effectif du métro montréalais.[6]

Cette performance pour le moins désastreuse met en question le mythe d'un centre-ville sur-développé pour lequel on doit bâtir des infrastructures lourdes, onéreuses (métro ou autoroutes), lesquelles sont en plus systématiquement sous-employées. En tout état de cause, on doit reconnaître qu'il ne se trouve nulle part ailleurs des équipements aussi mal employés, que ce soit dans l'entreprise privée ou dans le secteur public. Si cela se vérifiait, une performance comparable à celle du métro soulèverait certainement le scandale. En effet, que dirions-nous d'hôpitaux ou de barrages hydro-électriques dont le potentiel serait utilisé au tiers seulement?

Le réseau de surface

Que dire maintenant du réseau de surface? À Montréal, on constate qu'à l'heure de pointe, la plupart des lignes d'autobus ne sont véritablement utilisées que

[5] **Du Luc.** *Étude du service du transport de la Commission de transport de la Communauté urbaine de Montréal.* Rapport phase I. Comparaison Montréal-Toronto. Montréal, mai 1974, p. 62.

[6] **Dagenais,** Jean-Pierre. *Ironie du char.* Montréal, décembre 1982, p. 157.

SCHL

Le terminus de la place Bonaventure, à Montréal. Le va-et-vient d'un grand nombre d'autobus au centre-ville nous rappelle étrangement les problèmes rencontrés par les tramways d'une autre époque.

La forme des véhicules change mais la congestion demeure, celle-ci découlant d'une concentration croissante des emplois dans le périmètre urbain central.

dans une seule direction, de sorte que, bien souvent, l'autobus revient à son point de départ les bancs à moitié vides (quand ce n'est pas davantage). Une étude démontre qu'il faut 3 autobus pour déplacer sur l'ensemble de son circuit 1 000 passagers. De ce nombre, 850 se dirigent dans un sens et 150 dans l'autre. Si le même nombre d'usagers se déplaçait également dans un sens et dans l'autre, il ne faudrait alors que 2 autobus pour les voyager[7]. À Montréal, "moins de 10 pour cent des lignes de surface sont relativement bien balancées"[8]. Là encore, en répartissant mieux les lieux de travail, il s'ensuivrait des déplacements plus équilibrés sur l'ensemble du territoire urbain. La conséquence ultime d'un tel changement serait la réduction des flottes d'autobus, d'où des économies appréciables tant en matériel roulant qu'en main-d'oeuvre.

Toronto, la nouvelle métropole canadienne, a plus d'un exemple à offrir de sa détermination à créer un lien plus étroit entre ses politiques de transport et d'aménagement.

Là, comme à Montréal, de fortes pressions sont exercées par les promoteurs immobiliers et le monde des affaires pour continuer à développer le centre-ville. Toutefois, les autorités municipales font de grands efforts pour contenir et diminuer ces pressions. D'abord, elles s'opposent pour le moment à la construction de nouvelles infrastructures pour inciter les employeurs à se localiser dans les sous-centres. Ces mesures ne sont pas une décision de dernière minute. Elles s'inscrivent dans une démarche de longue durée. Ainsi, on a vu surgir, après la construction du métro, d'importants édifices à bureaux tout le long de la ligne Yonge/St-Clair. Le projet de création d'un mini centre-ville à Scarborough et le programme de construction domiciliaire aux abords du centre-ville s'inscrivent dans le sens de cette préoccupation d'équilibrer l'aménagement du territoire. Cette politique structurée et à long terme permet à la Commission de transport de Toronto d'avoir un système de planification de son réseau beaucoup plus équilibré et économique. En effet, à Toronto, les usagers versent à la TTC 70 pour cent des revenus totaux de la compagnie. À Montréal, cette proportion n'est que de 30 pour cent. On ne saurait attribuer cette importante différence uniquement à la différence de qualité de gestion ou même de tarification mais bien à un meilleur équilibre des fonctions urbaines.

[7] **Transport 2000 Québec.** Note interne.

[8] **Du Luc.** Tome I, op. cit., p. 62.

Réaménager la ville

Finalement, ces remarques n'appellent-elles pas un nouveau type d'aménagement urbain?

"Pour répondre aux problèmes causés par le transport urbain, il faut d'abord modifier la structure spatiale de la CUM (Communauté urbaine de Montréal). On doit créer différents centres-villes et réduire au minimum les relations entre ces nouveaux centres, en répartissant l'habitation, les lieux de travail et les services de telle façon que les trajets


SCHL

Un autobus paralysé dans la congestion...

domicile-travail ne nécessitent pas un temps de plus de 20 minutes. Les futurs prolongements de métro devront être pensés en fonction d'un plan d'aménagement d'une nouvelle géographie de toute la communauté urbaine. De plus, on s'assurera que les nouveaux centres-villes seront reliés par le système de transport en commun et par un réseau de boulevards d'excellente qualité. Il faut également songer à intercaler, entre ces différents centres, des quartiers d'habitation qui puissent satisfaire à la demande des citoyens et dont l'organisation soit élaborée en fonction des aspirations culturelles et autres de la population. Il importe de créer des milieux de vie où le citoyen se sente responsable de son quartier. Il est bien évident qu'une telle décentralisation doit être prudente et faire partie d'une politique à long terme. Mais encore, faut-il l'entrevoir pour que la qualité de vie revienne dans la cité."[9]

[9] **Miron, Yves.** "Le développement urbain et les transports" dans la revue *Critère* Printemps 1977, vol 18, no 2 La ville, p. 160

Bien qu'en matière d'aménagement urbain et de répartition des emplois il soit difficile de renverser complètement la vapeur, on pourrait freiner la concentration des emplois au coeur de Montréal, notamment en interdisant la construction d'édifices de plus de 14 mètres au centre-ville. Aussi radicale qu'elle puisse paraître, rappelons qu'à Toronto, en 1974, une telle mesure fut adoptée sous l'ancienne administration du maire Crombie.[10]

Les autorités municipales de Montréal pourraient, en outre, favoriser la transformation en habitat de bâtiments industriels ou commerciaux situés dans le périmètre urbain central et qui, présentement, sont désaffectés. La Ville pourrait aussi encourager la construction de logements sur des terrains vacants ou les espaces de stationnement. Bien entendu, cette dernière suggestion suppose que la qualité de la vie en ces endroits soit tout à fait acceptable. En somme, il s'agit de recréer au centre-ville ou proche de celui-ci, un milieu de vie intéressant qui soit susceptible d'attirer de nouveaux citoyens.

[10] **Greenberg, Kenneth.** "Urban design in Toronto" in *Urban design international* vol 3, no 4, mai-juin 1982, p 19

À cet égard, l'un des moyens les plus sûrs pour atteindre cet objectif consisterait à décourager l'utilisation de l'automobile au centre-ville, voire à l'interdire dans le site historique du Vieux-Montréal.

D'une façon plus générale, les intervenants publics, quel que soit le palier gouvernemental et le champ de leurs interventions (logement, transport, zonage, etc.), devraient se concerter afin d'inciter les citoyens à se rapprocher de leur lieu de travail. De la sorte, on soulagerait quelque peu la congestion des infrastructures de transport qui découle de l'éloignement croissant qu'on observe entre les lieux de travail et les lieux de résidence.

Quelques solutions

■ Les voies réservées

" Si dans certaines villes on peut résoudre le problème de la circulation "en surface", le transport en commun vivra sans accumuler de dettes au moment où on lui donnera la priorité de ses mouvements partout où ceci sera nécessaire".[11] Sans contredit, le second problème auquel doit faire face le transporteur est celui de la congestion des rues aux heures de pointe. Ainsi, a-t-on estimé à la CTCUM, (Commission de transport de la communauté urbaine de Montréal), que chaque fois que le réseau de surface voit sa vitesse commerciale réduite d'un mille à l'heure (1.6 km), ceci signifie un coût annuel supplémentaire de $15 à $20 millions pour le transporteur montréalais.[12]

Or, à cause des programmes de revitalisation des artères commerciales entrepris par la ville de Montréal, les autobus doivent réduire actuellement leur vitesse d'au moins 8 km/h. En outre, à cause du rétrécissement des artères commerciales, de la réapparition des saillies au coin des rues et de la diminution de vitesse des autobus, la CTCUM est obligée d'ajouter des véhicules sur plusieurs lignes, ce qui entraîne des coûts supplémentaires.

De plus, sur l'ensemble de l'île de Montréal la vitesse générale de la circulation se détériore au fil des ans, s'abaissant de 45 km/h, en 1963, à 31 km/h,

[11] "Le transport en commun doit passer le premier partout". *La Patrie*, 24 septembre 1957

[12] **Bernard, Florian.** Ryan accuse Montréal de faire payer par les autres villes ses programmes de "revitalisation". *La Presse*, 20 novembre 1981

en 1979.[13] Notons que ces données valent pour la vitesse moyenne hors-pointe, c'est-à-dire observée entre 9h30 et 16 heures. On devine aisément quelle peut être la situation aux heures de pointe . . . Aussi doit-on envisager sérieusement certaines mesures afin d'alléger la circulation.

Jusqu'à ce jour et dans la plupart des grandes villes nord-américaines, les solutions adoptées pour régler le problème n'ont, en fait, qu'aggraver la congestion urbaine. En favorisant la voiture privée, bien souvent au détriment du transport public, les politiques de transport ont abouti à des injustices criantes, notamment en ce qui concerne le partage de la chaussée publique. Le tableau au bas de la page ne l'illustre que trop bien.

Infiniment moins glouton de la voie publique, l'usager du transport en commun se contente de n'en employer qu'un pour cent pour ses allées et venues qui comptent pour 46 pour cent de tous les déplacements motorisés effectués à Montréal. Le reste, soit 99 pour cent de la voie publique, est réservé à l'usage quasi exclusif des adeptes de l'automobile, dont les déplacements comptent pour un peu plus de la moitié de ceux faits à Montréal.

Ces quelques données relancent un vieux débat qui oppose depuis toujours les tenants de l'auto aux partisans des transports en commun. En fait, tout le débat se résume à la question suivante: compte tenu des avantages et inconvénients de l'un et l'autre, lequel des deux modes devrait-on favoriser en milieu urbain? En termes d'économie de la chaussée publique, il est indéniable que l'autobus affiche une supériorité très marquée par rapport à l'automobile. On serait même surpris d'apprendre que l'adoption systématique de voies réservées pour les autobus n'exigerait à peine que 15 pour cent de la surface des rues dans une ville comme Montréal.[15]

[13] Statistiques compilées par le Service de la circulation de la ville de Montréal.

[14] **CTCUM** *Enquête origine-destination*, 1978; N.D. Lea Associates Ltd *Land use consumption by urban transport* Ottawa, 1975, p 23

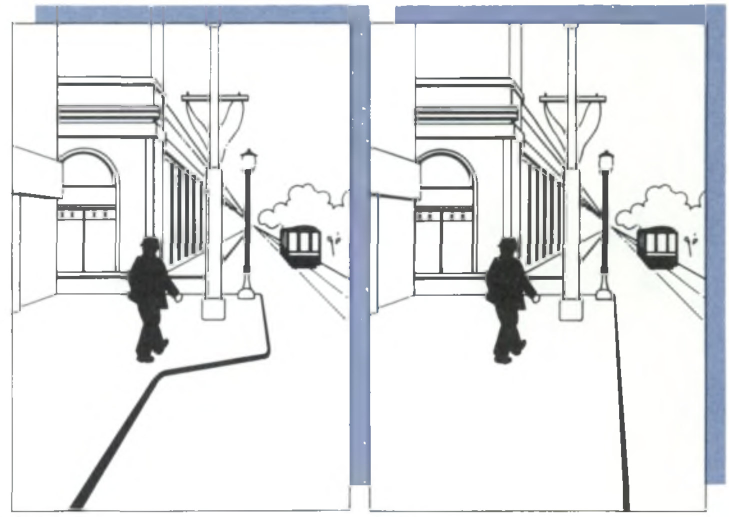
[15] On obtient ce pourcentage en calculant:

$$\frac{\text{La surface totale des voies de la CTCUM (à Mtl)} \times 100}{\text{La surface totale des rues de Mtl.}} =$$

$$\frac{\text{2 voies réservées larg. } 7\ m \times \text{longueur } 518.7\ km = 3.6\ km^2 \times 100}{\text{largeur } 12.3\ m \quad \text{longueur } 1\,916\ km = 23.6\ km^2} = 15\%$$

Sources: CTCUM Service de la planification Plan no 12C — F 1494, avril 1979
Données provenant du Service de la circulation de Montréal

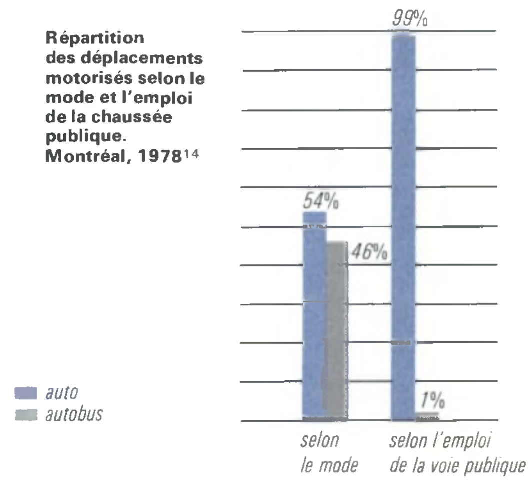
Dans les années 40, Montréal entreprend un programme dit "d'améliorations locales". À cet effet, la Ville éliminera les saillies qu'on retrouve alors au coin des rues. Dessins illustrant le coin des rues à l'angle de la rue Sainte-Catherine et de l'avenue Atwater.



Avant — Après

Quelque 40 ans plus tard, Montréal entreprend un nouveau programme dit de "revitalisation". Cette fois, les saillies réapparaissent et, en même temps, les parcomètres reviennent à la mode. De tous ces changements, il se dégage une seule et même préoccupation: favoriser l'automobiliste, que ce soit dans ses allées et venues ou pour le stationnement de son véhicule. Photo prise à l'angle des rues Saint-Laurent et Prince-Arthur.

Répartition des déplacements motorisés selon le mode et l'emploi de la chaussée publique. Montréal, 1978[14]



Quoiqu'elle puisse sembler extrêmement radicale, cette politique se défend d'elle-même. Seulement 15 pour cent de la chaussée suffirait pour accommoder les usagers du transport public qui comptent pour près de la moitié des déplacements motorisés effectués à Montréal.

Évidemment, une telle politique apporterait quelques désagréments aux automobilistes, mais les inconvénients disparaîtraient dans la mesure où un nombre significatif d'automobilistes opterait en faveur d'un réseau d'autobus nettement amélioré.

■Priorités aux intersections

Une autre mesure pourrait être prise afin d'accélérer le mouvement des autobus. À l'instar de Toronto[16], Montréal pourrait munir les véhicules publics d'un appareil leur permettant le libre passage aux intersections, soit en prolongeant le feu vert ou soit en permutant le feu rouge en feu vert.

Si l'on en croit une étude menée par un consultant privé, la télé-commande des feux de circulation réduirait de 20 pour cent le temps de parcours des autobus.[17] Sur certaines de ses lignes de tramway, l'ancienne Compagnie des tramways de Montréal avait déjà recours au réglage télécommandé des feux de circulation. Voilà donc une vieille idée qui peut encore servir.

Encore là, certains objecteront qu'une telle mesure pénaliserait les automobilistes en prolongeant leur temps d'attente aux feux de circulation. Mais le propriétaire d'une auto jouit d'avantages incomparables. Celle-ci le libère des horaires contraignants des transporteurs collectifs, lui évite de perdre son temps à se rendre aux points de service, lui épargne le temps d'attente passé à ces endroits. Enfin et surtout, à la différence de l'usager du transport en commun, l'automobiliste, lui, se rend directement à sa destination. Pas de correspondance et aucune obligation de s'arrêter aux points de service, ce que doit faire un autobus tout au long de son itinéraire.

Dans une perspective d'équité sociale, il serait donc acceptable de procurer à l'autobus certains privilèges, dont la priorité de passage aux intersections et des voies réservées. Ce faisant, le transport en commun parviendrait mieux à concurrencer l'automobile et les avantages énormes que celle-ci confère à son propriétaire.

De plus, en combinant l'une et l'autre des deux mesures préconisées, on améliorerait grandement l'efficacité des réseaux de surface. Par exemple, en milieu urbain où la circulation est dense, l'usager de l'autobus verrait son temps de parcours réduit de 30 à 35 pour cent.[18] En outre, la régularité du service s'en trouverait presqu'assurée, d'où la possibilité de diminuer le temps de battement, c'est-à-dire le temps alloué en tête de ligne pour la pause du chauffeur et pour absorber les irrégularités du temps de parcours.[19]

Finalement, les administrations municipales y gagneraient. Grâce à l'amélioration des performances du réseau de surface, un nombre moindre d'autobus pourrait boucler davantage de circuits. Et si, par bonheur, l'achalandage augmente parce que le transport en commun s'améliore, tout le monde y gagnera encore: plus de revenus entreront dans les coffres du transporteur et moins celui-ci aura besoin d'être subventionné par l'État (municipal, provincial ou fédéral). D'autre part, un meilleur système public de transport profitera autant aux usagers de ce service qu'aux automobilistes; le nombre de ces derniers diminuant, il s'ensuivrait une congestion moindre qui serait tout à l'avantage des automobilistes eux-mêmes.

Bref, une volonté politique des autorités compétentes associée à une concertation de tous les intervenants en transport et de ceux qui agissent au plan de l'aménagement permettrait de régler, à l'avantage de tous, les problèmes issus de la congestion urbaine et d'apporter, au moindre coût possible, une solution satisfaisante aux problèmes du transport.■

[16] Toronto Transit Commission. *Rapport annuel 1981*, p. 18.

[17] **Du Luc.** Tome II *Étude du service du transport de la Commission de transport de la Communauté urbaine de Montréal.* Améliorations recommandées. Montréal, octobre 1974, p. 68.

[18] **Du Luc.** Tome II. op. cit., p. 68 et 70.

[19] **Du Luc.** Tome II. op. cit., p. 68

Jean-Pierre Dagenais est recherchiste à Transport 2000 Québec, association d'usagers des transports en commun.

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L'implantation de voies réservées et la télécommande des feux de circulation réduiraient d'au moins 30 pour cent le temps consacré par les usagers à se déplacer. Nul doute qu'une telle amélioration du service attirerait une clientèle supplémentaire et partant, des revenus accrus pour les transporteurs urbains.

Voie réservée sur le pont Champlain.

Tumbler Ridge

Planning the Physical and Social Development of a New Community

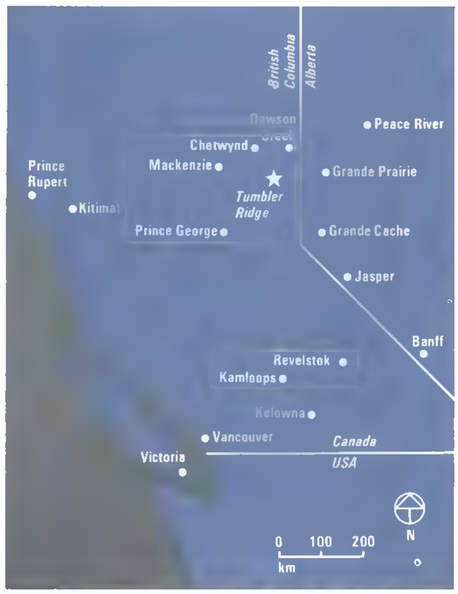
by Mark Budgen

Any town in Canada that depends on a single industry for its economic viability leads a precarious existence. If the markets for its product disappear or costs become too great, then the likelihood of the town surviving in any meaningful way is virtually nil. In the past year Uranium City, Saskatchewan, and Schefferville, Quebec, have lost the mines which kept them thriving and many residents are or will be leaving.

It's a pattern that's been repeated time after time, particularly in British Columbia and the Yukon, where in the last century towns rose instantly wherever there was a gold strike and died as quickly. More recently settlements depending on metals such as copper or molybdenum have either disappeared or been reduced to hamlets where a few hardy people eke out meagre livings.

But those responsible for the creation of the new town of Tumbler Ridge being developed in the coalfields of B.C. 660 km northeast of Vancouver, think that they've managed to lay the groundwork for a lasting community. Not only do they expect it to thrive for decades but they hope that they have managed to plant the seeds of a community that will grow to maturity in a fifth the time that other towns usually take. And they are optimistic that Tumbler Ridge, which welcomed its first residents in late 1982, will avoid many of the social and psychological problems associated with small isolated towns: a lack of adequate health care, loneliness, rampant alcoholism, boredom, family violence, a lack of educational opportunity, petty criminal behaviour and a general feeling of impermanence.

"What we want to do is make this a community which people will feel proud of and identify with very quickly,"



Tumbler Ridge is located in the coalfields of British Columbia, 660 km northeast of Vancouver.

says Patrick Walsh, the commissioner for Tumbler Ridge who has the powers of Mayor and Council until an election is held. "We expect that the breed of people which Tumbler Ridge will attract will be very receptive to the idea of helping each other, that there will be a bond of neighbourliness almost immediately."

Certainly the location will help. Nestled in a valley in the foothills of the Rockies, the townsite, costing an initial $250 million to construct including public and private financing, overlooks the confluence of three rivers. With an area of 150 000 hectares which will include the two producing mines, Quintette and Bullmoose, Tumbler Ridge is the largest district municipality in B.C. The population, expected to exceed 5500 by 1986, will be sheltered by surrounding mountains from the worst effects of northern winters. For those who enjoy the outdoors, Tumbler Ridge will provide hiking, fishing, hunting and skiing opportunities and the planners want to create an attractive atmosphere within the town, enhancing what nature provided.

Planning from the Inside Out

Vancouver planner Richard Rabnett was responsible for the overall direction of Tumbler Ridge planning from 1977 to 1982. From the beginning he was concerned with more than just the physical layout. "New towns are usually planned from the top down and people are expected to fit in," says Rabnett.

"We were concerned with designing from the inside out. We started by thinking of the individual then proceeded to the family, to the home, to clusters of homes, to neighbourhoods, to the town itself. The major problem was to create a community of people and we had to ask ourselves each step of the way – what relationship will this town have with its population?"

"In the fifties, Kitimat, for instance, was designed without considering social needs, fiscal management and local self-government. We wanted to emphasize those aspects of Tumbler Ridge as much as street layout, sewers and watermains."

Rabnett believes that it takes 60 to 70 years or two generations for a town to reach stability and maturity. He hopes that the thoroughness and detail of his planning process will have helped to cut down that period to 15 to 20 years because it will have enabled the residents to take responsibility for their own affairs by 1987 at the latest. "Within three years a municipal council will be elected," he says. "Even before then, people will be taking responsibility for other matters such as day care and recreation. There will be social clubs and other community activities. The planners have to back off so that the residents can take over."

One of the prime principles underlying the planning was that of "self-reliance", encouraging residents to do things for themselves as much as possible so they do not develop a dependence on either the companies or governments. The choice of recreation sites, for instance, will be left for residents to decide themselves later on as will the determination of how they want to finance them.

"All that Tumbler Ridge will have immediately will be an outdoor ice rink and a community centre by way of recreation facilities," says Commissioner Walsh. "A golf course, ski hills and jogging trails will be decided on by the residents themselves if that's what they want."

Rabnett and his fellow planners realized that moving into a new living environment always involves some stress but particularly when moving to a town that is itself in gestation. "In such circumstances people tend to help each other," says Rabnett. "We wanted to encourage people to continue to get involved and determine for themselves the whole direction of the town's future."

North East Coal Development

Before that can happen though there must be assurances that Tumbler Ridge will be on a firm financial footing. By incorporating the mines' assessable assets of about $250 million within its boundaries, the B.C. Government ensured that the coal companies would contribute about 65 to 70 per cent of property tax revenues.

As a municipality, Tumbler Ridge will also receive provincial grants to help with the provision of such necessities as social services, policing and fire protection. A company settlement does not receive such aid. In addition, the two mining companies, Quintette and Bullmoose, guaranteed the town's long-term debt and the purchase of 80 per cent of the unsold lots provided by Tumbler Ridge at the end of each year.

Emphasis on Home Ownership

A major desire of all the parties involved in the establishment of Tumbler Ridge has been that 80 per cent of the homes will be resident-owned. Several contractors started building single-family and apartment homes in the fall of 1982 to be ready for the first large influx of

North East Coal Development

Single-family homes and one of the six 50-unit apartment buildings which were built to house the first group of residents.

residents in early 1983. "Owning their own homes gives people a stake in the community," says John Talbot, the director of social development for Tumbler Ridge. "It shows they're willing to invest in their own and the town's future."

Both Quintette and Bullmoose are planning an ownership assistance program to help their workers purchase their own homes. Its final form will depend on limitations imposed by taxation regulations and the companies' own financial capabilities. "Ideally we would not like to own any houses," says John Anderson, the assistant to the senior vice-president of Teck Corporation, the principal shareholder in Bullmoose. "We want to help create a community that people will look forward to living in."

Crime Prevention through Environmental Design

Once people have moved into their homes in Tumbler Ridge, they won't find themselves living on typical grid-patterned streets. There are two main arterial roads through the town but the sidestreets will curve, circle and end in cul-de-sacs. A major reason for planning the residential subdivisions in this way was to encourage residents to develop a sense of identity with their neighbours and, more importantly, an awareness of mutual security. Each

North East Coal Development

The Tumbler Ridge townsite as it appeared from the air in May 1982. The first two subdivisions are clearly visible. Note the lack of typical, grid-patterned streets.

neighbourhood has well-defined boundaries that may be a major street, a park or other form of open space that will give residents a feeling of being a part of a distinct community.

Houses will be clustered in groups of ten or twelve encouraging residents to look to each other's safety and security. It is part of a concept called Crime Prevention through Environmental Design (CPTED) developed through co-operation with the RCMP and Simon Fraser University's Department of Criminology.

The theory behind CPTED is that many crimes can be forestalled if the opportunity for committing them is diminished. Thus a house is less likely to be burgled if it is in plain view of half-a-dozen others and a car won't be broken into if it is parked in a small, easily visible area. Vandalism happens less often in areas which are well-frequented, well-lit and aesthetically pleasing. Petty violence, theft and wilful damage tend to be less common when people have a sense of belonging.

Tumbler Ridge planners have incorporated many of these concepts and features into the overall design. Their hope is that the residents will develop a sense of neighbourhood and civic pride very quickly as well as security consciousness. If that occurs, then policing costs in Tumbler Ridge will likely be lower than in other communities of equivalent size.

"We want to create natural surveillance and informal control by people of their immediate surroundings," says Staff Sergeant Jack Hest, a community policing co-ordinator with RCMP divisional headquarters in Victoria. "What we have advised in Tumbler Ridge is the breaking up of space into smaller and more manageable areas."

Rabnett calls it "a return to the principles of good old-fashioned planning. Crime prevention should be a natural outcome from them." Hest likes to say that they're promoting the "nosy neighbour as a good concept."

Design of the Town Centre

As part of the planning process of working from the individual up, the next step is the creation of identifiable and well-bounded neighbourhoods with elementary schools, churches, small commercial centres and about 500 homes. The focus, though, will be the town centre where the secondary school, major commercial area, hotel and motel, municipal hall, community centre and public services will be located. The town centre was seen to be the most important component of Tumbler Ridge early in the planning process. Residents of older resource towns complain of a lack of amenities and identifiable public centres in their communities. Consequently, the construction of a town centre was seen to be essential for Tumbler Ridge viability.

Four basic premises lay behind the design of the town centre: to create a place attractive for families, to construct an area that would convince newcomers of the town's permanence, to let people know that their needs had been considered and to stimulate the growth of a successful commercial centre. To attain those ends, all the major commercial and government service facilities will be grouped together in the centre so that people will look on it as a "downtown" although it is, in fact, at the south end of the town. Its compactness, it is hoped, will cause people to look on the centre as a meeting place that is both familiar and friendly. Everything will be within easy walking distance.

The town centre's physical design enhances these aims in several ways. There will be several entrances. The "anchor points" at both ends are the municipal hall and the public services complex. Pedestrian access will ensure that it does not become a version of a suburban mall where people simply drive in and out. The centre has been aligned to take advantage of the area's exposure to the sun while protecting it from winter's strong southwesterly winds.

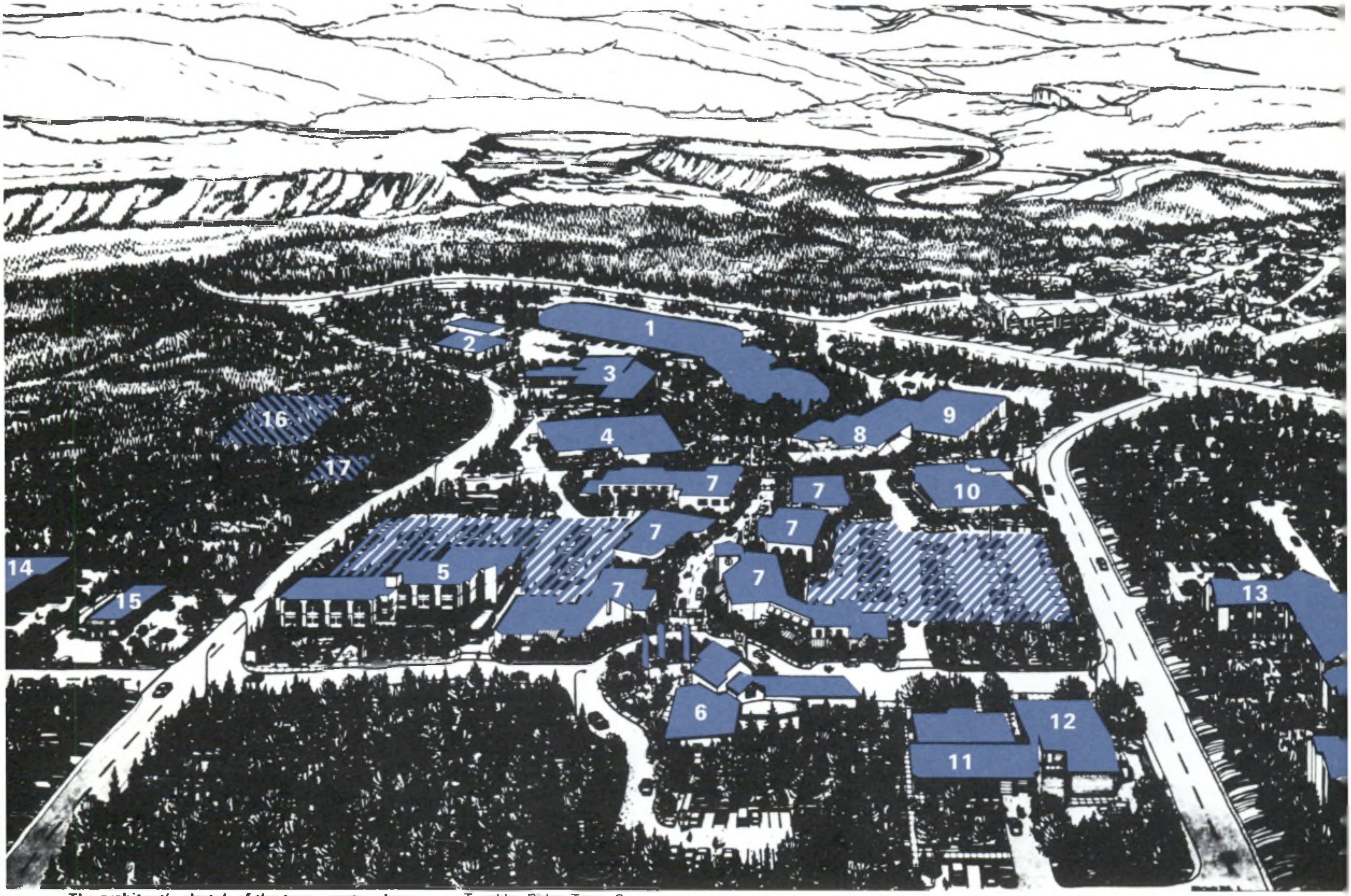
The District of Tumbler Ridge has obtained $25 million of financing from the municipal financial authority to help commercial developers establish themselves and has a Director of Marketing who is encouraging businesses to move into the town – a bank and a grocery store are already there. Developers in the town centre have to agree to certain design constraints such as protecting views, allowing light penetration, providing an arcade along the main street and a uniformity of exterior finishes.

Equal Attention to Social Development

While all this contributes to the quality of the physical environment, it was also recognized that while people can live in a most aesthetically pleasing area they still become ill, need libraries and want a proper education for their children. Social development has received as much attention from the planners as the physical development. John Talbot was appointed director of Social Development to ensure that the ultimate goal of creating "a socially cohesive, financially viable, self-governing community conducive to attracting and retaining a stable workforce" could be reached efficiently. Talbot is in charge of seeing that the community services expected in a modern town will be delivered as soon as possible instead of waiting for certain population levels to be achieved. In this way it is felt that people will feel from the start that they are a part of an already thriving community.

That feeling will initially be an illusion of course so, in order to compensate for the town's lack of social maturity and cohesiveness, certain facilities will be provided. The first priority is an information centre which will assist people to become oriented and to know

A temporary school has been built with five classrooms for Grades 1 to 10.



The architect's sketch of the town centre shows the public buildings that will provide a focus for the community.

Tumbler Ridge Town Centre
1. community park and playing fields
2. community college
3. secondary school
4. health and social services
5. hotel
6. civic plaza and town hall
7. retail and commercial
8. library
   meeting rooms
   day care
9. recreation and community centre
10. food store
11. police station
12. fire hall
13. apartments
14. motel
15. service station
16. site of future hospital
17. heliport

(hatched) municipal parking

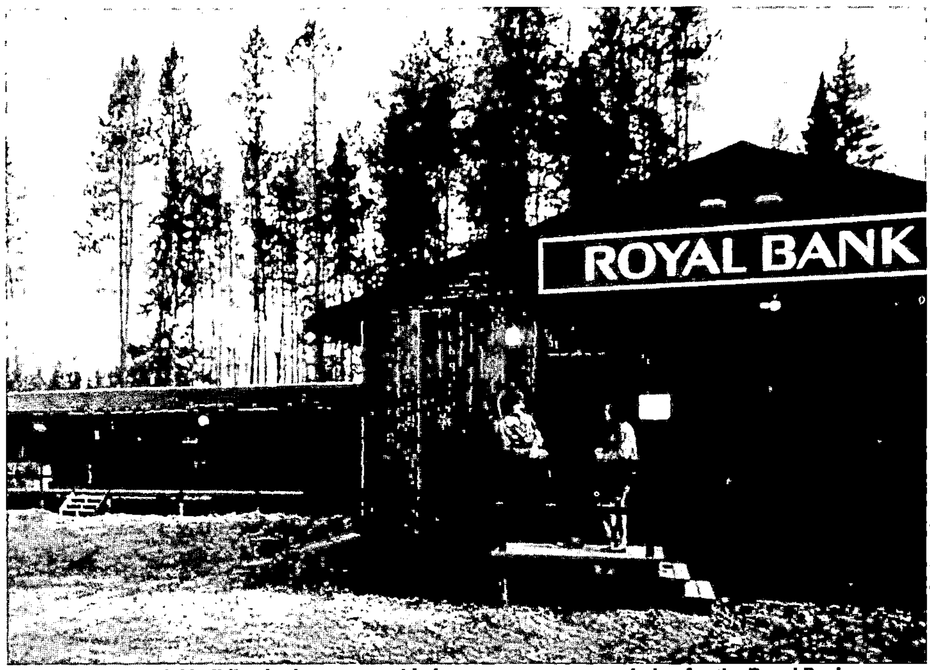
where they can get what they need. All newcomers are being encouraged to fill out a questionnaire asking what programs they think should be provided at the community centre, the types of outdoor activity they think should be provided, what clubs and societies they were members of in their previous community, what skills they have, what expectations they have for Tumbler Ridge, as well as more personal, census-type questions about their backgrounds, jobs and place of birth.

Developing Community Spirit

"It's important that Tumbler Ridge develop its own spirit quickly," says Talbot. "People should start to think about what they want and how they are going to get it. We want to avoid the company town dependency attitude absolutely." Talbot will be responsible for helping form a health and social services centre society to oversee the delivery of those community essentials.

A recreation coordinator was one of the first municipal staff to be assigned full-time. He is responsible for the community centre which will eventually have meeting rooms, a day-care centre and a library. The last two facilities were also regarded as immediate priorities. By the end of 1983 when the mines start full operation, a substantial population (over 3000) will have arrived and all the services they require will have been provided.

"New communities tend to attract people willing to experiment," says Rabnett, "And I expect Tumbler Ridge will be no exception. There's already some evidence that it's happening now and that there will be innovation in health care services and day-care experimental programs."



North East Coal Development

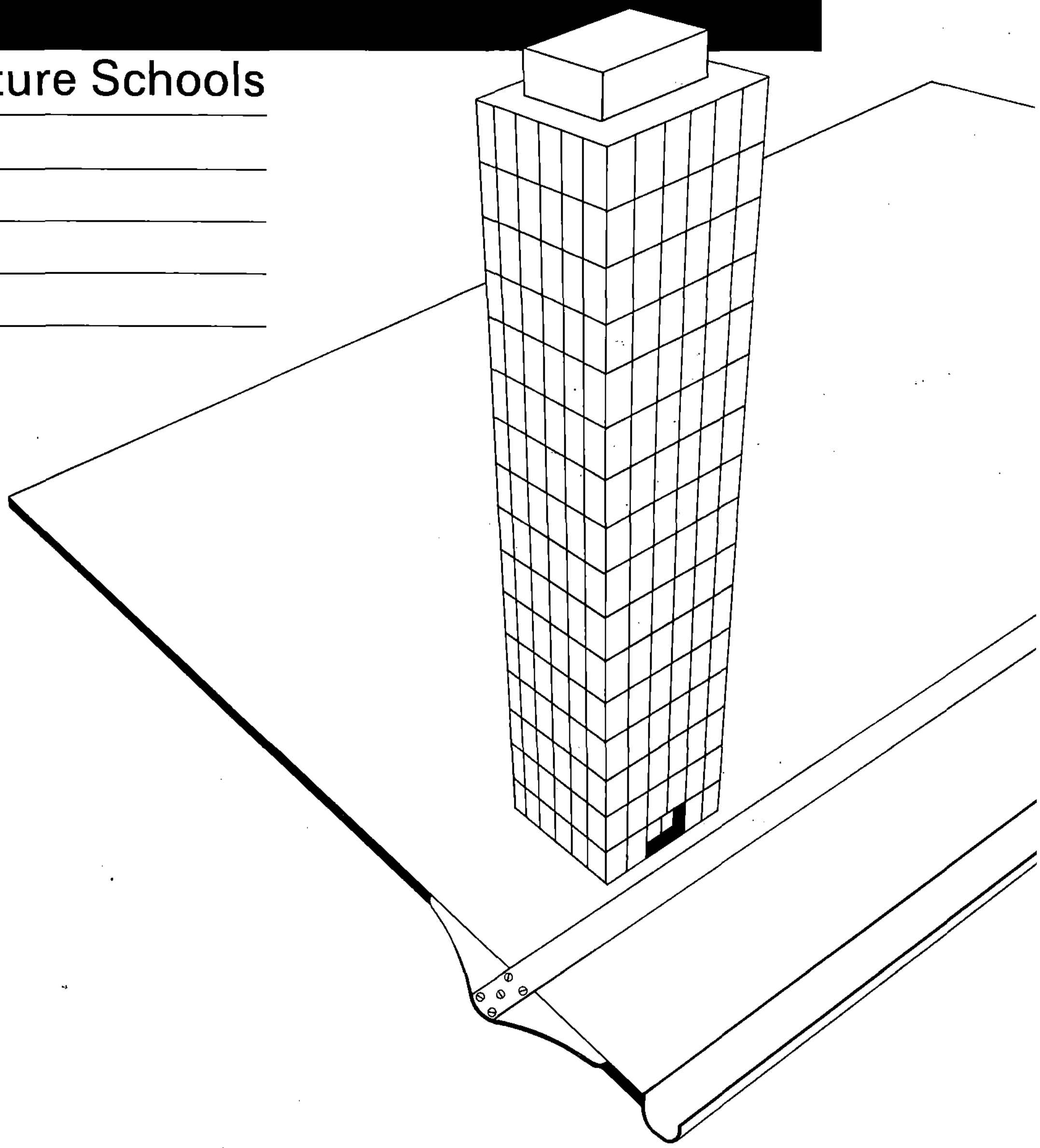
The first commercial building in the area provided temporary accommodation for the Royal Bank.

For Patrick Walsh who was, for a long time, the mayor of Fort St. John about 130 miles to the north, the main evidence of a sense of community developing is the competitive spirit being shown by Tumbler Ridge students when they're playing sports against teams from Dawson Creek, Chetwynd or Walsh's home town. "Really, Tumbler Ridge will become part of the northeastern community of municipalities," says Walsh. "Other communities already feel a sense of involvement with it. And just like those others it won't be identified as a company town but more with the people who are living there. That's the important thing to remember—the residents themselves will determine the future of Tumbler Ridge, not the companies."■

Mark Budgen is a freelance writer living in Vancouver.

Canada's Architecture Schools

Changing to meet the Needs of the 80s



by Christine Tausig

When Douglas Shadbolt, now director of the school of architecture at the University of British Columbia, started an architecture school in Halifax 22 years ago, he polled a group of 40 distinguished architects across the country to ask them what the school should teach. The experts all agreed on the essential tools of the trade for would-be architects – architectural history, drawing skills including freehand sketching, perspective and three-dimensional drawings of buildings and life drawing, plus a knowledge of the technical aspects of building construction such as the use of materials, structural and mechanical systems.

Seven years later, when Shadbolt moved to Ottawa to set up Carleton University's school of architecture, he again turned to the same 40 professionals. This time there was no agreement at all. "It was absolutely wild," Shadbolt recalls. "In 1961 the programs were very heavy on drawing and technical skills. In 1968 that was the first thing we threw out." In place of technical courses that were directly relevant to future jobs, students in the late 1960s and early 1970s turned more to philosophical concerns: courses such as urban sociology, or those that examined the human relationship with the environment or that taught architecture students how to determine the needs of communities and neighbourhoods.

Today, in some ways, architecture schools have come full circle. Although many of the interests that began to flourish during the 1970s, such as restoration of older houses and energy-efficient design, continue to be an important part of the curriculum, the 10 university-level schools across Canada[1] are again emphasizing technical skills such as structural theory, building construction, drawing and the study of acoustics and lighting.

> Pressure for change within the schools is directly related to the country's changing social, economic and political climate.

This latest shift in the curriculum is designed to prepare students to meet the new needs of the restraint-conscious 1980s – more multifamily dwellings, less expensive and more energy-efficient housing and the re-use of older buildings – as well as providing students with the vocational skills that they will need to find work in a highly competitive job market.

Part of the reason for the seesaw in curriculum over the last few decades stems from the nature of the profession itself. The practice of architecture is inextricably linked to the vagaries of the "rather chaotic" building industry, which prospers or fails swiftly as it mirrors the state of the economy, points out a 1976 report on architecture education by the Council of Ontario Universities[2]. Pressure for change within the schools, the report adds, is directly related to the country's changing social, economic and political climate.

During the 1960s, when the economy was healthier, office buildings and new housing mushroomed across the country. Enrolment in architecture rose as several new schools, among them Carleton and the University of Waterloo, were established. There was room to experiment: courses that focused on public participation in the design process, new building forms such as domes or solar-heated houses and courses that examined the social implications of architectural design flourished.

Today, with money tight for new housing and institutional buildings alike, many of Canada's approximately 4 500 practising architects are being forced to scramble for work. For those students graduating this spring, job prospects look even worse, according to architecture school officials. (In fact, the job situation for architecture graduates is so bad that many consider themselves lucky if they can find work in building or design-related fields such as construction, management, consulting, furniture design or even making toys.)

Because the students of the 1980s know that the economy is weak, they are turning their backs on experimental courses and looking for more "job-oriented and rigorous" training, says Jean-Claude Marsan, a professor of architecture at the Université de Montréal. Other architectural educators agree.

> Students of the 1980s are turning their backs on experimental courses and looking for more job-oriented and rigorous training.

The students' demands for more practical course content began about three years ago, states Thomas Howarth, professor emeritus at the University of Toronto and head of the U of T school from 1958 to 1974. During the early 1960s Howarth introduced a highly successful system of student selection by interview and proposed new concepts of two-tiered (double degree) programs, with the opportunity for diversification at the undergraduate level according to aptitude in architectural design, technology, history and theory, urban design, landscape, management and architectural conservation. There was also the opportunity for graduate design and research in these fields, including pioneer work in building in the North. Not all of these proposals were acceptable at the time, but degrees in urban and regional planning and landscape architecture were introduced and a new faculty established in 1967 of which Howarth was dean until 1974. He is currently writing a book about architectural education in North America over the past twenty-five years.

Howarth believes that the shift away from the freer, less-disciplined programs of the 1970s came inevitably because students felt that their education, though rewarding in many areas, seemed unrelated to the "real world" of professional practice – a world deeply concerned with the creation of a more humane environment in which the architect must know how to design *and* construct buildings and urban places that not only worked well but were economical to build and maintain, and a pleasure to use.

At McGill University the school's director can see concrete proof of the shift in interest. During the late 1960s and early 1970s, says Derek Drummond, almost all architecture students took courses in urban sociology as their elective subject. For the past four years, however, hardly any have taken sociology. Instead they take business and management courses as their electives. On the other hand, many of the faculty, often products of the earlier less traditional era, are more interested than the students in the social aspects of design such as incorporating the needs and demands of users in building plans.

However, the current trend does not represent a complete return to "the basics" of teaching only the technology of architecture, says Tony Santos, chairman of the school of architecture at the U of T. At Toronto, where architecture education began in this country in 1890, the school is currently going through a thorough overhaul of its program.

The program under revision at the U of T was introduced in 1968. It includes most of the creative and technical aspects of architecture within "core problems", which are the focus of the entire class's work for a year. Throughout the second year, for example, students are asked to consider in both design projects and technical workshops the problem of "Oasis", designing "accommodation for a group of strangers who, in their travels, share a stopping place".

> Many of the faculty are more interested than the students in the social aspects of design.

The current program is both a "lofty ideal", because it attempts to integrate theory, design and technology, and an

1 Degree-granting professional architecture schools and faculties are located at the University of British Columbia, Calgary, Carleton, Laval, McGill, Manitoba, Montréal, Toronto, Waterloo and the Technical University of Nova Scotia. Depending on the university, the degree is available either as a four or five-year program after high school or as a professional degree after a first bachelor's degree. Ryerson Polytechnical Institute also offers a non-professional bachelor's degree in architectural science

2 *Commoditie, Firmenes and Delight. A Study of Architectural Education in Ontario* (Toronto: Council of Ontario Universities, 1976).

"administrative nightmare", since student progress through a single year-long core problem is slow and difficult to evaluate.

The current program is to be replaced by a more structured approach to architecture education. The new curriculum, which could be in effect as early as this fall, provides for a mandatory technical and professional stream with courses in such areas as structures and mechanics to complement a "separate but parallel" studio stream. Thus, design projects undertaken by students in the studio workshop will be used to apply the technical principles that they are learning at the same time in the classroom.

The new curriculum still aims to show that technology and design are inseparable, but both will be earned and evaluated on their own terms. Therefore, explains Santos, the revisions are not "a reactionary return to the old days but really a hard and critical look at the failures of the much less deliberate program of the last 10 to 15 years.

"It really is a reckoning with our own record," he says.

"We may have turned almost full circle," agrees Thomas Howarth, "but we're continually learning from past experience and trying to anticipate future needs–this is the educator's job."

> Students are not easily able to transfer architecture credits to other faculties within the university. The proposed new program would allow students more leeway.

The U of T school, which accepts students after high school for a five-year professional program, also plans to make provisions for those students who have not entirely committed themselves to the profession of architecture in the new program. Currently students are not easily able to transfer architecture credits to other faculties within the university such as engineering or arts and science. The proposed new program would allow students more leeway. Instead of taking only architecture courses, first-year students could take arts and science courses along with a one-term studio workshop, thus allowing themselves more time to decide whether they have made the right career choice. However, those definitely committed to architecture could still opt for a more intense track, taking two design workshops and specialized architecture courses in their first year.

> TUNS hopes to replace the elective system with an almost entirely mandatory program in the first two years.

Sweeping changes are also in the wind for the architecture school at the Technical University of Nova Scotia (TUNS). The school is in the process of giving its program a "clearer structure", says Essy Baniassad, who was appointed dean two years ago.

The current program does not give enough emphasis to design, Baniassad explains. It allows students to take too many electives in the early years with a move to more mandatory work in the studio in the upper years. In their third term, for example, students are required to take only two mandatory courses: design, and urban and regional planning. All other courses, including drafting, an introduction to computers, construction systems, a study of the structural systems inherent in concrete, steel and timber, and architectural history, are optional.

The school hopes to replace this system with an almost entirely mandatory program in the first two years. Drawing will be the main focus of the new curriculum along with a supporting framework of courses in the theory of design, architectural history, structures, construction and environmental design. In the final two years students will do more studio work, concentrating their efforts on one of four major areas: the study of city design and development, housing, restoration, or architectural construction systems such as prefabricated buildings.

Some of the elements that were introduced during the 1960s at the 10 schools are still an integral part of architecture programs.

During the 1960s and early 1970s the general public began to take a much greater interest in both the design process and urban planning. At the same time the architecture schools began to reach out to the community. This involvement remains a strong and important aspect of the programs at Canadian architectural schools.

Students at the University of British Columbia, for example, are examining the impact on the city of the new rapid transit system (LRT). The students are studying the LRT route "inch for inch", according to Douglas Shadbolt, as they look at the impact and development opportunities of transit stations and routes on the community. The information gathered by the students and their suggestions are being passed on by the school to the city government.

The UBC school has a history of "activist" involvement in Vancouver's planning process, Shadbolt points out. The work done at the school was formative in saving Gastown, a derelict waterfront area which was restored into a section of fashionable restaurants and shops during the 1960s.

On the opposite coast of the country, students at TUNS are now in the process of studying Halifax's central business district with the intention of providing data for architects and planners and stimulating community debate about the fate of the area. The school is also funding a student to give advice about restoration and heritage buildings to Cole Harbour, a non-profit society which owns a group of old farm buildings in an outlying district of Dartmouth.

> Practical experience is an important aspect of architecture education at many of the schools.

McGill University's architecture school has taken its work with the community a step further. On Wednesday nights it runs Arcaide, a consulting service staffed by architecture students and available to Montreal-area homeowners who have questions about minor repairs or home improvements. Designed as a teaching vehicle for the students, Arcaide provides benefits both to the homeowners, who have their problems solved free of charge, and to the students, who gain practical experience and a full course credit at the same time.

The questions asked are usually easy for the students to answer: why does my basement leak? how can I save on my fuel bill? how can I stop my porch from falling off? The students are aided in solving the problems by two staff members and the course is supplemented by lectures on technical problem-solving and a final examination.

Such practical experience is an important aspect of architecture education at many of the schools.

Students at the University of Waterloo, for example, are given experience through the university's cooperative study system, which provides one term in the classroom followed by a term working in a career-related job. Waterloo students gain experience in design research, preparing site and floor plans and assisting architects in their offices and on-site during work term placements.

TUNS also operates on a co-op system while other schools encourage students to gain work experience during the summer or at another point during their academic studies.

Some of the interests that began to flourish during the 1960s are also still considered important by architecture students and faculty alike. Courses in areas such as energy-efficient design, energy conservation and building to use solar energy are popular across the country.

Most projects of any scope are now done by teams. The students get some taste of the importance of debate and trade-offs.

Interdisciplinary courses – often in areas such as engineering, urban planning or art history – also continue to play an important role. At the University of Calgary, for instance, the interdisciplinary approach is basic to the program. The architecture program is part of the larger faculty of environmental design which also includes industrial design, urban and regional planning and environmental science.

Student teams from all four disciplines work jointly, "thrown together" to solve problems, according to Douglas Gillmor, program director for architecture. "This broadens the horizons (of the architecture students)," Gillmor comments. "Most projects of any scope now are done by teams. The students get some taste of the importance of debate and trade-offs".

Perhaps the biggest steps for the schools in the near future will be the increasing use of computers to help in student design projects.

Restoration of older buildings is now also a vital part of architecture curricula in Canada. Ten years ago, notes McGill's Derek Drummond, students were hardly ever given restoration projects as part of their studio workshops. These days, though, design projects involving restoration or the recycling of older buildings for new uses are extremely popular. In fact, predicts Jean-Claude Marsan of the Université de Montréal, restoration will become an even more important facet of the curriculum in the next few years.

Perhaps the biggest step for the schools in the near future, however, will be the increasing use of computers to help in student design projects. Computer-aided design, often discussed during the 1960s, has now become a reality at architecture schools.

At the University of Calgary students can use the Computer Graphics Laboratory to build a three-dimensional image of their design project on a television screen. The computer allows students to change the angle, back off or come closer to the projected design at the touch of a key.

With the help of the computer, students can now spend less time on perspective drawings, points out Douglas Gillmor.

"The computer takes all the tedious, boring 'donkey work' out of architecture. This allows the students to spend more of their time on design issues . . . we still have a commitment to this".

The creative part of the architectural process – the design of buildings – is still the primary focus of architectural curricula in Canada.

But despite the growing use of such new technology, the creative part of the architectural process – the design of buildings – is still the primary focus of architecture curricula in Canada.

"Our increased interest in areas of technology and science doesn't mean we are less interested in design philosophy," comments Thomas Howarth.

Despite shifts of emphasis in the schools over the last few decades, the students' creativity in designing buildings remains the most important aspect of an architecture education in Canada. No matter what happens in the coming years, this is not expected to change.■

Christine Tausig is a former staff writer for *University Affairs*, a publication of the Association of Universities and Colleges of Canada.

Le nouveau visage des villes de province et des villes périphériques

par Denys Marchand et Alan Knight

Dans un premier article (*Habitat*, Vol. 25, No 4, 1982) nous avions considéré les changements qui s'opèrent dans le milieu rural et qui transforment la physionomie, le paysage du rang, l'ordonnance du village. Ces changements marquent la rupture des modes de vie et de production. L'industrialisation de l'agriculture autant que l'industrialisation de l'habitation, le transport par l'automobile privée concourent à ces transformations fondamentales.

Nous voulons maintenant jeter un regard sur les villes de province, petites et moyennes, ainsi que sur les villes situées en périphérie des grands centres et qui dans leur structure sont très proches des premières mais qui font face à des problèmes d'une échelle différente. Nous le rappelons, ces villes, ces milieux sont considérés comme des contextes types du Québec dans lesquels l'insertion d'une architecture nouvelle a fait l'objet d'une exposition[1].

Les villes de province

Nos anciens manuels scolaires de géographie avaient des formules bien à eux pour désigner nos villes de province, formules un peu éclatantes, un peu mystérieuses, qui donnaient la mesure du rôle régional de ces villes mais qui, en même temps, en laissaient imaginer le caractère physique, la physionomie du cadre bâti. Ainsi, la formule: "Sherbrooke, la reine des cantons de l'est" résonne-t-elle de toute la fierté régionale tout en laissant entrevoir une architecture chargée de décor, de dentelles, image que confirme une visite du quartier maintenant appelé le "Vieux Nord". Mais, de même, Saint-Hyacinthe, Joliette, Rivière-du-Loup, Valleyfield y trouvaient leurs qualificatifs qui les identifiaient comme autant de lieux différents.

Rôle et caractère

Ces diverses villes du Québec constituent traditionnellement autant de pôles de convergences et d'identité pour les diverses régions. Dans ces villes se concentrent souvent divers services régionaux, hospitaliers, administratifs, judiciaires. On y trouve aussi quelques industries de base qui ont parfois donné naissance à la ville elle-même ou encore on peut y trouver des centres d'échange répondant au besoin du commerce entre les régions. Le rôle de Saint-Hyacinthe en ce sens est bien marqué par l'importance du marché, de sa place qui l'entoure et de sa situation dans la ville.

Les grandes institutions, maisons mères, hôpitaux, séminaires côtoient le palais de justice et quelques immeubles administratifs. L'ancienne usine se situe à part, sa localisation étant plus fonctionnelle que prestigieuse. Ces édifices constituent souvent des monuments exceptionnels qui interrompent la trame de la ville ou, plus encore, ils deviennent des éléments structurants de l'espace urbain. Si la place du marché voit se concentrer les fonctions commerciales, le parc, plus formel reçoit le palais de justice, l'hôtel de ville, les grandes résidences.

[1] *De la rupture à la continuité l'architecture et le problème de l'insertion*, exposition présentée à Québec et à Montréal, au cours de l'été 1982

Si, en milieu rural, on a vu l'implantation des bâtiments se faire perpendiculairement à la ligne de subdivision des terres, cette tradition se perd rapidement dans la ville de province. Le bâtiment "s'urbanise" s'adresse à la rue, sa façade se place parallèlement à celle-ci, tandis que le lotissement devient plus étroit, que les bâtiments se resserrent dans une trame plus dense; l'espace est conditionné par l'économie, l'implantation devient plus ordonnée. En général, quelques paroisses se partagent le territoire de la ville qui se subdivise en autant de sous-centres nettement identifiables.

Les paradoxes d'un modèle

Ce ne sont certes pas nos petites villes qui ont servi de modèle à Ebenezer Howard ou à Raymond Unwin dans l'élaboration de leurs théories urbanistiques. Il n'en reste pas moins que ce sont ces petites villes européennes de province qui ont servi de modèle de base et qui ont permis de développer les concepts des "cités jardins" du premier et des "Garden suburbs" du second que nous prendrons ici comme exemple. Unwin dans son livre, *Town Planning in Practice*, s'attarde à l'étude de nombreuses villes dont il souligne, entre autres, l'individualité, le caractère propre auquel il consacre tout un chapitre. Dans cette étude, existait un nombre de règles et de modèles qui vont guider la mise en forme des nouvelles banlieues qu'il propose et dont Hampstead Garden Suburb constitue l'exemple le plus connu. Place centrale, édifices civiques, rues résidentielles sinueuses et pittoresques, la recherche d'un équilibre des distances correspondant aux possibilités du piéton, tout concoure à en faire la ville idéale entourée de campagne. Au cours des années, le principe en a été repris, modifié suivant la doctrine de séparation des fonctions, adapté aux exigences de l'automobile et aux règles du marché immobilier. Ces principes se sont transformés en une technique d'urbanisation dépourvue de ses bases théoriques, mais utile à l'industrie de l'immobilier dans la dilapidation du territoire agricole et dans l'éclatement des villes de province auxquelles les nouveaux développements viennent se greffer à l'aide d'autoroutes, de boulevards et de centres commerciaux. Si l'automobile, depuis son apparition, est passée du statut d'objet de luxe à celui de nécessité, c'est qu'elle aura été l'instrument par excellence de la rationalité du développement continu, rationalité dominante du 20^{e} siècle, en plus, bien sûr, de satisfaire à la jouissance technologique, au sentiment de domination et de correspondre à la loi du moindre effort.

Économie et fonctionalisme ont dominé l'urbanisation. L'économie de production et de consommation de biens ne pouvait faire autrement que de favoriser la consommation de la maison unifamiliale de banlieue et de son complément symbiotique, l'automobile. L'urbanisme avec ses dictats fonctionalistes a trouvé dans l'automobile l'instrument idéal pour justifier et réaliser la séparation des fonctions. Nous avons là les éléments essentiels d'une nouvelle morphologie (on serait tenté de dire morphogénèse tellement le processus est implacable), morphologie touchant la forme de la ville tout autant que la forme des bâtiments. En construisant en dehors des contraintes des centres existants, contraintes d'espace, contraintes de coût, on a développé des prototypes de bâtiments adaptés à l'automobile peut-être, mais dont l'existence dépend d'une consommation excessive d'espace dont le coût est reporté sur la collectivité. L'effort inverse n'a guère été tenté, soit l'insertion intelligente de l'automobile dans les trames urbaines existantes et nouvelles dont l'aménagement serait conçu en fonction d'une utilisation modérée du véhicule.

Mais, bien plus, il faut sans cesse se rappeler la terrible ségrégation sociale qu'impose l'utilisation de l'automobile à une partie importante de la population, notamment les enfants et les personnes âgées. Les décideurs publics, utilisateurs eux-mêmes de la voiture, prennent des décisions de localisation en fonction de leurs habitudes propres de déplacement. Ainsi voit-on trop souvent surgir les centres d'accueil en pleins champs, en dehors des noyaux urbains, coupant ainsi toute une population du contact quotidien avec le milieu normal de vie, tandis que de trop nombreux élèves des polyvalentes risquent de passer plus d'heures dans les autobus scolaires que dans les salles de classe.

Les villes périphériques

Si la ville de province est menacée d'éclatement par un développement externe, la ville périphérique quant à elle est menacée d'étouffement ou de disparition. À courte distance des grands centres, certaines localités se sont développées au cours des années, grâce à une situation géographique favorable à une industrie spécialisée. Ainsi, Sainte-Thérèse et ses manufactures de pianos devient une des premières villes électrifiée en Amérique du Nord. Ailleurs, grâce à un changement dans le mode de transport, Lachine, par exemple, se développe en parallèle avec Montréal. Ces villes ont connu un âge d'or dans leur développement, leur éloignement relatif leur permettant de se spécialiser sans souffrir de la concurrence des grands centres. Elles ont aussi souvent acquis une renommée régionale ou provinciale à cause d'une production manufacturière particulière ou d'une institution d'enseignement. Les mêmes principes organisateurs de l'espace que ceux qui ont présidé à l'émergence des villes de provinces se retrouvent dans la génèse de villes périphériques.

Par contre, leur situation, à cause du développement accéléré des grands centres, est fort différente. Les transformations de l'économie, le changement de vocation du territoire, tout tend à modifier la vocation, le rôle de ces localités qui perdent ainsi leur raison d'être. En même temps, le développement des zones résidentielles et des réseaux autoroutiers ont peu à peu noyé les centres anciens dans l'uniformité de la banlieue.

Un secteur de Saint-Léonard: morphologie standardisée de banlieue qui représente bien la déformation des idéaux des cités-jardins du début du siècle. On constate que la typologie d'habitation utilisée, le duplex jumelé avec quadruple accès de garage, peut difficilement s'imposer sur une morphologie conçue pour l'utilisation de "cottages" et pour une circulation de piétons.

Plan extrait de l'exposition
De la rupture à la continuité

Denys Marchand

Patrimoine en voie de disparition, à Saint-Léonard. Exemple type de la détérioration des centres anciens englobés dans une urbanisation effrénée.

Un ensemble urbain intéressant: Saint-Hyacinthe. Au nord, le Palais de Justice (D), de facture moderne, ferme bien l'ouverture du Parc Casimir Dessaules (C), parc entouré de résidences victoriennes et de l'Hôtel de Ville (coin sud-est) (B). Une petite rue en pente nous permet de descendre à la Place du Marché (A) et son édifice imposant. Malheureusement, un édifice à bureaux d'une modernité agressive vient s'installer du côté sud du parc.

Plan extrait de l'exposition De la rupture à la continuité

SCHL

Palais de Justice de Saint-Hyacinthe. Cet édifice nettement moderne joue bien son rôle de bâtiment civique sans détonner dans l'ensemble. Bien que de hauteur relativement faible, c'est par son implantation au sol et ses arcatures qu'il trouve une certaine majesté.

SCHL

Séminaire de Saint-Hyacinthe. Exemple intéressant d'intégration d'un édifice, d'une architecture moderne à un bâtiment ancien sans que l'un sacrifie à l'autre. Respect des hauteurs, contraste des textures, le bâtiment récent reprend, dans un langage nouveau, des formes traditionnelles.

SCHL

Banque et musée historique de Longueuil. Exemple complexe d'une architecture moderne qui résulte d'une recherche plastique portant à la fois sur les formes et les matériaux traditionnels et modernes. Le musée en pierre fait allusion au passé, le hall de banque découle des nouvelles techniques de béton armé.

Les principales rues de ces localités, devenues lieux de passage d'une circulation grandissante, ont subi des "améliorations" ponctuelles, à la petite semaine et sans vue d'ensemble qui ont peu à peu dénaturé le paysage de ces voies, telles l'avenue Royale à Beauport, la rue Notre-Dame sur l'île de Montréal et combien d'autres.

Contextes et réalisations

Pourquoi parler autant de l'évolution des contextes bâtis et pourquoi pareille insistance sur la voiture? C'est que l'on retrouve trop souvent une indifférence généralisée par rapport au milieu et que la voiture illustre les extrêmes de cette indifférence car elle permet à la fois l'isolation par rapport au milieu et oblige à la transformation du même milieu. Elle est instrument d'action directe, immédiate.

Et, dans les décisions d'aménagement, l'attention est portée sur l'action, la réalisation concrète, le résultat tangible alors que le contexte est oublié, que les conséquences sur le milieu ne sont pas considérées.

Cet oubli risque d'être fatal pour certains milieux construits qui sont souvent plus fragiles d'autant qu'ils sont plus petits. Faut-il se rappeler le cas de Sainte-Thérèse dont le vieux centre a fait l'objet d'un programme de rénovation urbaine il y a environ une dizaine d'année et dont les seuls résultats tangibles aujourd'hui sont un centre vide et une rivière recouverte d'une dalle de béton!

Cependant, nous ne prétendons pas que toutes les interventions soient négatives, loin de là, et nous pouvons nous attarder à quelques exemples. Saint-Hyacinthe recèle un aménagement civique intéressant si l'on considère l'ensemble formé par le Palais de Justice, le parc Casimir Dessaules entouré d'anciennes résidences et l'Hôtel de Ville qui débouche, par une petite rue en pente, sur la place du marché et son édifice imposant. Le Palais de Justice est carrément moderne, avec un petit air de Brazilia, mais il joue parfaitement son rôle d'édifice civique fermant le parc du côté nord et son implantation un peu distante ajoute au caractère majestueux. L'Hôtel de Ville, nettement victorien, occupe un angle important au sud-est du parc qui reçoit un kiosque à musique moderne mais dont l'élégance lui confère la discrétion voulue. Malheureusement, le côté sud a été fermé par un édifice à bureaux moderniste, sans caractère, et hors d'échelle par rapport à l'ensemble qui ne dépasse pas trois étages. Des édifices situés du côté ouest de la place du marché ont été la proie des flammes au cours de l'hiver 1981 et il est à espérer qu'ils seront reconstruits.

Par ailleurs, à l'extérieur du centre, le séminaire qui a été la proie des flammes au début des années 60 a fait l'objet d'une reconstruction remarquable ou l'architecte a su intégrer une architecture moderne aux éléments anciens encore existants.

Si l'on se tourne du côté de Valleyfield on s'aperçoit qu'un des atouts les plus importants de la ville, le canal, a été en partie comblé pour aménager un stationnement et construire un bureau de poste qui trône impérieusement sur un espace désordonné.

Le bureau de poste peut-être pris comme un cas type où la rationalité de l'institution qui construit prime toute considération contextuelle. C'est le cas aujourd'hui, de la plupart des banques, des interventions du ministère des Affaires sociales du Québec avec ses foyers pour personnes âgées; c'est le cas du ministère des Postes avec ses bureaux types répétés n'importe ou de certaines interventions plus particulières conçues en dehors des considérations pour le milieu. On peut difficilement trouver meilleur exemple que le bureau de poste de Beauharnois, énorme et glacial cube de granit gris qui vient bloquer la vue d'un parc vers le fleuve auquel il tourne le dos. Presqu'en face, de l'autre côté de la rue, l'ancien bureau de poste victorien, en grès rouge, transformé en bureaux privés, témoigne d'une époque révolue où ces bâtiments pouvaient s'appeler "civiques".■

Denys Marchand et Alan Knight sont architectes et professeurs à l'École d'architecture de l'Université de Montréal

SCHL

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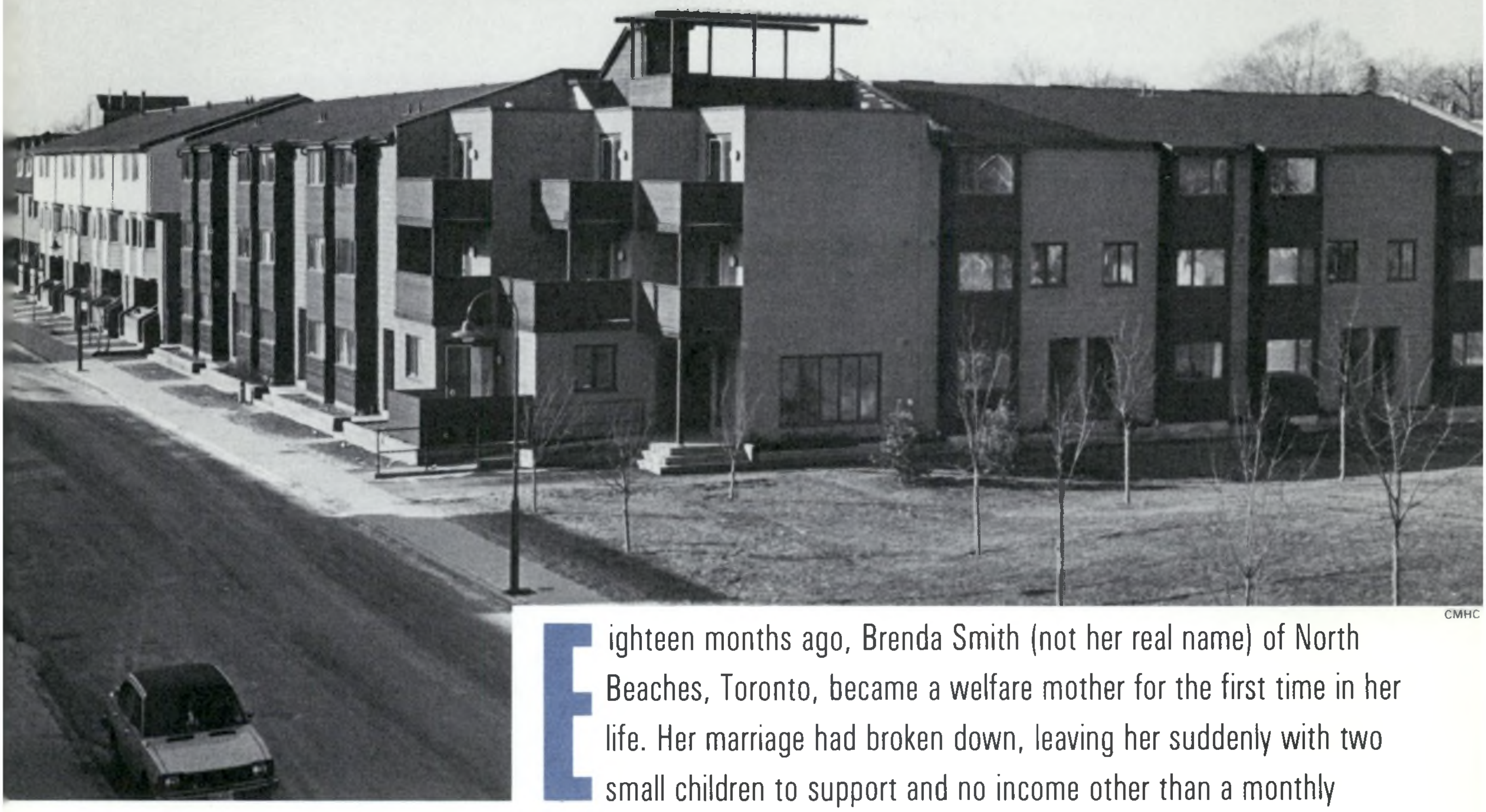
Ancien et nouveau bureaux de poste de Beauharnois. L'ancien bureau de poste situé à l'extrémité nord de ce qui fut un marché, traduit bien le souci que l'on avait d'une architecture civique. À l'opposé de cette conception, le nouveau bureau de poste marque bien l'indifférence qui résulte d'une logique interne à toute grande institution dépersonnalisée.

Constance Hamilton Co-op
Housing by Women for Women



CMHC

by Gabriella Goliger

Eighteen months ago, Brenda Smith (not her real name) of North Beaches, Toronto, became a welfare mother for the first time in her life. Her marriage had broken down, leaving her suddenly with two small children to support and no income other than a monthly welfare cheque of $512. The rent at her two-bedroom apartment where she and her children lived was $410 a month. Soon, the strain of her situation led Smith to a nervous breakdown and several periods of hospitalization.

Like thousands of others in Metro Toronto, Brenda Smith was caught in a housing squeeze caused by a chronic shortage of affordable low- and middle-income accommodation and an increase, in recent years, in the numbers of people in straitened circumstances.

According to a recent study by Toronto's Social Planning Council, emergency housing (such as Salvation Army hostels) has been innundated by requests from the homeless for shelter. Other studies show that women in particular have been hard hit by the housing crisis-the number of battered wives, single mothers and other sole-support women with severe accommodation problems is on the increase.

A Canadian First

With the support of Metro's Social Services Committee, a group of leading women in the city, including a lawyer and the director of a social service agency, incorporated the board of the Constance Hamilton Co-op two years ago. It was to be the first housing co-operative in Canada (and possibly North America) created by and for women.

Named after Toronto's first woman alderman, Constance Hamilton, who was elected to City Council in 1919 and had a particular interest in housing for women, the new co-op was to provide some affordable housing to self-supporting women in need.

"Women often don't have control over their environment," explains Janet Howard, vice-president of Constance Hamilton and a former Toronto city alderman.

"A housing co-op seemed an ideal situation to give women some management skills and experience at running their own affairs. So it wasn't just a matter of giving them a roof over their heads, though that was important. We saw it as a kind of affirmative action."

Another specific concern was the plight of women who, for any number of reasons, had been in crisis and who, until then, could only turn to transition houses providing short-term accommodation of a few weeks duration. The co-op was also, therefore, to include "second stage" housing in which women could stay for at least several months.

On November 1, 1982, many board and committee meetings later, the Constance Hamilton Co-op was ready for occupancy and members started moving in.

Designed by Toronto architect, Joan Simon, the new co-op is a 31-unit townhouse complex built on 1900 square metres of city-owned land in the Frankl-Lambert neighbourhood close to downtown Toronto. Shops, schools and public transportation are all conveniently located nearby and the area includes a good social mix of residents in rental, co-op and private housing.

Funding

A management grant of $11 380 was provided by the municipality as "start-up" funds to cover the costs of such items as organization, incorporation and professional fees, but funding for the project has come mainly through a $2 million mortgage insured by CMHC. The Corporation also provides an annual subsidy which effectively reduces the mortgage interest rate to two per cent. The remaining subsidy available is used to reduce monthly rents of income-tested residents.

The co-op has received additional funds for rent subsidies through the Ontario Community Housing Assistance Program (OCHAP) which allows the rents on a maximum of 25 per cent of the units (six in all) to be geared to residents' incomes.

Board members are concerned about the 25 per cent OCHAP ceiling and argue that more subsidized units should have been available.

"Many women withdrew their applications when the rents were set because they couldn't afford to live in the project," says Jean Woodsworth, the co-op's current president. "In normal times it might make sense to subsidize only 25 per cent of the units but these aren't normal times."

After its first year of existence, however, the co-op will be able to control its own rents and will not be under legal obligation to raise them as is the case in provincial public housing. The hope is that the co-op can avoid a rent hike next year through good management and efficient maintenance.

So far, the greatest disappointment for Constance Hamilton Co-op members has been their inability to keep rents as low as they would have liked.

CMHC guidelines stipulate that the co-op's rents must be set to low-end-of-market rates for comparable new housing in the area. However, rents in downtown Toronto, even at low-end-of-market, are higher than many women can afford. Thus a one-bedroom apartment at Constance Hamilton rents for $375; a two-bedroom unit for $505 to $540 (depending on design variations) and the three-bedroom units for $570. Utilities are extra.

Designed with Women in Mind

The Constance Hamilton Co-op is not particularly distinguishable from many other new townhouse projects in the area and this is no coincidence. The idea, says Joan Simon, was to create a co-op that would blend well with the neighbourhood – a co-op large enough to be a community.

The co-op was designed with women, particularly women with children, in mind. The units (one, two or three bedrooms) all have large combined kitchen and dining room areas so that mothers can cook while their children play within easy view.

The courtyard at Constance Hamilton co-op.

The importance of the companionship of other women and learning to manage their environment with their peers is the main attraction for many residents.

Because the co-op was designed particularly for women with children, all have large combined kitchen/dining room areas . . .

. . . where mothers can cook and watch their children at play.

The laundry room provides a pleasant view of the small park next to the co-op.

Each unit has its own balcony (some have two) or small yard facing a common courtyard – another good area for children to play where they can easily be seen by adults.

Residents also have access to a common laundry room and a small park next to the co-op. The two- and three-bedroom apartments have either full or half basements which offer useful storage, play or work areas.

Several features will help cut maintenance costs: there are no hallways to clean between units; light brown, easy-to-clean carpeting has been used throughout the project; and most of the courtyard is paved with cement blocks so little gardening is necessary.

The whole co-op has been designed for energy efficiency with tightly sealed windows facing south for maximum exposure to sunlight.

While it would have been desirable to include a central meeting room in the project, space limitations and budget did not permit this luxury. A unit designed for the handicapped was also omitted because of space limitations on the building site.

Within a few weeks of its opening, the Constance Hamilton Co-op was filled to capacity, most members having applied months in advance. Members were chosen on the basis of their economic and social needs, their willingness to help run the co-op (all current members sit on committees) and their ability to adapt to the community.

The new residents included teachers, social workers, artisans, students, a chiropractor and a shiatsu masseuse, among others.

"It sounds a bit middle class. Perhaps not what you'd think of as women in need. But women usually earn less than men, so even many professional women have housing problems," Janet Howard explains.

Most of the 37 adult members are between twenty and forty years old, while the twenty children in the project range in age from ten months to eighteen years of age. About half the members are single women; the rest are mothers with children with the exception of one grandmother and a grandfather (the only adult male, at present).

Women's Community, the Main Attraction

While the new residents appreciate architectural features such as the large kitchens, the main drawing card for most seems to be the less tangible aspect of the co-op – the opportunity to live in a women's community and to manage their environment with a group of peers.

Brenda Smith, for example, was one of the early members of Constance Hamilton. Having heard about the project while still in psychiatric hospital, she was eager to move into an apartment she could afford (she was one of those who received a subsidized unit) and into a community in which she and her children could feel secure. She now lives in one of the co-op's three-bedroom apartments and is waiting for her children to join her.

Active on two co-op committees, she has already met many of the women in the project and stresses the importance of the companionship of other women. She also expects her son and daughter to find companions easily because other children in their age group live in the co-op.

Sandy Harris (a pseudonym) is a personnel officer and single mother who says she joined the co-op mainly to learn skills and take on responsibilities she might not have had in another environment.

"I joined the maintenance committee here because I've never been very handy with tools and I wanted to gain confidence in tasks that women usually let men do for them when they're around."

Before moving into Constance Hamilton, Harris and her twelve-year-old daughter lived in a well-established co-op in Cabbagetown. Harris says she found it difficult to participate in co-op business because a small group of long-time members had gained political control.

"It wasn't just the men; there were dominating women too. But this community makes me feel more comfortable. More myself. I'm able to speak up more and don't feel I need to play a role."

But while praising the spirit of equality and co-operation at Constance Hamilton, Harris is quick to point out that the community is by no means one-dimensional.

"I like the fact that there are women here of different ages and backgrounds. I wouldn't want to live in a place where everyone was the same."

Other residents echo the assertion that the co-op is diverse and does not expect a uniform lifestyle or ideology from its members. Applicants who seemed likely to dominate their neighbours or force political views upon them had been discouraged from joining, says Jean Woodsworth.

One of the most controversial issues to arise during the long months of working out membership policies was the question of what to do about male, live-in companions. It did not seem fair to ban them and thus restrict the private lives of members. At the same time some women were concerned that the co-op's original character and raison d'être – a place for sole-support women – would soon be changed if men were allowed in. Eventually a compromise was reached. Men may live in the project, but may not become members, a ruling that ensures women will retain control of the co-op and its management.

Crisis Housing

An integral part of the Constance Hamilton Co-op is a six-bedroom second-stage house for women who need crisis housing. Unlike other transition houses which are intended to accommodate women for a few weeks only, the shelter at Constance Hamilton allows residents to stay for six months to a year. This period gives women a chance to find employment, housing and to rebuild their lives in a supportive environment.

CMHC

A resident enjoys playtime with her daughter.

A part-time counsellor, Ellen Wexler, gives advice and information when needed, but does not live in the project herself. To do so might encourage dependency rather than self-reliance among the residents, she says.

A house committee also helps shelter residents participate in co-op affairs as a whole and integrate with the rest of the community.

Unexpected Problems

An unexpected problem has occurred with the sound-proofing system of the building. Apparently, metal furrings between joists and carpet underlays have not had the desired effect of ensuring privacy between the units. A number of residents have complained that their neighbours' activities are plainly audible. If the situation must be rectified through structural improvements, the process could prove very costly.

Another disappointment for the co-op was the lack of day-care facilities in the area and the inability of members to find funding for any.

"There just isn't any money for daycare anywhere in the city," says Jean Woodsworth.

At the moment, residents are making do with the co-operative approach – exchanging babysitting services among themselves, but Janet Howard hopes the membership will eventually continue to lobby for a full-fledged day-care facility. Howard also sees Constance Hamilton acting as a catalyst for the creation of other women's co-ops in the city.

This co-op is just one small project, but it's an example of what can be done. The Social Planning Council hopes to help other women's co-ops get started in the city because they see it as a positive approach to a problem that's getting bigger all the time.■

Gabriella Goliger is a freelance writer who has prepared a number of articles on women's issues.

Native Settlements in Arctic Canada: A Decade of Change

by Richard Bushey

In the last decade the Canadian Arctic has undergone significant change. The mining of minerals in the Arctic Islands has begun; offshore oil and gas drilling is now a standard operation. All this activity has received international attention. But what of the thousands of aboriginal people who live in the North? Have they shared in the new-found wealth? Are they content?

Traditional native pursuits of sealing, trapping, fishing and hunting continue. Native languages dominate in the household. And much of the pace of life is still governed by the variants of weather and the abrupt change of seasons so familiar to the 45 000 people who live in this 3.2 million square kilometre territory, nearly one-third of Canada's land area. However, there is discontent among the Inuit and other native groups over the growing list of unresolved problems which affect the lives of all who live "north of 60"

Early communities in the Canadian Arctic were characterized by the "matchbox" house.

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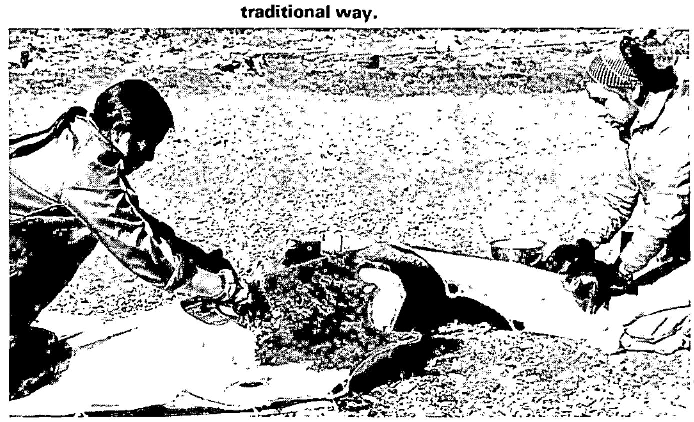

Women prepare pelts for trade in the traditional way.

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Life in Early Native Communities

The history of Canadian development policy for native people in the Arctic began in the early 1950s when the federal government encouraged nomadic families to gather in communities. Some 25 settlements of 100 to 200 natives were created in scattered locations across the Arctic. This enhanced the Canadian claim for national sovereignty over remote islands and windswept tundra.

In their original state these communities were similar. A police station, trading post, mission and a potpourri of matchbox-sized one-room houses built of plywood and heated with oil cook-stoves made up the community. These poorly heated homes were overcrowded and did little to prevent the chronic cases of tuberculosis or measles epidemics that infected young and old.

Life followed a regular pattern. In summer everyone who was able left the settlements for traditional camping areas down the bays, fiords and inlets that abound on the Arctic Ocean coasts. At camps men and boys would hunt and fish, while women and girls would prepare game and pelts for trade. As the short summer concluded, camps would break up and families would begin to return to the settlements so that children could attend school.

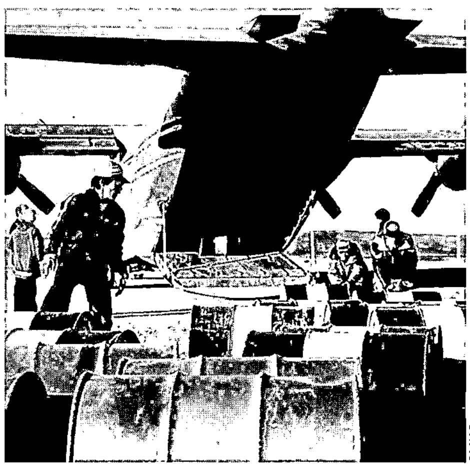
Upon returning to the community, another form of life would begin. Tents and furs would be put away. Women would prepare households for the long winter months of indoor life. The last of the supply ships for the Hudson Bay store would be unloaded. Shelves would be filled, warehouses supplied and trading would begin with but a few shrugs at the ever-increasing prices. School teachers from places like Ontario or England would return. Children would start thinking in English as classes began with stories of Dick and Jane and life down on the farm.

In winter or spring, the Commissioner of the Territories, the all-powerful representative of the Crown, would fly to the communities to reinforce the government presence. Meetings would be held in jam-packed rooms full of smoking men and a few women who might serve as interpreters for the Inuktuk and English languages. The acquisition of trucks, heavy equipment and attempts to remedy social or economic ills would be discussed in detail. Government representatives would become restless with the persuasive force of consensus decision-making. After many hours, bargains would be struck. Grants for vehicles, the allotment of a few more houses, or the enlargement of a water reservoir, for example, would be promised for the following year. The next day the Commissioner and his party would leave by airplane and the settlement would return to the daily life of hunting, trading, carving, part-time labour for wages, or social assistance, if necessary, to get through until summer arrived once again.

This pattern of existence was typical of most of these native communities over a decade ago. However major changes have taken place which have altered that way of life forever.

Major Social Changes

Due to the improved health care and better quality housing throughout the Northwest Territories over the last ten years, the native population and life expectancy have increased dramatically. While the North American population growth rate is less than one per cent, Inuit annual population growth has now risen to three per cent, similar to developing nations in Latin America and Africa. Should these fertility rates continue, the projected population figures for the Inuit will result in a doubling of the present population of 25 000 in the next twenty years. And this is a young society with few elderly people. At present the population under fifteen years of age represents over 40 per cent



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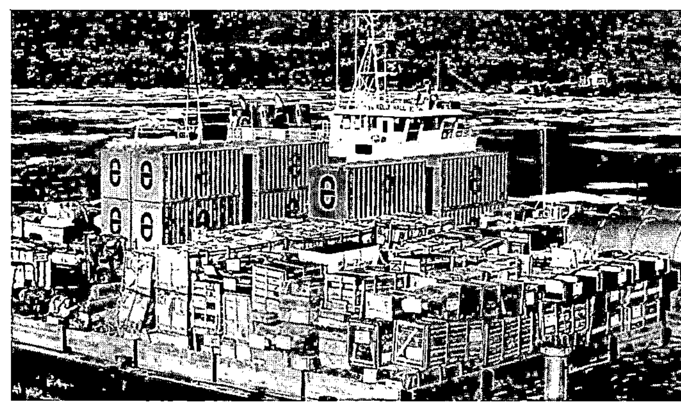
The arrival of supply ships and planes is an important event in Arctic life.



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of the people. As a result, settlements in the last decade have rapidly expanded in size from 100 to 200 residents per community to 400 or 500.

Since 1973, when the Northwest Territories Housing Corporation was founded in partnership with Canada Mortgage and Housing Corporation, it has built over 2000 homes in the 25 native settlements and 20 other northern communities with high non-native populations. These modern, centrally heated units have replaced the "matchbox" houses of years past. From the Mackenzie River to Baffin Island, it is not unusual to see energy-efficient senior citizen's homes or single-family housing, row housing, or rehabilitated older homes. Many of these units have been built by locally trained people.

As settlements have developed into hamlets and towns with year-round airports, modern medical facilities and public housing subdivisions, servicing and operations have slowly been taken over by local people. The hamlet manager is often a young man trained in the community and also educated in southern Canada. Daily business affairs are carried on by satellite-connected telephone and telex rather than the cumbersome radio-telephone of the past. Local people exercise more control and visits by the Commissioner are more ceremonial than complex wheeling and dealing negotiations. Budgets for housing associations, alcohol abuse committees and hamlet councils are co-ordinated through regional government centres, the Executive and Legislative Assembly in Yellowknife, or at bureaucracies in Ottawa. Business meetings are so frequent in a community that many native leaders are compelled to ration their time lest they become burnt out.

The economy of these native communities has also changed. Hudson Bay stores are in competition with co-operatives. The basic dozen commodities have been dramatically increased. Snowmobiles, food processors and colour TVs are now commonly stocked items.

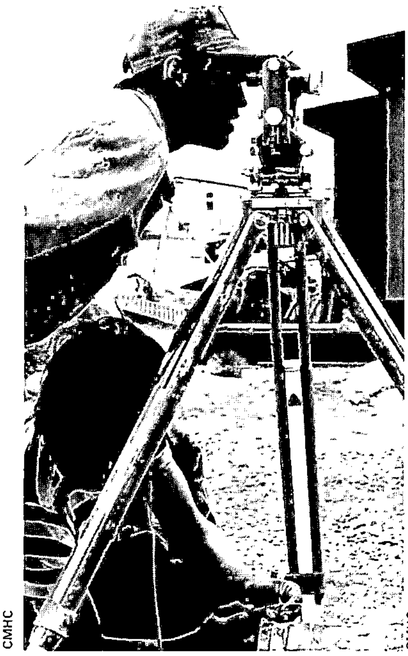
Bringing new technological and marketing techniques into the homes of Inuit people has created widespread debate. Many traditionalists, including Church leaders, find North American consumerism objectionable and a threat to cultural values. However, children and young people enjoy contemporary music, fashion and television programs via Anik satellite. To the curious, change is exciting. Those who can recall the rapid development over the last ten years feel anxious for the future. Yet, the native people of the Northwest Territories do not realize that this thrust into a modern technological society had been planned for some time.

Government's Vision of the North's Future

In 1970 the then Commissioner of the Northwest Territories, Stuart Hodgson, reported on the vast northern expanse he administered on behalf of the federal government. He proclaimed that the North was about to emerge as a political and economic force and that this emergence would be the greatest saga of the twentieth century. His vision included industrial developments of a scale suited to the immense size of the land, giving employment to thousands of pioneers. The Arctic was to become a modern re-enactment of old frontier days, accelerated and magnified by world pressures for increased commercial demand and heightened by competition for mineral resources. All of this was to be rocketed ahead by computer technology.

Jean Chrétien, who was then Minister of Indian Affairs and Northern Development, supported the Commissioner in a 1972 policy statement by asserting that the Canadian government was committed to this new era of economic development for the North. In addition, the Minister provided assurances of a higher standard of living,

Part of development strategy for the North was to train native workers for jobs in modern technological society and wean them from the traditional way of life.



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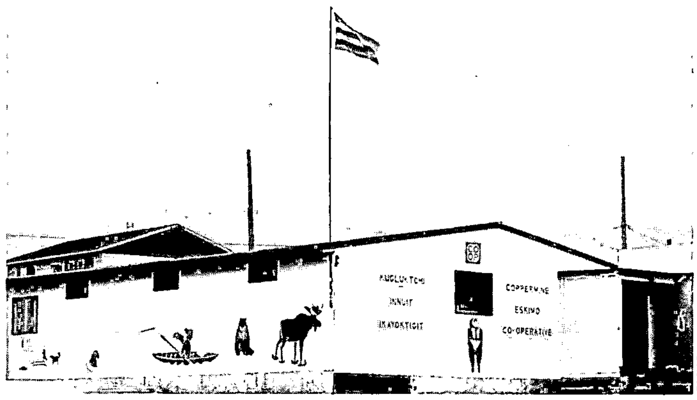
The economy of native communities has changed; Hudson Bay stores compete with native co-ops.



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improved quality of life and equal opportunity to all residents. Mr. Chrétien guaranteed that aboriginal preferences and aspirations would be preserved. He believed that the original people of the North would be the direct beneficiaries of the expansion of resource and industrial development, primarily through jobs in mining, off-shore drilling and related spin-off service industries.

Politicians and government policy planners assumed that the traditional mixed economy of the past, which included occasional wage employment combined with hunting and trapping, had collapsed in the majority of native communities. Subsequently, government would provide economic assistance through welfare and transfer payments to serve as a temporary measure until wage employment had been enlarged to meet the economic needs of a community. Once resource exploitation and industrialization had begun, it was thought that native people would be weaned from welfare into productive employment in these areas. This was to be the cornerstone of socio-economic policy for Arctic Canada.

Do Native People Benefit?

But is there any evidence that this welfare-industrialization-employment policy has brought benefits to the native people over the last decade? A review of various economic development studies and investigation into public records is revealing.

In 1970 in the Western Arctic, where major non-renewable resource development first began, the mean income for skilled workers from southern Canada employed in mines, on oil rigs and in support services was estimated to be $10 000 a year. Inuit workers employed in the same enterprises earned $3 000 annually. In 1977, researchers working for the Mackenzie Valley Pipeline Inquiry led by Mr. Justice Thomas Berger, concluded that there was no reason to believe that there had been any significant change in the proportional distribution of income in the last eight years. Despite continual industrial activity in this area of the Arctic, the Pipeline Inquiry researchers determined that the money economy of the North continued to be centred in urban locations, government centres and mining towns, not in native-dominated communities.

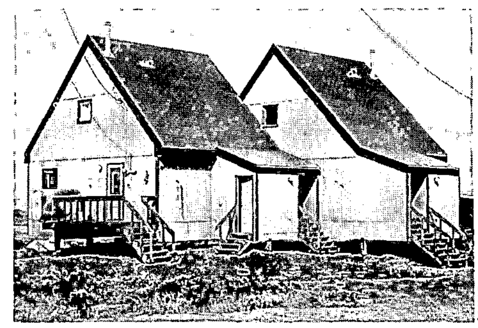
Throughout the last decade four basic facts have been revealed concerning resource development in the Canadian North:

- In nearly all cases, the income opportunities for native people were shortlived and they were relatively poorly paid in comparison to other workers.
- Few, if any, new skills were learned which could be carried over to or marketed by the native worker in another area.
- If any permanent positions were available when a major capital project was completed, they were not filled by native people in almost all cases.
- The economic and social effects of major industrialization projects on local native communities are often disastrous.

The consequences of the last point are all too familiar to developing regions of the world.

Negative Effects of Industrialization

As money flows into a small northern community from transients and native workers, the demand for commodities such as snowmobiles, televisions, boats and expensive foodstuffs (including liquor) increases and a local economic boom is fostered. Those with substantial cash incomes begin to accumulate expensive luxury household items. Envy and discontent are created among those who do not share in the newly



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Modern, energy-efficient housing has replaced the matchbox house.

acquired wealth. Soon employment terminates as the project is completed or is functioning independently of local supplies and labour. Business slumps. Purchased commodities wear out or break. There is no money to either repair or replace them. Abandoned vehicles are scattered about the community. People become depressed, some turn to alcohol and, when drunk, attempt to injure themselves or try suicide–a few succeed. Others begin to return to the land to hunt and trap as before. They discover that the wildlife has been either upset or destroyed by the industrialization project. Local residents find themselves worse off than they were before the development project–a reality that confounds the economic planners and politicians.

It appears that the goals and ideals of the last decade have proven to be unrealizable in the North. Unemployment, especially among young Inuit men, has continued to rise. Alcohol abuse, suicides and related crime persist. The prison system in the Northwest Territories has expanded and is filled to over-capacity. Public welfare statistics and costs climb every year. One especially tragic fact is the rise in violent deaths. In the Canadian Arctic death by violence rose from 14 per cent of all deaths to 30 per cent by the end of the last decade. In contrast, throughout Canada the national average for violent deaths was only 10 per cent, one-third the rate in the polar region. The development policy for the North has obviously gone wrong, the reason why this has occurred is not generally agreed upon.

Young native leaders such as John Amagoalik, Director of Inuit Land Claims, believe that all these problems are symptomatic of a greater malady–colonialism, inbred in all institutions in the North. Many aboriginal people believe that Western culture, attitudes and values which have come to dominate the North are the causes of social and economic distress. Yet government representatives believe otherwise. They are convinced that the last decade was but a transition period and that southern Canadians and their institutions have not corrupted native people. On the contrary, they assert that people in the North now have greater security and have been delivered from hardship and disease thus ensuring survival and progress.

There is no consensus on the debate concerning the social and economic situation in the North. Native leaders believe that success can be had with more political autonomy and the creation of a separate governing territory–Nunavut. However, there is no assurance that this will solve the problems of a lack of jobs, overcrowded communities, or the aspirations that are unfulfilled in the young.

With the world cutback in energy and mineral requirements, the megaprojects and pipelines planned for the North over the last decade have been abandoned. Job training promises have faded, housing starts have fallen and the expansion of communities has halted.

The welfare-industrialization-employment policies developed for the Arctic by the federal government planners and policy makers is in need of dramatic reform. There are lots of ideas but no concrete plans at present.■

Richard Bushey is manager of policy and planning for the Northwest Territories Housing Corporation.

Le défi de bâtir des coopératives d'habitation neuve

par Pierre Morisset

Beaucoup moins fréquentes que les coopératives d'achat-rénovation et de recyclage, les coopératives d'habitation neuve sont aussi moins connues. L'étude que nous avons faite de sept coopératives d'habitation neuve sans but lucratif, réalisées en territoire québécois, visait à comprendre les obstacles auxquels se heurtent les instigateurs de tels projets. Les difficultés encourues sont-elles proportionnées aux gratifications vécues durant le processus et à la jouissance des lieux dans son rapport qualité/coût? Car, dans le programme actuel, la première génération habitant une coopérative est celle qui devra investir toute l'énergie nécessaire à la promotion et les frais de loyer les plus élevés. Serait-elle le dindon de la farce?

D'un point de vue économique, les avantages l'emportent sur les inconvénients pour les ménages qui sont incapables économiquement d'accéder à la propriété individuelle. En effet, la formule offre à la majorité des ménages d'une coopérative l'accès au logement de première qualité pour un loyer équivalent à la moitié du prix du marché, soit en moyenne 252.00$ par mois pour les sept coopératives étudiées, construites en 1980-1981. Ces loyers augmenteront très peu par rapport au marché courant. Notons en plus que 43 pour cent des membres des coopératives étudiées profitaient de l'échelle des HLM i.e. payaient un loyer proportionnel à leur bas revenu. À ces bas loyers, il faut toutefois opposer l'absence de capitalisation pour les membres, i.e. le fait qu'ils renoncent à toucher quelque montant que ce soit à la vente de l'immeuble, à part une minime part sociale. Aucun des membres rencontrés n'a regretté le sacrifice d'une capitalisation qu'ils n'ont pas les moyens de s'offrir de toute façon. L'avantage économique est donc réel pour la grande majorité des coopérateurs et les candidats plus fortunés tendent à s'éloigner eux-mêmes d'un tel programme.

Dans ce rapport qualité/coût, les caractéristiques physiques jouent un rôle important. Tous ces projets sont à l'état neuf et d'une bonne qualité technique et architecturale. La coopérative *Villa Marcotte* de Drummondville et *La Villa Coopérative* de Saint-Gabriel de Rimouski sont deux ensembles pour personnes retraitées comprenant des logements typiques d'une chambre à coucher, et des espaces communautaires très utilisés. Les coops *La Marée* de Pointe-au-Père (Rimouski) et *Le Hameau* d'Alma sont des ensembles de maisons familiales en rangée, d'un étage et demie. L'absence d'espaces additionnels en sous-sol, l'utilisation de revêtements légers à l'extérieur et l'absence de toilettes au niveau des pièces de jour, sont les seuls éléments douteux quant à la qualité architecturale de ces projets. Par leurs propriétés architecturales, les coops *Saint-Sulpice* et *La Tannerie* de Montréal se comparent aux meilleurs ensembles de maisons en rangée. La coop *Grandir en ville*, logée dans l'ex-couvent du Bon Pasteur à Québec, constitue un très bon exemple de recyclage en habitation, sur un emplacement de premier choix. On peut donc conclure au chapitre du coût et de la qualité que les coopératives d'habitation neuve sont avantageuses même pour la génération fondatrice.

L'investissement d'énergie

Il y a si peu de coopératives d'habitation neuve au Québec que chacun des projets étudiés s'est un peu présenté comme un prototype dans sa région, avec ce que cela comporte d'improvisation, de lenteurs, de déceptions. En général, les rapports avec les divers bureaux de la Société canadienne d'hypothèques et de logement ont été difficiles, souvent décourageants. Les municipalités ont montré soit de l'indifférence ou de l'hostilité, quelquefois de la collaboration. La Société d'habitation du Québec a joué un rôle dynamique dans la mise sur pied de plusieurs projets. Du côté des coopératives, les difficultés ont été vécues en première ligne par les personnes ressources, autant internes qu'externes, à parts à peu près égales. Les ressources internes ont été en général des personnes motivées et expérimentées qui ont joué un rôle majeur de promotion dans la plupart des cas. Les ressources externes ont été soit des Groupes de ressources techniques, soit des organismes ou personnes exerçant une fonction équivalente. Elles ont aussi joué un rôle important dans la plupart des cas. Ces ressources internes et externes ont exercé, en général, un leadership de type classique, sauf à Québec et à Pointe-au-Père, où une forte volonté de fonctionnement démocratique a marqué tout le processus. Les difficultés ont d'abord été vécues par les initiateurs des projets mais elles ont peut-être eu des effets encore plus dévastateurs chez les membres moins actifs; on a constaté un grand nombre de désistements et de remplacements.

Les principales difficultés

■ L'achat d'un terrain

L'achat d'un terrain a été pour plusieurs coopératives la principale difficulté. Il s'agit, en général, de difficultés pratiques typiques du domaine immobilier, particulièrement pénibles pour des groupes non aguerris: changements de zonage, titres embrouillés, servitudes, sols impraticables, opposition de la ville ou de la SCHL au site choisi par la coopérative, etc. Le choix d'un site est déterminant pour tous les groupes et leur résistance aux pressions des corps publics à cet égard peut être farouche.

Les difficultés posées par l'acquisition d'un terrain ne peuvent s'aplanir que par l'intervention des municipalités qui constitueraient des banques de terrains et offriraient des choix aux groupes promoteurs. Dans le cas contraire, on suggère que les premiers instigateurs d'une coop s'assurent de la disponibilité de sites convenables, avant de recruter les membres de la coopérative. Le site étant un agent de litiges internes, il est aussi préférable de recruter les coopérateurs sur la base d'un terrain déterminé et accessible.

■ Les choix architecturaux

Dans le cas des coopératives d'achat-rénovation, le traitement des questions architecturales constitue souvent un processus exemplaire. Un Groupe de ressources techniques peut alors rendre un service architectural aux usagers si ceux-ci participent aux diverses étapes du processus. Cela est facilité par la connaissance qu'ont les usagers de leurs logements à rénover. En matière d'habitation neuve, le mystère est entier. Dans les sept coops étudiées, aucune n'a profité d'un service architectural intégré au GRT. Dans un seul cas, il y a eu étroite collaboration entre l'architecte et les usagers. Dans les autres cas, l'architecte n'a pu collaborer étroitement avec les usagers pour des raisons très variées. Par ailleurs, la SCHL a retardé l'acceptation des plans dans cinq cas sur sept, cela pour des raisons économiques. Ces retards et ces recommencements ont été des plus pénibles pour les membres.

Une façon d'aplanir ces difficultés serait de publier des modèles de logements et de petits bâtiments, étudiés en collaboration avec la SCHL, et susceptibles de faciliter les premières démarches architecturales d'un groupe. Notre expérience de services architecturaux en milieux populaires nous permet d'affirmer que le meilleur moyen de permettre une démarche architecturale démocratique dans un groupe est de lui fournir des hypothèses architecturales concrètes qu'il peut discuter, comparer, choisir. L'architecte désigné intervient pour collaborer à la discussion, à la synthèse et à la réalisation. Ces petits bâtiments peuvent être conçus pour se combiner et répondre aux besoins des groupes hétérogènes. L'unité HPU de l'École d'architecture publiera un tel dossier à l'hiver 1983 et l'Ordre des Architectes du Québec publiera aussi un cahier sur ce sujet, en collaboration avec la SHQ.

Les coopératives comme agents responsables d'une construction

La période d'activités fébriles qui précède immédiatement la construction et se poursuit durant le cours de la construction est d'un tout autre type que les longues étapes de tatonnements et de jambettes bureaucratiques qui précèdent. Les étapes de réalisation concrète ont peut-être été en général plus gratifiantes que pénibles pour les membres. Le tandem coop et GRT d'un côté, et la SCHL comme organisme responsable et inspecteur de l'autre, constituent finalement un ensemble administratif respectable. Les résultats montrent qu'ils ont su produire des logements de manière économique (coût moyen de 30 000$ par logement, en 1980-1981) pour une bonne qualité de construction et une habitabilité au-dessus de la moyenne (la majorité des logements sont du type familial en rangée). Les coopératives ont utilisé l'appel d'offre de type classique ou ont confié la construction au GRT ou encore un architecte a agit à titre de promoteur et de constructeur. Dans quatre cas sur sept, il y eut ouvertures publiques de soumissions et le plus bas soumissionnaire a obtenu le contrat. De fructueuses négociations ont permis en deux occasions de réduire substantiellement les coûts. Dans quatre de ces projets, des membres retraités et expérimentés ont sur-

Loyers

Coop	1	2	3	4	5	6	7	Moyenne
Coût de construction par logement	18 000 $	27 800 $	30 000 $	33 300 $	25 327 $	34 500 $	42 000 $	30 000 $
Loyer (du marché)	217 $	Nil	265 $	220 $	265 $	290 $	293 $	252 $
Pourcentage des membres payant un loyer proportionnel à leur revenu	38,5 %	100 %	60 %	33 %	40 %	15 %	15 %	43 %
Supplément au loyer S.H.Q.	Oui	Oui	Oui	Non	Non	Non	Non	
Précisions	Logements pour personnes retraitées	Logements pour personnes retraitées	Maisons en rangée, 1½ étage	Le loyer du marché varie de 190 $ à 245 $ d'une garçonnière à un 5½ pièces	Maisons en rangée, 1½ étage	Maisons en rangée, 2 étages + sous-sol	Maisons en rangée, 2 étages + sous-sol	

veillé les travaux, avec ponctualité et minutie, contribuant aussi à créer une atmosphère rassurante pour les membres. Les coops ont formé des comités de construction ou ont délégué leur surveillant de travaux pour les représenter aux réunions de chantier. C'est à l'occasion de ces réunions de chantier que la coopérative défend auprès de l'entrepreneur ses intérêts de propriétaire. Les coops ont été généralement bien secondées par les GRT et les architectes.

Il semble que l'étape de la construction, malgré sa complexité, ne soit pas la plus difficile à vivre pour les membres et les administrateurs d'une coopérative d'habitation neuve, à cause des services professionnels impliqués, des ressources internes, du déroulement rapide et défini des opérations, du plaisir de participer à la construction.

Les coopératives d'habitation sans but lucratif subventionnées suivant le programme 56-1 de la SCHL constituent une forme de logement social où la première génération d'usagers investit toute l'énergie de promotion, allégeant pour les gouvernements le poids bureaucratique qui serait autrement nécessaire. On a vu en première partie que les avantages économiques considérés isolément étaient importants pour les membres promoteurs. On peut ajouter que ces avantages économiques ne sont pas dépassés par les inconvénients, l'investissement d'énergie, la fatigue morale des coopérateurs. En tout cas, cela ne pourrait pas faire de doute si les terrains étaient plus facilement disponibles et la démarche architecturale, facilitée. De grands projets urbains, tels que le développement du site des usines Angus, dans l'est de Montréal, sont susceptibles de faciliter, d'une part, l'achat d'un terrain et, d'autre part, une meilleure participation des coopérateurs.

Les organismes sans but lucratif

Les organismes promoteurs peuvent choisir de se structurer en organisme sans but lucratif plutôt qu'en coopérative pour les étapes préparatoires et bénéficier des mêmes subventions. En effet, les programmes s'adressent indifféremment à ces deux types d'organismes et il n'est pas obligatoire que tous les groupes aient à vivre l'expérience du démarrage et de la construction. Un projet peut être initié et construit sous la responsabilité d'un OSBL privé, public ou institutionnel, et être cédé ultérieurement à la coopérative. Il y a également place en habitation pour des OSBL à caractère permanent, lorsque les usagers ne désirent pas participer trop étroitement à la gestion de leur milieu de vie.

Critique du programme suivant trois paramètres

■ Le contrôle par les usagers

Le contrôle par les usagers de la gestion de leur espace constitue un paramètre important pour apprécier la valeur d'un programme d'habitation. Les questions discutées précédemment font partie de ce paramètre, puisqu'il s'agit de la gestion de son espace avant la réalisation: choix des membres et d'une philosophie, d'un emplacement, d'une architecture, d'une qualité de construction, etc. Ce paramètre comprend aussi des aspects qui suivent la construction comme l'organisation de loisirs et de services, l'entretien, la gestion, le développement. Par extension, ce paramètre peut comprendre le droit à la stabilité (évictions) et à la mobilité (déménagement), les rapports de voisinage (sécurité, dissensions, domination, etc.) affectés par les responsabilités d'ordre administratif, etc.

L'enquête a été moins poussée quant aux aspects qui suivent la construction, les projets étant tous très récents. La question principale à se poser est la suivante: les avantages et les gratifications du contrôle par les usagers en valent-ils les inconvénients? L'étude montre que les groupes tendent à doser eux-mêmes le degré de participation démocratique ou de hiérarchie administrative qui leur convient, s'approchant ou s'éloignant du système locatif dominant. L'assemblée générale est l'outil démocratique minimal auquel tous semblent tenir. On peut dire que la vie en coopérative est simplifiée mais relativement appauvrie dans des structures plus classiques, alors qu'elle se complique mais s'enrichit avec une participation plus universelle. La formule est heureusement très souple. Sur le plan du contrôle par les usagers, le mérite principal des coops sans but lucratif est toutefois de le rendre possible à ceux qui le désirent.

■ L'accessibilité

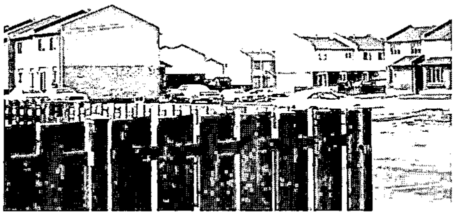
La majorité des coopératives étudiées sont habitées par des ménages à revenus faibles et ce, grâce aux subventions disponibles. Près de la moitié des ménages gagnent entre 7 000$ et 15 000$ par année et paient un loyer proportionnel à leur revenu, grâce au programme provincial de supplément au loyer que les coopératives ont obtenu en surplus du

SCHL

La Tannerie dans le quartier Saint-Henri, à Montréal. Un exemple de "leadership de type classique" où l'initiative du projet de même que sa promotion et sa gestion sont assumées par quelques individus, sans que l'on puisse parler de démarche commune des coopérateurs.

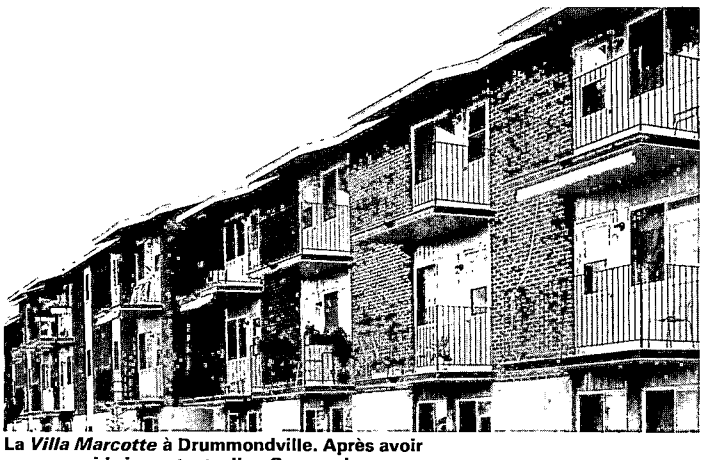
Un cultivateur, André-Albert Caron, fut le président-fondateur et promoteur de la *Villa coopérative* de Saint-Gabriel de Rimouski, un ensemble pour personnes retraitées. Il a, pour ainsi dire, porté le projet sur ses épaules et assumé jusqu'à la surveillance des travaux.

Vue arrière de la coopérative *Le Hameau* à Alma. Cet ensemble de maisons familiales d'un étage et demi, disposées en rangée, a été construit, en 1980, au coût de 25 000$ l'unité, par le Groupe de ressources techniques SALU, qui a agi comme entrepreneur-général et comme animateur auprès des coopérateurs.



La coopérative *Saint-Sulpice* dans le nord-est de Montréal est un grand ensemble coopératif accessible à des usagers qui ont des revenus supérieurs à la moyenne des occupants des autres coopératives d'habitation neuve existantes.

SCHL



La *Villa Marcotte* à Drummondville. Après avoir reçu une aide importante d'un Groupe de ressources techniques, les copropriétaires, des personnes retraitées, administrent désormais leur coopérative. La vie de groupe y est intense. Les espaces communautaires, situés au demi-sous-sol, comptent des équipements de loisirs, des ateliers de bricolage, etc.

programme fédéral. Les écarts de revenus peuvent être importants d'un projet à l'autre. Par exemple, à Saint-Gabriel de Rimouski, 100 pour cent des membres ont à peine plus que leurs pensions de vieillesse, alors qu'au domaine Saint-Sulpice, on devrait parler de revenus plutôt moyens, parfois assez élevés.

La politique récente de la SCHL serait d'accorder priorité aux ménages dits moyens gagnant entre 15 et 20 000$ par année. Ces ménages doivent être de type familial avec enfants. Des conditions spéciales peuvent être offertes aux groupes "spéciaux" (ex-détenus, femmes battues, etc.). L'accessibilité et le caractère social du programme varient donc selon la volonté du groupe promoteur et la disponibilité du "supplément au loyer". Dans certains cas, l'accessibilité des coopératives est comparable à celle des HLM, alors qu'ailleurs, elle n'est possible qu'à des gens qui ont des revenus plus élevés, comme dans le cas de la coopérative du *domaine Saint-Sulpice*, à Montréal.

■ Le coût social du logement coopératif sans but lucratif

Il ne s'agit pas ici du coût "public", mais du total des coûts publics et privés, qu'on peut décrire comme les déboursés des usagers et des contribuables pour payer les frais complets d'un logement pendant toute sa durée. Les coopératives et les organismes sans but lucratif ont un coût social très bas à long terme. S'ils se généralisaient, ils entraîneraient une baisse considérable des frais de logement, qui dépassent présentement le quart du revenu des ménages. En effet, l'absence de capitalisation pour les membres fait que l'immeuble se greffe au patrimoine collectif, une fois le capital et les intérêts remboursés. Les loyers se réduisent alors aux frais d'entretien, d'administration, de chauffage et de taxes, sans remboursement d'hypothèque, item qui constitue généralement la grosse tranche des frais de logement. En comparaison, le logement en propriété individuelle (ainsi qu'en copropriété) vivra généralement plusieurs cycles hypothécaires successifs durant sa vie utile. L'épargne forcée, ainsi réalisée, constituera pour chaque ménage une compensation de taille, bien sûr, mais contribue à l'inaccessibilité de la formule pour la majorité. Les subventions nécessaires pour maintenir cette accessibilité seraient considérables à long terme.

Dans le cas du logement locatif à but lucratif, le coût social en est particulièrement élevé. En effet, l'épargne forcée ne joue plus comme compensation aux cycles hypothécaires successifs, puisque cette épargne est en fait concentrée dans les goussets des propriétaires qui touchent à la vente de l'immeuble un capital indexé, qu'ils avaient presqu'entièrement emprunté et fait rembourser par les locataires. Cette formule d'un caractère féodal oeuvre à l'appauvrissement de la majorité à l'avantage d'un certain nombre. Elle reste populaire parce qu'elle est accessible à tous les niveaux de revenus, selon ses niveaux de dégradation, et cela, dans la mesure où les taux de vacance restent suffisamment élevés.

La crainte du marché noir

Qui profitera des bas loyers en coopérative lorsque les frais hypothécaires seront nuls et que la génération fondatrice cédera sa place? Les experts en logement s'inquiètent "nerveusement" de cette question et du grand danger d'injustice à l'horizontale . . . Plusieurs sont prêts à jeter le bébé avec l'eau du bain. Il serait bon que le mouvement coopératif sans but lucratif s'entende sur cette question pour la solutionner.■

Référence: "Les coopératives d'habitation neuve — difficultés de réalisation pour les membres promoteurs" par Pierre Morisset
Étude réalisée en 1981-1982, grâce à une subvention de la SCHL
Éditeur: INRS urbanisation "étude et documents" no 33

Pierre Morisset est architecte et professeur à l'École d'architecture de l'Université de Montréal.

Social Housing and Non-Profits in WEST GERMANY

Story and photos by Uwe J. Woltemade

Non-profits have played a significant role in the provision of West German housing since World War II and I believe that North Americans can learn from the successes and the shortcomings of these social housing efforts.

The first non-profit housing associations in Germany were founded in the 1860s as part of the broad effort to humanize the emerging capitalist society. They were closely associated with the growing labour movement and the demands for improved social legislation.

In the late nineteenth century and the decades before World War II, a number of important laws concerning the constitution of non-profit cooperatives, investment guidelines and auditing procedures were enacted. In the twenties, the giant of the current German non-profits, the *Neue Heimat*, was formed by labour unionists.

Non-profit housing was a mainstay in the provision of shelter for millions who had lost their homes in the Second World War, many of them refugees from the East. Non-profits enjoyed widespread political support and a great amount of this type of housing was built. From 1950 to 1975 over three million units were finished. Currently one out of every seven housing units belongs to a non-profit. The *Neue Heimat* group of companies has more than one million residents in its social housing. In 1976, there were approximately 1 900 non-profit housing enterprises in West Germany.

The Financing of Social Housing

Post-war public policy and financing for quite some time were characterized by a supply-side approach: the important ingredients were grants and low-interest loans for the buildings. But after the German *Wirtschaftswunder* (the economic miracle) and after family incomes had risen appreciably, public officials and social housing managers became concerned about the *Fehlbelegungsproblem* (the misoccupation problem): rather well-to-do families continuing to occupy scarce low-rent housing for which they had originally qualified. While this mismatch made for socio-economic integration, it constituted a serious financial problem. Currently, preparations are under way for the collection of "misoccupation surcharges" in larger German cities.

Other steps have been taken to make renters generally pay a higher share of housing costs. Rent levels for older dwellings have been raised because politicians have increased interest rates for subsidized public loans used in the original construction. For more recent projects in the seventies, a quicker phasing out of construction subsidies was tried, with the goal of having the families who were able pay the full economic rent. But, higher building as well as living costs and political sensitivities regarding tolerable rent levels militated against the anticipated results.

By the late seventies, the overall housing demand had been more adequately met and the country was faced with other economic difficulties such as inflation and high interest rates: public appropriations for social housing came in for harsh scrutiny. Appropriation constraints and the rise in construction costs led to sharp reductions in the number of units built every year.

Four Housing Projects: Their Location and Design

The four major projects visited for this study are in Bremen, Heidelberg, Wuerzburg and Munich.

Visits were also made to Cologne and Dueren. The main projects are described in the table. For three of these (Bremen, Heidelberg and Munich), the responsibility for planning and development rested with regional enterprises of the *Neue Heimat*. In Wuerzburg, all supervision and planning was in the hands of a city development corporation, but housing non-profits played an important role.

As the table shows, resident populations range from 6 600 to 26 000 and the settlements are situated 5 to 10 km from city centres. The predominant dwelling type is the rented apartment but there are also privately owned houses (detached or row) and condominium apartments. Planners achieved rather high residential densities which was considered a desirable goal in the sixties. Rather than "cluttering up" precious land, expanding cities were to have compact suburban settlements (i.e., compact apartment blocks) with open space between and around buildings. In the seventies, that density and building format no longer seemed appropriate and some planning and construction alterations were made such as lowering the heights of structures.

A cardinal factor in the viability of social housing projects is their location. Are they shunted aside to some site that is available cheaply or are they built in environments that make healthy growth possible?

Without question, there has been criticism about social housing sites in West Germany. But there are also positive developments. For example, the city development office in Bremen tried to steer housing into areas suited for it: all tracts in the metropolitan region were ranked according to such criteria as proximity to jobs, public transportation and recreation.

Looking specifically at the four settlements in the table, what can be said about their location? The Bremen project, completed before the guidance efforts of the city development staff, is situated on what was the eastern periphery of the city and occupies former agricultural land.

In Wuerzburg, the Heuchelhof suburb is built on a hill on land that previously belonged to a farm-estate. It is difficult to obtain large tracts of land here because of the topography and people have historically lived close together. In Heidelberg, the Emmertsgrund site to the south is an extension of residential construction along a mountain range that runs parallel to the Rhine River. In Munich, the project is built on former agricultural and forest land. All these sites are satisfactory and have considerable recreational value. They do not constitute "left-over" land for social dwellings. In Dueren, the non-profits have also built in suburbs of the city and, interestingly, have used infill sites in town. The result has been an appreciable dispersion of social housing.

How and by whom is the land acquired? There are two types of arrangements: in Wuerzburg, the city founded

Overview

Major Housing Projects Visited

	Bremen-Vahr	Heidelberg-Emmertsgrund	Wuerzburg-Heuchelhof	Munich-Haar*
Construction dates	1956 early sixties	1969 ongoing	1970 ongoing	1970 essentially completed in 1978
Distance from city centre	5 km	6 km	6-7 km	10 km
Number of dwellings	~10 000**	~3 000	~7 000 (phase I: 2 000)	2 800
Number of inhabitants	~31 000 (planned) ~26 000 (actual)	10-12 000 (planned)	20-25 000 phase I: 6 000	6 600
Types of dwellings				
Owned single-family (detached or row-type)	1 000	180 planned but number was increased	16.8%	7.9% (atrium- and row-type)
Apartments (primarily social units for rent)*	in buildings with 4, 8, 14 storeys; one 20-storey building by Finnish architect Aalto	in buildings with 4-17 storeys. Changes in plans to reduce heights of structures.	2-4 storeys 26.5% 5-9 storeys 39.1% 10+ storeys 17.6% (phase I)	2-4 storeys 12.2% 5-9 storeys 73.1% 10+ storeys 6.8%

*Munich-Haar has an appreciable number of apartments for rent on the open market; about 800 apartments were built for sale on the open market in that development.

** ~ = approximately.

The data for this table were compiled from various sources. Readers wishing more detailed information should write to the author.

The Munich-Haar development shows that a mixing of income groups and private and social housing is possible.
A social housing rental units
B open market rental units
C open market condominium apartments
D open market single-family, row and atrium condominium units
1 commercial / business district
2 shopping centre
3 school centre
4 community centre
••• neighbourhoods
Source: *Neue Heimat*, "Haar bei Munchen . . .", p. 10

the development corporation and transferred the purchased land to it; the corporation, in combination with outside planners, architects, non-profits and other firms, created the new settlement. Eventually, the development corporation plans to sell all the land to private owners, non-profits and the city. In the other arrangement, as exemplified by Munich-Haar, the non-profit acquired the land, planned and built. The *Neue Heimat* here has also sold some land to owners of private homes and has given parcels to the city for public green areas, cemeteries and the school. The non-profit enterprise also had to pay 5 000 marks (approximately C$2 500) per dwelling to the city to build the school, cemetery and recreation facilities.

Turning to design briefly, it must be reiterated that much emphasis has been placed on open green spaces, environmental health and recreation. Architects have provided settings that they hope will induce a mingling of residents. Walking paths were designed to offer the pedestrian views of buildings and landscapes. Some buildings were constructed on pillars so that one can walk under them. Street furniture encourages

The Munich-Haar project is characterized by excellent landscaping and attractive walkways.

people to stay awhile. Authorities realize, however, that there are clear limits on directing behaviour with architectural and landscape design.

Related to the largely unencumbered movement of pedestrians is the restraint on automobile access. One helpful street layout encountered is a ring-road with cul-de-sacs off the main road. Although expensive, garage space in the three more recent projects is provided underground which also permits the easy placement of utilities. Sometimes, as in Wuerzburg, playgrounds are on top of garages.

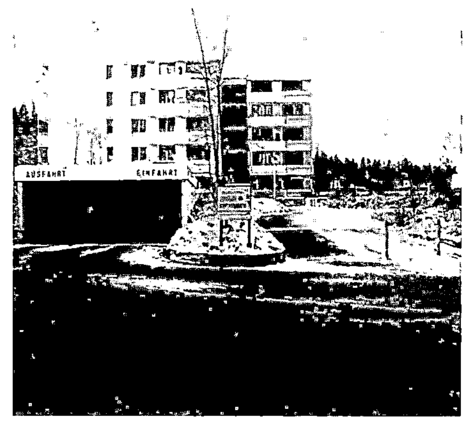
The Provision of Amenities

Other amenities studied were public transportation, shopping facilities, child-care centres and playgrounds.

With regard to public transportation, observers from many North American (particularly U.S.) cities would be satisfied with its availability. From the German resident's viewpoint there is, however, much room for improvement. For example, in Munich-Haar, where people have bus and train connections to the city centre, complaints were made about the long train departure intervals which were to be reduced. It takes twenty minutes to reach downtown 10 km away. In all four projects, residents can reach the city proper by bus or rail (streetcar or train).

While all the new settlements were designed to have their own shopping centres, such facilities were not intended to replace the diversity of shopping opportunities in the central city. A problem with the provision of shops is the greater sensitivity of their construction to business cycles: it is difficult to find companies to finance and build such stores during recessions. In addition, the housing projects in their early phases have a relatively small population and there is less demand for goods and services from their shops.

Apartments are located above the shopping centre.



Vehicular traffic is controlled by barrier posts to keep cars off residential lanes, and underground parking. The entrance/exit ramp for the garage is located on the left.

Sometimes, inadequate planning in the rest of the city leads to duplication of shopping facilities. In Heidelberg, for example, the shopping centre planned for the area was late in coming and a large supermarket had opened at the bottom of the hill on which the project is located, providing competition. However, even with these difficulties, shopping facilities are provided in the projects, facilities that at least satisfy day-to-day needs. One does not usually find the functional separation between shopping and housing that occurs so often in North America.

With the increasing trend to both parents working, an important amenity is the child-care centre. While such centres exist in the new communities, they were often not available upon project completion or with sufficient capacity. Some are operated by the cities or by the housing non-profits who, as long as ten years ago, ran some 200 child care centres throughout the country. A large percentage are managed by churches. A few are private enterprise undertakings for profit.

The provision of playgrounds is prescribed by legislation and the visitor is favourably impressed. In the most recent project in Munich, there are 40 playgrounds (1.5 m^2 for every 25 m^2 of living space) and other areas for such activities as ball playing and sledding. It was planned that children could skate on an artificial lake in the centre of the new community but there was some adult objection (some adults apparently broke up the ice to keep the children from skating).

The Socio-Economic Make-Up of Settlements

In West Germany, social housing neighbourhoods along narrow socio-economic lines have been avoided. This is essentially because a broad middle class has been eligible for such housing. Also, the *Fehlbelegungsproblem*(misoccupation problem) referred to earlier has helped: families that were initially eligible and subsequently obtained much higher incomes were allowed to remain in their low-rent dwellings.

It was in their interest to do so if they wanted to acquire consumer goods, especially durable goods. And, for a long time, it was rather difficult to move because of the overall dearth of dwellings. In the seventies, with a more adequate housing supply and with a generally more elevated standard of living, some financially comfortable families moved to more desirable housing. There are indications that some socio-economic segregation (*Entmischung*) has taken place.

It must be said that German social housing does not have a good record of integrating the really poor, low-income families with a large number of children, the elderly, foreign workers or the handicapped.

In Wuerzburg, planners wanted to duplicate the socio-economic profile of the larger city in the new settlement. They also aimed initially at a fifty-fifty mix of rental and ownership units in multi-storey structures (condominium apartments, also with appreciable subsidies, for middle-income families.)

But this could not be realized. The ownership apartments did not sell well, presumably because families who could afford them preferred detached homes. There was a shortage of apartments with four rooms or more for large, low-income families. Units for senior citizens had not been built but were planned for two appropriate lots near the shopping centre which were available for that purpose. Few foreign workers lived in the project.

Munich-Haar has been rather successful in the integration of dwelling types and socio-economic groups. Design seems to have helped as well as a strong housing demand; Munich and Bavaria are attractive living areas. There are considerable income differences between families living in row or detached houses (with price tags up to half a million marks —C$250 000) which they own and those living in social rental units. Average occupancy is two people per unit. Again, there were few foreign workers and special units for the elderly had not been built but were planned.

Citizen and Tenant Participation

Citizen and tenant participation in the planning and management of social housing so far has not been strong but there are indications of growing interest. Legislation fosters it and the federal government in the past decade has financed a great deal of research. The government wants such participation and the younger residents demand it more and more.

While the constitutions of non-profits have been quite democratic in character, the actual conduct of these enterprises in the past often exhibited little active participation by members. Even today, much of a typical meeting of a non-profit in an older neighbourhood is likely a routine checking-off of agenda items. The managers and local community leaders in the hierarchical German society of the past "knew" what was good for the non-profit members. But today younger residents and citizens are becoming more vociferous and actively involved as public demonstrations over various housing issues indicate.

One of the results of this demand for more participation has been the formation in some German neighbourhoods of renters' advisory councils (*Mieterbeiraete*) to advise on many issues, among them, rent levels and amenities. The effectiveness of these councils has varied greatly. Sometimes, citizen groups in new settlements publish newsletters or newspapers through which they seek to influence the development of the community. Such activity impresses the residents' wish for participation on non-profit managers, city officials and planners.

Conclusion

Non-profits in West Germany deseve much credit for helping to alleviate the housing shortage after World War II. In the seventies, they began significant rehabilitation and a transformation from "quantity" to "quality" housing. Germans wanted larger dwellings. They wanted more floor space and lower density buildings and they emphasized recreation, clean air and a need for noise reduction.

The progress to date in West German social housing generally has been achieved by a diverse non-profit movement responding to different market and social conditions in which large, well-staffed non-profit enterprises, a broad non-profit movement of small and large enterprises, government laws and regulations and market pressures have all played a part.

Unfortunately, 1982 has seen a major scandal concerning the top management of the *Neue Heimat* in Germany. In three related major stories, the news magazine *Der Spiegel* accused managers of making personal profits while operating a group of social enterprises. Manipulation of tax angles, ownership participation in housing projects and profiting from site acquisition were all ingredients in the scandal that badly hurt the image of the *Neue Heimat*.

Nevertheless, North Americans can learn from social housing accomplishments in West Germany and they can learn from the problems. Even with the recent scandal and the fact that inflation and interest rates have created substantial difficulties for non-profits, these enterprises will remain a part of West German housing.■

Uwe J. Woltemade is a professor of Economics at Ohio Wesleyan University in Delaware, Ohio.
His initial interest in European social housing was encouraged by a study trip to England, Holland and West Germany with a small group of North American city managers who wanted to learn from West European urban policies and practices in a wide variety of areas. Since that trip in 1976 Professor Woltemade has done extensive research on West German social housing. In the late seventies he made site visits and had interviews in Bremen, Heidelberg, Wuerzburg, Munich, Cologne and Dueren (a small city to the west of Cologne).

A Canadian Comparison

by Jacqueline Tilford

The Canadian non-profit housing movement has grown out of a need for 'third-sector involvement'. This movement is neither public nor private but is more closely associated with service clubs, church organizations and private individuals concerned with housing families and individuals less fortunate than the sponsoring groups.

They provide the labour while government provides the funding. Because of the service club/church organization background, the Canadian groups, for the most part, are only involved in the development of one project. Public non-profits, being municipally or provincially staffed as well as financed, often build more than one project.

It was not until legislative changes to the National Housing Act were introduced in 1973 that non-profit and co-operative housing were given explicit "front end" subsidies or seed money, such as 100 per cent low-interest loans with a capital grant equal to ten per cent of the appraised value of the project. Rent supplement subsidies, for non-profit and cooperative projects needing them, were on a shared-cost basis with the provinces. The rent supplement shared-cost program became widely used in conjunction with non-profit housing, as the economic rents, after the full federal subsidies had been applied, were still too high for lower-income people. The non-profit program changed in 1978 because the government wanted to reduce the growing public housing deficit and this type of housing provided an alternative.

The new program, under Section 56.1 of the National Housing Act, contained federal annual assistance equal to a reduction of the interest rate down to two per cent on the capital costs accepted by CMHC within the maximum unit price[1] over a 35-year term. Originally this was unilateral federal assistance, but subsequently it was agreed to share any losses with a province after it had contributed an amount equal to the federal subsidy based on the interest write-down.

A major change in this new program was that the project proponents obtained capital funding from "approved lenders"[2] rather than government, with an insured loan for 100 per cent of the approved capital costs. The program has been fully implemented and accepted and is currently going through an extensive evaluation.

The West German non-profits were called upon to alleviate a tremendous housing shortage following the Second World War encompassing all sectors of the population. In many instances the German reconstruction was neighbourhood-oriented with large, high-density buildings. During this period they appear to have been more quantity oriented than quality oriented and while there was income integration because of the very broad range of those in need, little attempt was made to meet the needs of large families, the very poor, the elderly and the handicapped. This period of intense building appears similar to the 1960s and 1970s in Canada when large-scale public housing projects were developed for the lowest income families and senior citizens.

Canadian non-profits are scattered throughout the country as the annual unit allocation is worked out on a computerized needs-based model taking housing delivery capabilities into consideration. Individual groups locate within their communities on land that has been chosen after a best-buy analysis is completed. The analysis determines if the housing proposal represents the best approach to housing to meet the needs

[1] The maximum unit price contains all the costs of purchasing and/or developing a project including fees, construction and land purchase.

[2] Banks, life insurance companies and trust companies authorized to make loans under the terms of the National Housing Act.

of the client group at the best dollar value. Because individual groups have control over site selection, sites are scattered throughout cities and provinces. However cost is a significant factor in the choice of location for non-profits. All developments are subject to a maximum unit price. Groups with equity may exceed this maximum unit price providing they contribute an amount equal to the amount of money that exceeds the maximum unit price so the loan amount will be reduced proportionately below it. Generally, construction is building- or project-oriented, low- to medium-density and more quality oriented than the previous public housing programs.

Although there is a difference in funding arrangement between the pre-1978 and post-1978 non-profit programs, residents pay from the lower end of market rent to market rent and provision is made for lower-income tenants to pay rent according to their income. Income integration is achieved through this means; the poor do not live in a ghetto as they do in public housing.

One important area where German non-profits appear to diverge from the Canadian model is in the provision of care facilities and hostel accommodation. Since the first non-profit program was initiated in 1973, CMHC has funded care facilities as well as group or transitional homes for special use. The latter are normally hostel units developed within an overall family setting providing kitchen and living room facilities.

A wide variety of groups are housed through this means including recently released prison inmates, troubled children and battered women. Many groups have used the program to develop care facilities for senior citizens no longer able to look after themselves in self-contained apartments. Technical guidelines on care facilities have been developed and these projects are meeting an acute need not being addressed by the provinces.

The overall impact on the housing market of non-profit housing is not as pronounced in Canada as it is in West Germany. Only 156 864 units and beds have been committed to non-profit corporations compared to three million in West Germany. Although market impact is negligible, the impact on those in need of affordable accommodation has been more substantial and many groups build units for special interest groups such as the elderly and large families. As a matter of policy five per cent of these units, if warranted, are to be designed for the handicapped. As might be expected, the need is greatest in large urban areas.

Tenant participation in the planning and managing of their development varies from one group to another and also between public or privately led groups. Communication among non-profit groups has not fully developed although public non-profits have been attempting to form a national organization for the past two years.

The non-profit plus other social housing programs are currently being evaluated by Canada Mortgage and Housing Corporation to assess such factors as continuing need by prospective clients, consistency in project design, cost effectiveness, appropriate design and delivery and whether or not objectives are being met. The non-profit program has met with success and demand for additional units is expected to continue in the coming years.■

Jacqueline Tilford is a program officer, Social Housing at CMHC's National Office

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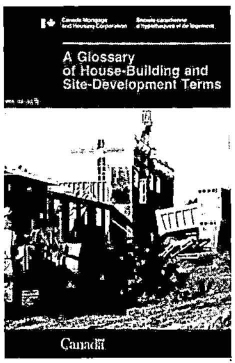

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Canada Mortgage and Housing Corporation, the Federal Government's housing agency, is responsible for administering the National Housing Act.

This legislation is designed to aid in the improvement of housing and living conditions in Canada. As a result, the Corporation has interests in all aspects of housing and urban growth and development.

Under Part V of this Act, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research. CMHC therefore has a statutory responsibility to make widely available information which may be useful in the improvement of housing and living conditions.

This publication is one of the many items of information published by CMHC with the assistance of federal funds.

La Société canadienne d'hypothèques et de logement, l'organisme du logement du gouvernement du Canada, a pour mandat d'appliquer la Loi nationale sur l'habitation.

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La présente publication est l'un des nombreux moyens d'information que la SCHL a produits avec l'aide de capitaux du gouvernement fédéral.

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Société canadienne d'hypothèques et de logement

Honourable Roméo LeBlanc
Minister

L'honorable Roméo LeBlanc,
ministre

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Habitat

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Crime Prevention
through Environmental
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Canada Mortgage and Housing Corporation, Canada's housing agency, is responsible for administering the National Housing Act.

This legislation is designed to aid in the improvement of housing and living conditions in Canada. As a result, the Corporation has interests in all aspects of housing and urban growth and development.

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This publication is one of the many items of information published by CMHC with the assistance of federal funds.

La Société canadienne d'hypothèques et de logement, l'organisme du logement du gouvernement du Canada, a pour mandat d'appliquer la Loi nationale sur l'habitation.

Cette loi a pour objet d'aider à améliorer les conditions d'habitation et de vie au Canada. C'est pourquoi la Société s'intéresse à tout ce qui concerne l'habitation, l'expansion et le développement urbains.

Aux termes de la Partie V de la Loi, le gouvernement du Canada autorise la SCHL à affecter des capitaux à des recherches sur les aspects sociologiques, économiques et techniques du logement et des domaines connexes, et à publier et diffuser les résultats de ces recherches. La SCHL a donc une obligation légale de veiller à ce que tout renseignement de nature à améliorer les conditions d'habitation et de vie soit connu du plus grand nombre possible de personnes ou de groupes de personnes.

La présente publication est l'un des nombreux moyens d'information que la SCHL a produits avec l'aide de capitaux du gouvernement fédéral.

CMHC
Canada's Housing Agency

la SCHL
l'agence canadienne de l'habitation

Habitat

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1983

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The contents of HABITAT are listed in the Canadian Periodical Index. Second class mail registration number: 1519, ISSN 0017-6370.

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Vous pouvez soumettre des articles qui traitent du logement et des affaires urbaines. Mais veuillez nous faire parvenir au préalable un résumé d'une page. Les textes soumis à HABITAT doivent avoir environ 2,000 mots, être dactylographiés à double interligne et être adressés à la rédactrice en chef. Les articles acceptés seront assujettis à la politique éditoriale de la revue. Dans la mesure du possible, les textes, photos et illustrations non utilisés seront retournés à leur auteur.

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Les sujets traités dans HABITAT sont inscrits dans l'Index des périodiques canadiens. Notre numéro de recommandation du courrier de deuxième classe est le suivant: 1519, ISSN 0017-6370.

by Rhonda Birenbaum

Crime Prevention through Environmental Design

Vandalism is a reminder of the increase in property crimes.

The achievement of security in housing has become a critical issue in the past few years. Every day we face reminders of the alarming increase in property crimes: vandalized buildings, break and entry crimes up 20 per cent, bloated insurance rates and increasing tax dollars spent on police and court services. A study prepared for Canada Mortgage and Housing and the Solicitor General's Department called *The Environmental Design and Management (EDM) Approach to Crime Prevention in Residential Environments*, estimates crime cost Canadians $1.3 billion in insurance payments alone in 1981. Public opinion surveys consistently identify crime, and perhaps more importantly, the fear of crime, as one of the major problems confronting urban neighbourhoods.

Traditional approaches to combatting crime have included police investigation and arrests, court actions, and social programs for rehabilitating offenders. Regrettably only 50 per cent of property crimes are solved.

As a result, attention has shifted toward prevention as the more practical approach. As an intervention strategy, crime prevention attempts to make the commission of crime less likely by removing the opportunity or making crime more difficult to commit. This involves changing the environment which tempts the criminal.

Environmental Criminology

In response to these concerns an "environmental design and management" approach to crime prevention has emerged. It began in the late 1960s when a group of law enforcers, sociologists and architects started to search for new ways to control crime. They realized the opportunity for crime was created by a complex series of causes and effects that included the characteristics of the physical environment and how people used it. But they needed to understand the relationship between crime and the physical and social design of a neighbourhood.

Finally in 1976, American architect Oscar Newman drew the first formal and practical link between the two in his book *Architectural Design for Crime Prevention.* He said: "Physical design features of public housing affect both the rate of victimization of residents and their perception (*of being victimized*)." And he concluded that the physical design of buildings could not only be used to deter crime, "but also encourage citizens to protect their rights and their property".

Newman's ideas evolved into what is now being referred to as "environmental criminology"; a science of crime prevention which views the physical design of a residential environment as a determinant of how well the environment can be managed by landlord, residents and police. This in turn determines its vulnerability to crime.

Fundamentally, the concept is based on the idea of "defensible space" about which Newman wrote, "It is a term used to describe a residential environment whose physical characteristics – building layout and site plan – function to allow inhabitants themselves to become the key agents in ensuring their own security." In other words, a neighbourhood that appears to defend itself is an overt deterrent to crime.

A defensible housing complex is a collection of small, defined areas controlled by specific residents. It is well-maintained and secure. Garden homes tend to be defensible. An indefensible community is one in which the neighbours are physically and socially isolated. The space between individual units appears neglected. Contemporary highrise designs typically represent indefensible spaces.

The creation of defensible space fosters a second element of environmental security: territoriality. By creating neighbourhoods that are defensible, architects and designers encourage residents to feel a sense of personal ownership and responsibility over areas beyond their front door. They share this feeling with their neighbours and the effect is an environment that is both used and monitored by its inhabitants.

Residents uphold this sense of territoriality through surveillance and "target hardening". Neighbourhood surveillance is more than just cameras and monitors. It can become a by-product of normal and routine residential

RCMP

Target hardening by using screens to improve building security increases the difficulty of illegal access.

activities. The idea is to light pathways and place doors and windows to allow a clear view of parking and play areas so residents can easily see activities around them. As they become aware of these activities, they tend to gain a greater sense of responsibility toward their environment. At the same time their control over this environment increases.

"Target hardening" means improved building security: better locks, windows, screens and alarm systems. All these tactics work to define and secure individual territory while increasing the difficulty of illegal access.

Real or psychological barriers further limit unwarranted access. They act to warn of the intrusion of a potential offender on the domain of others. Coupled with the fact that the intruder will probably be noticed, the barriers further discourage criminal behaviour.

A real barrier might be a picket fence, brick wall or one-way road. Psychological barriers can be created by a row of stones, a flower garden or a change in ground level. Inside a building, psychological barriers can be created by something as simple as a change in floor colour. All these tactics serve to define the controlled space and encourage neighbourhood territoriality.

Design for Security and Control

"Once planners are aware of how residents perceive their space, they can design or redesign it to optimize security and control," explains Sgt. Robert Moffatt of the RCMP Crime Prevention Centre. "Certain patterns of opportunistic crime occur in particular areas for logical reasons."

He describes two cases: Thieves remove an air conditioning grill and slip into a convenience store. Unseen, they

RCMP

Psychological barriers such as a garden or a change in ground level act as a crime deterrent.

Garden homes are an example of defensible housing – small, well-maintained areas controlled by specific residents.

CMHC

pilfer the store and escape with over $2 000 worth of goods and money. This is not the first time this store has been robbed.

In another Canadian city, no one questions the two men trying to get into a car on the third floor of an apartment house parking garage because visitors usually park there. The thieves break into the car and drive away.

Could either of these crimes have been prevented? According to Moffatt the answer is an emphatic yes. Both have one factor in common, he says. Poor environmental design.

In the case of the convenience store break and enter, a city ordinance had required that screening be erected behind the store to hide the unsightly garbage containers stored there. The store owner had built a wooden fence two metres high in compliance. The fence hid the garbage, but it hid the thieves as well. Police patrolling the vicinity could not see the break-in. However, since the city agreed to rescind the screening regulation, no further break-ins have occurred.

Concerning the parking garage, police had received 51 complaints that cars had been stolen, stripped or broken into there. The building security manager also admitted he had received over

200 complaints. Eventually the tenants were convinced electrically operated garage doors were necessary at the entrance to the parking area. And police further recommended that bars be installed on the outside walls of the ground floor to prevent access to the parking lot by pedestrians. There have been no further break-ins since the security measures were installed.

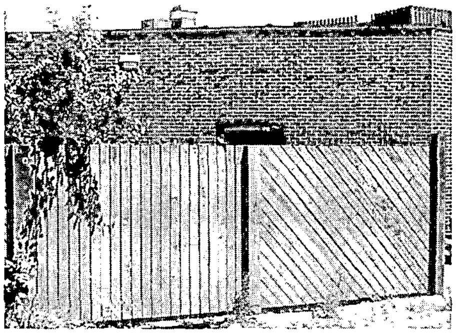
Crime Generators

Clearly, architectural and planning features can serve to increase or decrease the probability that crimes will occur. A fire escape adjacent to apartment windows allows easy entry. Buildings with multiple exits make it easy to evade pursuit. If the route from the high school to the fast-food restaurant or amusement arcade takes teenagers through the residential area, the teens will be presented with crime opportunities almost daily. Statistics will reveal a definite increase in burglary and vandalism along the route. When plans for land use and public facilities are made independently of one another, says Moffatt, they can create environmental competition, conflict and crime opportunities.

Certain other community design features can also contribute to criminal activity. These so-called "crime generators" include known offender hangouts, such as bars, drug dealing points or parks; public or private facilities which attract non-residents to an area, such as hospitals, post offices or businesses; circulation patterns which attract both pedestrian and vehicular traffic, such as bus stops or parking lots; and areas which increase the fear of crime, such as unstaffed parking lots and garages. And as building height increases, so too does crime; not only for height reasons, but because of increased anonymity and the fact that more interior public space is hidden from view.

From an architectural perspective, residential crime is highest in areas with substantial proportions of high-density, multiple-family, high-rise housing. Such housing, researchers have found, is considered to differentiate poorly between public and private space, to provide limited security features in terms of access restrictions and surveillance opportunities, to appear unattractive and often poorly-maintained.

Vulnerability to crime, however, is not limited to apartment buildings. A single-family dwelling, concealed by tall bushes or walls and cordoned off from the road in a neighbourhood plagued with a great deal of non-resident traffic, is also at risk. The neighbourhood must tolerate strangers wandering or driving through and any intruders in a house hidden by shrubbery can come and go unnoticed. As in large high-rise apartment buildings, this kind of neighbourhood commonly displays little neighbour-to-neighbour interaction so even if an intruder were noticed, other residents, unable to identify the true occupants of the house, would probably not question the presence of anyone.



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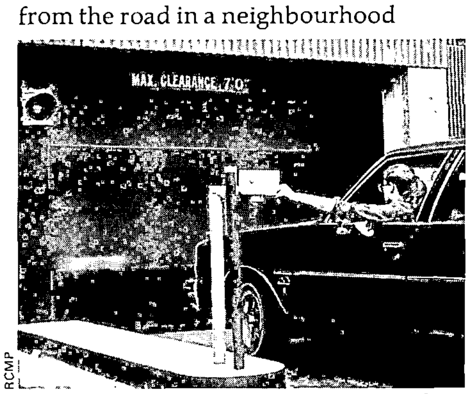
A wooden fence hiding unsightly garbage hid thieves as well. No further break-ins occurred after the fence was removed.



RCMP

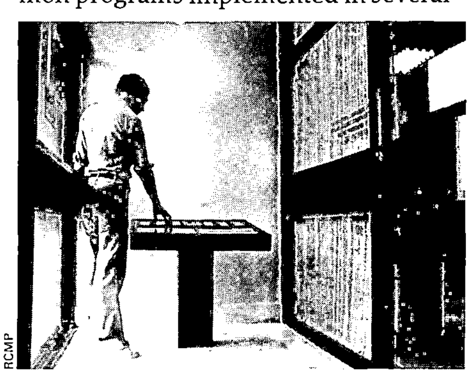
Parking garage security can be upgraded by the use of electrically operated garage doors.

Changing the Environment

The process of planning and organizing a community to discourage crime begins with changes in the physical environment which eventually lead to changes in residents' behaviour and attitudes. These changes will make it more difficult for unobserved or unreported crimes to occur.

For example, a games room in a senior citizens' complex will encourage socialization among residents. They will get to know one another and recognize strangers more readily. Well-positioned benches in shopping centres allow shoppers to monitor the activities of others. Common areas in apartment buildings such as mail boxes and laundry rooms will enhance social control because residents can watch what happens in their environment and get to know each other.

To reinforce the crime-prevention potential of the fundamental physical changes, the theory of environmental criminology calls for formal residential crime-reduction activities. Two common programs implemented in several



RCMP

Restricted access to high-rise apartment buildings acts as a security feature for this most vulnerable of indefensible communities.

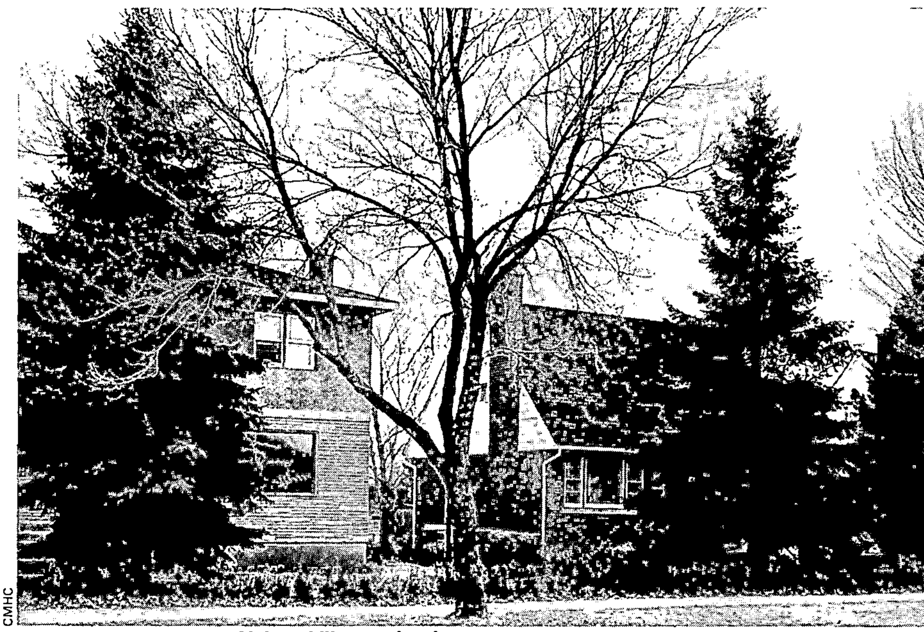
Canadian cities are "Neighbourhood Watch" (helping neighbours protect their homes by surveillance and property maintenance in their absence) and Operation Identification whereby residents mark their valuables with their social insurance or driver's license numbers for easy identification by the police. In the U.S. some communities have set up citizen patrols of their own neighbourhood to formalize surveillance and strengthen the responsibility each resident feels toward the community. These public safety committees work with police to improve the neighbourhood and reduce crime.

The relationship between police officers and the community is a key to the successful operation of environmental security. When police officers can develop an alliance with the residents in the neighbourhood they patrol, they become familiar with the physical characteristics of the environment, the patterns of crime and the residents. Policing strategies favour prevention rather than the apprehending of criminals and teams of officers are assigned to neighbourhoods for extended periods. Through increased interaction with the residents, the police teams can begin to set security priorities in response to community concerns.

However, if crime prevention is to become an integral part of urban design,

RCMP

Keeping an eye on the neighbours' property through the "neighbourhood watch" program is not acting as a nosy neighbour.

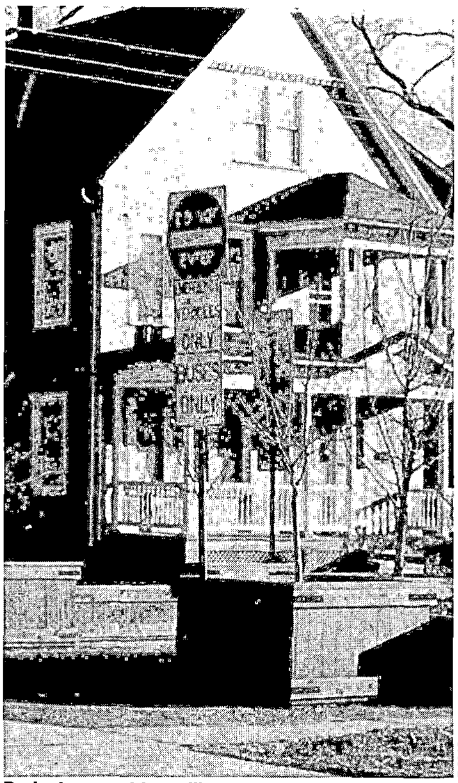


CMHC

Vulnerability to crime is not limited to highrises. Single-family homes concealed by shrubs or walls are also at risk.

Working Together To Prevent Crime

An alliance between police and community residents is a key to the successful operation of environmental security.



RCMP

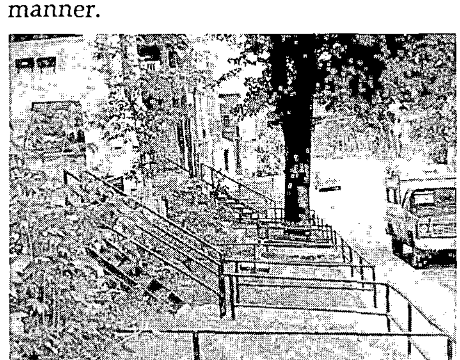
Reducing outside traffic by closing residential streets lowers the risk of crime.

police must be involved in community planning, says Moffatt. The police, more than anyone else, have a true understanding of how the environment is used and misused, and by whom. They've seen the problems caused by inadequate lighting, back alleys or inappropriate security hardware.

As a result, a number of police officers in various Canadian cities have been working to gain seats on regional planning committees. In Fredericton, for example, Junior Woodland, that city's crime prevention specialist, has been lobbying City Council for a place on the Planning Advisory Committee. Sgt. Paul Phibbs of the Calgary police has laid the groundwork for establishing an environmental design group within the police force to consult for the city planning department. All the officers involved agree the police inherit the problems of poor design. The taxpayers inherit the cost.

The Asylum Hill Experiment

In 1973 the U.S. Department of Justice put the concepts of environmental criminology to the test in the Asylum Hill neighbourhood of Hartford, Connecticut. This was the first program to integrate physical and social changes with new policing strategies in an attempt to test the environmental approach to crime control in a comprehensive manner.



RCMP

Fencing around private property enhances the residential character of a neighbourhood and discourages pedestrian use of the lawn.

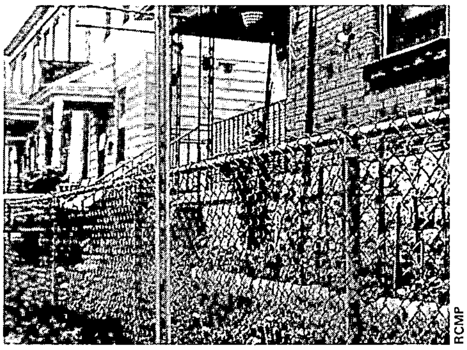
A team of specialists in urban design, planning, police operations and criminal justice, along with researchers and statisticians, studied Asylum Hill before, during and after implementation of the program. Their results were so encouraging that the community has become the most talked-about project among those in the field of environmental crime prevention who seek to introduce the same sort of concept into their own neighbourhoods.

After one year of design changes to reduce outside traffic, of neighbourhood team policing and of community organizations to improve the neighbourhood and reduce crime opportunities, the burglary rates in Asylum Hill dropped 42 per cent. Robbery dropped 27.5 per cent and fear of crime dropped about 30 per cent.

In 1973 Asylum Hill was a community of single, working individuals who lived in low-rise apartment houses or two- and three-family dwellings. The population experienced a high rate of transience and an increasing number of residents from minority groups. People rarely used the streets or their lawns. They did not know their neighbours and many windows were boarded or barred.

The community, which is located near the retail and commercial centre of Hartford, was plagued by vehicular and pedestrian traffic. "The streets belonged more to outsiders than to residents, creating an ideal environment for potential offenders", the Asylum Hill report read and the crime rates supported that statement. Robbery was rated at 5.1 per 1 000 individuals; burglary at 18.4 per 1 000 households. Less than one-fifth of the population said they walked in the neighbourhood or used the local park.

Three years later Asylum Hill had changed dramatically. The population of 5 000 who lived there was still homogeneous and unstable, but the features of the environment that had worked to destroy the neighbourhood and



Defining territory with chain-link rather than privacy fences is one way CPTED can be incorporated in existing neighbourhoods.

When neighbours begin to recognize one another and spend more time outside, the crime rate decreases.

welcome crime had been eliminated. By closing entrances to some residential streets and narrowing the intersections of others, outside traffic was reduced. Fencing around private property enhanced the residential character and discouraged outside pedestrian use of the area. Neighbourhood team policing strategies created a strong relationship between the residents and the police department. Community organizations worked with the police to maintain security and improve neighbourhood cohesion. Neighbours began to recognize one another, spend more time outside and use the once-abandoned park.

Environmental Criminology in Canada

Asylum Hill is a model to urban planners and law enforcement agencies in other communities who support the principles of environmental crime prevention. In Canada, people like RCMP officer Moffatt and criminologist Patricia Brantingham, an associate professor at Simon Fraser University in Vancouver, are attempting to introduce the ideas tested in Hartford to neighbourhoods here.

Both were consulted on an assessment of the application of environmental criminology to Canadian communities for the study conducted on behalf of CMHC and the Department of the Solicitor General. Both agreed that "given the variety of characteristics exhibited by high-crime residential environments in this country, the situation-specific environmental design and management approach would be the most appropriate response to these environments' crime problems."

Environmental criminology has had its greatest Canadian success in the Western provinces, probably because of the urban growth spurt taking place there, Brantingham conjectures. The population of Western communities is more transient than that of their Eastern counterparts so crime rates tend to be higher. But because these communities are expanding, the environmental design and management concepts can be built right in.

The police also seem to have picked up on the idea. A 1980 seminar in Victoria, B.C. brought the concepts of crime prevention through environmental design (or CPTED, as it became known) to a number of B.C.'s police chiefs. Now RCMP crime prevention coordinators sit on local design committees in half a dozen municipalities.

This year B.C. criminologists will begin a study to test the CPTED principles in Tumbler Ridge, a new community 660 km northeast of Vancouver being developed by the coal industry. The crime prevention specifications of Brantingham, Newman and others who pioneered environmental criminology are incorporated.

In Tumbler Ridge the stores have large open windows which are angled to direct attention to the side as well as the front of buildings. The hotel and pub are located off the main street at the edge of downtown, to direct rowdies away from the temptations created by glass store windows. The hotel parking lot opens onto a main road that passes the police station en route to the residential area.

The school and recreation centre are clustered together at one end of town to keep teenagers away from stores and houses. The amusement arcade sits at the end of the commercial district, closer to the school than to the town centre.

In the residential areas of Tumbler Ridge the conventional grid street pattern has been replaced by meandering routes and dead-end streets that will draw attention to strangers and make escape awkward – both of which will deter crime.

"This kind of neighbourhood design," says Brantingham, "accelerates the process of the town becoming a community. That is the greatest contribution to crime prevention that environmental criminology can make."

Balancing Surveillance and Privacy

Despite the promise of environmental criminology, Brantingham acknowledges its limitations. Primarily there's the question of balancing neighbour-to-neighbour surveillance with individual privacy. "As a society we want high accessibility to our communities. But at the unit living level we want a lot of privacy," she says. "Those are the conditions that facilitate crime. High accessibility means people can move around more looking for targets. High unit privacy means we don't see people committing offenses." Resolving that dilemma may come down to a choice between crime control and extreme privacy. "We should not be forced to give up our current way of living," says Brantingham, "but people should be aware of the trade-off."

Occasionally some of the concepts of environmental criminology clash head on with current planning trends. Popular now, for example, is the inclination to enclose residential buildings in large green spaces, or to design houses to back onto parks. But according to the criminologists, these designs simply create ideal environments for vandalism and burglary. Again here's the Brantingham trade-off for existing neighbourhoods: in a high-crime neighbourhood this kind of planning may have to be aborted in favour of a design more discouraging to crime. In a low-crime neighbourhood such a plan may be more acceptable.

Community Support

There's also the task–monumental in some cases–of encouraging a community to rally around the crime prevention issue. Brantingham has found the excitement lasts about four to six months before interest wanes. For that reason more emphasis needs to be placed on the physical design aspects of environmental criminology. The social aspects have short half lives, she says.

In Fredericton, urban geographer and University of New Brunswick professor Gary Whiteford faced the political inertia that sometimes intercepts CPTED and prevented him from being able to address the city planning committee on the issue of environmental criminology. "After an hour-long presentation before city council," he said, "they voted down the issue 12 to zero." Even the Asylum Hill project, in spite of its success, initially encountered local government resistance. Only time and more experience with CPTED concepts will tell who's right.

Establishing a CPTED program takes a great deal of creativity, especially in existing neighbourhoods. It's a little easier to incorporate the principles from the planning stages; a little more difficult to make changes in an established community. But it can be done, says Moffatt. Some of his suggestions include:

- making exits and entrances visible from the street
- improving outside lighting
- situating windows for easy viewing of play areas
- providing off-street parking for residents in an area which is observable by them
- defining territory with chain-link rather than privacy fences
- designing landscaping so intruders cannot hide
- installing key-control entrances to apartment buildings or parking garages
- clustering houses to create social cohesiveness.

Moffatt cautions, however, that each neighbourhood will require very different aspects of the CPTED program, depending on the kind of community and the type of crime that exists there. It is designed to reduce crimes of opportunity, not premeditated offences. Brantingham calls this "situational crime prevention".

In planning and crime prevention circles in Canada all eyes are now on Tumbler Ridge. The first of the city's new residents was due to move in this spring and a test of the CPTED concepts has begun.

In the meantime, people like Moffatt and Brantingham, both of whom teach police about CPTED, and Whiteford and Phibbs, who promote environmental criminology in their own home towns, continue to spread the word about preventing crime. Each is convinced the environmental design approach warrants serious consideration, by planners and others, as a crime prevention strategy in this country.■

Rhonda Birenbaum is a freelance writer living in Ottawa.

For Further Reading

Booth, Alan. "The Built Environment as a Crime Deterrent: A Reexamination of Defensible Space", *Criminology*, Vol. 18, No. 4, February 1981, 557-570.

Gardiner, Richard A. *Design for Safe Neighbourhoods*. Washington, D.C.: U.S. Printing Office, 1978.

Hartford Institute of Criminal and Social Justice. *Reducing Residential Crime and Fear: The Hartford Neighbourhood Crime Prevention Program, An Executive Summary Report*. Hartford, Connecticut: Hartford Institute of Criminal and Social Justice, 1979.

Moffatt, R.E. *Crime Prevention through Environmental Design: A Management Perspective*. Ottawa: Crime Prevention Centre, Royal Canadian Mounted Police Headquarters, 1981.

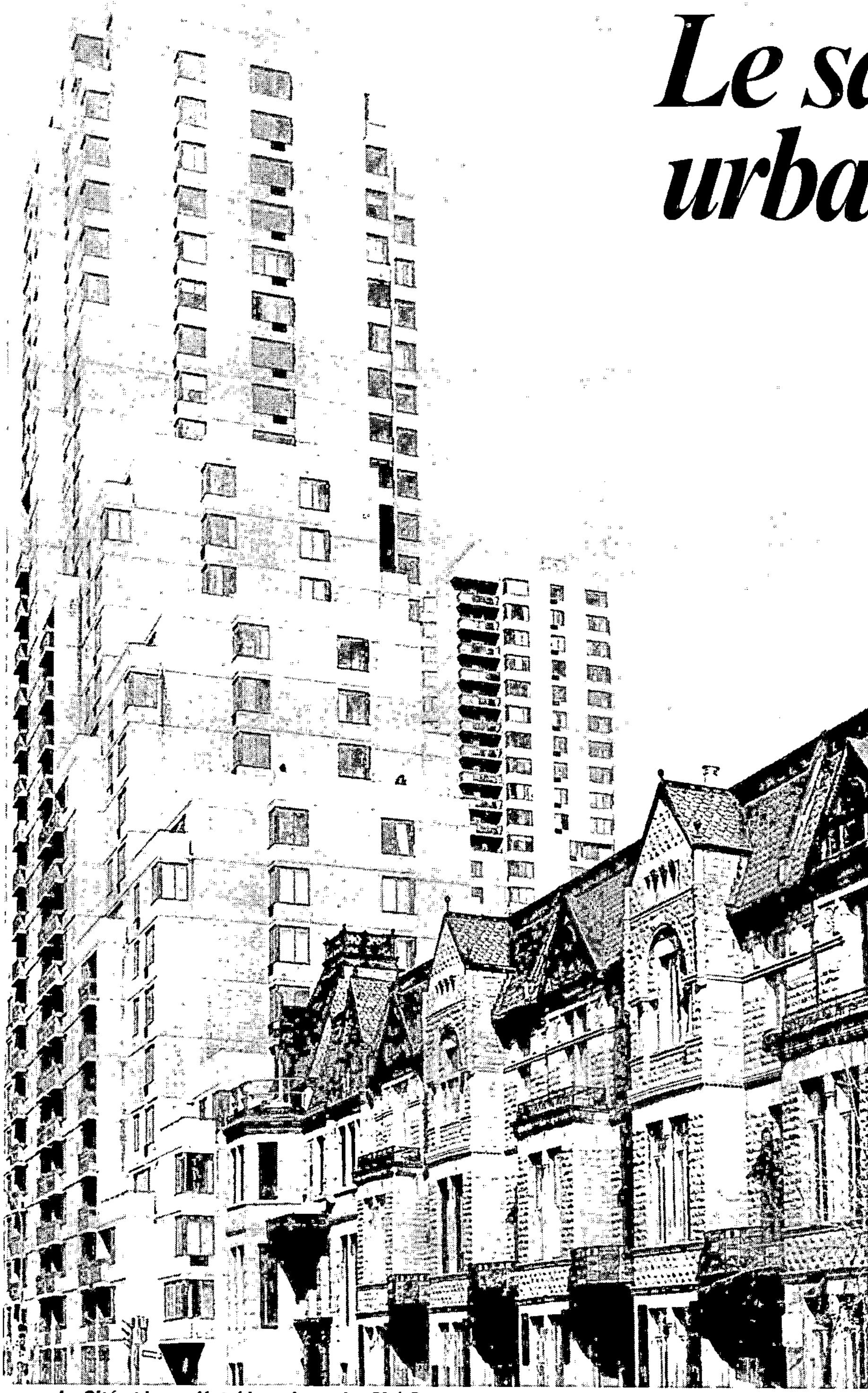
Newman, Oscar. *Architectural Design for Crime Prevention*. Washington, D.C.: Department of Justice, 1973.

________ Design Guidelines for Creating Defensible Space. Washington, D.C.: Department of Justice, 1975.

Urban Design Consultants and The Research Group. *The Environmental Design and Management (EDM) Approach to Crime Prevention in Residential Environments*. Ottawa. Solicitor General, Canada and Canada Mortgage and Housing Corporation, 1982.

Quartiers anciens
et centres-villes:

Le savoir-faire urbain



A.J. Knight

La Cité et la rue Hutchison. **Le projet Cité Concordia lancé à la fin des années soixante est en partie réalisé. Les protestations des résidents ont eu raison du Goliath, aujourd'hui, assiégé par les coopératives d'habitation, mises sur pied par la Société du patrimoine immobilier de Montréal (SPUM) et qui l'encerclent.**

**par Denys Marchand
et Alan Knight**

Lors de la rédaction des deux articles précédents, nous avons suivi le découpage effectué dans l'exposition intitulée *De la rupture à la continuité: l'architecture et le problème de l'insertion.* Ce découpage nous avait permis de diviser le territoire en 6 contextes types où l'insertion de nouvelles constructions peut entrer en conflit avec les caractéristiques ou les qualités du milieu. Ainsi, le rang et le village, les villes petites et moyennes et enfin les villes périphériques aux grands centres, soit les quatre contextes déjà abordés dans les articles précédents, présentent-ils des caractéristiques culturelles et sociales que les progrès technologiques et l'urbanisation tentaculaire remettent en cause.

Le développement des moyens de transport ont permis l'expansion rapide des villes en rendant accessible un immense stock de terrain à bon marché. Cette disponibilité du terrain couplé à l'usage de l'automobile a donné naissance à une nouvelle morphologie de la ville ainsi qu'à une nouvelle typologie de bâtiments qui s'étendent sur le sol, par opposition aux formes compactes imposées par l'économie obligatoire du sol dans les centres anciens. Ces nouveaux bâtiments sont conçus en fonction de l'accès automobile, parfois de façon quasi exclusive, et sont presque devenus des modèles de référence. Ceci pose particulièrement problème lors de l'insertion de constructions nouvelles dans les quartiers traditionnels et les centres-villes, les deux derniers contextes que nous voulons considérer dans ce dernier article.

D. Marchand

Toronto: **une nouvelle typologie. Bâtiment moderne d'inspiration victorienne qui s'insère élégamment dans le contexte d'un quartier ancien.**

Ville de Montréal

Outremont, **paroisse Sainte-Madeleine. Quartier typique du début du siècle à Montréal. Trame orthogonale, maisons en rangées de 3 étages; l'église occupe la place centrale. Le succès économique de la rénovation urbaine de ce quartier démontre bien l'intérêt de cette forme d'habitat.**

H. L'Heureux

Rue Drolet. **Une réalisation de la SOMHAM. La Société municipale d'habitation de Montréal a tenté à plusieurs endroits des expériences d'intégration d'habitations nouvelles dans les quartiers périphériques. Trop souvent malheureusement, des règles de zonage arbitraires et une crainte irrationnelle de la densité handicapent ces projets.**

La maison néo-victorienne

Ce qui frappe le plus un voyageur qui n'est pas venu à Toronto depuis très longtemps, ce n'est pas l'ampleur des nouveaux gratte-ciel, que l'on retrouve d'ailleurs dans toutes les grandes villes modernes, c'est de voir des maisons victoriennes en cours de construction! Soyons justes et appelons-les néo-victoriennes car il s'agit de l'évolution d'un type de résidence victorienne en un type commercial.

On a repris de la maison victorienne les deux baies-windows et la porte centrale, les frontons triangulaires et les toitures à versants. Mais il s'agit bien d'une construction moderne, aux formes épurées, qui abrite soit un restaurant sur deux ou trois étages, soit des boutiques spécialisées au rez-de-chaussée ou en demi sous-sol lorsque le bâtiment est en retrait de la rue. (L'espace de recul est alors en creux par rapport au trottoir). Il s'agit en fait de la création d'une nouvelle typologie issue des transformations effectuées sur les anciennes résidences pour les transformer en édifices commerciaux. Ces nouveaux bâtiments, banals en soi, s'insèrent parfaitement bien dans l'alignement des rues anciennes et s'intègrent très bien à leurs voisins plus anciens sans renier leur propre modernité. Ils indiquent aussi une voie possible dans la conception d'une architecture nouvelle et sont un rappel des luttes menées à Toronto contre une spéculation effarante qui risquait de détruire la totalité du Toronto ancien. Ils résultent aussi d'une action politique très précise, ce maintenant fameux règlement de zonage qui limitait à 40 pieds de hauteur toute construction nouvelle.

Ce règlement a permis de contenir l'expansion en hauteur, il a provoqué la remise en valeur des bâtiments anciens et sous l'incitation des architectes de l'atelier d'"urban design" de la ville, les architectes de la pratique privée ont été amenés à proposer ces nouveaux modèles de bâtiments.

Derrière le projet culturel de préservation des valeurs du passé ou en parallèle avec ce dernier, il y avait un projet social de ville vivable dans lequel le bâtiment de faible hauteur, bien relié à la rue, sur un îlot de grandeur raisonnable pour le piéton, tenait lieu de référence.

En France

Prenons un autre exemple, celui de l'expérience, pour ne pas dire de la catastrophe, des grands ensembles et des villes nouvelles en France. Issus des préoccupations étatiques en matière de logement social, ces grands ensembles témoignent de la mégalomanie technico-bureaucratique qui a mis en place un système de production industrialisé du logement. La logique implacable du système a conduit à la réalisation d'ensembles inhumains de grandes barres dans des ensembles de plusieurs milliers de logements. Nombre de ceux-ci sont aujourd'hui abandonnés et murés et le plus grand défi laissé et non pas lancé aux architectes français d'aujourd'hui consiste à rendre vivable ces conglomérats de logements. Tout cela, comme le mentionne bien Bernard Huet, parce que l'on a cru que l'on faisait des villes en construisant des logements! La ville est issue d'une organisation sociale, elle offre des places, des lieux de convergence et de rencontre, elle supporte autant la vie que l'imaginaire, elle est, selon Maurice Culot, la seule véritable invention de l'humanité et la plus grande.

A partir de ces remarques, on comprend mieux le sens des actions des groupes de citoyens qui, à Toronto, arrêtent la construction de l'autoroute Spadina et la prolifération du centre-ville, et qui à Montréal, tels *Sauvons Montréal* militent pour la préservation et le classement des édifices. Ils réclament l'arrêt des démolitions de ce qu'ils considèrent une valeur culturelle. Cette volonté démontre en négatif, de façon implicite, une critique de l'architecture et de l'urbanisme modernes, parce qu'elle ne leur prête pas la capacité d'offrir de véritables valeurs de remplacement. Le danger toutefois de pareilles démarches consiste à ne penser qu'en terme de valeurs culturelles, d'oublier que ces valeurs ont été mises en place, générées par une logique sociale, qu'elles avaient aussi un sens social.

Le quartier . . .

C'est sous cet angle que l'on doit aborder le quartier comme contexte existant. À l'origine de ces quartiers périphériques des centres-villes, on retrouve la paroisse et ses monuments ou encore l'ancienne municipalité englobée dans la grande ville par les annexions. Le quartier apparaît comme un ensemble de systèmes. D'abord une grille de rue déterminant un ensemble d'ilôts dans lesquels on retrouve un lotissement serré et une implantation forte au sol. Ce lotissement serré commande l'utilisation du mur mitoyen comme support latéral des maisons en rangées. Ces conditions premières ont généré au cours des années divers types d'habitations urbaines facilement identifiables suivant les époques et les conditions secondaires d'implantation et de construction, telles la présence ou l'absence de ruelle.

La grille de rue peut être rigoureusement orthogonale comme dans la plupart des quartiers de Montréal ou dans la vieille partie d'Outremont (voir photo). Elle peut, par ailleurs, se conformer à la topographie comme dans le quartier Saint-Jean-Baptiste à Québec et présenter de ce fait un aspect plus organique. Dans tous ces cas, l'îlot renferme en son centre une intimité semi-privée, celle de ses résidents. La maison offre une façade à la rue et un arrière moins officiel. Simple constatation, situation tout à fait normale aurait-on tendance à dire. C'est quand même une façon de faire que tous les grands projets d'habitation ont eu tendance à nier et que les architectes français redécouvrent comme un des palliatifs à l'inhumanité des grands ensembles.

Le quartier nous offre une hiérarchie des rues selon leur occupation et on y trouve donc un centre et des rues principales. Le quartier présente à la fois une certaine uniformité découlant du type répétitif d'habitation mais, en même temps, une merveilleuse diversité apparaît dans les matériaux et la composition de la façade. L'implantation, le recul, les escaliers extérieurs confèrent à chaque rue, à chaque îlot un caractère propre. Le quartier est le lieu d'identification du citoyen dans la masse urbaine. On peut dire qu'il est le support essentiel de la vie quotidienne avec ses réseaux de relations, d'habitudes familières et de points de rencontre.

Cette structure physique n'a jamais été une simple enveloppe matérielle, elle découle de, elle traduit un projet social, la mise en place d'une société et de ses institutions.

Les dangers

Deux types de dangers pèsent sur ces quartiers, l'un découlant de l'expansion (que la crise semble avoir quelque peu tempérée) des centres-villes, l'autre de la réappropriation de ces quartiers par une classe sociale mieux nantie attirée par les politiques de retour à la ville et qui en chasse les actuels occupants moins favorisés.

En fait cette nouvelle population est attirée par la commodité de vie de ces quartiers et par le type de maisons urbaines rénovées qu'elle peut acquérir en copropriété à raison de 50 à 60 000 dollars l'unité dans des quartiers considérés comme des taudis il y a cinq ans à peine.

Face à cet intérêt pour des maisons à caractère urbain, on comprend mal les politiques qui président à l'élaboration et au choix des projets réalisés dans le cadre du programme 20,000 logements de la ville de Montréal. La plupart des réalisations nous offrent des modèles issus des typologies de banlieue et font une consommation excessive de terrain sous prétexte que la densité est dangereuse! La densité en soi n'est qu'un moyen de quantifier. L'aménagement équilibré d'espaces internes et externes appropriables par les habitants, l'aménagement d'espaces publics adéquats sont la condition essentielle d'un quartier vivable. Sur le plan des nouvelles typologies résidentielles les expériences de la Société municipale d'habitation de Montréal (SOMHAM) sont plus prometteuses sur le plan de la forme bien que, du côté zonage, elles cèdent à l'obsession de la densité et des reculs qui ne tiennent pas compte des alignements traditionnels.

L'insertion dans les quartiers existants demande qu'une attention particulière soit portée au caractère et à la nature du quartier autant qu'à la compatibilité du type de bâtiment proposé. Nous prendrons ici deux exemples opposés.

Le premier, celui de l'arena Camilien Houde construit par la ville de Montréal dans le quartier centre-sud. Cette typologie d'arena municipale est issue des pratiques de consommation de terrain développées dans des conditions de banlieue: un bâtiment fermé qui s'étend inconsidérément au milieu d'un stationnement. On a pris la décision de l'implanter entre les rues Wolfe et Montcalm présentant des façades totalement fermées sur deux longs côtés du bâtiment, s'opposant aux résidences de la rue. Parachutage malhabile d'un bâtiment impropre à un tel emplacement.

Le second cas est infiniment plus intéressant parce qu'il est révélateur des nouvelles possibilités de conception de bâtiments urbains signifiants. Il s'agit du centre d'accueil Armand-Lavergne sur la rue Chapleau à Montréal. Ce bâtiment renoue avec la tradition de figuration symbolique de l'architecture et se veut donc porteur de signification dans le paysage urbain. Sa façade se présente comme un alignement sur rue d'une suite de maisons urbaines coiffées d'un fronton triangulaire, symbolisation de la résidence, alors que le plan en L qui permet au bâtiment de tourner le coin de la rue Rachel rappelle la typologie des institutions traditionnelles, couvents ou collèges, d'autant plus que l'articulation de la jonction entre les deux branches du bâtiment se fait par des galeries en loggia sur la rue Rachel alors que la façade principale, rue Chapleau, nous offre l'entrée principale, un peu monumentale, placée au point central. On pourrait presque parler de croisement de typologie, processus fréquent dans l'architecture classique.

"On constatera d'abord que les termes du discours architectural d'avant-garde ont une connotation nettement culturelle. On y fait appel à des notions, à des paradigmes, qui privilégient la fonction de représentation de l'architecture face à une mémoire collective en quête d'identité. La critique de la pauvreté de la charge symbolique de l'architecture contemporaine témoigne certes d'une prise de conscience de la fonction culturelle de l'architecture dans la société."[1]

Ce bâtiment cherche donc à répondre à cette lacune perçue par le public autant que par de nombreux architectes. Malheureusement, l'habitude de concevoir des bâtiments uniquement fonctionnels et privés de significations porte d'autres architectes à attaquer cette recherche de la figuration, attaques irrationnelles bien révélatrices de la stérilité culturelle du Mouvement moderne et de son incapacité à répondre à un nouveau climat social.

Centres-villes

Quels sont les effets de ces nouvelles conceptions de l'architecture dans les centres-villes? On a mentionné au début de cet article l'apparition d'une nouvelle typologie à Toronto dans les secteurs anciens du centre ou à proximité. On

D Marchand

***Centre d'accueil Armand Lavergne,* rue Chapleau, à Montréal. Une lueur d'espoir dans l'architecture officielle des foyers et centres d'accueil. Croisement de typologie entre l'institution et la maison en rangée, ce bâtiment remplit bien son rôle matériel et symbolique dans son quartier.**

trouve un phénomène analogue à Montréal dans le cas de deux condominiums résidentiels récents soit La Cour Sainte-Famille, rue Sainte-Famille et Place Pauzé, rue Pierce. Toutefois, nous sommes là un peu en périphérie du centre.

Quelles sont donc les caractéristiques de ce centre? Le centre constitue depuis toujours le lieu de rencontre des intérêts les plus puissants dans la ville. Le gouvernement et l'église s'y sont installés, accompagnés des banques et grandes compagnies. L'époque victorienne où le capitaliste s'identifiait à son entreprise et à sa ville nous offre des exemples de constructions civiques par lesquels il se manifestait à la fois comme citoyen et comme dirigeant. Les activités de Phillips et de McGill à Montréal au milieu du XIX^{e} siècle en témoignent.

L'internationalisation du capital et sa diversification ont modifié cette relation à la ville. Institutions financières,

[1] Germain, A., Architecture urbaine: enjeux et débat social, *Revue ARQ*, numéro spécial, mai-juin 1982, p. 27.

D. Marchand

***Intersection des rues Notre-Dame et Des Seigneurs,* Montréal. Témoins de la vitalité passée de quartiers ravagés par la spéculation et la rénovation urbaine, ces deux banques illustrent bien l'importance qu'avaient alors les intersections dans la trame des rues.**

grandes corporations multinationales, gouvernements et administrations hypertrophiés lui succèdent maintenant. Le centre a tendance à se renouveler sur lui-même. Spéculation et coût du terrain et de la construction ont conduit à une augmentation de la densité. Les besoins de la circulation ont imposé la construction d'autoroutes; la demande d'espaces de stationnement s'accroît avec la facilité de circulation. Celle-ci augmente le traffic et instaure la congestion. Les intérêts plus faibles doivent céder la place aux nouveaux venus; les bâtiments anciens sont démolis. La grille de rue doit se réadapter à la dimension des nouveaux ensembles construits et répondre aux exigences du transport individuel.

Faut-il rappeler le sort tragique de la haute-ville à Québec où, dans un simulacre de planification, on a démoli des quartiers entiers cinq ans même avant de connaître les besoins réels d'espace pour les bureaux gouvernementaux et où, par la même occasion, on faisait pénétrer l'autoroute Dufferin comme un coup d'épée en plein coeur de la ville. Il faut dire que le développement en parallèle des super centres commerciaux du boulevard Laurier et de la banlieue avait pour effet de vider le centre de ses habitants et de ses fonctions.

Qu'arrive-t-il alors des vieux centres? Ceux-ci disparaissent ou sont relégués au rang de quartier musée offert aux touristes. Quelle est la place du citoyen ordinaire dans la ville?

Il s'agit pourtant de regarder l'extraordinaire vitalité de la rue Sainte-Catherine au centre de Montréal pour constater l'intérêt de la rue commerciale structurée et continue, sur laquelle s'ouvrent les différentes fonctions des bâtiments riverains avec leurs vitrines. Pouvons-nous sacrifier la rue, espace libre et ouvert, accessible à tous en tout temps, pour la troquer contre un espace commercial artificiel à accès contrôlé et limité par les intérêts privés qui en sont propriétaires? On peut se demander ce que les Québécois ont gagné à troquer le circuit piéton traditionnel des années cinquante (Place d'Youville, rue Saint-Jean, Côte-de-la-Fabrique, Terrasse et retour) contre les espaces artificiels de la Place Laurier et de la Place Sainte-Foy. Sûrement pas la liberté d'expression et de rencontre!

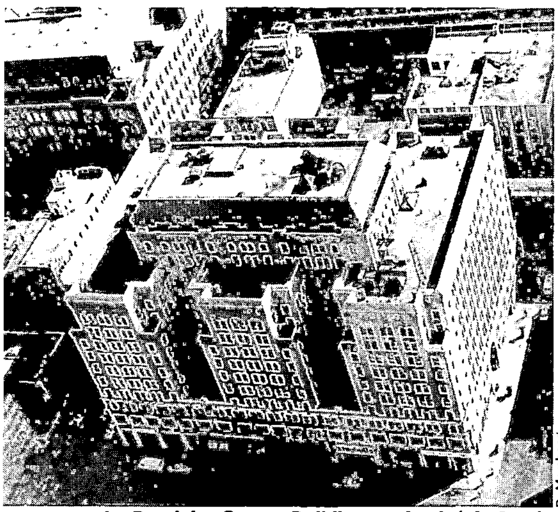
Le savoir-faire

Il importe de regarder dans les centres-villes certaines réalisations urbaines plus traditionnelles pour retrouver le savoir-faire d'une certaine urbanité. Bien peu d'utilisateurs de la rue Sainte-Catherine réalisent la présence d'un bâtiment imposant de plus de 12 étages qui occupe la totalité de son lot à l'intersection de la rue Peel. L'édifice Dominion Square qui termine le côté nord du square du même nom pourrait être le prototype du bâtiment urbain par excellence. Son rez-de-chaussée s'ouvre par des vitrines et des boutiques sur les rues Sainte-Catherine et Peel donnant au bâtiment cette perméabilité qui attire le regard et ne rebute pas le piéton. Ses accès se font par de grandes portes en arc axées au centre des façades des rues Sainte-Catherine, Peel et Metcalfe correspondant à deux "rues" intérieures qui forment une intersection en T au centre de l'édifice. Construit au cours des années 20, cet édifice toujours hautement utilisé démontre des possibilités et des moyens d'intégration que l'on a perdus depuis. Il s'agit de monter l'avenue McGill College, que les autorités municipales souhaitent transformer en boulevard de prestige, pour se heurter à un cercueil de verre bleu glacial. Bâtiment impénétrable au regard, l'édifice de la Banque Nationale de Paris se pose comme une énigme sur la rue. Pourquoi? C'est le drame des centre-villes dont le citoyen résidant a été exclu, et ou les décisions d'aménagement reposent sur un processus technico-économique qui semble échapper à tous.

Autre exemple, moins concret cependant, celui des règlements de zonage qui demandent des reculs et des implantations sans cohérence avec la conception de l'espace essentielle aux centres. Plutôt que de prévoir l'aménagement systématique de places, on se rabat sur les reculs insignifiants sous prétexte d'espaces verts. Ainsi voit-on surgir ici et là, notamment boulevard de Maisonneuve, des tours à bureaux entourées d'une minuscule bande de gazon dont la fonction essentielle consiste à séparer le bâtiment de la rue et à accumuler les papiers de rebut.

Il faut revoir la façon de concevoir l'aménagement urbain et il nous apparaît pertinent de terminer ici avec certaines citations tirées des textes de l'exposition:

"On réalise que les constructions anciennes vivent en cohérence avec un contexte physique établi autour d'elles; que la ville est un organisme particulier composé de divers contextes, structuré par des éléments déterminants tels les rues, les boulevards, les places publiques, les institutions, les monuments. L'innovation, sur le strict plan de la forme, n'apparaît plus comme le seul geste créateur valable. L'intégration dans un


D. Marchand

Le ***Dominion Square Building,*** **vu du côté du Carré Dominion. Bâtiment urbain par excellence qui sait allier les impératifs de densité tout en assurant la relation avec la rue.**

contexte physique, le respect de la mémoire collective deviennent des composantes du geste créateur."[2]

On revient là à la dimension culturelle de la nouvelle idéologie architecturale que mentionnait plus haut la citation de A. Germain qui continue cependant de la manière suivante:
"Mais peut-on s'en tenir là? À réduire le social au culturel, à privilégier les valeurs comme source de dynamisme social, on s'enferme vite dans une vision fonctionnaliste de la société. Aussi les paradigmes structuralistes sont-ils peu à peu délaissés, dans les sciences sociales, au profit de perspectives mieux adaptées à l'analyse des cadres et conditions de vie. Ces thèmes devraient également figurer en priorité dans le programme de l'architecture urbaine, ce qui suppose que l'on restitue sa primauté à la logique de l'usage, au-delà d'un projet strictement culturel."[1]

À ce questionnement, laissons répondre Maurice Culot:
"Ceci, je crois, détermine une attitude conceptuelle qui ne met pas l'emphase sur l'obligation d'inventer des choses qui n'existaient pas auparavant, mais qui, au contraire, insiste sur la nécessité d'inventer de nouvelles façons de voir ce qui existe déjà."[3]

Affirmation qui nous amène à l'une des réflexions que nous avions formulées lors de l'exposition:
"On peut trouver dans les contextes anciens du Québec un savoir-faire spontané qui utilise l'analogie, qui manipule le contraste, qui réussit l'intégration. Bien sûr, on va trouver des erreurs, mais ce savoir-faire est présent dans les contextes établis, que ce soit le rang, le village, la petite ville, le quartier ou les anciens noyaux des centres-villes. Il faut réapprendre à utiliser ces contextes comme source d'inspiration."[2] ■

[2] Marchand, Denys et Knight, Alan. Exposition *De la rupture à la continuité.*

[3] Culot, Maurice, cité par Franco Roggi, A.D., vol. 48 no 4.

Denys Marchand et Alan Knight sont architectes et professeurs à l'École d'architecture de l'Université de Montréal.

In Regina

The REGENERATION of Regent Court

by Gerry Hopson

Nestled on the border between the aging bungalows of Washington Park and the split-levels, townhouses and ranch-style housing that dominate Regina's sprawling northwest section, Regent Court occupies some very choice real estate. It's directly adjacent to a large shopping centre, parks, school, swimming pool, skating arena and library.

Regeneration goes beyond rehabilitation to redesign key elements in a project that are judged to be deficient

Regeneration has been designed to tackle physical and social problems simultaneously

But it hasn't been a popular address. In fact, it doesn't even have an address. Regent Court is no place, a limbo in the midst of the ordered succession of Bays and Crescents surrounding it.

For the last 25 years Regent Court has not existed on city maps. Regina's first public housing project, it was completed under Section 40 of the National Housing Act in 1959. The vintage is immediately recognizable to residents of any Canadian city – twelve two-storey row-housing blocks arranged barrack-like around courtyards of open grass.

the isolation of the project from its neighbourhood was merely one of many problems

There are also two walk-up apartment buildings for families and two single-storey blocks for senior citizens.

Although bounded on three sides by ordinary city streets, Regent Court itself has no street address. Vehicle access for the 320 residents is limited to a couple of large parking lots abutting the street system. The rest of Regent Court is a walk-in island of public housing in a sea of private residences.

This isolation of the project from its neighbourhood – a social as well as a structural fact – was merely one of a deadly phalanx of problems that, by the end of the seventies, had turned Regent Court into a depressing mini-ghetto. Hailed by their builders and by early tenants as a significant breakthrough in the provision of decent, affordable housing to low-income families, projects like Regent Court across the country have been manifesting strikingly similar signs of breakdown.

the design insufficiencies contributed to social and physical decay

If the Regent Court project is at all representative, the deficiency would seem to consist not so much in this particular concept of social housing as in some of the details of its execution. Other problems facing Regent Court must be attributed to the cumulative wear and tear resulting from a generation of hard use. Significant components of the project were simply wearing out.

Over the years it became clear to longtime tenants that the most obvious shortcoming of Regent Court as a living environment lay in the courtyard design itself. The site is a huge four hectares. Simultaneously turning the community in on itself and leaving it with no private outdoor space in which to live, the huge open areas effectively locked people inside their homes. Envisioned by architects as park-like zones dotted with strolling adults and playing children, the courtyards were instead bleak barriers to human intercourse. Poorly lit at night, deserted by day, they offered inducement to vandalism and fear.

being sent to Regent Court was seen as a form of punishment

As the tenant mix in the project evolved to reflect the social realities of the seventies, the design insufficiencies of Regent Court contributed to a discouraging mutual escalation of social and physical decay. Geared to low-income earners, rents in Section 40 projects are graduated up to a maximum of 25 per cent of family income. Outpacing trends in the population at large, more and more single-parent households replaced traditional nuclear families in the tenant group, creating a serious child supervision problem. Lack of organized play areas or daycare left children "frustrated, at loose ends and looking for trouble", as one mother put it. Damage from vandalism increased.

By 1980 the project was experiencing an annual turnover among tenants of over 40 per cent. In spite of a shortage of public housing in Regina, only one in three applicants accepted accommodation in Regent Court.

"People on social assistance were actually looking at more expensive apartments in preference," says Fred Wolch, manager of Regina Housing Authority, the administering agency. "Being sent to Regent Court was seen by people as a form of punishment."

After the failure of persistent efforts to meet tenant complaints with improved maintenance and the similar types of minor upgrading permissible under their budget, Wolch and others at Regina Housing came to the conclusion that more drastic action might be necessary. "The catalytic event was a tenant request for construction of a social and recreational facility," Wolch says. "We decided to take the whole issue to the partnership."

Like most Section 40 projects, Regent Court capital and operating costs are shared 75 per cent by the federal and 25 per cent by the provincial governments, with the city taking on five per cent of the province's share. When Regina Housing consulted its partners on the Regent Court problem in 1980 two things happened which were to drastically alter the lives of the tenants.

CMHC was committed to investigating more far-reaching options than the request for recreational facilities

The first was the response of the federal partner, Canada Mortgage and Housing. George Anderson, general manager for CMHC's Prairie Region, undertook to consider a comprehensive review of the Regent Court situation. Deciding that the request for recreational facilities represented the tip of a very large iceberg, Anderson committed the Corporation to investigation of more far-reaching options.

In this he was met more than halfway by Hewitt Helmsing, chairman of the Regina Housing Authority. "That place was like a concentration camp," Helmsing says, "one thing I vowed when I became chairman of the Authority – I would change Regent Court." With Helmsing providing the political drive and Anderson the backing of the senior partner, the second major initiative took place. A partnership Steering Committee was established to study the alternatives for Regent Court.

The Steering Committee was unique. It was designed as an initiating and decision-making body, capable at once of processing information and making prompt recommendations for action. With three major bureaucracies involved, the Committee was enfranchised to make headway by involving the most senior people – managers who could at least anticipate the reactions of their respective senior executives. Hewitt Helmsing was named chairman. He worked with George Anderson; Peter Anderson who was Saskatchewan director of CMHC; Fred Wolch of the Housing Authority; Stan Willox, the general manager of Saskatchewan Housing Corporation; Don Kostea, the Regina assistant city manager and a succession of representatives of the Regent Court Tenants' Association.

the inclusion of a tenant representative was instrumental to the success of the Committee

As it turned out, the inclusion of a tenant representative was to be instrumental to the success of the Committee. After preliminary inspection and study had indicated three main options for the project, tenant advice significantly tipped the scales in favour of one of the alternatives.

The Committee was asked to choose between selling or maintaining the Project 'as is', major redevelopment, or some form of extensive rehabilitation. Since demand for land was low and sale would simply create the need for replacement stock, that option was ruled out. Living conditions – according to record – had reached a point where continued administration of the project as it was could only have served as a prelude to major redevelopment. The argument for redevelopment – increased densities, modern facilities, better design – was persuasive.

But tenants didn't want to be dislocated. More than that, they weren't prepared to accept dramatically increased densities. Nor was the surrounding community. "It's the prairie perception of space," recalled Steve Read, a planner with CMHC's Prairie Regional Office in Saskatoon.

"While there was underutilization of existing space, people didn't want to see a dramatically increased number of units in that part of Regina." Furthermore, inspection found most of the existing units structurally sound. Demolition didn't make economic sense.

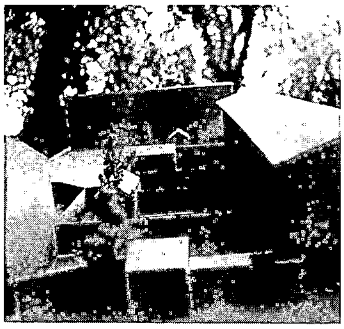
The Committee opted for regeneration. "The difference between regeneration and rehabilitation," explains Steve Read, who became regeneration project co-ordinator, "is a matter of extent. Rehabilitation can involve gut repair of facilities, including structural and utility upgrading. We were looking at that – and something more. Regeneration goes beyond rehab to redesign certain key elements in a project that are judged to be deficient. It was this kind of redesign we wanted to examine. We were looking at giving Regent Court a completely new image, a new lease on life."

The initial study authorized by the Steering Committee and funded by a $25 000 grant from CMHC included a complete energy audit using National Research Council computerized energy flow models. Armed with the results of the audit, reports from a CMHC social housing officer, input from tenants, a site engineering assessment and detailed unit inspections, the Committee proceeded to authorize a comprehensive concept plan and budget for the regeneration of Regent Court.

By midsummer 1982 a preliminary construction budget was ready to present to CMHC for funding both rehabilitation and new construction. "The co-operation among the agencies was superb," Peter Anderson says. "Thanks to the Steering Committee, we moved very quickly, considering the complexity of the issue and organization involved."

because of the large stock of public housing units across Canada, the issues involved in regeneration are bound to be of national interest

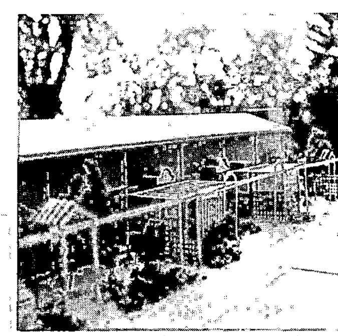
CMHC also had a particular reason for being interested in the regeneration. With about 200 000 public housing units across Canada growing older, the issues involved in regeneration are bound to be of interest nationally.



Stone Croft Architects

As part of regeneration a large part of the vast open courtyard at Regent Court will be converted to private space for individual units by the use of fences.

Stone Croft Architects



Stone Croft Architects

Stone Croft Architects

Front yards didn't exist, but now public sidewalks will be pushed away from the buildings and fences and trellises will create private spaces.

Camera One

Camera One

Camera One

Modifications to the interior of the units include providing vanities and shower enclosures in the bathroom, doors for kitchen cupboards and closets, as well as planning to cover cinderblock walls with drywall.

"This is an experimental, not a pilot project," Peter Anderson says. "It's not necessarily a model, since every housing project has its specific problems and specific solutions have to be found for them. But it is a learning experience for everyone. We want to know more about the processes and costs of regenerating our own stock. An undertaking like this is bound to have some applications of interest to us and to other jurisdictions – including the private sector."

Regeneration is a small word for an awe-inspiring process. "We are reclaiming the waste space in Regent Court for people's lives," says supervising architect Richard Stone of Stone Croft Architects, Regina. Stone's concept involves extension of private space outdoors, creating a security of environment and a sense of possession. Where there had been asphalt back aprons with a few feeble attempts at definition of private space, there will now be wooden decks, backyard fences 1.5 to two metres high, and grass. Where front yards didn't exist, public sidewalks will be pushed from two to seven metres or more away from the buildings. Latticework fences and trellises serving as a framework for vines will create private space in front. Individualized trellis forms will differentiate dwellings. "People will no longer feel as if they're living in a motel," says Stone.

The aim is to create some pride of possession. Throughout, the regeneration has been designed to tackle physical and social problems simultaneously. A loop road will be introduced to the project, eliminating its isolation from the street system to improve access and provide street addresses for the units. Road construction will also form part of a systematic regrading of the site to alleviate drainage problems. "In the future tenants won't have to carry their groceries – or their furniture – a quarter of a mile (400 m) to the front door," Fred Wolch says. "The road will give them a street address. For the first time in a generation, they'll be citizens of Regina as well as project residents."

The road will be accompanied by redesigned and augmented parking facilities, giving front-door access to all units. Instead of bulk metering, plug-ins will be individually metered back to the units – a proven energy conservation plus. Addition of two playgrounds, one for teens and one for younger children, will rationalize open space and address the recreational problem. A multi-use recreational facility will be constructed for the tenants which they can use as a day-care centre.

Unit extensions will be repainted and reshingled in different colour schemes, further individualizing living space. The colour schemes – cedar, cocoa, avocado – will also serve to integrate the project with its neighbourhood. At present, second-storey cedar siding on the townhouse blocks is painted in garishly distinctive 'project colours' – bright blues, yellows, oranges. Improved landscaping, lighting, complete regrading to eliminate flooding due to subsidence, re-orientation of parking to cut down on hard asphalt surfaces – all will work to break the visual monotony of outdoor spaces.

scepticism among the tenants about regeneration has given way to enthusiasm and participation

The motel-style senior citizen housing is being replaced with modern townhouse designs situated to facilitate traffic circulation and visual variety. This substitution will result in a modest increase to the density of the project from 109 units to 115.

Architectural modifications to unit interiors were shown by tenants to tenants in a model suite opened in February 1983. Initial scepticism among tenants about the nature, reality and significance of the regeneration has given way to enthusiasm and participation. Joe Bailey, current tenant representative on the Steering Committee, says that residents are almost more impressed by how things are being done than by what is being done. "They see that an attempt is really being made to meet their needs," he says.

Bailey cites the extraordinary efforts made by Regina Housing to smooth away the dislocation caused by construction. Opting for work to proceed with tenants on site, the partnership moved tenants from one block to vacant units in other blocks. With one block at their disposal the contractors could start work on rehabilitation. When that is finished tenants from another block will be moved in and construction will move block by block throughout the project. While planning allowed initially for senior citizens to return to new units in Regent Court, all chose to relocate permanently in housing closer to downtown.

"Every cost of moving has been covered," Bailey says. "In all but the very first cases tenants will not have to move more than once." The on-site method, controversial among the agencies and resisted at first by the contractor, is proving a tremendous success.

the controversial on-site method is proving a tremendous success

When tenants saw the model interiors they decided the disruption was more than worthwhile. Existing cupboards and closets have no doors. "Absolutely every possession is open to public scrutiny," Richard Stone says. In the model there are tasteful wooden doors. The bathrooms will have vanities and shower enclosures. Asbestos tile will be replaced by resilient sheet flooring in warm tones. Some main living areas will be carpeted. Bare ceilings will be stippled. "Contrast, warmth, convenience – liveability is the accent of interior alterations," says Stone.

Cinderblock walls will be soundproofed and made visually attractive with drywalling. New countertops, new energy-efficient windows, upgraded electrical service, replacement of furnaces, security systems in the apartment blocks will add years of life to the structures and quality to the lives lived in them. That's what regeneration is beginning to mean to everyone associated with Regent Court. With three blocks rehabilitated, ten new units nearing completion and tendering out for landscaping and regrading this summer, Regent Court awaits its rebirth under the regenerated name of Regency Gardens.

tenant participation is absolutely essential to regeneration on this scale

Are there lessons to be learned at this stage? "We're still in the process," says Project Co-ordinator Steve Read. "But I think we can point to a few things we've learned already."

"Tenant participation," he says, "is absolutely essential to the success of regeneration on this scale. Unit pricing on the basis of partial replacement of fixtures is probably less advantageous from a cost and planning point of view than total replacement. Servicing arrangements with the city and major utilities should be worked out early. The complexity of negotiations with city departments over water, sewer, fire protection and with the utilities over subterranean electrical and phone installations is enormously time-consuming."

He pauses before continuing. "Because servicing and rehab costs are such big unknowns – this is an experimental project – substantial contingency and inflation factors should be built into budgets. Currently, we're running close to two-thirds of replacement cost per unit. And," he says drumming the desk with his fingers, "potential neighbourhood issues – like location of recreation facilities – should be tackled very early on. We're still involved in a controversy over the siting of our rec centre. The neighbours don't want it too close to their property . . . Yes, we're learning," he says.

periodic review and upgrading would avoid the costly and cumbersome process of regeneration

Regeneration, a unique solution to the complex problems of social and physical deterioration, obviously presents some interesting challenges to all participants. The myriad of purely physical problems encountered have led Steve Read, among others, to express a need for "periodic major review and upgrading of projects like Regent Court – something that goes beyond the Housing Authority inspection and maintenance budgets."

The human dimensions of regeneration have proved, on the other hand, less problematic than anticipated. Tenant scepticism and apathy can give way to flexibility and enthusiasm about on-site repairs, if they develop a sense of participation and of the benefits they will eventually have. As for the ultimate social aims, community integration and pride of place, "regeneration may help", says tenant Joe Bailey. "The process itself has created positive attitudes. But it remains to be seen whether the new suit will change the life and behaviour of the person."

A lot of others will be watching the outcome of this project with the same curiosity as Joe Bailey. "The outside interest in the Regent Court regeneration has been enormous," says Steering Committee Chairman Hewitt Helmsing. "It is going to help answer some very important questions for a lot of people right across the country." Of that, there is no doubt.■

Gerry Hopson is a freelance writer living in Regina

The Changing Canadian Suburb

1950 1960 1970 1980 1990

by Gabriella Goliger

"For God's sake just get me a house and leave me alone." According to author and urban planner Humphrey Carver, this statement epitomized the sentiments of Canada's post World War II generation, the generation that inspired and populated an entirely new kind of living environment – the North American suburb.

Traumatized by fifteen years of depression and war, Canada's veterans yearned for the stability, security and regeneration of domestic life. They wanted to forget the ugly past, sink roots, invest in the future and raise families. And they wanted a new kind of habitat to do it all in, one remote from the congestion and turmoil that the city represented. It was a time of longing for pastoral simplicity and for the ultimate social aspiration – the single-family detached home on its own plot of land.

Post-war economic prosperity and the industrial boom suddenly made this aspiration accessible to thousands of average-income North American families. Developers sought the profits to be made in buying large tracts of land on city outskirts and mass-producing single-family homes. Supply accommodated demand and suburbia was born.

Inner City vs Suburb

The new neighbourhoods were very different from the pre Second World War city which was characterized by its compactness and high-density living, sometimes in substandard housing. In urban districts streets of two-storey houses on narrow lots – roughly 200 residents per hectare – were the norm.

The new suburbs contained about 75 people per hectare.

The organizing principle of the city in those days was the streetcar "creating an extraordinarily efficient kind of habitat", writes Carver in his essay "Suburbia: Its Purpose, Growth and Design", that had shops and services clustered near streetcar stops and residential streets at right angles to streetcar corridors.

By contrast, the suburb was based on the premise of mass ownership of the private car which could free residents to spread out over large areas and permitted a greater separation of work and home environments than had ever been possible before. Another basic premise was a homogeneous population composed of nuclear families with similar needs and goals.

The typical suburban family of the 1950s consisted of a father who commuted to work (often via private car), a mother who took care of the home and an average of 2.8 youngsters. The family unit was basically self-sufficient with much social and recreational life centred around the homes of neighbours.

Canada's First Suburb

Canada's first planned suburb created to accommodate such families was Don Mills, Ontario. Built in the 1950s in northeastern Toronto, Don Mills became the model for most of the new neighbourhoods that spread out around Canadian cities during the 1950s and 60s.

This model suburb was based on four main planning principles:

- the hub or focus of each neighbourhood was to be an elementary school and, in some cases, a newly-created phenomenon, the shopping centre
- plenty of green space was to be provided through parks and wide building lots
- the predominant style of home was the single-family detached house set with its widest dimension facing the street to create an atmosphere of spaciousness
- vehicular and pedestrian traffic were separated through the provision of pedestrian walkways and a "spaghetti" system of curbed streets and cul-de-sacs that discouraged through traffic.

The Don Mills plan, an exciting innovation when first created, soon became a cliché as it was routinely copied throughout Canada. Endless rows of similar bungalows on standard 18 × 30 m lots mushroomed around city after city. Critics decried the blandness of the new communities. Writes Humphrey Carver in "Suburbia: Its Purpose, Growth and Design":

"Never before in history has there been an urban environment of such uniformity and conformity and lack of diversity."

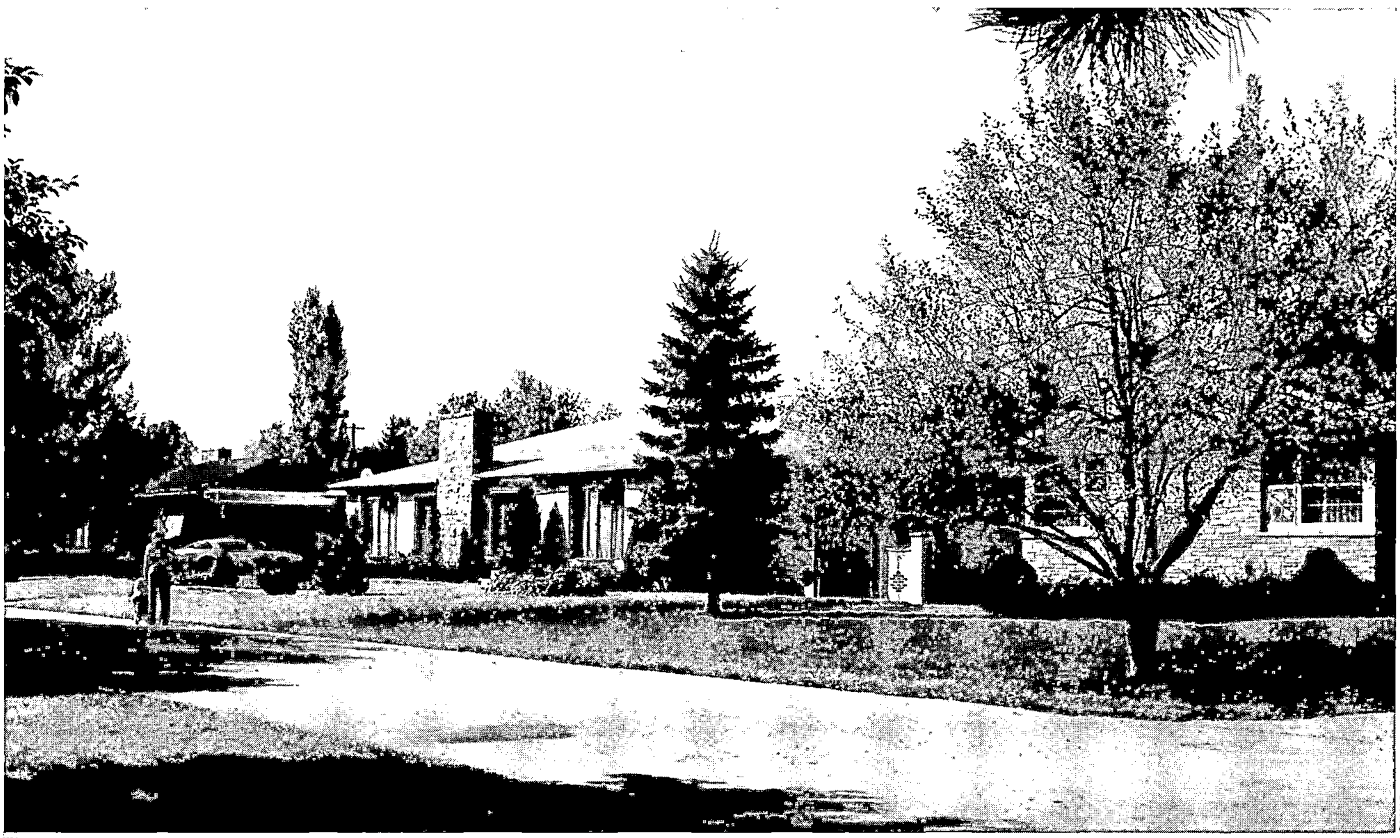
But these were the laments of intellectuals or misfits. The average Canadian continued to aspire to a home in the suburbs. Perhaps suburbia lacked colour and excitement, but for these very reasons was considered the ideal environment for family life. It was far from the bad influences of the city.

Through the 1950s and 60s rapid expansion of the suburbs continued.

New Realities change Suburbia

By the 1970s, however, social and economic realities in Canada had changed so significantly that the basic assumptions upon which suburbia was founded were no longer valid. The post-war boom years had ended, leaving in their wake an era of inflation, recession and high unemployment. Real estate prices were skyrocketing, a trend which some commentators attributed to land speculation by large development corporations. As a result, fewer and fewer Canadians could afford what once was considered the birthright of the middle classes – the detached single-family home. At the same time housing shortages within cities were forcing more and more low-income families to seek accommodation on the outskirts of town.

The energy crisis of the 1970s meant not only high home heating costs, but high gasoline prices as well so that com-



The single-family detached house on a large lot was the predominant style of house in the model suburb of the 50s and 60s.

muting to and from and within the suburbs by private car was becoming a financial burden to many people.

In addition, the demographic composition of suburbia was changing dramatically. The birthrate had declined significantly as a new generation of Canadians either postponed child rearing or else was content with smaller families. Between 1951 and 1956, 28 babies were born for every thousand Canadians; between 1971 and 1976 this number had decreased to 15.6. Divorce rates were soaring, creating large numbers of single-parent families and single adults in the suburbs.

During the 1970s the number of single-parent households increased by 50 per cent and, according to the recently released Statistics Canada publication *Divorce: Law and the Family in Canada,* 40 per cent of marriages now end in divorce. In addition, many suburbanites were getting older. Spouses died. Children grew up and moved away.

The Effect of Changing Demographics
All these factors meant that households were getting smaller and that low-density neighbourhoods were more sparsely populated than ever.

According to a 1979-1980 study by the Social Planning Council of Metropolitan Toronto, the average household size in Metro suburbs in 1951 was 4.1. With a density of 20 units per hectare, this meant 80 people per hectare. The Council predicted that by 1986, with a projected average household size of 2.7, the number of residents per hectare would dwindle to 55, one-third fewer people than in 1951.

The cost of servicing low-density neighbourhoods with such necessities as fire departments was rising and becoming increasingly impractical.

Changing demographics and lifestyles also meant that suburbia no longer consisted of a homogeneous population of young families, but rather a diverse mix of residents with a variety of needs. The Metro Social Planning Council report identified a number of disadvantaged or minority groups in the suburbs which together formed a new social majority.

These groups included:
- women in the labour force, contributing to family incomes or maintaining households
- single-parent families (headed mostly by women)
- increasing numbers of elderly, including isolated and dependent aged

The typical suburban family of the 1950s.

A diverse mix of residents now live in Canada's suburbs:


the recent immigrants


the elderly


the single-parent, mother-led families


the unemployed

• recent immigrants from a variety of backgrounds experiencing adjustment difficulties in a new society
• large numbers of youth (under 25) at varying stages of independence, with significant numbers unemployed
• unemployed adults
• households without automobiles
• divorced or separated adults living alone.

The New Needs of Suburbanites

Each of these groups, the report said, had special needs not met by the traditional suburb built with the nuclear family in mind. Planners of the original suburb presumed that residents' socializing would occur mostly at home and that public recreation and meeting places could be kept to a minimum. But the new family structures of the 1970s and 1980s required more sources of support and opportunities for social contact than elementary schools (whose enrolment was declining) or impersonal shopping centres could provide. New housing options were a major requirement – smaller units to accommodate smaller households, less expensive units for growing numbers of residents of average or modest means.

The senior citizen, especially the less mobile, needed community and health care services. Teenagers, especially the unemployed, needed places to meet – they were becoming increasingly unwelcome in parks and plazas – as well as outreach services. Single and working mothers needed daycare as well as more conveniently placed shopping and recreational facilities. (Many suburban women no longer had the time for prolonged shopping or chauffeuring.)

For large numbers of people, living in the suburbs was becoming a lonely and isolating experience.

Increased Housing Densities

In recent years, urban planners, architects and community agencies have suggested a number of solutions to housing and social problems in the suburbs.

The premise of modern times is that housing densities must increase. Typical suburban sprawl is too great a waste of land and resources.

Suburbs built recently reflect this premise and contain a mix of apartment buildings, condominiums, townhouses and row houses. But these new, high-density areas are often more remote from and more desperately in need of community services than older, established neighbourhoods.

In original suburbs, planners have suggested increasing population densities through a number of schemes. These include:
• property conversions – transforming a single-family dwelling into a multiple-family home by adding a second storey, a wing or a basement apartment
• lot subdivisions – adding two houses or a multiple-family unit where one single-family home stood
• infill housing – using some of suburbia's expansive green space, such as large corner lots, for additional buildings.

In a paper prepared for a conference on the future of the suburbs, one firm, A.J. Diamond Planners, showed how housing density could be increased in Don Mills by 60 per cent. The study proposed converting a typical street of 25 single-family units into a street with 40 units by renovating every second home and adding a small townhouse infill project on a corner lot.

Resistance to New Types of Housing

Such changes would, of course, presume resident approval and changes in municipal zoning bylaws to allow for higher-density development. But research shows that suburban residents are not necessarily enthusiastic about proposals for far-reaching alterations to their neighbourhoods. In a study by Vischer Skaburskis Planners on resident attitudes in neighbourhoods of Burnaby, B.C. (a suburb of Vancouver), Jacqueline Vischer found significant resistance to the idea of new housing projects, even by the very residents who would potentially benefit from such projects.

"... residents who feel they might have to move because of the physical and financial difficulties of maintaining their property expect to move to an apartment or townhouse, and also expect to stay in the same neighbourhood. These are the people who would fight against the rezoning or redevelopment that would make the housing available in the neighbourhood that they want to live in. This inconsistency is not apparently evident to residents themselves."

One implication of such findings is that intensive public education programs may be necessary to modify attitudes before redevelopment schemes can be implemented. The issue is obviously a delicate one for local politicians anxious to please voters and, at the same time, maintain an economically viable community.

Recommendations for Solving Suburban Problems

Increasing social services in the suburbs is another thorny issue at a time when public coffers are far from full. In 1980 the Social Planning Council of Metropolitan Toronto published Part II of its *Suburbs in Transition* study, a thick volume of recommendations for solving suburban problems. The Council's shopping list included: increased availability of housing for seniors close to services and public transit, more community and home support services for suburban seniors, more daycare services for working parents and single mothers, youth outreach programs, immigrant resource centres, educational

CMHC

One way of increasing population density is to use large corner lots for additional housing.

CMHC

Medium-density row housing counteracts suburban sprawl.

support programs for disadvantaged children and a host of other services.

What is clear from such reports is that the suburbs are no longer an enclave for comfortable, privileged people.

Originally perceived as a means of escape from big city crime, poverty and turbulence, suburbia now has many big city problems without the big city amenities, but the lion's share of social service funding is concentrated in urban areas.

In the Toronto area, there has been a flurry of activity to strengthen suburban community agencies since the publication of *Metro Suburbs in Transition.* Several municipalities have set up social service coordinating bodies (e.g. Human Services Scarborough) aimed at supporting the efforts of local voluntary groups that cater to social needs. Metro's United Way has also allocated more of its resources for suburban organizations. In addition, five social planning and development agencies in the Toronto area have formed a Joint Task Force on Neighbourhood Support Services to find ways of improving on the current hit and miss system of funding under which most suburban agencies now operate.

Beefing up social services is a widely-accepted (though slow-to-be-implemented) proposal for solving suburban dilemmas. There have been other, more radical suggestions. Toronto's outspoken municipal politician, John Sewell, has advocated abolishing suburbia altogether by raising suburban densities to city levels and ending corporate land speculation (which, he says, is the main cause of high housing costs in suburbs) through government intervention.

Others envision a gradual decentralization of commercial life with more businesses moving into the suburbs thereby enlarging the suburban tax base and reducing the daily exodus of commuters from satellite communities.

As far as the authors of *Metro Suburbs in Transition* are concerned, suburbia will remain a distinct family environment, changing demographics notwithstanding.

"Change does not mean becoming like the central area, with its emphasis on fast-paced single living. The suburbs can retain their unique social identity in relation to Metro by evolving into flexible family environments . . ."

But the city is also evolving and accommodating new family structures through the revitalization of older neighbourhoods. The middle classes are flocking back to once-shunned urban centres.

If such trends continue and if suburban population densities continue to increase – as planners say they must – it may be that, in the future, city and suburb will resemble each other more and more.■

Freelance writer Gabriella Goliger lives in a pre-Second World War Ottawa neighbourhood.

par Chantal Léveillé

L'éducation des enfants

à l'environnement urbain

Il est, certes, difficile de percevoir la ville comme une forme d'art! Nous avons plutôt l'habitude de considérer l'environnement urbain comme un désagrément nécessaire. La dégradation de l'environnement bâti, due à diverses causes (problèmes fonciers, manque de planification, pollution, etc.), aboutit à un désintéressement des habitants pour l'observation du monde qui les entoure.

Pourtant l'architecture, à son sens le plus large, c'est-à-dire celui de la construction de l'espace urbain, est l'art le plus global et sans doute le plus essentiel qui soit. L'architecture reste le cadre tridimentionnel de notre vie quotidienne. L'influence de l'environnement urbain sur nos actions, émotions et pensées est déterminante, d'autant plus déterminante qu'elle n'est pas reconnue comme telle.

L'environnement urbain est une expérience totale: visuelle, auditive, tactile, olfactive. La ville n'est pas seulement une oeuvre d'art, c'est un objet d'histoire, l'expression d'une réalité économique, le cadre de rivalités politiques, le reflet d'une évolution technique, le résultat d'impératifs climatiques, la liste peut s'allonger indéfiniment.

Le vécu architectural des enfants

Mais dans cet espace urbain, longtemps mal structuré, quelle importance a l'objet architectural pour l'enfant? Est-il même ressenti en tant que tel? Les bâtiments sont plutôt vécus comme des créations spontanées, ayant existé de tout temps et sur lesquelles il serait illusoire d'intervenir ou de porter un jugement. Les maisons sont indissociables de leurs propriétaires, les édifices publics sont ennuyeux, les magasins sont attirants surtout s'ils recèlent quelque objet convoité; seuls, peut-être, les monuments, colonnes et statues ont une existence architecturale spécifique, car ils ne servent à rien, seulement à marquer l'espace de leurs repères (et éventuellement à grimper dessus). Il n'y a peu sinon pas de place dans cette perception pour la contemplation esthétique et l'évaluation de la qualité de l'environnement. Le cadre de vie est utilitaire (il l'est sans doute pour la majorité de la population) et il y aurait beaucoup à redouter d'une ville dont le prince serait un enfant, comme en témoignent souvent leurs maisons ou villes de rêve, qui sont des copies conformes des clichés véhiculés par les adultes. À partir de cette conception fragmentaire et subjective, comment amener les jeunes à une "prise de conscience" de l'environnement urbain?

Les enfants, un monde méconnu

Disons d'abord que s'il existe un consensus unanime sur la nécessité de sensibiliser les enfants à leur cadre de vie, cette sensibilisation demeure dans ce pays un voeu pieux. Pour les profession-

Résultat étonnant: un croquis architectural dessiné par un élève de dix ans d'une école publique de Montréal, située dans un quartier de classe moyenne. "Habituellement, les enfants dessinent des maisons de mémoire", explique Chantal Léveillé. "Ici, l'enfant exécute le croquis, installé sur le trottoir, devant la maison. Ce croquis respecte les règles du dessin d'architecture professionnel."

Description rédigée par un autre élève du même âge de la même école, après une visite d'observation de son quartier.

Mon quartier

Autrefois il n'y avait pas de maternelle à l'école italienne. Les garçons étaient d'un côté et les filles de l'autre. Il y a plus de monde aujourd'hui. Mais il y a moins d'Italiens qu'avant dans le quartier. Les voitures étaient anciennes. Il y avait plus de parcs parce qu'il y avait moins de maison. Les rues étaient construites en terre. Les magasins vendaient dehors avant. Ils étaient plus petits. On trouve plus de dépanneurs aujourd'hui. Les tramways roulaient à l'électricité. Par terre il y avait des rails. Les maisons étaient construites en bois. Elles étaient plus solides.

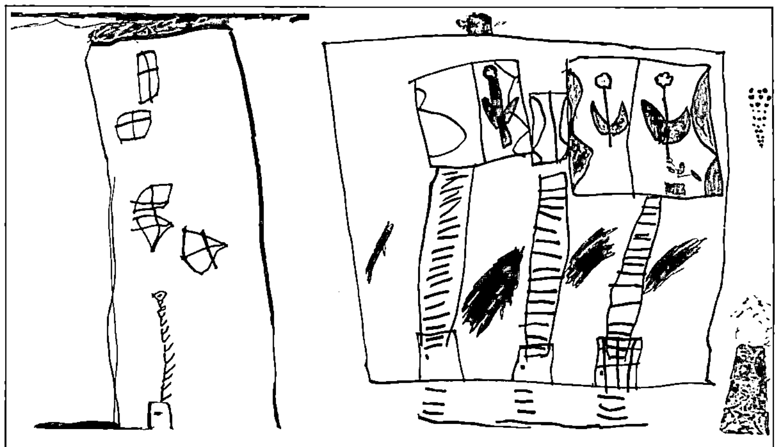
nels désireux d'initier les citoyens, clients, promoteurs et conseillers municipaux de demain, le monde des enfants demeure méconnu. Nous sommes portés à voir les enfants comme un groupe monolithique, tendance que nous adoptons souvent face à des groupes auxquels nous ne nous rattachons pas.

L'appartenance à un âge, à l'un ou à l'autre des sexes, à une classe sociale ou à un environnement urbain, rural ou banlieusard, fait que chaque groupe d'enfants est particulier et qu'à l'intérieur d'un groupe homogène, il y a des variantes sensibles dans l'attitude par rapport au milieu de vie (en fait par rapport à la vie elle-même!)

Il n'y a pas d'études exhaustives sur la façon dont les enfants perçoivent l'environnement urbain. Une seule chose est sûre, il existe des "paliers de perceptions" du monde qui sont franchis au cours de la croissance.

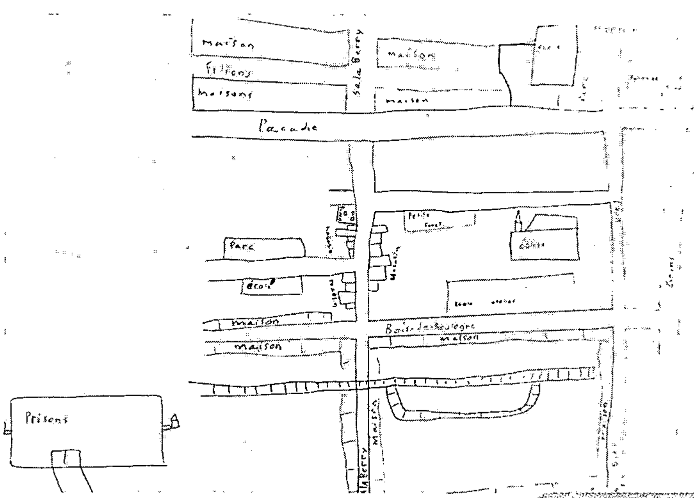
Pour les très jeunes enfants, l'environnement immédiat est constitué de la maison et de l'école qui forment les frontières d'un monde uniquement construit sur l'expérience quotidienne. À l'entrée à l'école, les notions d'échelle et de distance ne sont pas encore perçues, bien que les enfants de cet âge s'intéressent à l'organisation de leur cadre de vie. C'est l'âge de la construction des maisons pour lesquelles ils réutilisent le mobilier familial dans de multiples aménagements non-conventionnels, au désespoir des adultes qui pensent qu'une chaise doit avoir les pattes en bas. Entre l'âge de huit et dix ans, l'enfant alphabétisé commence à reconnaître son environnement et à en faire des représentations réalistes. Des différences apparaissent alors entre les enfants qui sont véhiculés et ceux qui marchent jusqu'à l'école; les premiers ayant une vision moins nette et structurée du chemin de l'école que les seconds.

La ville, et surtout la grande ville, n'est perçue dans sa totalité qu'à l'adolescence, cette compréhension restant directement liée à la possibilité de s'y déplacer dans divers endroits: discothèques, arénas, cinémas, librairies, cafés. Les enfants des classes plus aisées se déplaçant plus souvent ont une bien meilleure idée de la géographie de leur ville que ceux des classes moins favorisées qui demeurent essentiellement dans quelques rues de leur quartier. Ce n'est qu'à la fin du secondaire et au niveau collégial que les adolescents deviennent conscients des réalités socio-économiques et peuvent éventuellement s'y intéresser.



Avant **Après**

Dessins d'une maison par un enfant de quatre ans qui fréquente une garderie. Le dessin de gauche fut réalisé avant une première séance d'observation de l'environnement d'une durée de deux heures. Celui de droite, après.



Un plan d'utilisation du sol réalisé par un élève de 9 ans après une visite d'observation de son quartier.

Le trajet d'une visite du Vieux-Montréal, tiré du cahier *Le sentier du patrimoine* réalisé pour les enfants de 10 à 13 ans par le Musée des beaux-arts de Montréal et la Fondation Héritage Montréal.

Les possibles de la sensibilisation à l'environnement

En respectant leur stade de développement, il est possible d'apprendre aux enfants à voir et à apprécier leur cadre de vie. Si l'éducation artistique a pour but de développer l'observation et la prise de conscience des aspects esthétiques de l'oeuvre d'art, la sensibilisation à l'environnement vise à développer la perception des divers aspects du cadre bâti.

La sensibilisation à l'environnement doit aussi leur permettre d'analyser leur milieu de vie en termes de composantes historiques, géographiques, économiques, sociales. L'approche multidisciplinaire s'impose. Il s'agit d'analyser la ville tout comme on peut analyser un tableau selon des critères sociaux, techniques, historiques ou esthétiques.

Cette sensibilisation vise à les amener à émettre des jugements de valeur sur la qualité de leur environnement. Un rapprochement s'établit immédiatement avec l'éducation artistique qui doit permettre d'évaluer et d'apprécier la qualité d'une oeuvre. Les programmes d'éducation à l'environnement veulent permettre aux enfants de maîtriser des techniques dérivées des disciplines relatives à l'aménagement (architecture, urbanisme, écologie) et aux éducateurs de diversifier leur enseignement à l'intérieur des programmes existants. La maîtrise des techniques rappelle la pédagogie artistique.

La sensibilisation à l'environnement propose une approche éducative qui n'est pas forcément cloisonnée et qui a sa méthodologie propre, tout comme les musées qui ont une approche éducative fondée sur l'observation directe des oeuvres d'art et qui développent une pédagogie qui leur est particulière. L'ultime but de ces programmes est de permettre à l'enfant d'intervenir sur son propre environnement.

Voir la ville

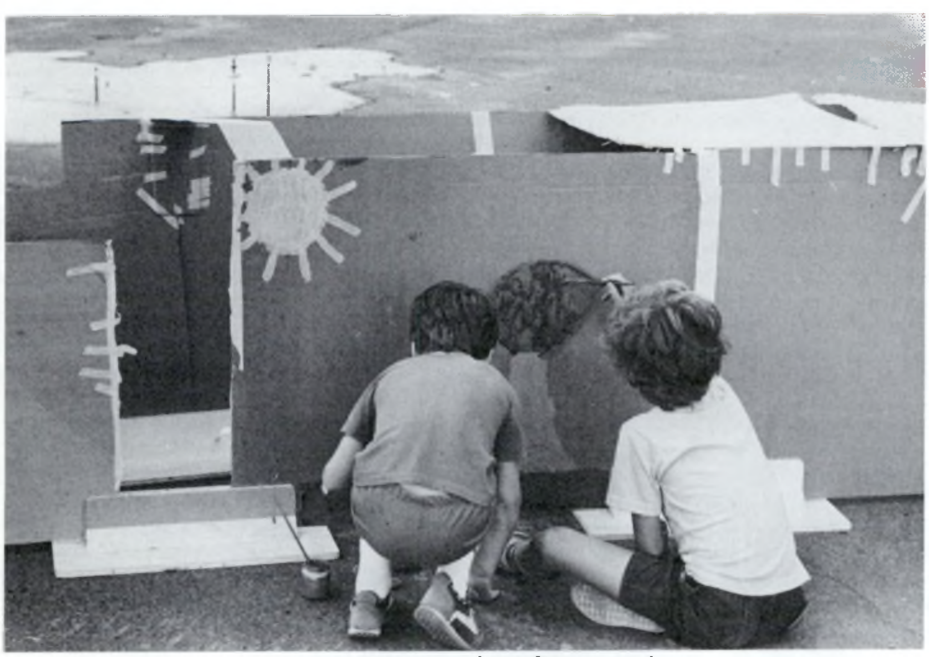
Par ailleurs, on constate que rien ne remplace l'observation directe. Nous vivons dans un monde en trois dimensions. Tout comme l'observation est le point de départ d'une réflexion créatrice, rien ne remplace le contact direct avec la ville.

Il en résulte que l'environnement urbain est lui-même matériel didactique et que l'on ne peut que proposer des activités. Tout d'abord, parce que le cadre urbain est en mutation constante et qu'il est différent d'un endroit à un autre. Ce qui vaut pour le centre-ville ne vaut pas pour l'étude de la banlieue, par exemple. Ensuite, parce qu'il n'y a pas forcément de réponse unique et invariable à un problème donné. Et ceci nous ramène à l'approche artistique.

On doit insister sur des réalisations concrètes de la part des élèves qui traduiront les phénomènes observés: carte ou maquette de quartier, montage de diapositives sur la ville, exposition de photographies de maisons, croquis architectural. Ceci ne conduit pas obligatoirement à la figuration. Le paysage urbain comporte une foule de signes, symboles, éléments, qui peuvent conduire à une représentation abstraite. Les possibilités sont immenses, les moyens d'expression étant aussi variés que les sujets.

Le cadre scolaire actuel se prête mal à l'insertion de cette nouvelle matière qui n'en est pas une, dans les programmes existants. Ceci explique le rôle que jouent les institutions non-scolaires dans la sensibilisation à l'environnement. Les programmes éducatifs des musées et des organismes culturels ne visent pas à faire de chaque enfant un artiste en herbe ou un spécialiste de l'histoire de l'art. Les expériences de sensibilisation à l'environnement urbain ne tentent pas de produire des jeunes architectes. Il s'agit de sensibiliser les enfants à une réalité, de leur per-

L'été en ville, une expérience tentée à l'été 1982, dans 38 centres de loisirs de la région de Montréal, une exploration du milieu urbain, au moyen des jeux et des arts plastiques.



Les enfants construisent un labyrinthe de carton éphémère.

mettre d'émettre des jugements et d'intervenir dans le cadre de leur école, quartier ou espaces verts.

Les expériences étrangères

La Grande-Bretagne

C'est en Angleterre, qu'ont été réalisées les premières expériences de sensibilisation à l'environnement urbain diffusées par la Town and Country Planning Association qui publie, depuis 1972, la revue *Built Environmental Education,* sorte de bréviaire de l'éducation à l'environnement construit. Les expériences diverses réalisées avec les enfants aux niveaux primaire et secondaire y sont décrites à l'intention des professeurs allant du "towntrail" (sorte de visite questionnaire du quartier ou de la ville), au croquis architectural, en passant par des études de problèmes aussi divers que le logement, les centrales atomiques, l'élimination des déchets ou la démocratie municipale.

Par ailleurs, les sociétés historiques, comme le Heritage Education Group ou le Young National Trust établissent des programmes d'interprétation architecturale de leurs propriétés, comme des camps de restauration de monuments, d'activités en costume d'époque ou de constructions de maquettes. En résumé, une variété de possibilités réalisées un peu partout dans le pays, avec des moyens limités mais une connaissance de la pédagogie dont nous aurions beaucoup à apprendre.

Les États-Unis

Le programme *Architects-in-Schools* récemment supprimé, propose une autre formule. Des architectes en résidence dans les écoles, testaient des séries d'ateliers dans les classes avec les professeurs, activités qui peuvent, dans certains cas, déboucher sur un réaménagement des locaux de classes. Un autre exemple, parmi tant d'autres: the Center for City Building Educational Program à Los Angeles développe un programme d'une année complète pour les étudiants du primaire, centré sur la découverte de la ville et intégrant toutes les matières enseignées. Plus coûteuses, et plus sophistiquées, ces expériences sont aussi plus soumises aux aléas de la conjoncture économique.

La France

Par l'entremise des Conseils d'architecture, d'urbanisme et d'environnement, diverses expériences scolaires sont tentées en région: aménagement des locaux de classes, étude du patrimoine architectural, reconnaissances urbaines, au gré des initiatives des architectes ou des enseignants. Les services éducatifs des musées, comme, à Beaubourg, l'atelier pour les enfants, tentent également des expériences plastiques intéressantes.

Et le Québec

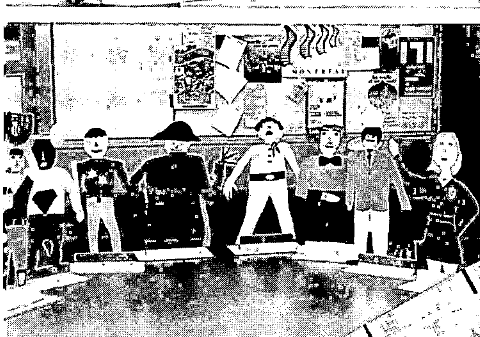
C'est surtout par le biais du patrimoine architectural que s'est faite la sensibilisation à l'environnement urbain. L'Atelier d'histoire Hochelaga-Maisonneuve centre son action sur un quartier qui s'est bâti à la fin du XIXe siècle et dont, grâce à une maquette et à des livrets pour visites guidées, il explique le développement. Le Centre d'interprétation historique de la Place Royale au moyen d'animations de théâtre ou d'arts plastiques fait revivre une réalité historique.

Le programme de sensibilisation des enfants au patrimoine architectural lancé voici quatre ans par la Fondation Héritage Montréal et le Musée des beaux-arts de Montréal a tenté d'élargir cette notion de patrimoine pour s'intéresser à l'ensemble de l'environnement urbain. Comme les autres programmes, il cherche à rejoindre la clientèle du primaire, du secondaire et des centres de loisirs.

Au niveau du primaire, par le biais du programme de Sciences humaines qui s'intéresse à la maison, au quartier,

L'avant-midi, les enfants dessinent les croquis des "personnages de la rue", l'après-midi, ils les fabriquent. À 16 heures, la caméra les fige pour la postérité.

Sur l'herbe, c'est l'heure de la construction de maquettes.



En une journée, une murale sophistiquée.

à la région, puis au Québec et au Canada, il a été possible d'insérer des activités qui relèvent de l'urbanisme ou de l'architecture, mais que les enseignants ne pratiquent pas habituellement. Les croquis architecturaux se sont révélés un moyen d'observation et d'analyse étonnant, au niveau des résultats, à quelque niveau qu'on les pratique. Le plan d'utilisation du sol a permis d'enrichir et de compléter l'étude du quartier. Des questionnaires sur le métro ou les services municipaux ont permis de familiariser les jeunes avec les problèmes urbains. Le plan du logement ou le dessin du trajet de la maison à l'école, facilement réalisables, permettent une familiarisation avec l'environnement. Le fait d'avoir testé ces projets-pilotes avec des groupes d'élèves dans les écoles et de les diffuser dans des cahiers à l'intention des enseignants permet d'élargir une expérience jusque-là assez limitée.[1]

Au niveau secondaire, par le biais de l'histoire locale, il est possible de sensibiliser les élèves aux traces architecturales des époques passées. Mais glisser cet apprentissage dans les programmes scolaires implique des moyens techniques plus sophistiqués et plus coûteux. Pourtant l'observation de plans, élévations, schémas d'aménagement est une occasion unique de familiariser les futurs citoyens avec l'urbanisme et l'architecture. D'autant plus que ce genre de documents est fort difficile à se procurer quand on est professeur au secondaire.

Dans les centres de loisirs, où une proportion non négligeable des enfants passe leur été, on a choisi de sortir des programmes scolaires, car les jeunes tiennent avant tout à s'amuser. L'expérience de *L'été en ville*, menée l'an dernier, par trois moniteurs, dans 38 centres de loisirs de la région montréalaise, a permis d'explorer le milieu urbain au moyen des arts plastiques, sans prétendre former des citoyens conscients des problèmes de leur environnement, mais en proposant des jeux centrés sur l'observation de la ville. Les couleurs, les textures, les fenêtres, les affiches, l'eau, les trains, les terrains vagues, etc., sont autant de thèmes qui ont servi de point de départ à des croquis, murales, collages, maquettes, jeux de piste, ou labyrinthes de carton éphémères. L'objectif étant d'abord d'apprendre à voir. Une étape que beaucoup considèrent gratuite ou comme allant de soi, mais qui constitue la première expérience concrète et personnelle de l'environnement.

Le cahier, *Ce bâtiment est aussi un musée* permet de découvrir le Musée des beaux-arts sans regarder les oeuvres d'art mais en analysant visuellement les éléments architecturaux. Le cahier *Le sentier du patrimoine* propose pour sa part une visite du Vieux Montréal davantage basée sur l'observation et la perception que sur les notions historiques. Il semble que cette approche soit aussi très utile pour les adultes . . .

En conclusion, pour le futur

Les enseignants ne sont guère habitués à lire la ville. Pour eux, comme pour tous les autres citoyens, la ville est affaire de spécialistes: urbanistes, architectes, agences gouvernementales, municipalités, promoteurs immobiliers. Ils savent d'expérience qu'ils n'ont que peu de prise sur leur cadre de vie.

Quant aux spécialistes, ils réclament depuis quelques années l'intervention des habitants sur leur environnement. Le mot de participation est largement utilisé. On s'est aperçu que planifier des villes complètes sans demander l'avis des habitants aboutissait à créer des milieux informes et mal acceptés. Mais comment susciter cette participation? Qui peut lire un schéma d'aménagement et donner son avis s'il ne l'a pas compris, donc étudié quelque part? Où apprend-on l'utilité d'un règlement de zonage? L'école peut permettre un tel apprentissage.

En se souvenant que le maniement des concepts et la possibilité d'analyse n'arrivent que fort tard dans le développement de l'enfant . . . et que remplacer les clichés d'un professeur par les préjugés d'un architecte n'est pas forcément faire oeuvre d'éducation. Milieu de vie considéré comme dangereux et malsain pour l'enfant, depuis le XVIII^{e} siècle, la ville est un sujet peu exploité en classe. Pourtant elle constitue une ressource pédagogique essentielle. Ressource non utilisée, entre les professionnels de l'environnement qui surestiment le public scolaire et les enseignants, inhibés par leur manque de connaissances et de vocabulaire spécialisé.

Il reste ainsi une jonction à faire entre l'éducation et l'architecture à condition, sans doute, que nous acceptions de quitter notre langage de spécialistes et de retomber (un peu) en enfance . . . ■

Chantal Léveillé est urbaniste au service éducatif du Musée des beaux-arts de Montréal, et à la Fondation Héritage Montréal.

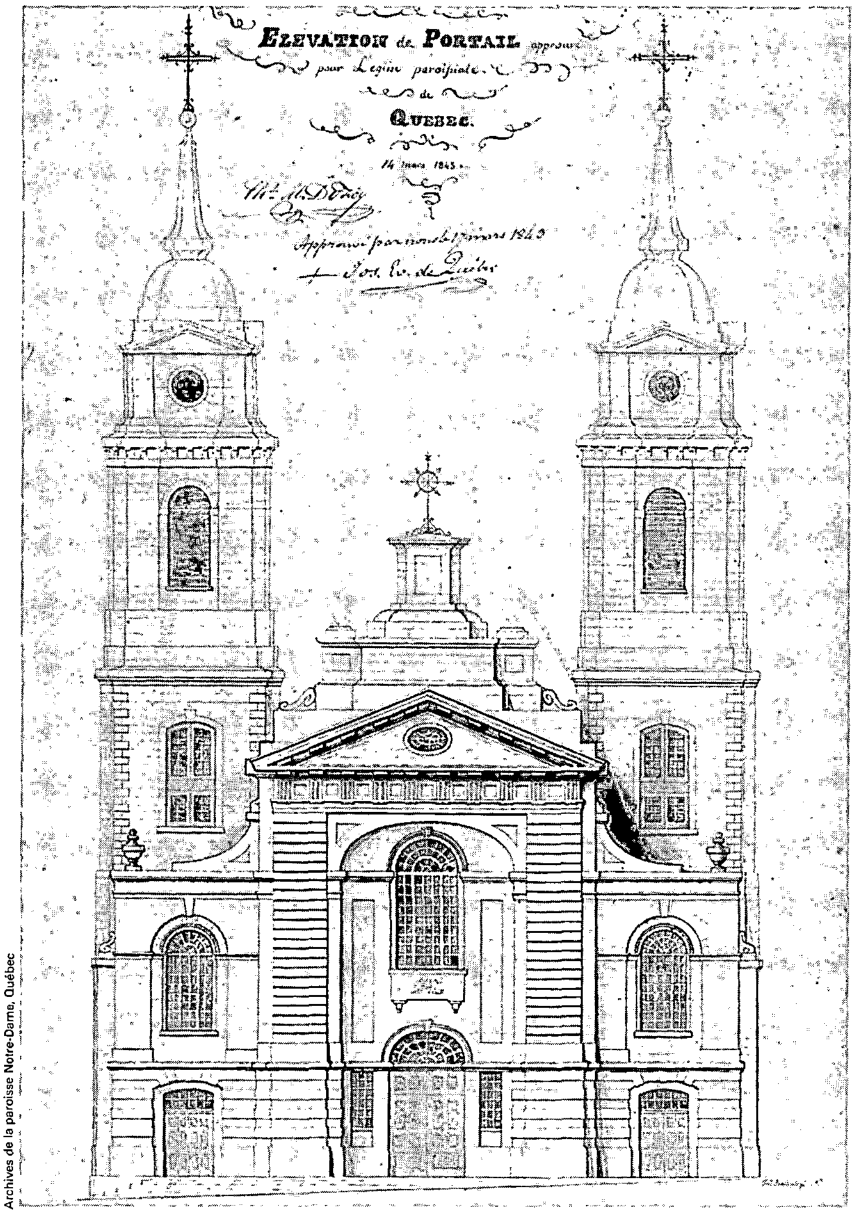
[1] Les cahiers *Le sentier du patrimoine*, *L'été en ville*, *Ce musée est aussi un bâtiment*, et dès l'automne 1983, *De la maison à la métropole* sont en vente à la boutique du Musée des beaux-arts de Montréal.

Bibliographie

The Child in the City, William Michelson, University of Toronto Press, 1979.
L'environnement de l'enfant, Anne Denner, Jacqueline Dana, Seuil, 1973
Growing up in cities, Kevin Lynch, 1977

Architectes et architecture ... dans l'ordre

par Marc Grignon



Archives de la paroisse Notre-Dame, Québec

Thomas Baillairgé (1791-1859). Elévation de Portail approuvé pour l'église paroissiale de Québec, 14 mars 1834.

Cet article développe un des thèmes de l'exposition *L'art de l'architecte* (trois siècles de dessin d'architecture à Québec), le thème *faire régner l'ordre* qui montre comment s'est formée, après 1800, la pratique architecturale que nous connaissons aujourd'hui.

Cette exposition s'est tenue du 6 avril au 29 mai au Musée du Québec, à Québec, et se tiendra du 29 juillet au 18 septembre à la Galerie nationale du Canada, à Ottawa, et du 15 octobre au 30 novembre 1983 au Royal Ontario Museum, à Toronto. Elle a été réalisée grâce à une étroite collaboration entre le Musée du Québec et l'Université Laval.

Les musées exposent de plus en plus de dessins d'architecte, la plupart du temps comme documents servant à expliquer l'architecture des édifices, au même titre que les photos, les textes, les maquettes. L'exposition *L'art de l'architecte,* qui retrace l'histoire de trois siècles de dessin d'architecture à Québec, déborde cette approche documentaire et présente les dessins dans leur spécificité. Cette analyse du dessin d'architecture, en lui-même, permet d'entrevoir des catégories nouvelles. Et si ces catégories ne coïncident pas toujours avec ce que nous connaissons de l'histoire de l'architecture du Québec, c'est que l'histoire du dessin d'architecture ne se réduit pas à celle des édifices; son apport se révèle par là d'autant plus riche puisqu'elle permet de constituer une nouvelle image de l'architecte dont l'historien devra désormais tenir compte.

L'exposition présente plus de cent dessins réalisés entre 1679 et 1912, regroupés sous dix thèmes principaux, identifiant les catégories dont nous venons de parler. On y présente, par exemple, *les dessins des bâtisseurs:* dessins sommaires destinés à préciser un point particulier tel que les dimensions des fenêtres ou encore la division intérieure. Ce type de dessin fait par l'ingénieur, l'entrepreneur ou parfois le client, amène le constructeur à utiliser ce qu'il connaît déjà et ouvre la voie à l'architecture traditionnelle. On peut aussi y voir les dessins des ingénieurs français et britanniques, ceux des premiers architectes Claude Baillif et Jean Maillou. Une section de l'exposition montre aussi comment on a utilisé la maquette pour illustrer les styles d'édifices.

Une autre section est consacrée au renouveau architectural qui a marqué le début du XIXe siècle. À cette époque, naît, à Québec, l'enseignement de l'architecture, apparaît une nouvelle définition de l'architecture et une importance primordiale est accordée au dessin. Le dessin d'architecture, qui prend à ce moment de son histoire un caractère si particulier, devient le moyen par lequel l'architecte se taille une place privilégiée dans les multiples étapes de la production d'un bâtiment.

La naissance de l'architecture québécoise d'aujourd'hui

Ce renouveau architectural, fondé sur les ordres de l'architecture classique (toscan, dorique, ionique, corinthien, composite) fut proposé par Thomas Baillairgé et Jérôme Demers[1]. Le premier était architecte et le second, professeur au Séminaire de Québec, était avant tout un théoricien. Ce dernier est aussi l'auteur d'un *Précis d'architecture* utilisé pour l'enseignement à Québec, à Nicolet et dans quelques autres collèges classiques de la province. Nous connaissons ce traité à travers des copies d'élèves conservées dans les archives de ces institutions[2]. Il était accompagné d'illustrations et de maquettes exécutées par Thomas Baillairgé. Seule une partie des illustrations a été retrouvée, en plus d'une série de maquettes réalisées par Louis-Thomas Berlinguet en 1833 et 1834 pour le cours dispensé au Séminaire de Nicolet.

Ce traité, qui a contribué à former le goût du public et des clients autant que celui des architectes, est largement tributaire du *Cours d'architecture* de Jacques-François Blondel et de quelques autres traités français[3]. L'auteur y présente les cinq ordres d'architecture, en définit soigneusement les proportions et en établit l'usage selon les lois de la convenance et de la vraisemblance mais il propose par-dessus tout une image de l'architecture qui modifie profondément la pratique qui avait cours jusqu'à ce moment.

Ce *Précis d'architecture* s'ouvre sur une brève histoire de l'architecture qui fait remonter l'origine des ordres d'architecture à l'observation de la nature par les Anciens. L'auteur y affirme: ". . . ne peut-on pas conclure avec la plupart des savants que l'architecture est un art dont les hommes ont puisé ou découvert les principes dans la nature"[4]. À ce moment, il ne reste plus à Demers qu'à démontrer comment l'architecture au Québec respectait très peu ces lois "naturelles" pour que soit justifiée l'intervention d'une personne spécialisée en cette matière, en l'occurrence un architecte, dans le sens actuel du terme.

L'architecte et l'ordre . . .

L'architecte devient ainsi le représentant d'une loi, d'un "ordre". Et dès le début de son exposé, Demers utilise le mot "ordre" dans deux sens différents; il désigne tantôt chacun des cinq ordres de l'architecture classique, et tantôt un concept plus général qui se définit uniquement comme le contraire de "désordre". Par là, il semble souscrire à la définition que donne Jacques-François Blondel: "ce mot [ordre] signifie l'arrangement de plusieurs belles parties au moyen desquelles on parvient à composer à l'opposé du désordre"[5]. Demers dissocie bien ces deux acceptions et dit clairement qu'un édifice peut être bien ordonné même s'il ne reçoit pas tout le traitement décoratif du classicisme: "Une décoration peut être composée suivant les proportions d'un ordre quelconque et peut être appelée du nom de cet ordre, quoiqu'il n'y ait ni piédestaux, ni colonnes ou pilastres, pourvu que les hauteurs, les saillies et les autres parties en soient réglées suivant les proportions de cet ordre. Dans ce cas, quand il n'y a ni colonnes, ni pilastres, on dit que l'ordre est absent, ou bien l'on dit qu'il est présent, quand il y a colonnes ou pilastres"[6].

La précision du dessin

Thomas Baillairgé nous fournit un très bel exemple de ce qu'est "l'ordre absent" lorsqu'il construit l'école de l'évêque Signaÿ[7]. Le plan nous montre un édifice aux proportions clairement définies par un dessin précis et à l'échelle. La rigueur de la composition de la façade montre sans ambiguïté son caractère néo-classique, malgré l'absence d'une ornementation classique. Pour Demers et Baillairgé, le classicisme est donc avant tout une question de relations, de rapports ou de proportions. Les éléments eux-mêmes peuvent être absents ou présents, l'ordre régnera tant qu'il y aura un architecte pour en appliquer les lois.

Un exemple de décor plus élaboré où l'ordre est "présent" est évidemment le projet, toujours de Baillairgé, pour la façade de l'église Notre-Dame de Québec. Cette fois, l'architecte présente une composition toujours rigoureuse, ornée de pierre de taille et coiffée par une frise dorique surmontée d'un fronton triangulaire. Passons sur la nomenclature de tous les autres ornements

1 Voir à ce sujet: Luc Noppen, *Le renouveau architectural proposé par Thomas Baillairgé entre 1820 et 1850: le néo-classicisme.* Thèse de doctorat, Université de Toulouse-Le Mirail, 1976.

2 Pour les citations, nous utilisons un exemplaire conservé aux archives du Séminaire de Nicolet.

3 Ce point a été très bien démontré par: Luc Noppen, "Le rôle de l'abbé Jérôme Demers dans l'élaboration d'une architecture néo-classique au Québec", dans *Annales d'histoire de l'art canadien*, vol. II, no 1 (été 1975), pp. 19 à 33.

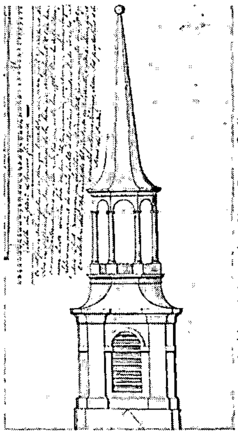
4 Jérôme Demers, *Précis d'architecture*, manuscrit conservé aux archives du Séminaire de Nicolet, paragraphe 278.

5 Jacques-François Blondel, *Cours d'architecture*, Paris, 1771, cité par: Philippe Boudon, *Sur l'espace architectural; essai d'épistémologie de l'architecture.* Paris, Dunod, 1971, p. 12.

6 Demers, *op.cit.* paragraphe 16.

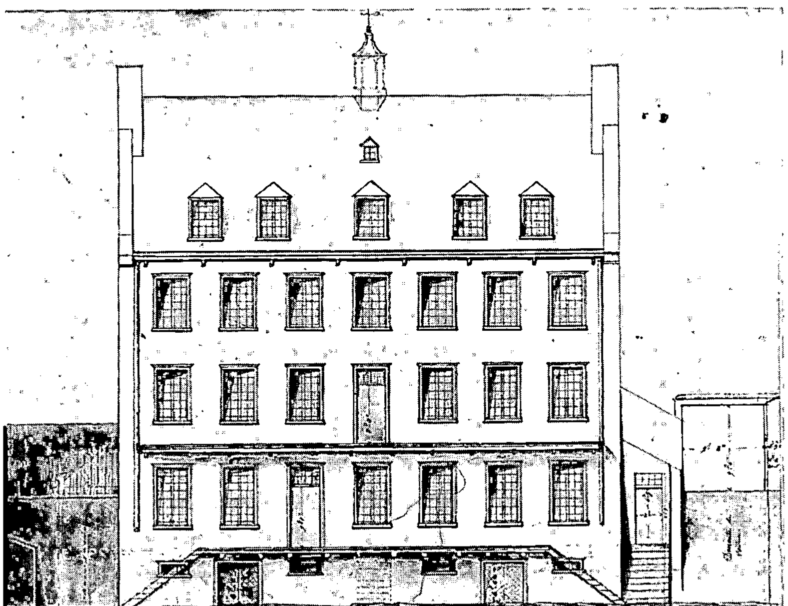
7 Voir à ce sujet:
Luc Noppen et Marc Grignon, *L'art de l'architecte. Trois siècles de dessin d'architecture à Québec.* Québec, Musée du Québec, 1983, 308 p.
Ce volume est le catalogue de l'exposition du même nom; on peut y trouver le développement de nombreux thèmes abordés dans cet article en plus de l'analyse de l'ensemble des oeuvres exposées.

Jean Baillairgé (1726-1805). Plan du clocher de la cathédrale Notre-Dame de Québec, après 1770. *Un dessin de bâtisseur* démontrant les préoccupations du maître charpentier qu'était Jean Baillairgé. Comme on le remarque, avant le XIXᵉ siècle, le dessin laisse voir la charpente.



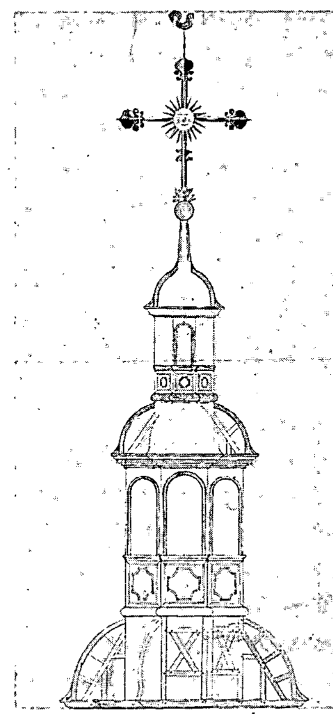
Archives de la paroisse Notre-Dame, Québec

Dessins de l'architecte Thomas Baillairgé (1791-1859)



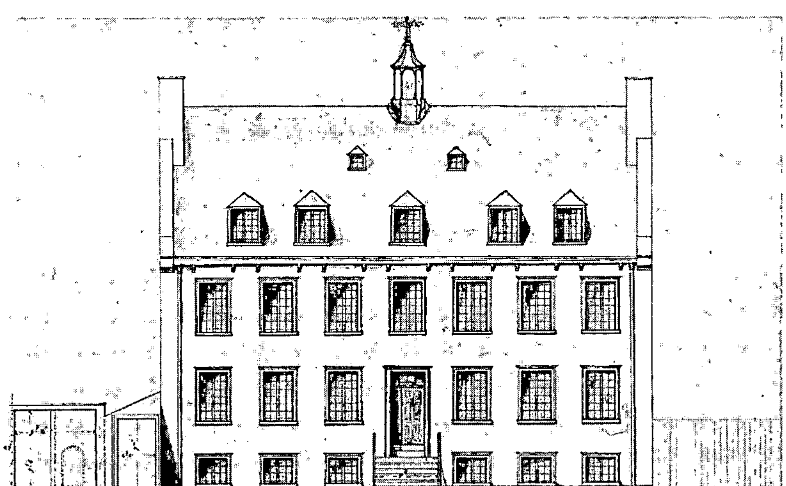
Archives de l'archidiocèse de Québec

L'école Mgr Signaÿ*, rue Champlain, Québec, 1841. *Élévation de la "Façade du côté du fleuve".



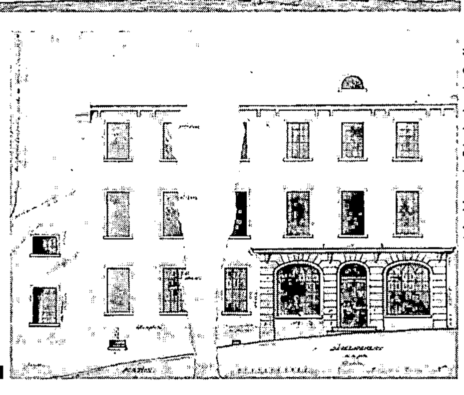
Archives de l'archidiocèse de Québec

Élévation du clocher de l'église Sainte-Claire de Dorchester, 1825. Un dessin précis et rigoureux où la charpente disparaît.



Archives de l'archidiocèse de Québec

L'école Mgr Signaÿ*, rue Champlain, Québec, 1841. *Élévation de la "Façade sur la rue".



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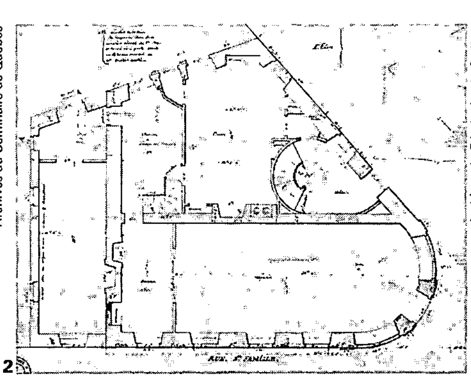
Archives du Séminaire de Québec



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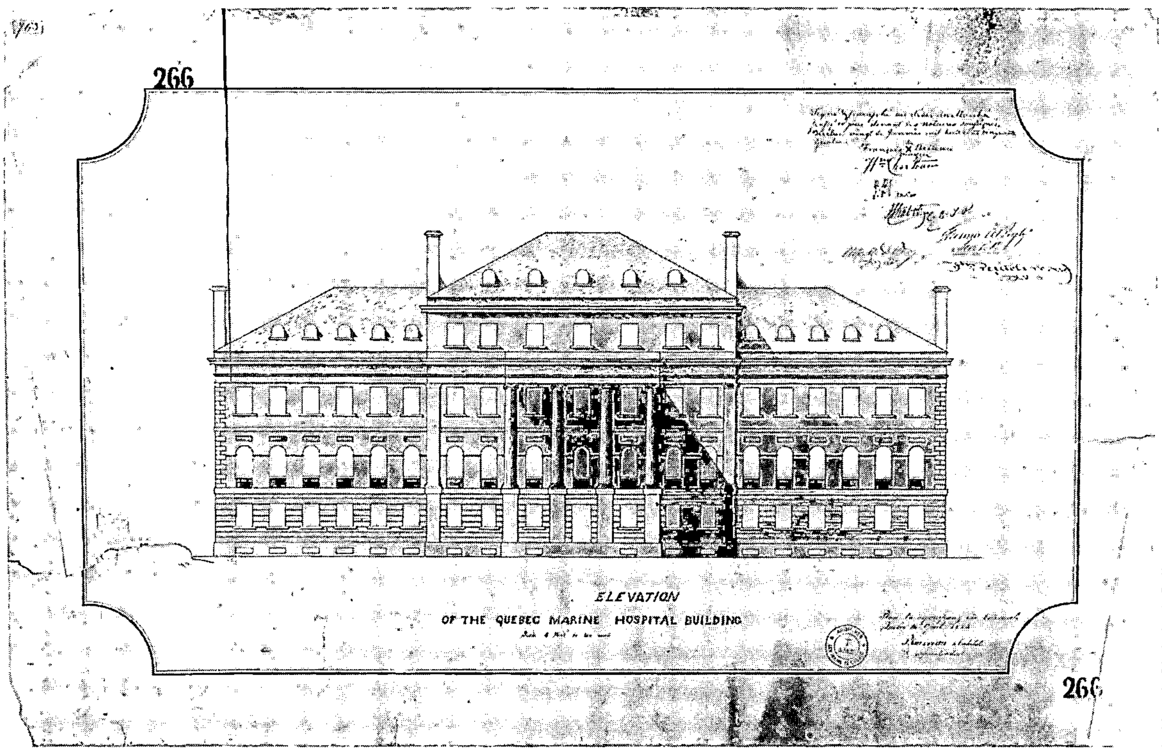
Archives du Séminaire de Québec

1 Élévation de la façade d'une maison, coin rue Sainte-Famille, Québec, 1838.
2 Plan du premier étage.



Pierre Gauvreau (1813-1884). "Elevation of the Quebec Marine Hospital Building", plan de l'hôpital de la Marine à Québec, 1853. Pierre Gauvreau est un élève de Thomas Baillairgé; son dessin laisse bien voir l'influence de son maître: la précision du dessin, le lavis gris, l'ombre qui indique les volumes.

Archives du Séminaire de Québec

mais insistons sur la qualité du dessin lui-même. Le portail monumental est mis en évidence par le retrait des deux tours dans l'ombre; la précision de la ligne, le détail de l'ornementation et la suggestion des textures font de ce plan un dessin de présentation dont le but premier est d'impressionner le client.

Tous ces caractères sont le fondement même de la pratique architecturale qui s'instaure progressivement à Québec à partir du dix-neuvième siècle. La précision du dessin apparaît de plus en plus comme une contrainte à l'entrepreneur qui devient un simple exécutant; le dessin de présentation implique une intervention minimale du client dans le projet. Ce sont ces dispositions qui défrichent la place qui sera dorénavant occupée par l'architecte.

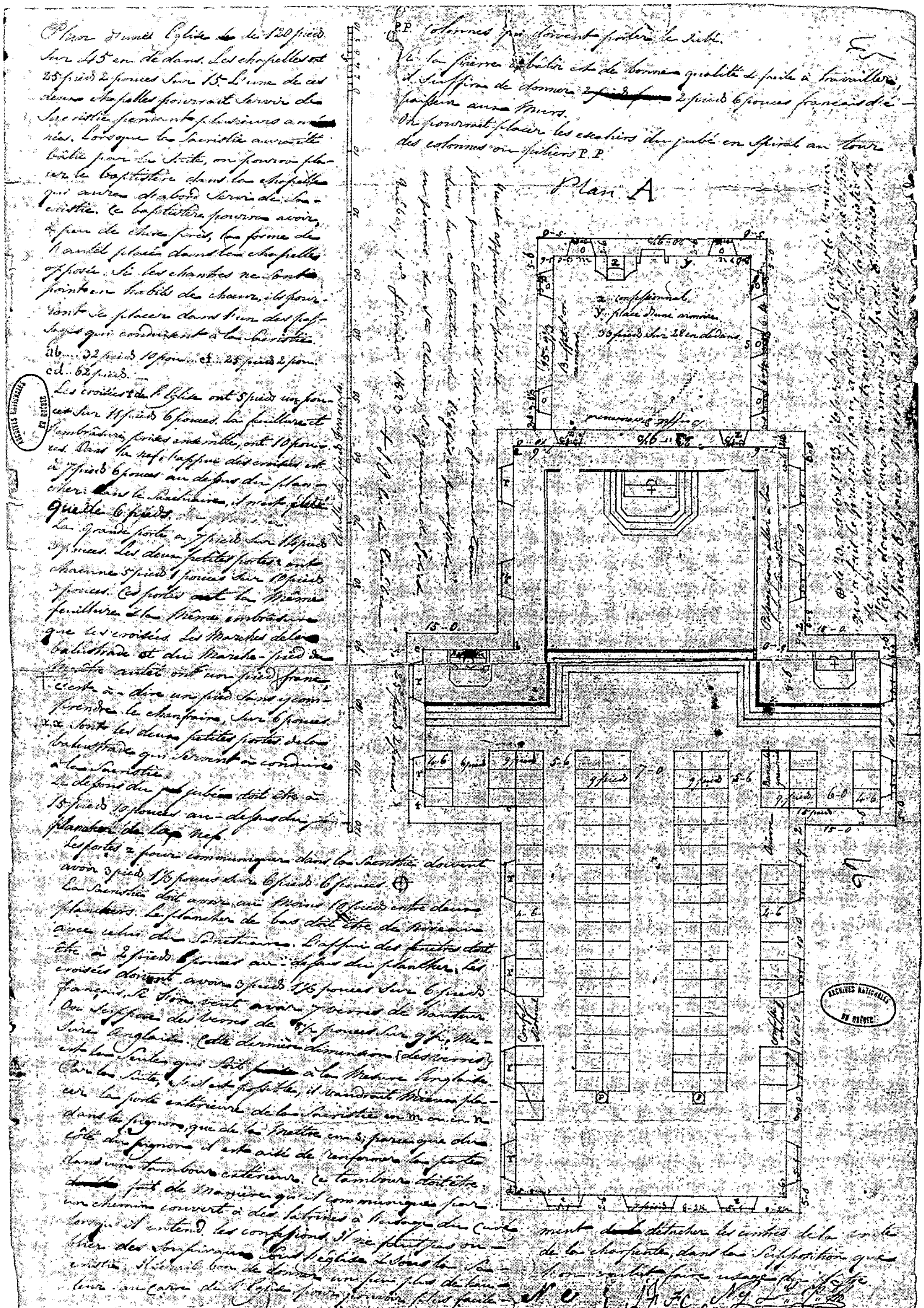
Les plans que soumet Thomas Baillairgé dans les années quarante sont aussi caractérisés par une présentation en cahier de plusieurs feuillets; c'est le début des plans composés d'une quantité de plus en plus importante de dessins. Tel était le cas des plans de l'école Mgr Signaÿ; tel est aussi le cas du projet réalisé pour la maison au coin de la rue Sainte-Famille et de l'allée du Séminaire de Québec. Chaque figure importante est présentée sur un feuillet individuel; on retrouve les plans de chaque étage, de la toiture et une élévation développée. Sur ces feuillets sont aussi inscrites de plus petites figures: détails venant préciser tel ou tel aspect en particulier.

Cette période de maturité de Baillairgé fut précédée de plusieurs années de collaboration avec Jérôme Demers lui-même. En effet, celui-ci semble avoir dessiné plus qu'on ne l'avait cru jusqu'à maintenant et nous pouvons lui attribuer, par exemple, les plans de l'église de Sainte-Claire de Dorchester. Thomas Baillairgé complétait les plans de Demers en leur ajoutant les éléments décoratifs, tels que les portails, les frontons, etc . . . Dans le projet pour la paroisse de Sainte-Claire, il a exécuté les dessins pour le clocher.

Ces exemples tirés de l'oeuvre de Thomas Baillairgé et de Jérôme Demers montrent bien comment le néo-classicisme du début du dix-neuvième siècle participait d'un réaménagement en profondeur de la pratique architecturale et le rôle qu'y a joué le dessin d'architecture dans une nouvelle définition de l'architecte.

Le concept d'ordre qui semblait si cher à Demers n'a pas seulement organisé la façade des édifices, c'est toute la pratique architecturale qui fut ordonnée. Et si chaque architecte est responsable de l'ordre dans les édifices, c'est l'Ordre des architectes du Québec qui est devenu responsable de l'ordre dans la pratique elle-même . . .■

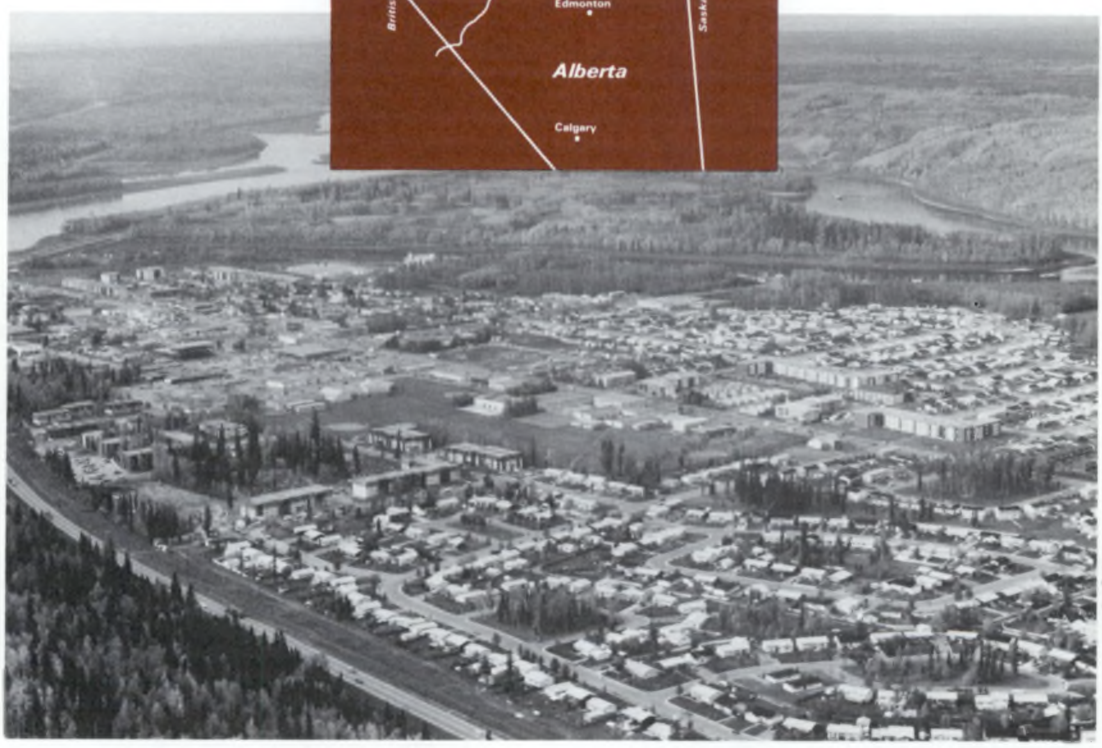
Marc Grignon est étudiant en architecture à l'Université Laval de Québec, au niveau de la maîtrise. Il est co-auteur du catalogue de l'exposition *L'Art de l'architecte* et a participé avec Luc Noppen, professeur en histoire de l'art à l'Université Laval, au travail de recherche de cette exposition.


Plan d'une église de 120 pieds sur 45 en dedans. Les chapelles ont 25 pieds 2 pouces sur 15. L'une de ces deux chapelles pourrait servir de sacristie pendant plusieurs années. Lorsque la sacristie aura été bâtie par la suite, on pourra placer le baptistère dans la chapelle qui aura d'abord servi de sacristie. Le baptistère pourra avoir à peu de chose près, la forme de l'autel placé dans la chapelle opposée. Si les chantres ne sont point en habits de chœur, ils pourront se placer dans l'un des passages qui conduisent à la sacristie.

P.P. Colonnes qui doivent porter le jubé.

Jérôme Demers (1774-1853). Plan au sol de l'église Sainte-Claire de Dorchester, 1825.

Timberlea: Fort McMurray's Answer to Unpredictable Urban Growth



An aerial view of Fort McMurray, Alberta.

Story by Mark Dent
Photos from the National Film Board

No expense was spared on Timberlea. It would be Fort McMurray's showcase subdivision, cut from the forest surrounding the northern Alberta boomtown. More than 40 000 people would live there, most brought north by oil companies exploiting the region's vast oil sands deposits.

The city of Fort McMurray and Alberta Housing Corp. spent three years and $50 million preparing Timberlea for residents. But the dream went awry. World demand for oil dropped and prices fell. A city accustomed to doubling its population every six or seven years was changing. Businesses closed and office buildings stood half-empty. Unemployment increased.

On April 30, 1982, with the national recession deepening, plans for a new, multi-billion-dollar tarsands megaproject collapsed. Since then, Fort McMurray's population growth rate has decreased from 10 per cent annually to an estimated two per cent. Planners were forced to take another look at Timberlea because the subdivision might lack one crucial ingredient – people to call it home.

But Timberlea's long-term growth appears certain. Fort McMurray was literally built atop one of the world's largest deposits of non-conventional oil. As conventional sources dry up, the Alberta oil sands will become more important. But what of the short term? Did unrestrained optimism make Timberlea a white elephant?

"Work done so far on Timberlea has been justified," argues Fort McMurray Mayor Ted Mason. "Given the situation in 1979, it looked right and any reasonable person would have done what we did. Hindsight is great, but even in hindsight I still don't think Timberlea was wrong."

Runaway population growth had always been expected in Fort McMurray. Until last year there'd been no other kind. When Great Canadian Oil Sands (now Suncor Inc.) began building the first giant oil sands extraction plant in 1963, the city had fewer than 2000 residents. By 1966 the population doubled and doubled again by 1972. In late 1978, when the Syncrude Canada Ltd. plant began producing oil, Fort McMurray had 25 000 residents. Even during the "quiet years" before and after construction of Syncrude, growth was averaging between eight and ten per cent annually. Today, the city is Alberta's sixth largest with almost 33 000 citizens.

Such growth would be welcomed by some towns. In Fort McMurray it was a nightmare. Homes could not be built quickly enough to accommodate the thousands who drove up unpaved, winding Highway 63 looking for steady income. By 1970 the city outgrew its lower townsite, a floodplain at the junction of the Clearwater and Athabasca rivers. New land was needed and the only place to build was on the flatland above the river valleys.

That land was Crown land, part of the huge Athabasca Forest covering northeastern Alberta. To make development possible, Alberta Housing Corp., the provincial housing agency, stepped in. AHC teamed with the city to try to provide serviced, affordable land quickly. AHC borrowed development money from Alberta's Heritage Fund, a publicly owned, multi-billion-dollar savings account built on oil revenue.

Between 1973 and 1981, AHC spent $100 million developing more than 810 hectares of raw land into building lots for 20 000 people as well as 243 hectares of serviced industrial land. Still there was not enough housing. Construction of Syncrude created material shortages and competition for the limited labour supply. Deadlines were missed. During the Syncrude construction peak in 1977, newcomers were living in tents and cars in campgrounds south of the city.

Syncrude was finished the next year and the boom finally slowed. Everybody found a place to live. But the governments had little time to rest. A consortium of multinational oil companies called Alsands Energy Ltd. announced it would start building a third, $13-billion oil sands megaproject in the early 1980s. Anticipating another boom, planners decided things would be different this time.

"All through the '60s and '70s we were playing catch-up as far as housing was concerned," says Doug Raines, Fort McMurray's commissioner of community services. "For the Alsands boom we decided we had to have land ready

Thousands drove through the Athabasca forest looking for work in Fort McMurray.

for development. We needed a development that would accommodate any growth that occurred."

The result was Timberlea, a subdivision that would meet housing demand through the 1980s. It would cover 973 hectares northwest of the city and would consist of eight individual neighbourhoods, each to include schools, churches, commercial property and access to the surrounding wilderness. One of the eight neighbourhoods would be a 1275-space mobile home park. Also planned was a $40-million wastewater treatment plant needed to service the new homes.

With citizens and government confident that Alsands would bring another boom to the nation's fastest-growing city, work began in earnest on Timberlea in 1980. Its main street, Confederation Way, was paved. Three of the eight neighbourhoods were cleared of forest and surveyed. Utilities were laid. A 13-million-litre water reservoir and pumphouse were finished.

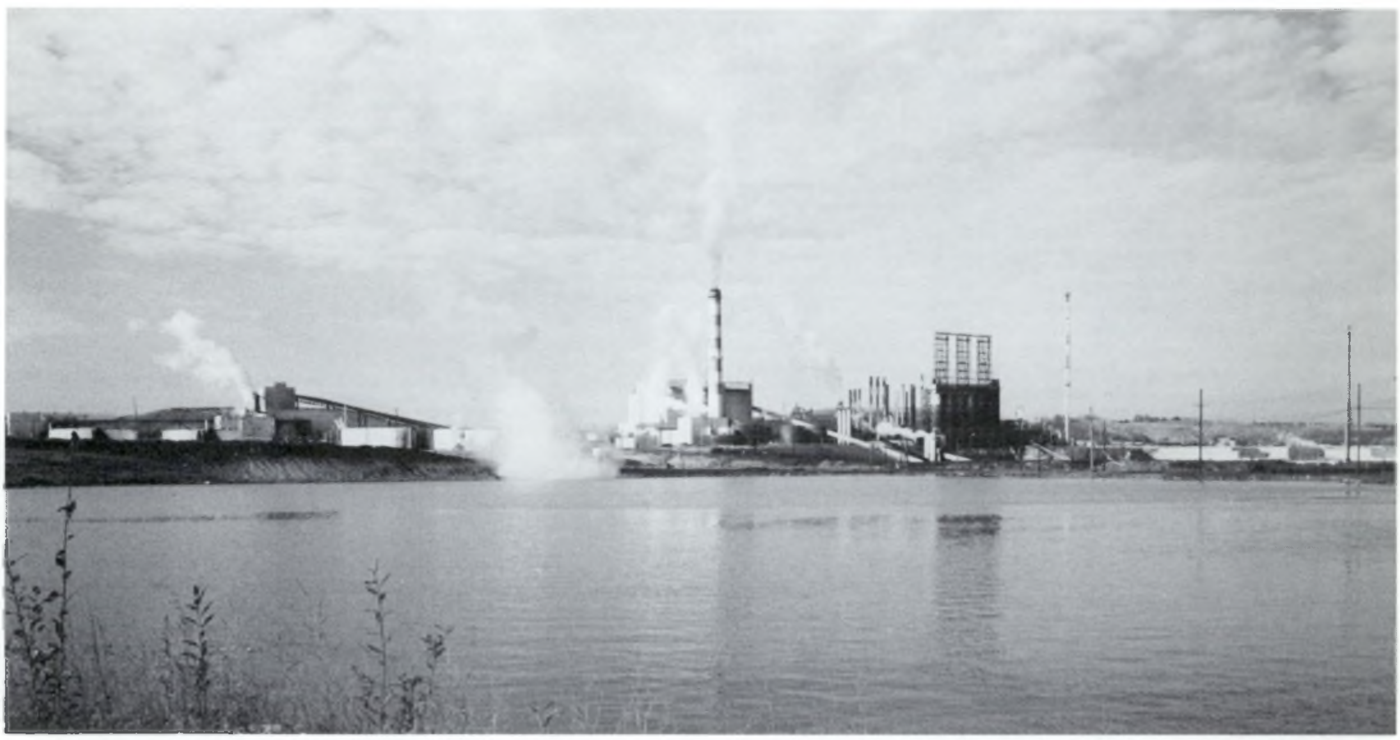
Then last year Alsands was cancelled and Fort McMurray had no prospects for major oil sands development. Governments faced a new challenge: how to predict growth in an oil market controlled by nations halfway around the world.

Fortunately, planners had expected the unexpected when they conceived Timberlea. The subdivision was designed as eight separate, self-contained neighbourhoods for the simple reason that Fort McMurray's growth – boom or no boom – has always been unpredictable. By opening only one or two neighbourhoods at a time as needed, they hoped to eliminate the possibility of having too much or too little development land ready.

"So if our growth rate is anywhere from two to ten per cent," says Mayor Mason, "Timberlea will play a major role. It's the only area that can handle the growth. The quandary now is how much development to undertake. That wasn't a question a year ago."

For the short term, it is likely that development will be limited to 700 single-family home lots and 165 mobile-home lots due to become available this summer. These lots represent less than 10 per cent of Timberlea. And if AHC studies are reliable, that's all that may be needed for years to come. In fact, Timberlea may not be totally occupied until well into the next century.

The studies were ordered to help government decide how quickly to develop Timberlea. How many serviced home lots should be provided? How many apartments and schools? The results confirmed the city's hopes – that population would continue to grow. Considering the available housing stock, housing under construction elsewhere and minor subdivision developments for the next five years, the demand for lots in Timberlea should be about 655 units – roughly the number ready for market.



The giant oil sands plants are the reason for the existence of Alberta's sixth-largest city.

There is one possible variable in the city's future. Syncrude originally had planned a major plant expansion last year. Those plans have been shelved because of uncertain world oil prices. If the Syncrude expansion did proceed, the demand on Timberlea could triple to 1900 units and new neighbourhoods would have to be opened.

Currently in Timberlea, about 75 homes are under construction by Syncrude, which offers housing at low-interest loans to its employees. In addition, a Catholic elementary school is being built. And city officials say the $40-million water treatment plant will be built regardless of growth in Timberlea. The city's current facility is operating at capacity.

by the oil companies, then, Timberlea might be priced out of reach.

The situation with mobile homes, ranging in price from $35 000 to $40 000, will be altogether different. AHC expects the lots, at a monthly rental of $270, to be taken almost as quickly as they are offered. Fort McMurray has always suffered from a lack of mobile-home spaces. The situation has been made even tighter by a city council decision to eventually remove hundreds of mobile homes from the downtown area. Mobile-home zoning was thrown wide open at the height of the boom growth period when housing space was at a premium. Now city aldermen, in an attempt to give the city a less transient atmosphere, want them moved to outlying areas.

and schools boarded up behind them. Only a few hundred stalwarts have remained behind to clean up.

Companies also realize other benefits by using dormitories and temporary housing instead of cities for their employees. By flying in employees from southern cities, companies eliminate the need to offer relocation incentives. Both Syncrude and Suncor offer low-interest mortgages and low-rent apartments and townhouses to their employees. Both would like to get out of the housing business.

Meanwhile, Fort McMurray's boom also has convinced city and provincial planners that co-operation is necessary to provide developed land as quickly as possible. Timberlea marked the first time that a committee of AHC and city representatives met regularly during the first stages of design and development in an effort to head off disagreements before it was too late. "In the past they'd bring in their finished plans and we'd bring in ours and they were never the same. It was always a confrontation," says Commissioner Raines. "Now I think we've learned to work together."

The oil companies offer housing at low-interest loans to their employees.

Mobile homes are part of the answer to the housing problem.

Timberlea's test will come this summer, when the first lots will be offered on a first-come, first-served basis. Lots can be bought by individuals or developers, with no limit on the number available to each purchaser. AHC is confident that they will be sold quickly.

But even by Alberta standards, the price for a serviced lot will be high and may result initially in a soft market. Lots will start at just under $40 000. Three-bedroom bungalows may cost $100 000 by 1984. A provincial government study recently showed that the cost of labour and materials to the general contractor in isolated Fort McMurray is $8416 greater per unit than in Edmonton 440 kilometres south. For the 50 per cent of residents not employed

Governments and resource companies have learned during the past two decades that booms are almost always bad. AHC spokesman Mike Bradshaw says companies are growing more reluctant to create "new towns" near their mines or to create large towns where previously only villages existed – as in Fort McMurray's case.

"There is no longer any desire to create new cities in the north just to have ghost towns when the mine closes," he says. The recent experience at Uranium City, Sask., is the best example. Uranium mines there were closed last year after world prices plummeted. Thousands of people packed up and went south, leaving homes, businesses

Could the time and money spent on Timberlea have been saved? Probably not. If the boom had continued, the subdivision might have made the difference between tents and real homes for some of the newcomers. Government would have been negligent not to have prepared for the worst possible circumstances.■

Mark Dent is a freelance writer living in Fort McMurray, Alberta

Energy Audit and Retrofit reduce Heating Costs

by Alina Popp

Three major housing cooperatives in downtown Ottawa are jointly carrying out what is probably the largest, most comprehensive energy audit and retrofit program undertaken by consumers in Canada.

The three-phase project developed by the Dalhousie, Laidlaw and Tompkins co-ops consists of:

- **an individual energy audit of each home**
- **based on audit results, the retrofitting of each unit to a higher level of energy efficiency**
- **the presentation of lifestyle workshops designed to show co-op residents how fuel and electrical energy savings can be gained in everyday life activities.**

The Dalhousie, Laidlaw and Tompkins co-ops own and operate a total of 180 housing units in the LeBreton area of Ottawa, located a 10-minute walk from Parliament Hill. The housing includes renovated century-old single and row houses, modern townhouses and apartment blocks.

The Dalhousie Energy Audit

Dalhousie co-op, which has a membership of low- ($10 000) to upper-middle ($40 000) income earners, is the originator of the energy retrofit project. In a three-year period from 1976 to 1979, the co-op bought and renovated 20 apartment units and 32 old houses built 80 to 100 years ago. The house renovations included up-dating the plumbing, electrical and heating systems and insulating each unit to standards recommended at that time.

During the winters of 1979-1980 and 1980-1981, residents of the houses found that the average cost of heating each unit was up to 30 per cent higher than predicted on the basis of the living area and the insulation value of each home. Since fuel costs at that time were expected to continue to rise for the foreseeable future, heating bills would soon become an intolerable burden for low-income co-op members. The only practical solution was to increase the energy efficiency of the units. This demanded an energy audit of each house. (An individual audit evaluates the energy efficiency of housing as opposed to the community audit which assesses the use of energy in homes, businesses, transportation and other services in an entire community.)

To finance this energy evaluation Dalhousie co-op applied for a Canada Community Development Program (CCDP) grant available from the Canada Employment and Immigration Commission for energy conservation related projects in high unemployment areas. The Ottawa-Carleton region qualified for such funding in the construction segment of the economy. In October 1981, Dalhousie received a CCDP grant of $6000 to cover the labour costs of auditing the 52 housing units over a 20-week period.

The energy auditor, who was selected for the job on the basis of his knowledge of construction and energy conservation methods, visited each home. He inspected doors, windows, caulking around vents and openings, quality and installation of insulation, and overall sealing of the house or apartment against air infiltration. Residents were encouraged to discuss in what areas of the home they noticed the most drafts or lack of heat, the changes in comfort in the home during the day, and the lifestyle activities which could affect their heating requirements.

The results of the audit, completed in early 1982, indicated that massive quantities of outside air infiltrated each unit through warped doors, poorly fitted windows, open vents, and insufficient insulation and caulking. The audit also showed that the renovation work done in the units had been inadequately supervised and often poorly executed. The work left air paths which should have been sealed in the renovation process.

Dalhousie found the audit results encouraging. It proved that something could be done to reduce heating costs. Now the question was how to finance the necessary retrofit work.

Laidlaw joins Dalhousie

Laidlaw co-op, which has a middle-income membership and owns 36 townhouses in the recently completed LeBreton Flats Development, became interested in the energy evaluation done by Dalhousie. The two co-ops jointly applied to Canada Manpower for a Summer Employment grant and received $12 000 to hire four students from May to September 1982. From available candidates, the co-ops selected four students with some construction trade experience or skills.

The students retrofitted 15 of the 32 Dalhousie houses and carried out an energy audit of the remaining Dalhousie housing and all Laidlaw townhouses.

Under the close supervision of the energy auditor, the students completed the following types of retrofit tasks in each home:

- applying weatherstripping around doorframes; correcting warping or replacing doors; rehinging outside doors and storms to an air-tight fit
- caulking and weatherstripping all outside and inside window frames from basement to attic
- inserting air seals in all outside wall electrical sockets
- ensuring that the wall insulation in the basement is tightly sealed at corners and edges
- caulking around vents and fan openings
- insulating from inside any north-facing outside wall
- inserting foam insulation behind all baseboards
- adjusting and, if necessary, relocating heating ducts to ensure that maximum heat output is at ground level.

The energy audit carried out in the summer of 1982 in the LeBreton Flats townhouses of Dalhousie and Laidlaw

CMHC

Weatherstripping baseboards and window ledges and installing insulation around electrical sockets are part of an energy retrofit at LeBreton.

CMHC

CMHC

co-ops was more comprehensive and lifestyle-oriented than the original Dalhousie audit.

In addition to a visual inspection of each unit to determine its air tightness, residents were asked to fill out a lifestyle questionnaire to assess:
• how much humidity is produced in the home (by cooking, frequency of showering, washing dishes and clothes)
• how often outside doors are opened on the average per day
• what the thermostat setting is during the day and at night
• where condensation is noticeable
• how many and what size plants there are in the home
• what is being done to save energy
• what is known about energy conservation methods.

The Laidlaw energy audit indicated again that air infiltration was a problem in the new townhouse units. The LeBreton Development housing was designed to incorporate, in addition to conventional energy conservation measures, such special energy-saving features as thermostats with night set-back option, exterior and interior shutters (not in all townhouses), a closet to enclose the furnace and extra insulation. Most inadequacies identified in the Laidlaw audit occurred because design ideas were not effectively carried out.

The lifestyle questionnaire proved that everyday activities can affect fuel costs by as much as 30 per cent. This important finding indicated to both Laidlaw and Dalhousie that to seal houses against air infiltration was not enough. To reduce heating costs to practical limits, residents must be made aware of how their lifestyle affects energy consumption.

The Tompkins Questionnaire

Tompkins co-op, which owns 81 townhouse and apartment units in the LeBreton Flats Development, felt that its low- to middle-income members could also benefit from an energy audit of their homes.

In mid-1982, Dalhousie, Laidlaw and Tompkins co-ops jointly applied to Canada Employment and Immigration for a CCDP grant to cover labour costs for:
• the completion of the retrofitting of the remaining Dalhousie and Laidlaw units
• the energy audit of Tompkins units
• the presentation of consumer workshops to residents to show how additional heating cost savings can be made.

The co-ops received funding of $55 490 from the Canada Community Development Program – sufficient to hire four on-site workers and one coordinator full time for a one-year period. Work under the grant began in January 1983.

The energy audit of Tompkins housing was similar to that carried out in the Laidlaw units. The lifestyle survey, however, was revised and expanded with more energy-awareness related questions. Did the residents ever discuss energy-savings among themselves or with others? Did they read about the subject? Have they bought energy-saving appliances?

The data from this questionnaire will become available for in-depth analysis later this year.

The Results of the Energy Retrofit Program

Dalhousie co-op residents, who are spending their first winter in air-tight homes, find that the retrofitting has had the following beneficial effects:
• heating costs have dropped by an estimated 50 per cent; if the unusual mildness of the winter is taken into account, actual savings are conservatively estimated at 25 per cent
• the comfort level throughout the house is increased since drafts under doors and around windows have been eliminated
• the thermostat can be set lower than previously without feeling discomfort because the distribution of heat is more effective.

The project has had important long-term benefits. These include:
• extension of the useful life of each unit because, as fuel costs rise, residents will now be able to afford to live in such housing longer
• lower maintenance costs since all structural defects such as wall cracks and misaligned frames have been corrected.

The co-ops have taken advantage of the retrofit program to test different types of caulking, indoor storm windows and urethane foam insulation products. The most effective products will be recommended to residents in the consumer workshop series.

The Consumer Workshops

Once the data from all lifestyle questionnaires are analyzed, the three co-ops plan to show residents how they can modify everyday habits and activities to save additional heating and electrical costs.

The workshops, for example, will examine the effect of humidity levels in the home. Flowers, showers, baths, cooking, dish and clothes washing each generate moisture in the atmosphere. The higher the humidity level in the home, the more energy is required to heat room air to the desired temperature.

The co-ops plan to publish a newsletter about energy-saving practices to encourage residents to follow through on workshop suggestions. They hope to coordinate their workshops with the 'Energy Action Plan' undertaken by the City of Ottawa to create greater energy conservation awareness among its citizens. This would increase coverage and reduce costs. The energy audit, the resulting retrofit program and the consumer workshops of course need not be limited to co-op residents. They can serve as effective models for any community, group or neighbourhood wanting to achieve a more energy-efficient lifestyle.■

Alina Popp is a freelance writer living in Ottawa who specializes in technical subjects.

Reviews

The Housing Problem: A Real Crisis?
by Michael A. Goldberg. Vancouver: University of British Columbia Press, 1983. pp. 144. Price: $8.95

This valuable little book asks in its title "Is there a real housing crisis?". Professor Goldberg's answer is a resounding no, a more widely acceptable answer now, after the recent free fall in interest rates, than it would have been earlier. In the course of arriving at his answer Goldberg pursues the main aim of his book which is to provide the educated layman with a primer on how the housing market operates.

The book starts with a brief discussion of the amount of national spending on new housing construction, the size of the residential mortgage market and the housing expenditure of the typical household. It then moves on to consider various components of housing costs. Notable is the discussion of mortgage payments and the tilt problem (caused by declining affordability due to inflation), the factors behind the land price boom of the early seventies and that usually neglected topic, real estate commissions and other closing costs. After this seductive material the reader is eased into an exposition of drier, more abstract material, the basic economic principles of supply and demand analysis and their application to the housing market in the short run and long run. There is then a short discussion of the impact of government policies- monetary policy, specific policies to increase housing construction, and regulatory policies, specifically rent control and land use control.

The closing chapter assesses prospects for the future, drawing on findings from the 1981 UBC symposium on the housing markets. The main task of the closing chapter, however, is answering the question in the title. While the overall answer is that there is no crisis, Goldberg concludes that there *is* an affordability problem for low-income households. He proposes a negative income tax to solve the problem; or as a second-best solution, a shelter allowance. But Goldberg concludes that affordability for middle-income households is not a "genuine" problem; in his view the problem is that the "average Canadian household consistently expects more and more housing and does not feel happy paying any extra for it."

The affordability discussion for homeowners would have been more useful if it had been couched in terms of the two distinct concepts, cash flow cost (the mortgage payment plus property tax and other cash expenses) and economic cost (deducting from cash flow cost, principle repayment and more important, capital gains, and adding to cash flow cost the opportunity cost of the homeowner's equity). Instead, most of the time, especially in Chapter six (see p. 86) Goldberg discusses affordability in terms of the ratio of house price to income. This is a very misleading indicator of the cash flow burden for households with large mortgages because of the unprecedented high interest rates in 1980-82. In an interesting and comprehensive appendix on mortgages Goldberg shows that he is well aware of the major importance of the cash flow burden; it's a pity that the appendix Goldberg did not have more influence on the Chapter six Goldberg.

While the high rates of inflation and high interest costs of the last decade brought great cash flow burdens for those with large mortgages, it also brought large, untaxed capital gains for homeowners. This meant that while would-be home purchasers were major casualties of events in the late 1970s, homeowners with no mortgage were clear winners. Use of the economic cost concept would have brought out this dichotomy more strongly.

High rates of inflation also had a great deal to do with the land price boom in the early 1970s. Goldberg discusses this boom at some length, agreeing with the Greenspan view that it was a demand-side phenomenon. While there can be little disagreement with the point that the price boom was initiated by demand-side factors which increased the demand for single-family houses, surely the increase in demand would have resulted in a much lower increase in the real price of lots if land servicing regulations had been looser. How else to explain the big increases in single starts unassociated with very large increases in real lot price, at times in the 1950s? Goldberg, it must be added, does believe that high servicing standards will tend to increase prices in the long run. He makes this point, incidentally, using market diagrams showing long-run supply curves for lots hardly more elastic than his short-run curves. (This looks suspiciously like a draftsman's mistake rather than Goldberg's pessimism.)

A great merit of this book is its use of instructive and interesting applications and its use of a wide variety of data, most of it taken from *Canadian Housing Statistics* published by CMHC. Further, Goldberg mentions considerations which are often ignored by economists. Thus while his first choice to solve the affordability problem of low-income households is a negative income tax, he acknowledges that this would not solve the security of tenure problems. Another merit of this book is the discussion of recent policies and proposals like the mortgage interest rate insurance scheme. Journalists, Members of Parliament and other laymen will find this book enlightening. Many housing specialists will also find it useful.

Marion Steele is a professor of economics at the University of Guelph in Guelph, Ontario.

Little Communities and Big Industries
edited by Roy T. Bowles.
Butterworth & Co. (Canada) Ltd., 1982,
pp. 232, $16.95 softcover.

The objective of the editor is to bring together in one volume a collection of papers which illustrate those issues common to small communities impacted by the activities and processes peculiar to large-scale industry. To set the context, Bowles provides a tightly structured and illuminating introduction which might be considered the most searching and rewarding component of the text. In a few pages he draws the distinction between the small-town community traditionally envisaged as the centre of a rural area and the dependent resource community which is the community more common to vast geographical areas of Canada. This distinction is critical to an understanding of 'rural' Canada and is a fact which needs to be more thoroughly examined in its geographical, social and economic contexts.

Further, Bowles stresses the community as the milieu of individual experience and makes reference to the writings of C. Wright Mills to illustrate and strengthen his argument; he introduces the concepts of secular and episodic change in delimiting the perspective of social impact assessment and argues the value of absorbing the circumstances of many communities.

Beyond the introduction, the text is divided into three parts: Part One entitled "Setting the Stage" comprises one paper by Alex Himelfarb, Part Two entitled "Planning Perspectives" contains three papers and Part Three entitled "Case Studies" includes eight papers.

By pointing out that "about one-half of all Canadians live in communities of fewer than 30 000 and should be familiar with some aspects of life in one-industry towns", Himelfarb stresses the significance of the small community to the Canadian settlement pattern.

In contrast to other significantly rural nations, many of Canada's small communities are distinguished by their physical isolation and their dependence on external factors — the commodity market, the availability of capital, long distance transportation etc. Himelfarb identifies the context common to such settlements and draws upon a significant range of research and writings to support each point. He points out that in the past 'company towns' were often viewed by the companies as temporary settlements whereas today it is recognized 'that one industry towns are an important and permanent feature of Canadian society'. Four characteristics of today's one industry towns are identified:

- the communities are more isolated
- the communities are more technologically intensive
- the communities are more carefully planned
- 'company towns' are becoming 'public towns'.

If the 'external factors' are the predominant factors determining community structure, it is essential to understand the mechanisms associated with these factors whether it be in terms of hiring practices or the provision of social or recreational services. What is not definitively stated in this section, although taken up elsewhere in the text, is the role of government as an external factor. The interaction between external factors profoundly influences all components of social stratification and the many facets of community institutions — recreation, health services, education, church and housing.

Himelfarb's final sections focus on the characteristics of interpersonal relations found in single-industry communities and identify two important elements: the personalization of relationships and increased role visibility. In recognition of the various problems of remote single-industry communities that have been identified, Himerfarb turns to a planning source which proposes three alternatives to the traditional single-industry community:

- the development of regional centres
- the development of a central residential and commercial centre
- the creation of non-permanent communities.

The context has been set, the problems identified and the challenge made. Unfortunately the latter two parts of the text do not respond to the challenge.

The three papers which comprise Part II of the text, all reprinted from Plan Canada, attempt to provide the rationale of the physical planning response to the single-industry community, but the papers do not purposely address the points raised either in the introduction or by Himelfarb. In essence, planning has failed to address the real problems. Stelter and Artibuse's paper does provide a valuable history of the resource town from the mid-nineteenth century to the early seventies, but many of the issues it discusses are repeated in the subsequent two articles. The second paper on the internal structure of the resource towns is interesting in itself, but adds little substance to meeting the overall objective of the text. Bradbury's paper focuses on the policies adopted by the Government of British Columbia between 1965 and 1972; it highlights the impact of government intervention, but belabours the fact to the detriment of the text.

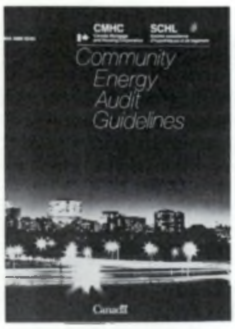
Part III, the collection of case studies, which should be the culmination of the text is profoundly disappointing. The eight papers describe various elements of resource community development over the period 1879 to the present time. Each in itself raises significant points of interest, but their relevance to meeting Bowles's objective for the volume is lessened by the historical nature of the majority and by the fact that they are aimed at a variety of audiences. A shorter collection of papers, preferably specifically written and focusing on developments which have occurred during the last twenty years, would have been more valuable.

As structured, the book opens strongly and leads the reader to believe that certain things will be discussed. The reader is disappointed and is searching for a tightly written concluding section which is not present.

Despite shortcomings, selected parts of the text will be of interest and value to many involved in resource community development including students in geography, sociology and community planning.

Ann Wilkie is chairman of the Department of Urban and Regional Planning at the Technical University of Nova Scotia in Halifax.

Just Published from CMHC



Community Energy Audit Guidelines
This publication is an introduction to the process and methods of community energy auditing. It describes the purpose of an audit, outlines the working principles, sets out the major published audit methods and suggests sources for the data required to carry out an audit.
NHA 5580
New in 1983
45 pages
Bilingual
278 × 215 mm
Price: $4.50

LeBreton Flats Demonstration Objectives
This publication describes the main objectives of the LeBreton Flats demonstration project, to obtain: a balanced community with a broad socio-economic and tenure mix, physical integration of housing with the site, privacy, ground orientation and territorial identity of units, energy conservation and landscape planning. A brief history of the site itself and the planning process is also included.
NHA 5612
New in 1983
31 pages
Bilingual
278 × 215 mm
Free

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Recension

Québec, ville fortifiée du XVII^e^ au XIX^e^ siècle
André Charbonneau, Yvon Desloges, Marc Lafrance. Éditions du Pélican et Parcs Canada, 495 pages, illustrations et cartes.

Quelle que soit la perspective par laquelle on montre Québec, le regard s'accroche inévitablement sur ses murs, ses portes et sa citadelle. Ni le château d'un empire ferroviaire, ni la ''colline'' d'un destin national ne lui confèrent autant de personnalité.

Les fortifications de Québec l'identifient et lui valent, depuis un siècle, une bonne fortune touristique. Nulle part ailleurs en Amérique du nord, un ouvrage militaire n'a-t-il autant marqué le développement d'une ville dans son rôle urbain, comme dans ses rôles économique et politique. Certes, ailleurs, on trouve encore debout des forts et des ensembles militaires qui se présentent plus comme des furoncles dans la trame du bâti que comme l'une des composantes essentielles, déterminantes, de la ville.

Le mérite de *Québec, ville fortifiée du XVII^e^ au XIX^e^ siècle* tient précisément dans cette perspective, plus globale, des liens étroits entre la ville et sa citadelle, que les auteurs, MM. André Charbonneau, Yvon Desloges et Marc Lafrance, ont adoptée et su maintenir dans leur ouvrage.

Ces trois chercheurs à l'emploi de Parcs Canada ont publié récemment en co-édition avec les Éditions du Pélican une oeuvre considérable, parmi les plus complètes et les plus achevées que l'on connaisse sur cette ville à cheval sur le fleuve Saint-Laurent et le Cap-aux-Diamants. Il ne s'agit ni d'une histoire des fortifications, ni de l'histoire d'une ville, mais de l'étude historique d'une ville fortifiée, phénomène unique et passionnant.

Parcs Canada a entrepris depuis quelques années la mise en valeur de ce patrimoine exceptionnel en y mettant, comme il a l'habitude de le faire, temps et recherches. Ce faisant, Parcs Canada constitue un autre patrimoine, archivistique et documentaire, d'un grand intérêt qu'il nous plaît de voir ainsi mis en valeur dans une publication de qualité.

Dès la première habitation de Samuel de Champlain, et même dès le premier séjour de Jacques Cartier, à quelques pas du Cap-aux-Diamants, Québec s'édifie en lieu fortifié; en lieu abrité conviendrait-il mieux d'écrire puisque, dans les premiers moments de son histoire, le comptoir commercial n'a pas encore grandi en une capitale et cherche plus à se protéger du pays inconnu qu'à défendre l'ambition coloniale.

Très tôt, Québec, s'imposant dans son rôle politique et économique, situé à la fois au coeur d'un empire continental et à la porte d'entrée de sa principale voie de pénétration, bâtit sa forteresse. Aux palissades de pieux se substituent des ouvrages plus durables, en maçonnerie et en terre, dont l'ampleur et le développement définissent en même temps le périmètre de la ville et l'affectation de l'espace, à l'intérieur comme à l'extérieur des murs. Jusqu'au milieu du XIX^e^ siècle, la ville évolue entre deux plans de fortifications, toujours inachevés, toujours menacés de désuétude selon la stratégie militaire dominante, toujours exécutés avec plus ou moins de bonheur, selon la conjoncture en métropole et l'humeur des habitants.

Sous le régime français, le fait militaire imprègne toute la société. Les besoins militaires, omniprésents, organisent et articulent la vie économique (75 pour cent des dépenses de la colonie), façonnent une hiérarchie politique et sociale. La défense de la ville et, par elle, de la colonie, appartient à sa population organisée em milice. ''Quant aux fortifications'', écrivent les auteurs, ''si leur conception découle d'impératifs militaires, elles sont néanmoins intimement liées à la planification du territoire urbain et des entrepreneurs civils se chargent de leur construction.''

Sous le régime anglais, l'administration militaire se distingue nettement de l'administration civile. Elle fait ville à part. Cela tient à la fois de sa situation de conquérante, méfiante à l'égard d'une population qui lui est totalement étrangère, et d'une tradition britannique de ségrégation entre le militaire et le civil. Préoccupés par la défense de leur nouvelle conquête, désireux d'affirmer leur autorité, les Britanniques investissent dans les fortifications de la ville. La démarche permet tout à la fois de protéger une capitale politique contre un débordement américain et de s'allier, par expropriations généreuses interposées, bon nombre de propriétaires fonciers. ''La majorité des officiers et soldats ne sont pas chez eux, mais simplement en poste dans une colonie où l'ensemble de la population leur est totalement étrangère. Dans une telle situation, leur société, déjà fermée, ne peut qu'être davantage en marge de la société civile de la ville.''

''Le milieu social urbain à Québec aura été en opposition avec la place forte pendant près de 100 ans. Si sous le régime français, ville et place forte vont de pair, au XIX^e^ siècle, ces concepts s'entrechoquent. Ces divergences sont symptomatiques de l'isolement des militaires par rapport à une société civile en pleine évolution . . .''

Québec paiera cher son rôle de place forte de la colonie britannique en Amérique du nord. Les marchands et les entrepreneurs d'industrie s'établiront plutôt à Montréal où ils ont tout loisir d'abattre les murs sans s'encombrer d'un corps militaire exigeant.

Dans la seconde moitié du XIX^e^ siècle, l'importance stratégique et politique de Québec n'est plus la même. Sous le régime canadien, la population entrevoit enfin l'occasion de mettre la ville à sa main en se libérant de son juste-au-corps fortifié. Les démolitions commencent, l'abandon s'installe à peu près partout.

Un gouverneur général, Lord Dufferin, propose en 1874 de restaurer les remparts en s'inspirant de l'architecture médiévale. Le premier projet de conservation d'un patrimoine historique nous livre les fortifications de Québec telles qu'elles nous apparaissent aujourd'hui, toutes empreintes d'un certain esprit romantique, plus proches du château galant que de la forteresse imprenable. Si la citadelle conserve ses caractéristiques militaires et même quelques soldats, la porte Saint-Louis, elle, aurait peine à repousser l'ennemi; mais quelle élégante porte dans une des villes les plus remarquables du continent!

Les auteurs ont cherché, en outre, à esquisser le portrait de l'ingénieur militaire. Il nous apparaît, dans le contexte particulier de cette ville, comme l'ancêtre des urbanistes. Instruit, il transpose ici, en les adaptant à la topographie, les conceptions européennes de la défense et de l'aménagement des villes. Il compte parmi les notables et tient un rôle important dans la société. Il a peu de chance, l'histoire le démontre, de voir son oeuvre achevée, continuellement remise en cause de tous les côtés . . . les urbanistes d'aujourd'hui s'y reconnaîtront.

Alain Duhamel est journaliste, spécialisé en habitation et affaires municipales.

Publications récentes de la SCHL

Comment établir un bilan énergétique local
Cette publication est une introduction aux méthodes à observer pour établir un bilan énergétique local. On y définit le but d'un tel bilan, on en fait ressortir les principes d'application, on y décrit aussi les principales méthodes d'analyse connues et on propose des sources pour les données nécessaires à la réalisation d'un bilan.
LNH 5580
Nouveau en 1983
45 pages
Bilingue
278 × 215 mm
Prix: 4,50 $

Objectifs de démonstration aux Plaines LeBreton
Cette publication sert à décrire les principaux objectifs envisagés pour le projet de démonstration des Plaines LeBreton, en vue d'en arriver à une collectivité équilibrée composée d'éléments socio-économiques divers. Ce projet comprend diverses formes d'occupation, l'intégration physique des habitations sur le terrain, des logements, l'économie de l'énergie et un aménagement paysager bien planifié. On y trouve aussi un bref historique du site lui-même et du processus de son aménagement.
LNH 5613
Nouveau en 1983
31 pages
Bilingue
278 × 215 mm
Gratuit

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Canada Mortgage
and Housing Corporation

Honourable Roméo LeBlanc
Minister

Société canadienne
d'hypothèques et de logement

L'honorable Roméo LeBlanc,
ministre

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Vol. 26, No 3, 1983

Habitat

CANADA MORTGAGE AND HOUSING CORPORATION ▪ SOCIÉTÉ CANADIENNE D'HYPOTHÈQUES ET DE LOGEMENT

Canada Mortgage and Housing Corporation, Canada's housing agency, is responsible for administering the National Housing Act.

This legislation is designed to aid in the improvement of housing and living conditions in Canada. As a result, the Corporation has interests in all aspects of housing and urban growth and development.

Under Part V of this Act, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research. CMHC therefore has a statutory responsibility to make widely available, information which may be useful in the improvement of housing and living conditions.

This publication is one of the many items of information published by CMHC with the assistance of federal funds.

Honourable Roméo LeBlanc
Minister

La Société canadienne d'hypothèques et de logement, l'organisme du logement du gouvernement du Canada, a pour mandat d'appliquer la Loi nationale sur l'habitation.

Cette loi a pour objet d'aider à améliorer les conditions d'habitation et de vie au Canada. C'est pourquoi la Société s'intéresse à tout ce qui concerne l'habitation, l'expansion et le développement urbains.

Aux termes de la Partie V de la Loi, le gouvernement du Canada autorise la SCHL à affecter des capitaux à des recherches sur les aspects sociologiques, économiques et techniques du logement et des domaines connexes, et à publier et diffuser les résultats de ces recherches. La SCHL a donc une obligation légale de veiller à ce que tout renseignement de nature à améliorer les conditions d'habitation et de vie soit connu du plus grand nombre possible de personnes ou de groupes de personnes.

La présente publication est l'un des nombreux moyens d'information que la SCHL a produits avec l'aide de capitaux du gouvernement fédéral.

L'honorable Roméo LeBlanc
ministre

CMHC
Canada's Housing Agency
la SCHL
l'agence canadienne de l'habitation

Habitat

Vol. 26, No 3,
1983

Contents/Sommaire

HABITAT is published quarterly free of charge as a public service by Canada Mortgage and Housing Corporation. Author's opinions do not necessarily reflect those of CMHC. Articles may be reprinted with permission. Address correspondence to the Editor, at CMHC, Montreal Road, Ottawa K1A 0P7.

Manuscripts on issues related to housing and urban affairs are welcome. Query first with a one-page outline. Manuscripts should be about 2 000 words in length, typewritten, double spaced and addressed to the Editor. Material accepted is subject to the magazine's editorial requirements. Where possible, any unused material will be returned.
Note: The Corporation is not responsible in event of loss of or damage to any material submitted.

The contents of HABITAT are listed in the Canadian Periodical Index. Second class mail registration number: 1519, ISSN 0017-6370.

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Vous pouvez soumettre des articles qui traitent du logement et des affaires urbaines. Mais veuillez nous faire parvenir au préalable un résumé d'une page. Les textes soumis à HABITAT doivent avoir environ 2,000 mots, être dactylographiés à double interligne et être adressés au rédacteur en chef. Les articles acceptés seront assujettis à la politique éditoriale de la revue. Dans la mesure du possible, les textes, photos et illustrations non utilisés seront retournés à leur auteur.

Note: La Société ne se tient pas responsable de la perte des documents ou des dommages qui pourraient leur être causés.

Les sujets traités dans HABITAT sont inscrits dans l'Index des périodiques canadiens. Notre numéro de recommandation du courrier de deuxième classe est le suivant: 1519. ISSN 0017-6370.

INSPECTION SKILLS GET REHABILITATED

Canada Mortgage and Housing Corporation runs unique training courses

The rehabilitation of old homes is becoming increasingly popular in most Canadian cities. Escalating energy costs and the high prices of new housing are attracting more and more people to live in older houses, close to the workplace in the downtown core. The demand for older housing and the availability of grant programs for their rehabilitation have stimulated the housing renovation industry across the country. Each year, for the remainder of the century, millions will be spent on housing rehabilitation through government programs and private industry initiatives.

Older homes often have a very special character–with their high ceilings, wide baseboards, hardwood flooring and distinctive architectural features. But they can also have a hidden unpleasant side, too. This might take the form of structural rot, weakness in plumbing or other subsystems, flaws difficult for the uninitiated in renovation work to detect. Very often the inexperienced find conditions that can give rise to nagging questions. Is the crumbling cement around the basement window a sign of total foundation deterioration, or simply a bit of loose parging? Does the crack in the ceiling plaster tell the story of a water leak and rotten joists, or signify the house settling on unstable soil?

Until recently, few people had the expertise to answer these questions. Consequently, the buyer bought the proverbial pig in a poke, and hoped for the best. All this uncertainty began to change in 1974 when the federal government introduced the Residential Rehabilitation Program (RRAP). Until then, most building inspectors in Canada were only experienced in evaluating new construction. They visited new housing sites, checked drawings, construction materials and the quality of workmanship to ensure compliance with the National Building Code and the municipal bylaws.

It is one thing to inspect a brand new house, it is quite another to deal with one that is 50, 60 or 70 years old. For example, the inspector must be able to judge if the building structure is sound. This involves checking load-bearing joists and beams for excess deflection, recognizing the cause of any cracks in walls, ceiling or foundation, and finding any rot or serious deterioration in structural components.

Under RRAP, administered by CMHC, a homeowner may receive a partially forgivable loan to undertake structural, plumbing, heating or other subsystem repairs that help to extend the expected life of single or low-rise multiple housing. Municipal building inspectors are responsible for assessing the rehabilitation required in each house prior to approval of the RRAP loan, for specifying exactly what repair and/or replacements should be undertaken and for inspecting the work in progress. The inspector must know

Story by Alina Popp
Photos by CMHC

the building codes and bylaws, be familiar with older building forms and construction techniques and be aware of the monetary constraints of the client.

In the first four years of RRAP, municipalities had to rely on inspectors to learn on the job because no training in rehabilitation was available. As demand for RRAP loans grew, it became obvious that training in this field was essential if the quality of work required under the program was to attain an acceptable and uniform standard.

CMHC's RRAP program division, the Corporation's regional offices and the Ontario Association of Property Standards Officers (OAPSO) soon began requesting guidelines and instructions for inspectors. It was clear the Corporation would have to take the lead and fill the void by developing a housing rehabilitation skills training course, initially for its own inspectors and for the RRAP delivery agents.

A core working group was formed within CMHC to develop a "housing rehabilitation skills course". The group brought together inspectors from CMHC field offices and municipalities to form a steering committee and provide, or find, authors for designated subjects. In December 1979, the first pilot training course was run in Ottawa. Senior inspectors acted as students and provided comments and suggestions. This experience led to a revised pilot course and resulted in the final publication of the course as, *Inspecting Dwellings and Introduction to Specification Writing*. This first edition has been presented over thirty times around the country and has received wide acceptance from all segments of the industry.

Jane McNamara of Ottawa's Dalhousie Housing Cooperative, explains the benefits of the course this way: "I learned the technical side of how houses are put together. It has helped me in dealing with contractors for maintenance work and renovations".

Larry Kruitz of the Ontario Ministry of Municipal Affairs found the course to be, "very good, very intensive with an interesting mix of classroom and field work".

The feedback from the course deliveries to date has stimulated the preparation of a second edition. It will be published in 1983 as part of a planned cyclical upgrading for all the course material.

This second generation course will also establish a closer and clearer link with the overall housing rehabilitation process, and will deal with the inspection of an existing house as a function supported by specific activities and tasks. It will also clarify the difference between inspection reporting and specification writing.

Establishing a Training Centre

In 1981, CMHC set up the Housing Rehabilitation Skills Training Centre with the mandate to develop, deliver, market and administer a program of training courses in housing rehabilitation skills.

Keith Hornsby, acting director of the Residential Improvement Division explains, "We set up the first course to serve RRAP inspectors in the short term. We had no idea that it would develop to this extent, although it became obvious as soon as Course 1 was published that interest would be widespread."

The Training Centre, based in CMHC's National Office, has representatives in each of the Corporation's regions across the country. They have the responsibility for convening a specific number of direct delivery courses in their respective regions during the year.

More than 30 courses are delivered each year to CMHC and RRAP agency personnel and to the staffs of provincial and municipal housing agencies and building inspection departments.

Course 1, a revision of the original *Inspecting Dwellings and Introduction to Specification Writing* discusses

"All the standards in the courses have to be checked against those in force for the Province of Québec" Pierre Robinson
Senior Consultant, CMHC.

different architectural styles of housing, their construction methods and associated problems. It teaches the student to identify problems in structural and other subsystems of the house and proposes practical procedures for repair. It outlines how to record the deficiencies found in the house and how to prepare an accurately written description of the work required for the repair or replacement of its systems or components. Such specifications are written in a language and format that is familiar to contractors and trade crews in the field.

A student's reaction to an old house is often dramatically different before and after the course, according to Hugh Graham, a Rehabilitation Skills Training Centre consultant. "On the first field inspection of an old home, many students are convinced that the only solution is to tear the house down. At the end of the course, they're proud of how well they have fixed it up."

The enthusiastic response to Course 1 from inspectors and the building industry alike encouraged CMHC to develop a follow-up, Course 2, entitled *Specification Writing and Cost Estimating*. It explores specifications in greater detail and leads the student through the preparation of performance, prescriptive and 16-division format specifications. Course 2 also stresses the importance of on-site drawings. It provides guidelines on how to read field drawings, recognize the quality of a drawing and prepare sketches and preliminary construction plans. A student in Course 2 is also taught to estimate the costs of a renovation project and is introduced to contract administration principles.

The importance of energy conservation in rehabilitation is the subject of Course 3 which builds on the skills acquired in Courses 1 and 2. The participant in Course 3 learns to evaluate the energy efficiency of an existing building and to determine how it can be increased during the rehabilitation process. The course describes the materials that are available for improving the energy efficiency of existing housing, and looks at various ways such materials can be used. It suggests how to set retrofit priorities; for example, should the homeowner seal air-leaks around doors, windows and vent openings before spending money to insulate the basement? Course 3 explains that payback in terms of reduced heating costs should be the deciding factor. Sample payback calculations are taught.

"We set up the first course to serve RRAP inspectors in the short term. We had no idea that it would develop to this extent, although it became obvious as soon as Course I was published that interest would be widespread."

Keith Hornsby
Acting Director, Residential Improvement Division, CMHC.

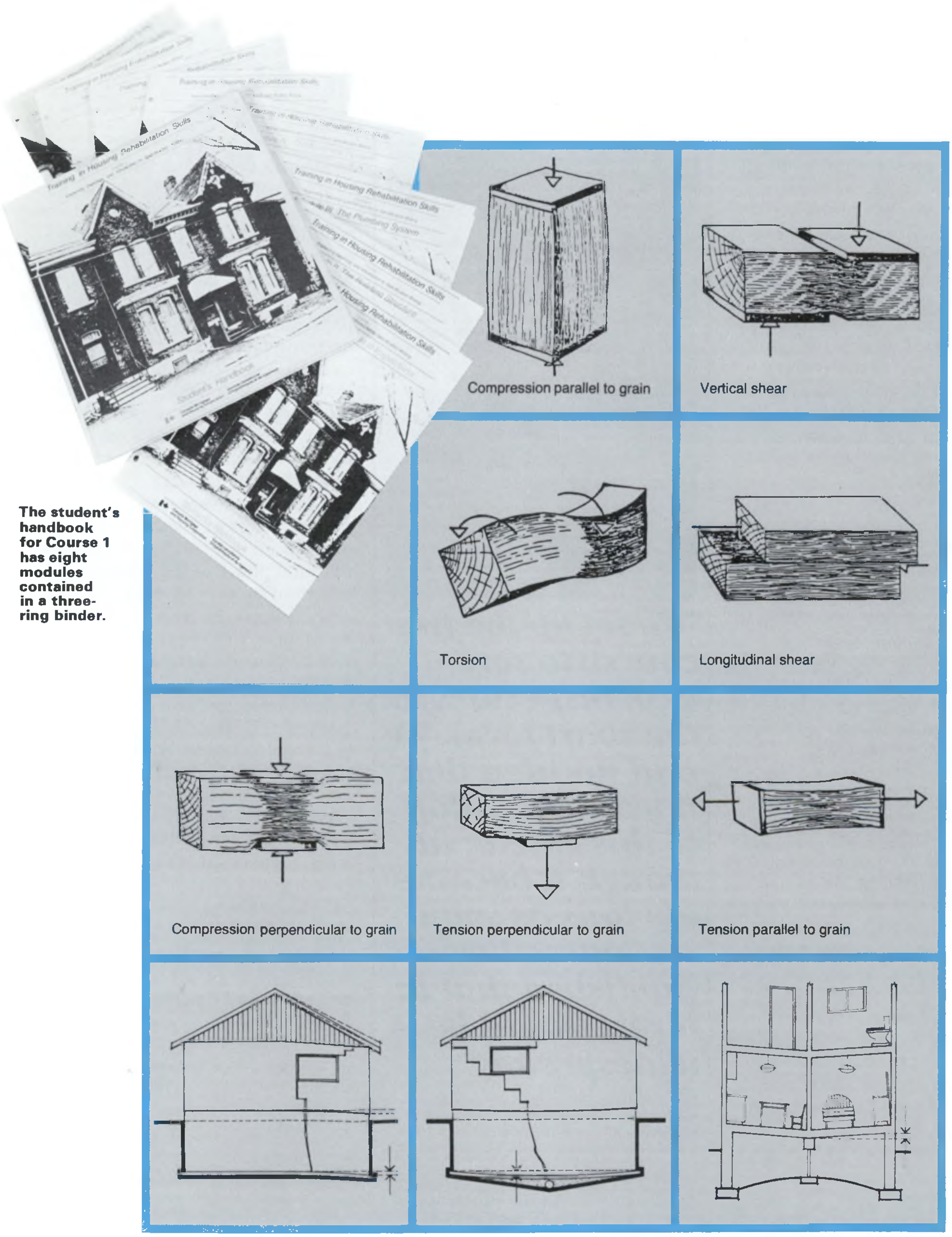
Course 3 concludes by discussing the inspection of a completed retrofit job in terms of materials used, quality of workmanship and compliance to existing standards.

Course 4 dealing with *Contract Administration in Rehabilitation* will be introduced in 1984. It will complete the final phase of the housing rehabilitation process from project preparation through contract implementation. In Course 4, emphasis will be placed on the relationships between inspector, client and renovator contractor, and on their particular responsibilities.

Each course teaches theoretical principles and provides hands-on training in the field. During the one week term of each course, instructors and students visit renovation sites, inspect subsystems in existing housing and proceed step-by-step in the classroom and in the field through the subject matter of each course.

Standardized Course Materials Ensure Quality

The Training Centre, with the help of CMHC's Information and Communications Group, produces the texts and books in English and French for each course. This material includes a Student's Handbook, Trainer's Guide and Convener's Handbook.



The student's handbook for Course 1 has eight modules contained in a three-ring binder.

A selection of illustrations from Course 1 showing what happens when various parts of the house are subject to abnormal stress.

The Student's Handbook is an easy-to-read reference for the subject matter covered in class, but is not intended to serve as a comprehensive text on any of the topics. The handbook is packaged in a three-ring binder with individual booklets for each segment of the course. Each booklet contains ample illustrations and clear, concise copy written in simple terms with definitions when field expressions are used.

The Trainer's Guide, for the use of course lecturers, contains a lesson plan for each of the subject modules in the course. Each lesson plan describes in detail the content of the session, and is supported by slides and overheads to illustrate the lecture. This system ensures that course standards and consistency are maintained from region to region, while providing a format which is sufficiently flexible to permit the addition of regionally specific material.

The convener's handbook for each course describes in detail how to set up and run the course. It identifies all the logistical and administrative steps, and also lists all the resource people required. The handbook explains the content, and the design of each course and defines the roles and responsibilities of the resource people. As described in the handbook, each course is designed for a maximum of 28 students who are divided into a maximum of four groups each with its own course coordinator serving as group leader on field excursions. The latter performs an important role in guiding the group through their assignments and acting as a supplementary teaching aide to the specialist lecturers.

Course contents and publications are reviewed and updated as changes in the *National Building Code* or relevant developments in the housing industry occur.

"Achieving continually higher standards in course design and delivery is one of our chief goals." Lionel Bourdeau
Acting Manager, Rehabilitation Skills Training Center, CMHC.

The courses in housing rehabilitation skills were initially presented by the Training Centre to municipal and provincial building inspectors, CMHC technical service representatives and RRAP personnel. The effectiveness of the training program prompted the Housing and Urban Development Association of Canada (HUDAC) to ask that the courses be made available across Canada to renovator contractors who are responsible for carrying out most rehabilitation work.

To meet this demand, the Training Centre began negotiations last year with a number of technical colleges and vocational institutes to present the courses, on behalf of CMHC, in a format to suit adult education programs.

As a result, housing rehabilitation skills training has been open to renovator contractors, real estate agents, appraisers, property managers and architects in some parts of Canada since the fall of 1982. Their availability is becoming more widespread as negotiations continue with the colleges and technical institutions in the various provinces.

In addition to its institutional delivery network, the CMHC Rehabilitation Skills Training Centre working within the five CMHC regions across the country, delivers a total of 32 courses in accordance with an annual delivery calendar. This direct delivery system is intended primarily for inspectors and those involved in the RRAP program. Others in the rehabilitation industry are accepted as fee paying students as space permits.

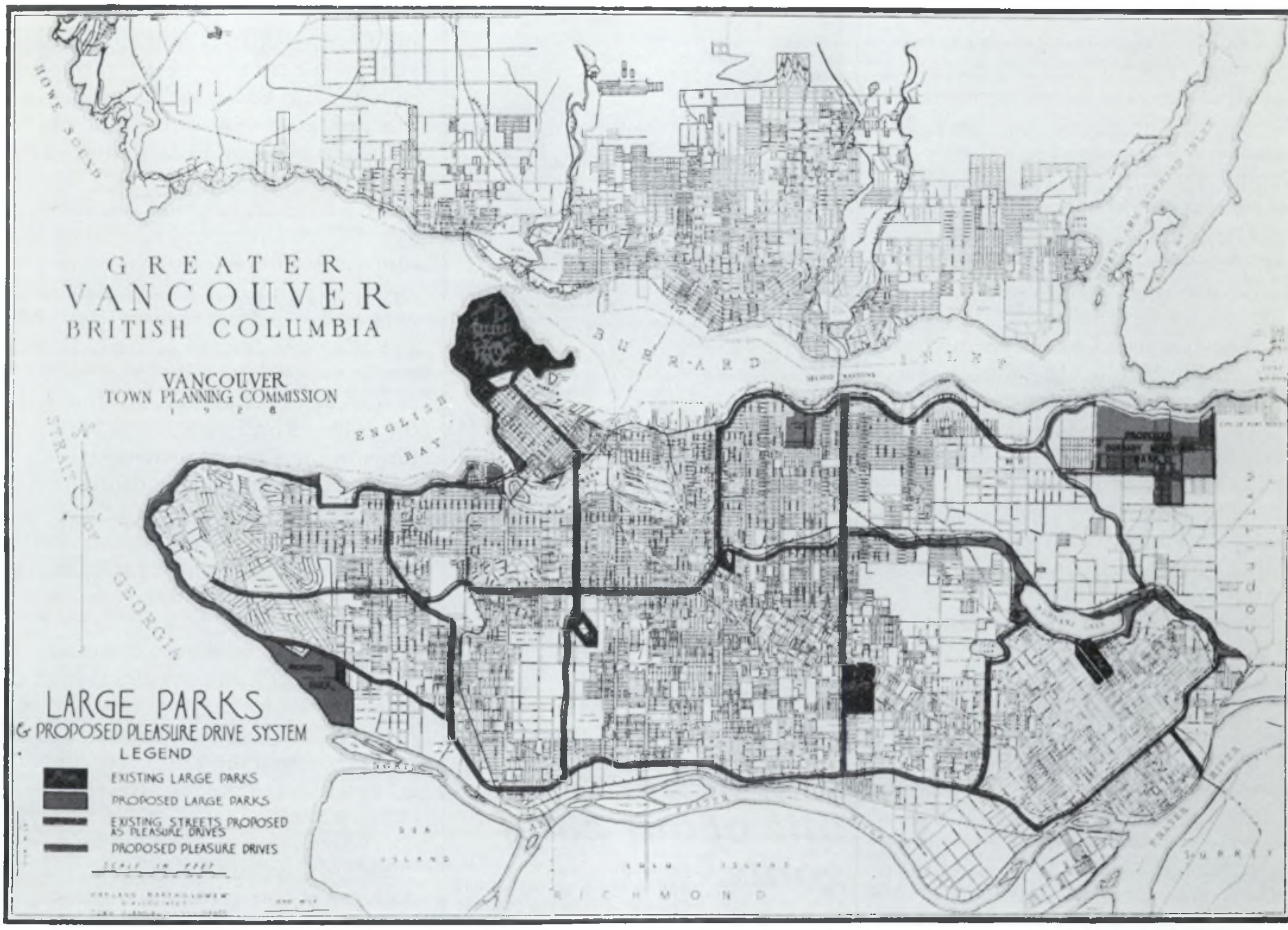
"Achieving continually higher standards in course design and delivery is one of our chief goals," explains Lionel Bourdeau, acting manager of the Rehabilitation Skills Training Centre. That is one reason why the courses in housing rehabilitation developed by CMHC are such an important step toward ensuring quality in the renovation of housing across Canada.■

Alina Popp is a free-lance writer living in Ottawa.

OVER 50 YEARS AGO

Vancouver
and the City Beautiful Movement

by Rodger Todhunter



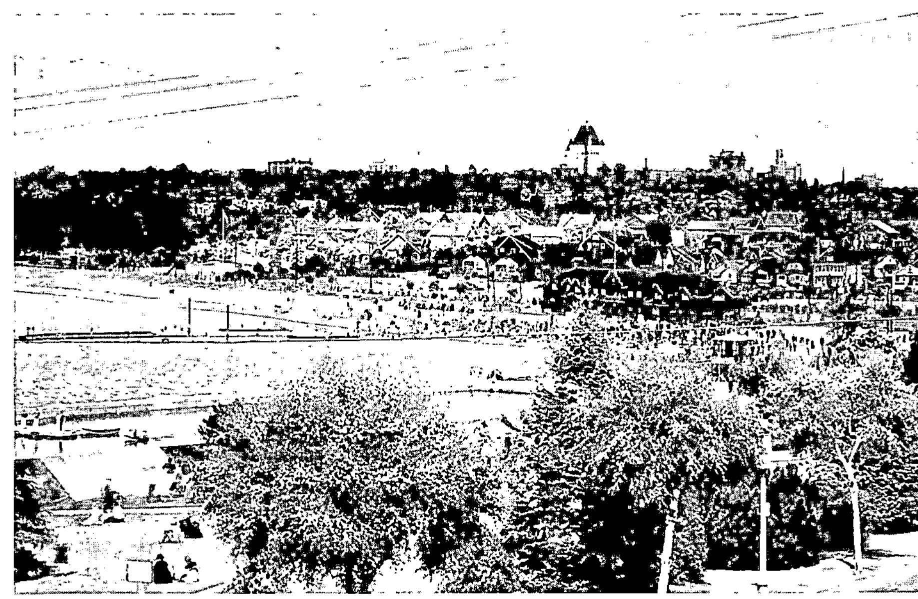
Bartholomew Plan, Plate 47

This 1930 map of the city shows large areas of proposed parks and pleasure drives, many of which were actually built according to the plan.

Few cities take as much pride in their appearance as Vancouver. The city's natural harbour, mountains and forests provide a unique backdrop to the exciting skyline of its downtown peninsula. Pride in both this setting and its urban amenities make the residents of Vancouver one of the most vocal and concerned group of any Canadian city.

This concern for urban form and aesthetics is not only derived from its natural beauty, but also from the City Beautiful movement, which is largely responsible for shaping many of Vancouver's most valued urban attributes. The City Beautiful movement which began over 50 years ago, was primarily concerned with urban beautification and was first introduced to Vancouver through the firm of Harland Bartholomew and Associates who prepared the Vancouver Plan of 1930. This document is commonly referred to as the Bartholomew Plan and many of Vancouver's neighbourhood and waterfront parks, curvilinear streets and handsome residential neighbourhoods can all be attributed to the efforts of this planning direction used by Bartholomew over half a century ago.

It is time to review the Bartholomew Plan, in the light of recent planning concepts for the False Creek area. The B.C. Place development, which is presently under way, may be the largest redevelopment scheme Vancouver will ever experience. Before the plan is cast in concrete, it may be worthwhile to compare the new revised scheme for B.C. Place with the Bartholomew Plan of 1930 to see if there are any lessons to be learned from this earlier document. It may not be too late to incorporate some of these planning ideals into today's present controversial planning direction for the False Creek area.


Vancouver City Archives

The Bartholomew Plan

On January 1st, 1929, Vancouver amalgamated with Point Grey and South Vancouver. The city fathers of the newly incorporated and rapidly growing city of 220 000 realized the danger of allowing growth to develop without adequate controls.

"Vancouver is the most important Pacific port of a great country. Here, if anywhere, should develop a great city. Circumstances of such character call for a city plan of substantial scale."

A town planning commission was established to prepare a comprehensive plan for the new city. This commission in turn appointed the experienced Harland Bartholomew & Associates, a city planning and landscape engineering firm from St. Louis, Missouri, to prepare the master plan.

The plan, as Bartholomew introduced it, was for a city of one million and would guide development for the next thirty to forty years. The "Plan for the City of Vancouver", completed by the firm in 1930, was a comprehensive document outlining zoning bylaws, transportation improvements, street and transit plans, and park and recreation improvements.

Present day bridge locations, such as the Burrard Street bridge, removal of the "pall of unnecessary smoke" caused by industries located along False Creek, the cleaning up of Coal Harbour, and the transformation of the rock quarry and reservoir of Little Mountain into the renowned Queen Elizabeth Park are some of the better known results of the long-term recommendations of the plan. However, the Bartholomew Plan's major strength was its concern with day-to-day workings of an efficient, yet aesthetically pleasing city. As stated in the plan, "All these schemes constitute the basic pattern of a greater city. Together they make up the plans and specifications by which a more healthful and more efficient Vancouver of the future may be built. But it is only incidentally that these elements of the total plan touch the appearance of the city. The plan, to be properly balanced and completed must clearly show how the city may be made more pleasing to the eye."

This dedication to aesthetics and visual order puts Bartholomew in the generation of planners who advocated the planning principles of the City Beautiful movement. Three principles of urban aesthetics identified by Walter Van Nus were promoted by the movement, and these concepts are readily identifiable in the Vancouver plan. They are visual coherence, variety and civic grandeur.

Visual Coherence

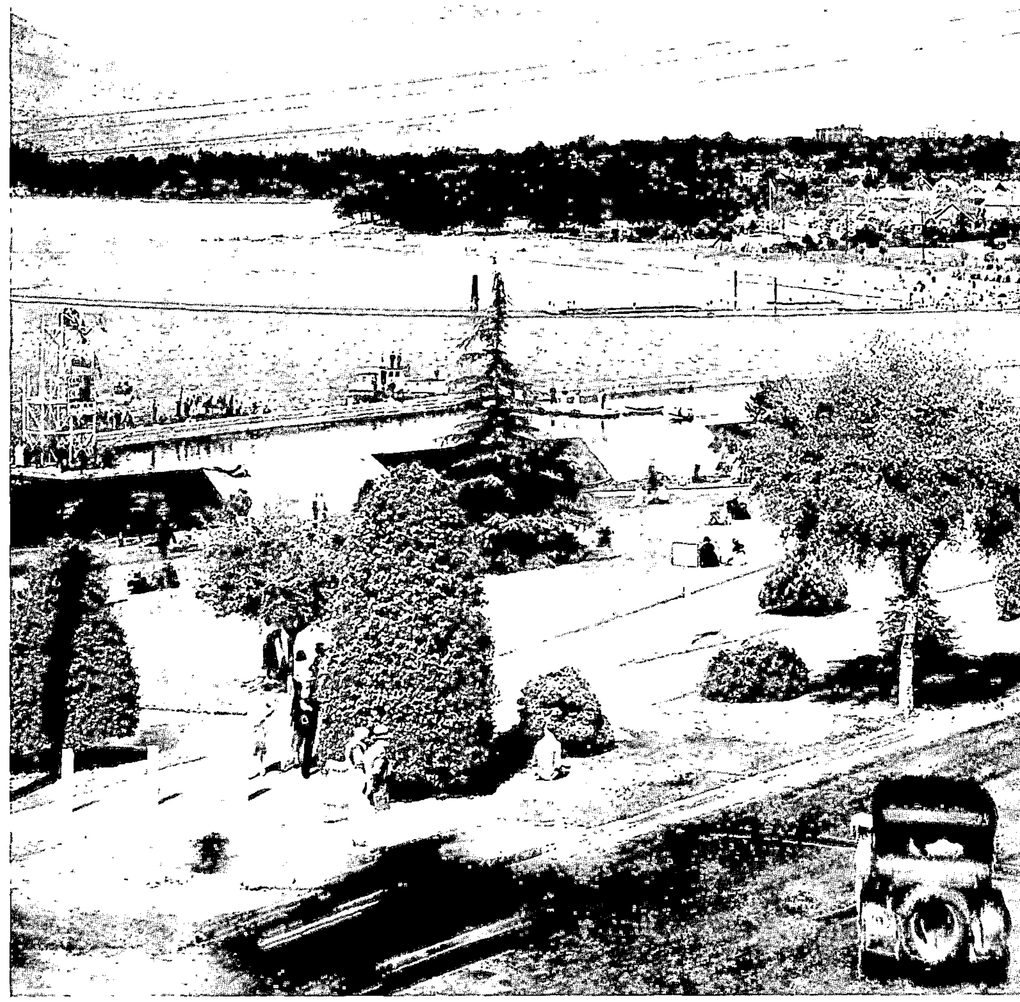
To achieve visual coherence, Bartholomew emphasized that zoning was the method to coordinate building types, massing and height in order to prevent a "serious jumbling of buildings". The zoning bylaws were adopted and became Vancouver's first. This placed controls on future land use and was a progressive step in the city's history. At this time, using legal regulations to control growth was a relatively new concept in Canada.

Visual coherence was also stressed with respect to local neighbourhoods. Residential landscaping and the improvement to home grounds was emphasized. Since the majority of the city is devoted to private residences, Bartholomew argued that it is "the individual responsibility of each homeowner in producing and maintaining an attractive city..." It was stressed that by educating the public concerning aesthetics, the appearance of the city would be enhanced. This included recommending the half-timber house as the appropriate style for the surroundings.

Various types of residential landscaping around "smooth, weedless lawns" were also detailed. Landscape gardening principles, such as proper border and foundation planting, and the use of specimen plants were outlined, as well as the proper environmental conditions in which they would grow.

By today's standards, this careful detail and emphasis on educating the public taste is unique. Yet at the time, the city was just emerging from its pioneer stage, and to improve its appearance, the plan and its aesthetic recommendations needed the support of both civic officials and the public. Bartholomew

This 1931 photograph shows a portion of the continuous waterfront park along English Bay.



stressed that it was only through the aid of each citizen improving his own property that "the people of Vancouver can gradually make their streets, parks, buildings and grounds so attractive that their city will be second to none in appearance."

Visual Variety

"Just riding, riding for pleasure. There is fascination in a changing picture such as one gets from the window of a smooth-riding motor car." With respect to providing visual variety, the second principal characteristic of City Beautiful plans was primarily to utilize city streets to provide visual and spatial experiences as one travelled along them. To this end the Bartholomew plan recommended a continuous chain of pleasure drives along curvelinear streets and parkways which would connect a series of parks and other scenic locations. The "continuous and comprehensive" plan which was forwarded was the most sweeping program of street development for visual pleasure in its time.

The plan took advantage of the views and experiences afforded by Vancouver's waterfront location by recommending the construction of a scenic drive. Starting at Stanley Park, the drive would skirt English Bay and continue around Point Grey to the north arm of the Fraser River in Burnaby, where it would end.

Other scenic drives, complete with landscaping, were also recommended. Four drives were planned to run north from the Fraser River to False Creek and one crosstown roadway along Prince Edward Drive was also suggested. Leading past scenic views and parks, these drives were to be accompanied by parallel streets to avoid heavy utilitarian use of the pleasure drives.

The plan stressed the need to preserve pedestrian vistas. The natural beauties of the mountains, the waterfront and Stanley Park were to be retained primarily for pedestrian activities. To this end it was recommended that cars should not skirt Stanley Park along the seawall, or dominate English Bay between the shore and Beach Avenue. Bartholomew emphasized that the pedestrian "deserves primary consideration, for he is willing to exert himself to see the landscape under advantageous conditions."

Civic Grandeur

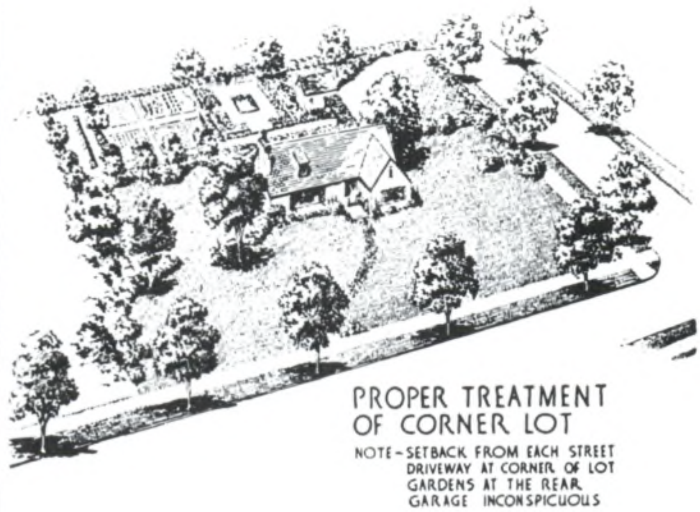
"Build a Great Civic Centre"

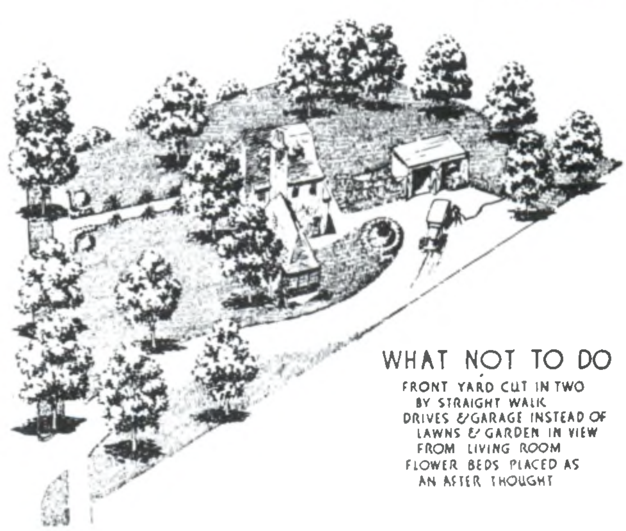
The final principal characteristic of the City Beautiful movement found within the Vancouver plan was the concept of creating a grand civic centre. A fine civic building would become the symbolic and physical focal point of the city. Vancouver's centre was to be located initially on a site of high ground overlooking English Bay near the present Burrard Street Bridge location. The site was selected by Bartholomew because it was located near important thoroughfares and was close to the existing business district. Its high position above English Bay would present an imposing composition and be "a constant stimulus to civic pride."

Although this site was not selected, his concept of a civic centre for Vancouver was eventually built after years of bickering. The present classical modernistic City Hall, built in 1936 in accordance with City Beautiful principles, stands high on the south side of False Creek. In the opinion of civic officials, this location was better in that it was more central to all the newly amalgamated municipalities which City Hall served.

Vancouver City Archives

Rodger Todhunter

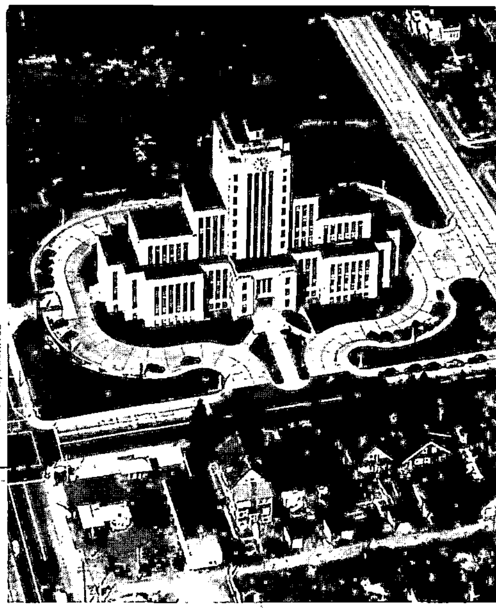




Bartholomew Plan, Plate 58

Prince Edward Drive is one of the main boulevarded streets and pleasure drives that were built on the recommendation of the Bartholomew Plan.

The Bartholomew Plan presented detailed recommendations for residential landscape gardening to ensure a beautiful Vancouver.



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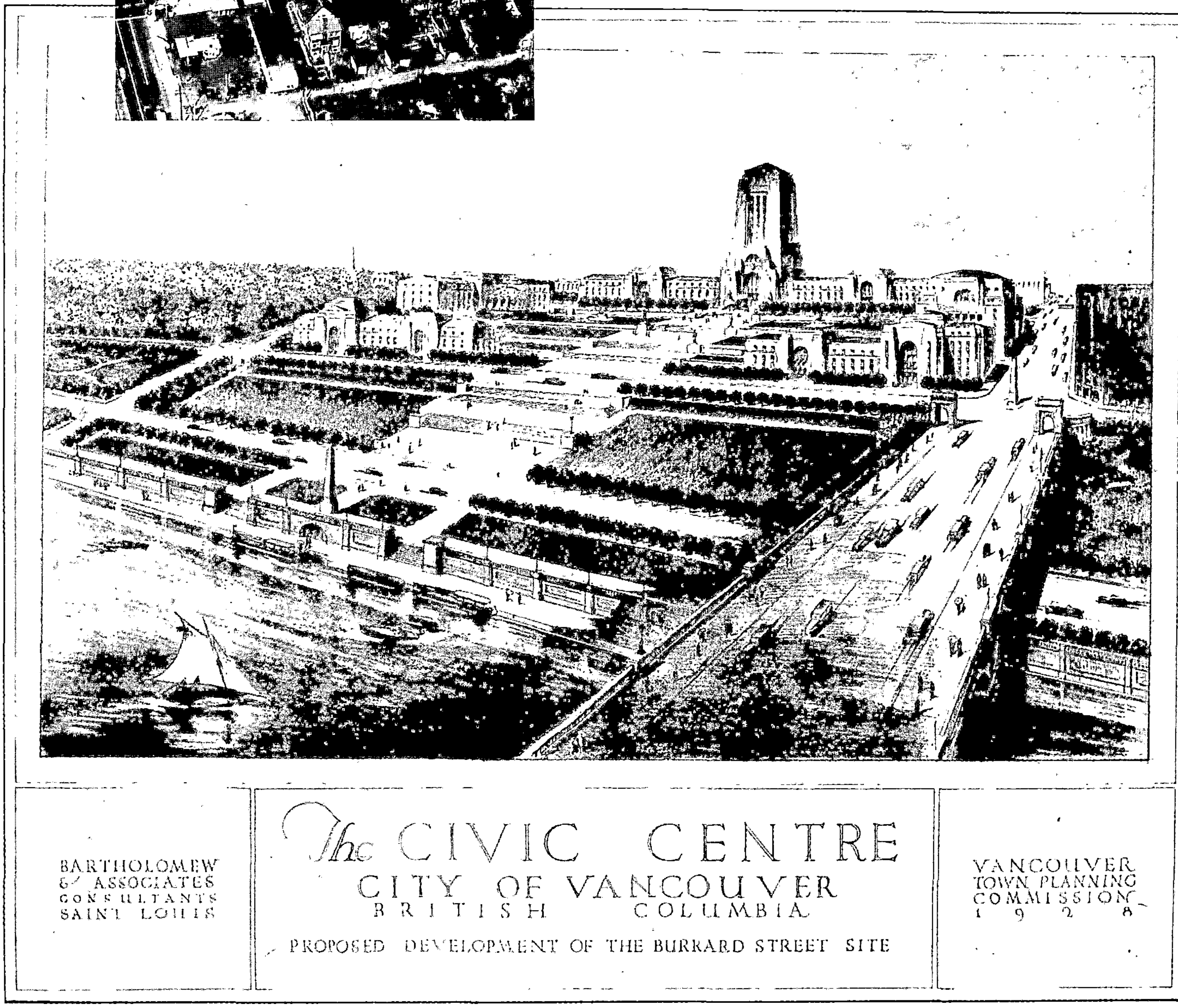
The Bartholomew Plan called for a grandiose civic building, called a civic centre, to be the actual city hall. City officials eventually agreed with the concept, but not the location. Vancouver's modern city hall was built in 1936.



Bartholomew Plan, Plate 57

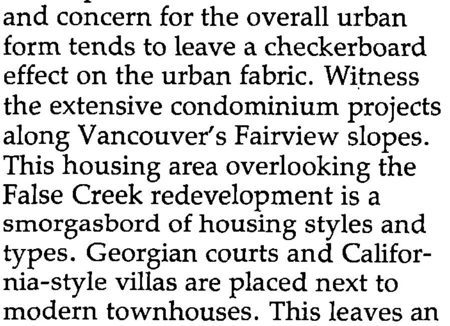
Evidence of the success of the plan is readily visible in present day Vancouver. The city's road network through residential areas is a delight to use. Most major arterial roads, if they are not boulevarded, are all handsomely landscaped and tree-lined. Highways and freeways by and large, have been prevented from slashing through residential areas and marring the landscape. Shoreline drives and pedestrian access is almost continuous around both sides of English Bay, from Stanley Park to the Fraser River. A series of city parks, linked by foreshore parks, ensure Vancouver's waterfront will always be open to the public. This amount of waterfront access puts Vancouver far ahead of two other West Coast cities, Seattle and San Francisco.

Vancouver is truly a pedestrian city in which long-range views of the City's magnificent surroundings are complemented by its urban open spaces. The Bartholomew Plan, like any planning document, cannot be interpreted as being totally responsible for the appearance of present day city. It did, however, correctly interpret the cultural make-up of the city and responded to it in an enlightened manner. Bartholomew correctly perceived the city and enhanced its cultural fabric and aesthetic appearance. Working within the economic constraints and practicality of the times, he blended City Beautiful concepts into the "practical" school of planning through the use of legal and administrative techniques such as zoning.

This is one of the last plans in Canada to successfully blend the two schools of thought. Planning in the future would concern itself less and less with aesthetics and design, and concern itself more with analytical, legislative and administrative concerns.

Today, site-specific physical planning and design primarily falls upon the shoulders of urban designers, architects and landscape architects. On a project-by-project basis, these professional groups respond to the requests of individual developers. They often design open spaces and building structures in a vacuum unrelated to adjacent developments. This lack of context and concern for the overall urban form tends to leave a checkerboard effect on the urban fabric. Witness the extensive condominium projects along Vancouver's Fairview slopes. This housing area overlooking the False Creek redevelopment is a smorgasbord of housing styles and types. Georgian courts and California-style villas are placed next to modern townhouses. This leaves an impression of the area which is visually confusing. The open space system abandons the traditional street. Each project is totally inward looking and neglects the pedestrian who does not live in the particular development.

These townhouses indicate that Vancouver is developing in a new fashion, as indeed it should. The trend towards multi-family developments is an increasing phenomenon, as exorbitant land prices, changing values and a shrinking family cell signals the end of the single-family tradition in inner-city neighbourhoods. However, in abandoning traditional family values, these new developments should not abandon values which are for the good of society overall.



Rodger Todhunter

California bungalows, along with Tudor homes comprise the two major historical housing stocks of Vancouver.

Rodger Todhunter

A long distance view of the Fairview slopes shows the new way Vancouver is developing; multi-family developments are an increasing phenomenon.

At a recent planning conference, Alan Jacobs, an American city planner, implored planners to choose a definition for a city in order to achieve an image or a dream. He warned them to defend their right to do so, lest private, national or multi-national forces do it for them.

Whatever direction Vancouver planners take for the city's future, it is hoped they will choose one which is based on this city's tradition, as was the Bartholomew Plan.

Continuity in the built environment must be recognizable by local residents as it reflects their values. Planners should, as Alan Jacobs implores, have faith in the general public, "... members of communities with proud traditions of home rule. Put well thought out action before these people and they'll be willing to pay for it."

Vancouver residents and politicians accepted and implemented the Bartholomew Plan over the years. Let us hope that they accept the revised B.C. Place plan. If they do, it will become tomorrow's haven and an object of admiration as is the present-day city.■

Rodger Todhunter has recently joined the faculty of landscape architecture at the University of Toronto; prior to moving to Toronto, he was a landscape architect in Vancouver.

L'intégration des arts à l'architecture

Une solution à un pour cent... et plus

MAC

Pierre Granche. Installation ornant le hall d'entrée de l'ancienne École des beaux-arts, rue Sherbrooke à Montréal, immeuble recyclé pour les besoins de la Bibliothèques nationale du Québec. L'artiste multiplie dans le hall d'entrée les variations sculpturales sur le thème des colonnes néo-classiques qui décorent la façade de l'édifice.

par René Viau

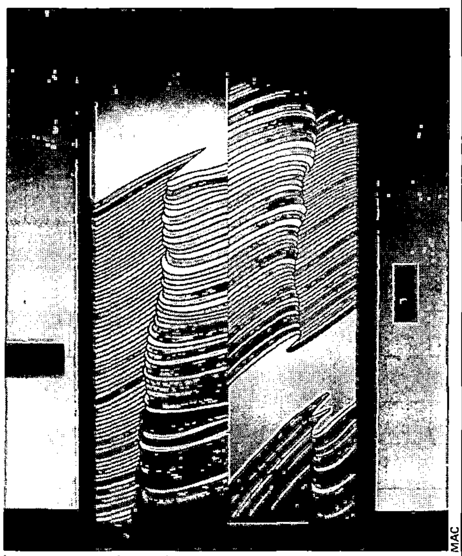
"Le programme gouvernemental d'intégration des arts à l'architecture offre aux artistes un nouveau carré de sable où jouer", lance avec enthousiasme Rose-Marie Goulet, une sculpteure de 28 ans. Son nouveau carré de sable, un jardin de sculptures, en cours d'installation, au Centre d'accueil Montarville Rabastallière, à Saint-Bruno. Cette jeune artiste est au nombre des 74 créateurs québécois qui ont reçu, en 1982-1983, une commande d'une oeuvre d'art (de 19 866 $ en moyenne), dans le cadre de la politique d'intégration des arts à l'architecture et à l'environnement des édifices du gouvernement du Québec. Selon cette politique, approximativement un pour cent du coût total d'un édifice est affecté à la commande d'oeuvres d'art. Pour l'année en cours, le budget alloué aux créateurs est de 1 470 104 $.

"Ce programme représente un véritable défi pour les artistes", affirme Jacques Cleary, directeur du Secrétariat permanent de ce programme, au ministère des Affaires culturelles. "Il leur faut travailler avec la contrainte d'un lieu spécifique et tenir compte, en plus, des usagers et de la vocation sociale de l'édifice. L'artiste sort de la galerie pour aller sur la place publique. Des milliers de gens et non seulement ceux qui fréquentent habituellement les musées et les galeries peuvent voir son oeuvre. Pour ce, il n'y a qu'à entrer dans une bibliothèque publique, un palais de justice, une école, une résidence pour personnes âgées, un poste de police ou même dans une prison."

Étonner sans détonner

Soumises aux impératifs d'un lieu avec lequel elles doivent s'harmoniser, ces oeuvres étonnent sans détonner. Autant d'artistes, autant de solutions. Donnons quelques exemples des 170 projets parachevés depuis 1981. Au centre d'accueil Armand-Lavergne de Montréal, un foyer pour personnes âgées, l'artiste Eric Daudelin a opté pour un montage de photographies qui rappelle la vie du quartier d'autrefois. À Lachenaie, le sculpteur André Mongeau a égayé un poste de la Sûreté du Québec, en créant un aménagement paysager meublé de sculptures traversables. Au palais de justice d'Alma, Giuseppe Benedetto a imaginé en guise de grille une sculpture-relief colorée. Joëlle Morosoli a essaimé le plafond de l'une des salles du Palais des congrès de Hull de sculptures cerfs-volants en acier. Dans le même édifice, Suzanne Joubert a utilisé des panneaux de verre pour créer un environnement poétique. À Sept-Îles, Richard Tremblay a agencé des formes de métal en noeud focal suspendu au-dessus du hall principal de l'édifice de Radio-Québec. À Trois-Rivières, sur la façade austère d'un centre d'accueil, Richard Normandin a fait courir des spirales de métal. Au centre d'accueil Ernest-Routhier de Montréal, Michel Fortier a décoré des portes d'ascenseur en aluchromie. À l'Île Bizard, Trixie Rittenhouse a fleuri la bibliothèque de bannières. À l'ancienne École des beaux-arts de Montréal, recyclée pour les besoins de la Bibliothèque nationale du Québec, Pierre Granche a voulu non seulement intégrer l'oeuvre d'art à l'architecture de l'édifice mais réaliser une oeuvre polyvalente qui en soit le reflet et constitue une sorte de commentaire sur le passé de l'institution. Granche a multiplié dans le hall d'entrée des variations sculpturales sur le thème des colonnes néoclassiques qui ornent la façade de la bâtisse.

Parmi les créateurs de renom qui ont participé, depuis 1981, au programme d'intégration des oeuvres d'art à l'architecture des édifices publics, mentionnons Micheline Beauchemin, Michel Goulet, Peter Gnass, Louis Gosselin, Robert Savoie, Marcelle Ferron, Edmund Alleyn, Guy Montpetit, René Derouin, Pierre Osterrath, Gilles Boisvert, Louise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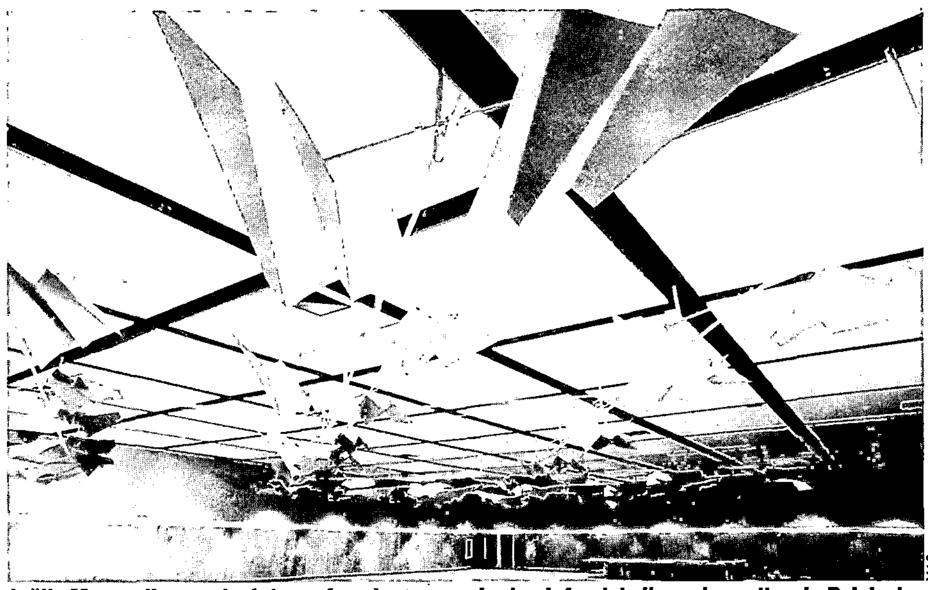
Michel Fortier décore en aluchromie des portes d'ascenseur du centre d'accueil Ernest-Routhier de Montréal.

Doucet-Saïto et Pierre Granche.

"L'un des objectifs de ce programme", souligne Jacques Cleary, "est d'offrir un plus grand débouché aux artistes, mais ce n'est pas le seul. Grâce à cette nouvelle politique, le Québec se dote d'un patrimoine actif d'oeuvres d'art permanentes, permet à la population de mieux connaître l'art actuel et améliore la qualité de l'environnement des lieux publics."

C'est en 1981 que le gouvernement du Québec adoptait par voie de décret les règles et le cadre général d'application de ce nouveau programme d'intégration des arts à l'architecture et à l'environnement, qui s'applique obligatoirement à tout projet de construction d'un édifice public dont le coût dépasse 150 000 $. Les édifices réservés à l'usage exclusif des fonctionnaires en sont exclus.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Joëlle Morosoli a essaimé de cerfs-volants en acier le plafond de l'une des salles du Palais des congrès de Hull.

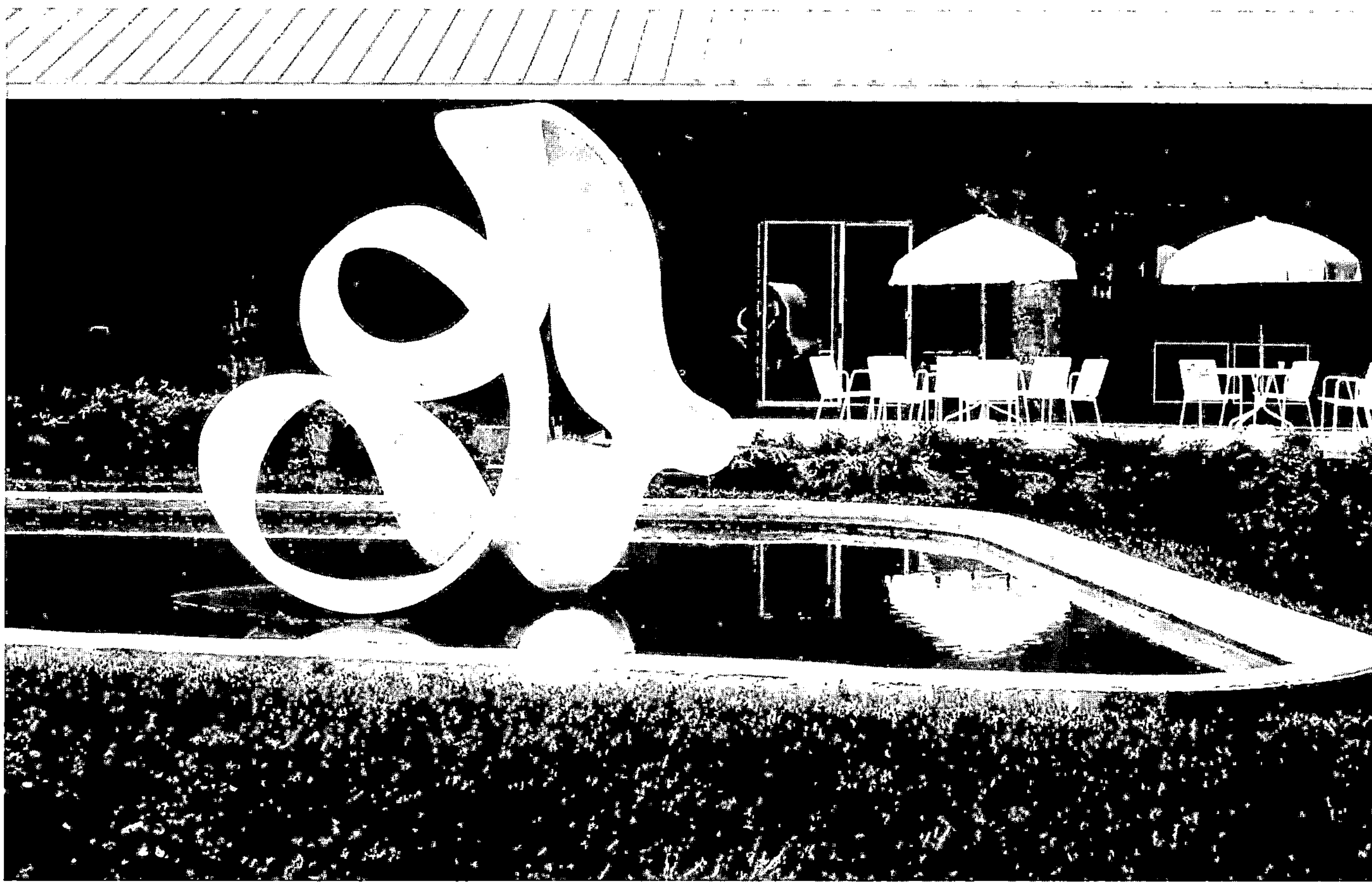
Auparavant, un programme similaire existait mais son champ d'application était limité. "En 20 ans," souligne Jacques Cleary, "seulement 900 000 $ ont été distribués aux créateurs. Maintenant, toutes les constructions érigées par les principaux ministères bâtisseurs, Travaux publics et Approvisionnements, Affaires sociales, Affaires culturelles, Énergie et Ressources, Éducation, Loisirs Chasse et Pêche, de même que par les municipalités, dans le cadre du programme de développement des bibliothèques publiques, sont soumises au nouveau programme."

"Il peut s'agir de constructions neuves", poursuit Jacques Cleary, "mais aussi de projets de réaménagement et d'agrandissement d'édifices existants ou de projets de recyclage de fonction d'un immeuble ou même de sa restauration." Des édifices à caractère historique peuvent être dotés d'oeuvres d'art modernes; il faut alors convaincre les spécialistes de la restauration du bien-fondé de cette juxtaposition."

Un pour cent et plus...

Un bref examen des modalités d'application du programme d'intégration des arts à l'architecture démontre que le budget affecté aux oeuvres d'art dépasse un pour cent du coût de construction de l'édifice. Quand ce coût est de 150 000 $ à 400 000 $, 1,5% de la somme est réservée aux oeuvres d'art. Pour les projets de 400 000 $ à 2 millions de dollars, 6 000 $ sont accordés automatiquement plus 1,25% de la tranche suivante. Pour les projets dont le coût se situe entre 2 et 5 millions, le budget d'intégration des oeuvres d'art est de 26 000 $ pour les deux premiers millions, plus 1% de la tranche suivante. Pour les projets de 5 millions et plus, 56 000 $ sont accordés pour les cinq premiers millions, plus 0,50% de la tranche suivante.

Le choix des artistes ne se fait pas comme celui des architectes par ordinateur. Une mécanique sophistiquée et bien huilée, dont les règles sont connues, est en place. Le coeur du système: la banque de données du Secrétariat permanent, contenant les renseignements sur les 750 artistes qui y sont inscrits par discipline. Des jurys mandatés par le ministère des Affaires culturelles sont appelés à recommander aux comités des divers ministères constructeurs et au comité permanent d'application du programme les noms de créateurs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Sculpture de Danielle Thibault pour le centre hospitalier Goerges-Frédéric de Drummondville.

qu'ils jugent aptes à réaliser l'oeuvre à commander. Selon l'ordre du coût de construction et la nature de l'édifice en cause, les modes de désignation varient. Ainsi, pour un projet de moins de 2 millions, un seul créateur est recommandé. Pour des projets plus coûteux, on procédera par concours restreint, invitant trois créateurs à soumettre des maquettes pour ne retenir que la plus valable des propositions. Enfin, pour des projets de 5 millions ou plus, on tient un concours public dont les modalités peuvent varier. Ce fut le cas du Palais des congrès de Montréal–dont le budget était de 88 millions de dollars–et du Musée de la civilisation de Québec–dont le budget est de 26 millions.

Désireux d'encourager les artistes des régions, Québec accorde à ceux-ci la priorité pour certains projets à caractère régional. De nombreux artistes des grands centres estiment que cette mesure de régionalisation se fait au détriment de la qualité et de l'excellence.

Le pour et le contre

De façon générale, le nouveau programme québécois d'intégration des arts à l'architecture a su gagner l'assentiment des artistes. Du moins, ceux qui y ont participé s'en disent-ils satisfaits. Ils estiment être traités en professionnels par une administration diligente. Bien qu'un bon nombre des 750 artistes inscrits au fichier ne seront jamais choisis, ce programme, de l'avis des regroupements d'artistes, permet de reconnaître des talents autrement négligés.

Dans le cadre de ce nouveau programme, très peu de confrontations entre un artiste et un public incompréhensif ont eu lieu. "Les mentalités évoluent", explique Jacques Cleary, "et le public accepte mieux aujourd'hui le message de l'artiste. Quelquefois, des difficultés se présentent. Il faut alors apporter un complément d'information aux mécontents ou inviter l'artiste à les rencontrer et l'incident est clos."

Ce programme inédit fait aussi l'objet de critiques répétées. Pour certains amateurs d'art, artistes et critiques, un bon nombre des oeuvres d'art commandées ne sont pas assez fortes ou stimulantes. Il y a là un risque, estiment-ils, de tomber purement et simplement dans la décoration. D'autres se plaignent que l'oeuvre d'art n'est pas suffisamment intégrée à l'architecture de l'édifice. L'artiste, pensent-ils, devrait être consulté dès l'étape de la conception de l'immeuble et de la préparation des esquisses préliminaires.

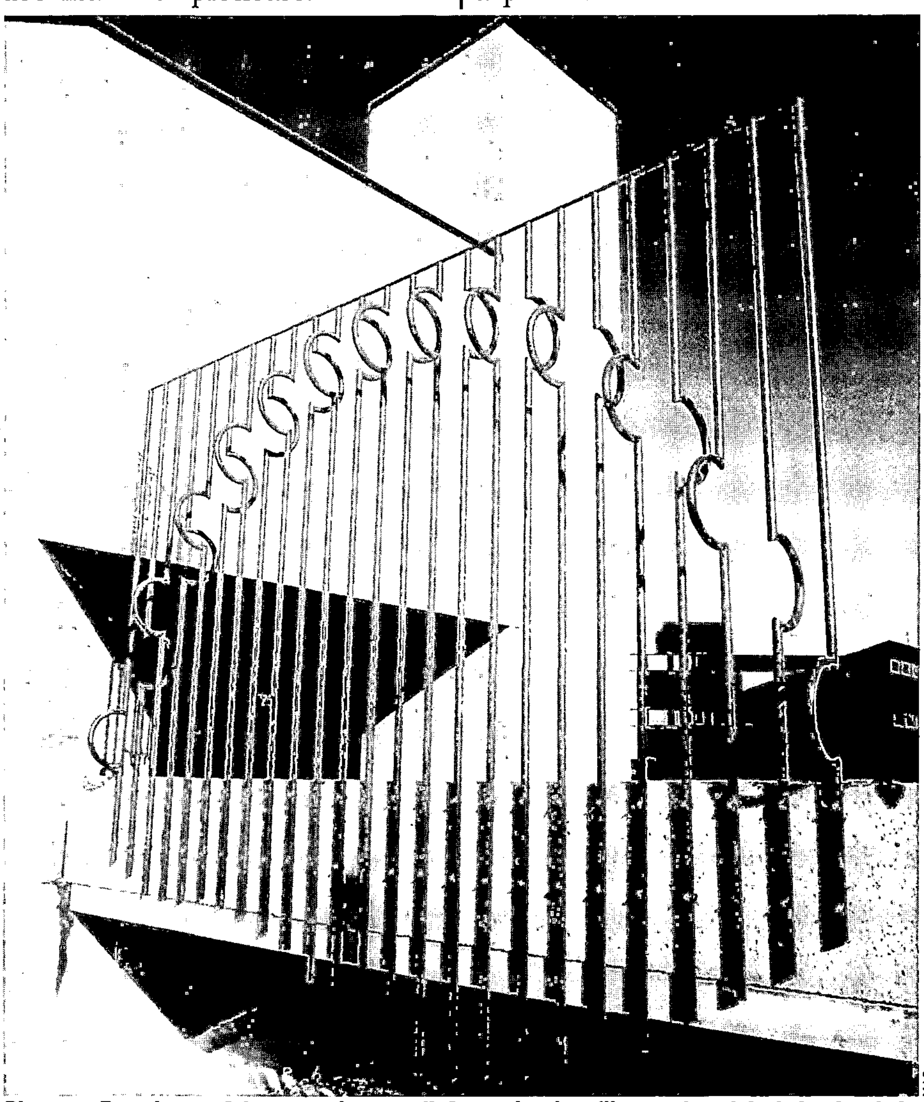
La réaction des architectes

Nombre d'architectes, pour leur part, croient que les artistes ne parlent pas la même langue qu'eux. Les uns estiment que trop d'artistes ne sont pas familiers avec les techniques de construction, ce qui entraîne des problèmes de planification. D'autres demeurent indifférents au programme. Ceux qui tiennent à "esthétiser" eux-mêmes leur bâtiment croient que les artistes empiètent sur leur terrain. Plusieurs architectes ont, de plus, des idées bien arrêtées sur le mode de choix des artistes; ils perçoivent le travail en comité et les recommandations du jury comme des intrusions malvenues. Ils regrettent l'ancien programme qui leur permettait de choisir eux-mêmes l'artiste avec lequel ils avaient le plus d'affinités.

"Notre très riche banque de données sur les créateurs", soutient Jacques Cleary, "offre la possibilité de multiplier les choix. Du reste, beaucoup d'architectes n'ont pas le temps de visiter les galeries ou les musées et connaissent mal les courants actuels en arts visuels. Pour eux, cette banque est une mine de documentation précieuse."

L'intégration, un instant de grâce

Selon Victor Pruss, architecte du tout nouveau Palais des congrès de Montréal et du Grand Théâtre de Québec, qui a abrité courageusement la murale de Jordi Bonet et l'inscription tant décriée du poète Claude Péloquin, l'intégration est cette situation privilégiée où une oeuvre d'art et une architecture sont absolument indissociables. Elle présuppose une sorte de connivence et une intense collaboration entre les créateurs. Victor Pruss garde de son aventure avec Jordi Bonet un souvenir inoubliable alors que sa récente expérience au Palais des congrès l'a déçu. "Bonet et moi", raconte-t-il, "ne savions pas où nous allions au départ. Nous avons assumé ensemble tous les risques et le résultat est le fruit de cette liberté créatrice, de cette absence de contrainte. La murale du Grand Théâtre de Québec est un des rares exemples d'intégration totalement réussie entre l'oeuvre d'art et l'architecture." "La vingtaine d'oeuvres d'art intégrées au Palais des congrès", poursuit-il, "dont le coût total est de 502 200 $, n'est qu'une solution de compromis, même si les oeuvres prises individuellement sont valables."



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Giuseppe Benedetto a fait une sculpture-relief en guise de grille pour le palais de justice de la ville d'Alma.

"Peu d'artistes et d'architectes", explique-t-il, "s'engagent à fond dans une véritable démarche d'intégration, à cause des contraintes administratives qui rendent le contact difficile entre eux. L'architecte, qui travaille avec un comité permanent peu sensibilisé aux exigences et aux particularités d'un projet donné, n'a que peu de voix au chapitre et, pourtant, c'est lui le maître d'oeuvre."

Le programme d'intégration des arts à l'architecture du Québec, qui est décrié par les uns et loué par les autres, est en train de devenir un modèle pour les autres provinces. L'Ontario et l'Alberta songent à mettre sur pied un programme similaire. Des demandes d'information de l'étranger, notamment de nombreux états américains, affluent. Le rapport récent de la Commission Applebaum-Hébert préconise une plus grande participation des artistes et artisans canadiens à l'aménagement des édifices qui abritent les services du gouvernement fédéral.

Pendant 14 ans, ce dernier a appliqué une politique semblable à celle du Québec mais l'a abandonnée en 1978. Si plusieurs pays européens ont depuis longtemps des politiques à pourcentage, destinées avant tout à créer un marché pour la sculpture civique, c'est au Québec que ce genre de programme est appliqué avec le plus de rigueur. L'oeuvre d'art humanise les lieux publics, améliore la qualité de l'environnement, rapproche la population des créateurs et constitue pour ceux-ci un débouché important. Mais la discussion reste ouverte sur les problèmes que soulève son intégration à l'architecture.■

René Viau est journaliste à la pige.

New Dawning in Dayspring NOVA SCOTIA

Story by Stephen Kimber

Concept influenced by Canada Mortgage and Housing Corporation–funded study

When Premier John Buchanan of Nova Scotia cut the ribbon to mark the official opening of LaHave Manor near Bridgewater, N.S., it signalled the long overdue end of a dark era in the care of some of the mentally ill. The day was 16 October, 1982.

Hebb's Photography

One LaHave Manor resident chats with two staff members. Clean, pastel-coloured bedrooms encourage self-sufficiency while providing adequate facilities for nursing care when needed.

LaHave is a residential care facility for the mentally handicapped built high on a hill looking over the LaHave River. The ceremony was more than the opening of a new $1.6 million building with 65 beds. It marked the beginning of an innovative approach to dealing with mental problems.

"I remember feeling very happy and very content that day," says Maria Devries, a municipal councillor and the current chairman of LaHave Manor's board of directors. "After so many years of trying, we had been able to take people out of what were terrible conditions and bring them to this place where they could feel–some probably for the first time in their lives–like human beings."

Today, she says, she can see the changes the new building has made in the lives of the residents. "I'll go to visit and people will say to me, 'Oh come visit me in my house.' They're proud of their rooms, of their beds, their closets even. Having a place like this one in which to live has made them take better care of themselves too. They take pride in themselves, in the place in which they live".

The facility, which was designed by Halifax architects Dumaresq and Byrne, is unusual. Deceptively compact in appearance, the manor consists of six interconnected "houses"–each with its own living room, dining room, kitchen, bathroom, shower, four single-bedrooms and two double-bedrooms,–clustered around an airy central corridor that opens onto a completely enclosed courtyard. Residents, some of whom may graduate from the residential centre to group homes and even back into the outside community, can eat, play cards, watch television or just relax in the reasonably private setting of their own "houses". There is also a central lounge and a basement recreation and therapy room, as well as a small hospital-like facility at one end of the complex for the 17 severely handicapped residents who need constant attention.

Dayspring belonged to the Middle Ages

To understand how architects, government officials and local groups finally agreed on LaHave Manor's home-like concept, one has to know what Dayspring, the old adult residential centre LaHave Manor replaced, was like.

Almost everyone who visited the county "poor-farm", as it was known locally, came away shocked and distressed. Maria Devries, who first visited the home in 1964 with a local church group, remembers it as so depressing and horrible, "I wouldn't even put my cow in there".

Opened over 100 years ago, it was a catch-all for those in the area who couldn't fit in–not just the retarded, but the mentally ill, epileptics, the elderly and even some people who were so poor that they had nowhere else to go. By the 1960s, it had become an overcrowded, rundown human warehouse for over 200 people.

Ian Robinson, Dumaresq and Byrne's project architect, says, "visiting the place made me sick to my stomach. If you can imagine a gymnasium, fill it with 60 cots and put a bedside table beside each one, and then you'll have some idea of the kind of place it was. There were no closets, no private areas, no places for any sort of training". He pauses, remembering. "And then there was the basement. It was a series of cells along a long corridor and the floor sloped toward this central drain. There was no light in the cells and there were slots at the bottom of the doors, and that's how their food was passed to them". The cells were used for difficult patients in the days before such mental conditions were controlled by drug therapy.

The original rambling complex, a former farmhouse that had been expanded four or five times with a hodgepodge of jerry-built dormitory-style additions, was also in a sorry state of repair. It was too hot in summer, far too cold in winter, and the roof leaked so badly that staff had to put buckets everywhere when it rained just to keep the floors from being turned into rivers. "The wiring was just terrible too," Maria Devries remembers. "God must have been watching over us. We were very fortunate we never had a fire or a bad accident".


CMHC

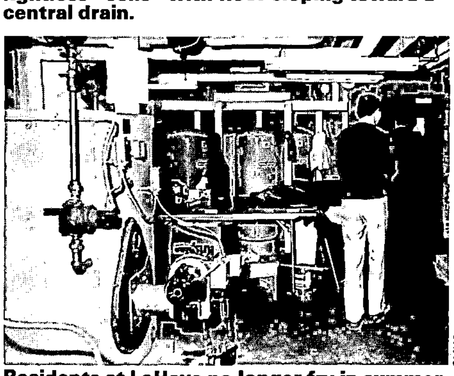
Dining rooms are arranged with individual tables for quiet, intimate meals.


CMHC

Hot meals are delivered to house residents from this large central kitchen. "Not everything is totally perfect," says Ross Thorpe.


CMHC

One of the basement recreation and therapy rooms is decorated in preparation for Christmas festivities–a far cry from the old lightless "cells" with floor sloping toward a central drain.


CMHC

Residents at LaHave no longer fry in summer or freeze in winter. This modern heating/cooling plant assures adequate comfort throughout the year.

Replacement Plans met with Problems

The first push to replace the old poor-farm, former Lunenburg County Warden Charles Walters says, "began at least 15 or 20 years ago when we first discovered just what kind of shape the place was in". After architects reported that the necessary renovations might cost between \$300 000 and \$400 000–"a lot of money in those days–we decided it would be better to replace the home entirely."

The process, however, was not as simple as it sounds. That was partly the result of the usual arguments over budgets and priorities and cost-sharing, but also because of society's changing notions about treating the mentally handicapped.

At the provincial level, says Ross Thorpe, Nova Scotia's director of services for the mentally handicapped, "we began to get away from old idea of simply keeping people in institutions during the 1970s, and began to put the emphasis on rehabilitating people instead".

"People in the local community," Charles Walters adds, "also began to realize that these were people who were sick and there was at least the possibility of helping many of them to eventually get back into the community again."

There were inevitably tensions among the participants because everyone concerned–local councillors, patients' families and friends, advocacy groups for the mentally handicapped and provincial and federal government officials–wanted to make sure that whatever replaced the poor farm would serve the best interests of its residents.

The project was started at a time when the whole issue of "normalization" (the idea that the mentally disabled should be integrated into society rather than isolated in hospital-like institutions) was just coming into focus. "There were strong opinions on all sides," notes Don

Johnston, then CMHC's Halifax-based branch architect. While some people wanted to build a replacement to the facility, others saw such construction as perpetuating the practice of keeping the occupants in an institution.

In the end, a new building housing 65 beds was approved. While 125 residents remained in the old facility at the time, many were transferred to group homes, homes for the elderly or placed back in their communities.

Given a rural site near the old poor-farm and remote from the community, the problem of creating a residential environment was all the more difficult.

Robinson visited the old poor-farm, talked with staff members and local officials about the kind of facility they wanted. He visited other centres and devoured every piece of research available on the subject.

"The thing we were hearing over and over again," Robinson says today, "is that everyone was dead set against the institutional type of building. They wanted some sort of facility that would allow residents to do as much for themselves as possible and for some of them to actually use the facility as a place to gradually adjust back to normal living".

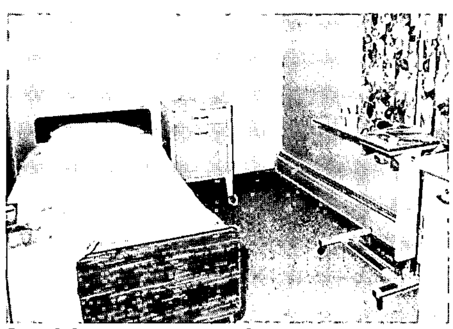
The Cluster Concept Provides Homelike Atmosphere

"The concept which emerged was influenced by a CMHC-funded study undertaken by Montreal architect Ron Williams, and students of the McGill School of Architecture", notes Don Johnston. "This publication, *Residences for the Mentally Retarded,* advocates the creation of neighbourhoods in such facilities".

The result is a cluster concept of small interconnected houses within the facility where groups of residents can live together in a home-like atmosphere but still be loosely supervised by staff members. The enclosed courtyard, Robinson says, is

CMHC

Despite its attractive appearance, no residents loiter around the lobby because there are other activities available to them in the home.



CMHC

Special care is available in the infirmary when patients become physically ill.

a modern response to the old idea of "chain-link fenced recreation areas that made them seem like prisons. There are gardens and swings in the courtyard where people can enjoy themselves while being supervised, without appearing to be supervised".

Although there are certain common facilities like a lounge, "you don't find people at LaHave Manor hanging around in the lobby or the lounge because it's the only place they have to go," Robinson adds. "Here, they have their own 'houses' in which they can spend time."

Because each house has its own kitchen and two of the units also have washer-dryer laundry facilities, residents are able to do as much of their own housekeeping and cooking as they are able. The bedrooms are small but adequate and most residents have a rocking chair to use when they read or visit together. The living areas are larger and airy in order to encourage residents to spend time with each other rather than by themselves in their rooms.

Today, 25 of the residents from the cluster houses spend their days at the nearby Ark Workshop in Lower Branch where they work as furniture refinishers.

Thanks to that job training as well as the social skills they learn at LaHave Manor, some of the residents–who might formerly have been consigned to spend their lives in institutions–will move into group homes and eventually out into the ordinary community.

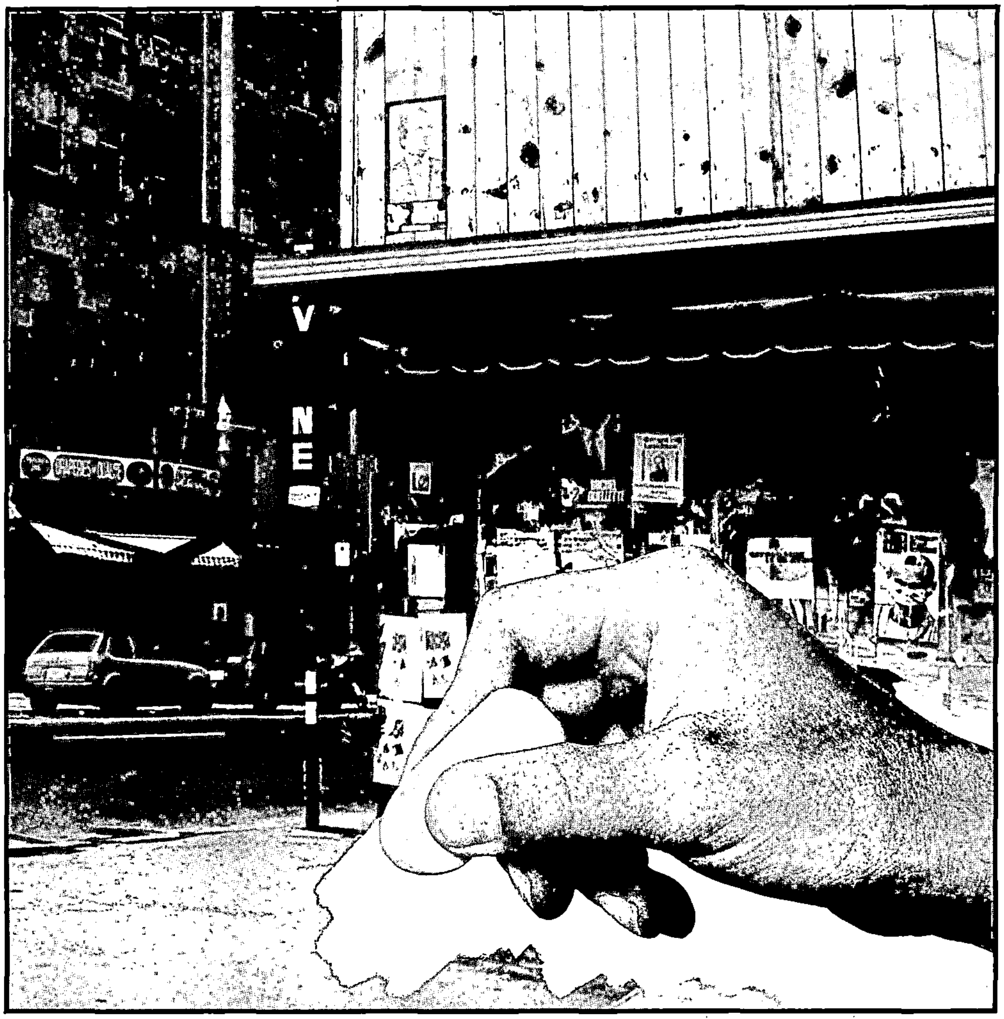
Even those residents who require constant care and whose long-term prospects for being integrated back into the community are not bright, are encouraged to do what they can for themselves, from learning to fold napkins to setting the table for meals. "We're no longer in the business of simply holding people in order to keep them out of society," Ross Thorpe explains. "That's what makes a place like LaHave Manor such an important institution."

While he concedes not everything has worked out as well as everyone hoped–the meals for house residents are still prepared in a central kitchen and delivered hot to each house, for example–"the facilities are there to let the residents do as much for themselves as they can".

Thorpe, like almost everyone who visits the home, is impressed by its home-like atmosphere. Says Don Johnston, who visited the manor last fall to see how the facility had worked out in practice, says it seems "like a very caring place".

Marie Devries agrees. "There were a lot of tears and a lot of pounding on the table along the way," she admits, "but in the end, I think our residents are the big winners. They have a place now in which they can grow and develop as human beings. And that," she says without a wistful thought for what went before," is what it should be all about".■

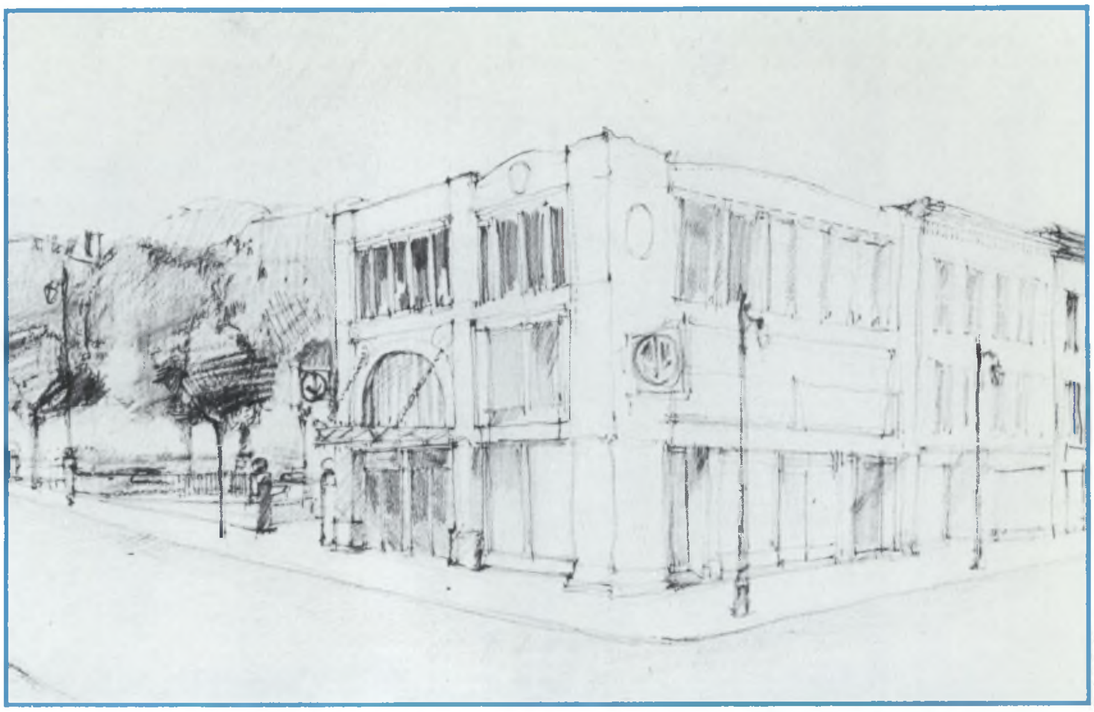
Stephen Kimber is a communications consultant in Halifax.



Revitaliser en beauté et en agrément les rues commerciales d'une métropole

par Odile Hénault

Dix têtes valent mieux qu'une. Cette assertion aurait pu être le leitmotiv de l'un des événements majeurs de l'Archifête, une semaine de célébration de l'architecture qui s'est tenue à Québec et à Montréal, dans le but de familiariser le public avec la profession mais aussi de convaincre les divers paliers de gouvernement de donner une place plus importante à l'architecture dans la



Projet de l'équipe Peter Rose. La station de métro Beaudry est insérée dans un nouveau bâtiment conforme au tissu ancien de la rue.

Fisch et Godin

création d'un environnement de qualité. Cet événement dynamique fut la tenue d'une "charette" de revitalisation de la rue Sainte-Catherine est, entre les rues Berri et Papineau. Cette initiative visait à intéresser, en particulier, les décideurs municipaux au rôle de l'architecte.

En termes du métier, la "charette", qu'on pourrait tout aussi bien appeler "corvée", désigne une période de travail intensif qui a lieu habituellement à la toute fin de l'élaboration d'un projet alors que les membres d'une même équipe unissent leurs efforts et travaillent jour et nuit à mettre le coup de crayon final à leur présentation.

Dans le cas de cette charette de l'Archifête, il s'agissait plutôt d'un exercice de trois jours pour quatre équipes distinctes d'architectes appelées à étudier un problème urbain spécifique et à proposer leurs solutions au terme de leur travail. L'année dernière, l'Institut royal d'architecture du Canada avait organisé une manifestation similaire lors de son congrès annuel à Winnipeg. Le sujet consistait alors en un projet de revalorisation de certains bâtiments anciens du centre de la capitale manitobaine.

Architectes de Montréal, Toronto et New York réunis

Les équipes participantes sont habituellement choisies, d'une part, pour leur capacité à réagir rapidement à une situation donnée et, d'autre part, pour leur talent de polémiste. À la tête des deux équipes montréalaises de cette année: les architectes Peter Rose et Jacques Rousseau qui se sont tous deux signalés tant par la qualité de leurs oeuvres que par leur vitalité comme animateurs de leur milieu. Rose, notamment, en était, l'hiver dernier, à sa huitième série de conférences Alcan, l'un des événements annuels les plus intéressants du genre au Canada.

Larry Richards, qui composait avec Marc Baraness l'équipe torontoise, est actuellement directeur de l'école d'architecture de l'Université de Waterloo, où il anime un programme d'études dynamique. Marc Baraness travaille pour la firme torontoise J. Michael Kirkland Architect, gagnante du concours de l'Hôtel-de-ville de Mississauga. Il participe régulièrement à des concours d'architecture et enseigne aux deux écoles d'architecture de Toronto et de Waterloo.

Enfin, la seule équipe de l'extérieur du pays était celle de Roger Ferri, architecte new-yorkais, qui avait déplacé pour l'occasion quelques membres de son personnel de New York à Montréal. La réputation de Ferri n'est plus à faire; l'intérêt de ses nombreuses interventions aux États-Unis et la qualité de ses présentations graphiques en faisaient un candidat de choix pour les organisateurs de la charette.

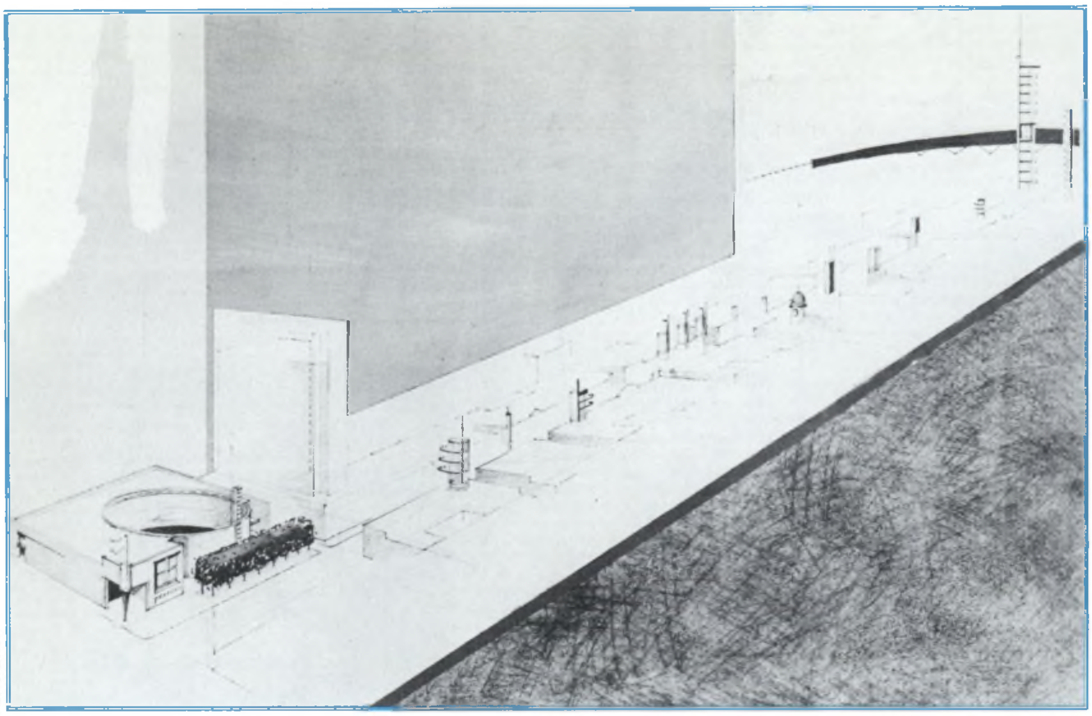
Fisch et Godin

La station de métro Beaudry, rue Sainte-Catherine est, dans son état actuel.

Au coeur de la ville, une artère dévitalisée

La rue Sainte-Catherine forme l'un des axes majeurs de l'Île de Montréal qu'elle parcourt dans la direction est-ouest. Traditionnellement, le boulevard Saint-Laurent a toujours représenté la ligne de démarcation entre l'est et l'ouest de la ville mais, à toutes fins pratiques, depuis l'implantation du métro, la rue Berri assume cette fonction; de là, son importance stratégique. La rue Papineau constitue elle aussi une artère majeure de la ville puisqu'elle est la voie d'accès au pont Jacques-Cartier.

Pour résumer les conditions prédominantes dans ce secteur, disons que la portion de la rue Sainte-Catherine, située entre les rues Berri



Fisch et Godin

Projet de l'équipe Richards/Baraness. Vue d'ensemble de la rue Sainte-Catherine remodelée, de la rue Berri au pont Jacques-Cartier. On remarque à l'intersection Berri, une "chambre urbaine" attenante à la station de métro, une tour d'observation du pont Jacques-Cartier qui permet aussi d'y accéder de même que des tourelles et des colonnes qui soulignent les angles de rue.

et Papineau, possède avant tout un caractère commercial. On y voit, côte à côte, des entreprises importantes, comme la Place Dupuis, située près de la rue Berri, et des commerces de plus en plus modestes, à mesure qu'on s'éloigne vers l'est de la ville. Le quartier avoisinant, notamment au sud du boulevard Dorchester, a été partiellement détruit il y a quelques années pour faire place aux installations massives de Radio-Canada. Depuis ce moment, l'effort de revitalisation s'est surtout concentré dans le domaine de l'habitation et les anciens taudis ont été transformés en demeures relativement aisées où vivent des employés de Radio-Canada. Par contre, la rue Sainte-Catherine elle-même semble avoir peu profité de ce vent de rénovation. C'est donc à ce problème que devaient s'attaquer les quatre équipes de la charette.

À l'examen, les propositions révèlent plusieurs points d'analyse communs aux quatre équipes. En premier lieu, cette portion de la rue Sainte-Catherine est criblée de "trous" ou de terrains vacants sur lesquels existaient auparavant un ou plusieurs bâtiments, détruits par le feu ou par quelque autre fléau. En second lieu, pour chacune des équipes, les trois stations de métro, situées le long de la rue étudiée, constituent des pôles d'attraction majeurs. La station Berri doit son importance à son emplacement au coeur du nouveau centre montréalais, à proximité de la Place Desjardins et du Palais des congrès. La station Beaudry est entourée de bâtiments institutionnels et utilisée de façon intensive par les employés de Radio-Canada. La station Papineau est perçue comme un point charnière, probablement à cause de sa proximité avec le pont Jacques-Cartier. Quant à celui-ci, toutes les équipes le considèrent comme l'élément dominant de ce secteur, à l'ombre duquel, d'une certaine façon, se passent toutes les activités de la rue.

Conjuguer modernité et symbolisme

Dans chacune des quatre analyses, les architectes ont envisagé la revitalisation de cette artère en amplifiant les éléments symboliques existants ou qui avaient un potentiel symbolique plutôt qu'en s'attardant à des solutions purement d'ordre technique et pratique. Ils dotent la rue Sainte-Catherine de "portes", aux intersections Berri et Papineau. À ces deux endroits, les architectes choisissent de créer une signalisation adéquate, c'est-à-dire de signifier par un ou des élements précis, l'accès à une nouvelle zone. À l'emplacement Berri, site que la ville de Montréal contemple depuis plusieurs années avec l'idée d'y faire soit de nouveaux bâtiments, un parc ou, aux plus récentes nouvelles, un terrain de stationnement à demi

Fisch et Godin

Vue de la rue Sainte-Catherine est, au coin de la rue Papineau sous le pont Jacques-Cartier.

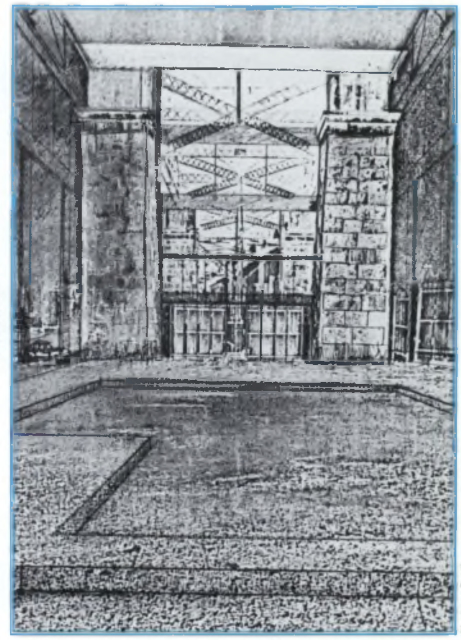
enfoui, la plupart des équipes ont opté pour la construction d'édifices à l'une des extrémités du terrain et l'implantation, près de la rue Sainte-Catherine, d'une "chambre urbaine" pour reprendre l'expression de l'équipe Richards/Baraness. Cette "chambre" ou parc ouvert joue le rôle d'un oasis de verdure dans un secteur relativement dense, constitué par l'Université du Québec et les édifices avoisinants.

La plupart des équipes réagissent de façon similaire à la présence massive du pont Jacques-Cartier, important point d'accès à Montréal. C'est la station de métro Papineau qui sert de prétexte de signalisation. Après l'avoir redessinée, les architectes l'entourent elle aussi d'un parc; une équipe dote son voisinage

Projet de l'équipe Ferri. La station de métro est "habillée" d'une coupole de cuivre. Ce même élément, typique de l'architecture montréalaise d'une autre époque, est également utilisé pour redessiner la station Papineau.

Fisch et Godin

Projet de l'équipe Jacques Rousseau. L'un des éléments intéressants de ce projet est une piscine intérieure dans le voisinage de la station de métro Papineau et dont la vue donne sur le pont Jacques-Cartier.



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d'un marché, un autre, d'équipements sportifs, une troisième, d'une tour d'observation qui sert aussi d'accès au pont. Les architectes soulignent l'importance symbolique de la station Papineau, située presque sous le pont Jacques-Cartier.

Coupoles de cuivre, tourelles, colonnes

Les conceptions des équipes diffèrent cependant dans le choix des détails. Seules les deux équipes de l'extérieur du Québec se laissent entraîner dans des envolées presque lyriques sur le thème du vocabulaire montréalais. Roger Ferri, par exemple, est impressionné par les coupoles de cuivre de Montréal. Il en "habille" la station Beaudry dans l'espoir que ses environs s'en retrouveront revitalisés. Richards et Baraness, eux, remarquent les coins de rue à 45° et les accentuent en jouant sur le thème des tourelles et des colonnes. Ils suggèrent également la construction d'une tour qui permettrait aux piétons d'accéder directement au pont Jacques-Cartier. L'équipe de Peter Rose préfère s'en tenir, quant à elle, à une reconstitution du tissu urbain disparu et reconstruit, aussi fidèlement que possible, les pièces manquantes du jeu. Jacques Rousseau s'absorbe dans une présentation poétique beaucoup plus hermétique que les autres où il joue avec des transpositions d'échelle et des allégories difficiles à saisir de prime abord. Sa contribution principale à une revitalisation de la rue Sainte-Catherine consiste en la création de la "porte Papineau" qu'il entoure d'un côté d'un marché et de l'autre, d'une piscine intérieure dont la vue donne sur la structure du pont Jacques-Cartier.

Le point le plus intéressant à retenir des proposition des équipes d'architectes qui ont participé à cette charette est le retour à une forme de signalisation symbolique. Concept utilisé, parfois inconsciemment, mais depuis toujours, en planification urbaine, c'est une notion dont on retrouve fort peu d'applications sur une rue montréalaise comme la rue Sainte-Catherine, dans sa partie située à l'est. Les éléments de signalisation existants, tels le pont Jacques-Cartier, sont plutôt là par l'effet du hasard. Quant aux stations de métro, si elles remplissent adéquatement leur fonction à cet égard dans le Montréal souterrain, elles abdiquent leur rôle dès qu'elles font surface au niveau de la rue.

Lors de la présentation officielle des projets de la charette de revitalisation de la rue Sainte-Catherine est à la ville de Montréal, les autorités municipales ont accueilli avec intérêt ces propositions qui privilégient la valeur symbolique d'un aménagement urbain de préférence à des critères d'ordre uniquement pratique. Quelles seront les conséquences réelles de ce nouveau type de dialogue entre créateurs et hommes politiques?

Il est aussi, par ailleurs, possible que certaines des idées émises lors de cette charette soient retenues et même adoptées par des promoteurs. Pourtant, là ne réside pas l'objectif essentiel de cet exercice. En effet, cette manifestation voulait faire valoir l'intérêt d'utiliser le principe de la consultation élargie ou du concours comme processus de choix d'une firme d'architectes pour les travaux publics. L'expérience de cette charette représente aussi un jalon dans la concrétisation d'une communication sans confrontation des créateurs avec les autorités politiques, en vue de la réalisation d'un objectif commun: la création d'un environnement de meilleure qualité, dans ce cas-ci, en milieu urbain.■

Odile Hénault est architecte.

La révolution industrielle

un patrimoine à découvrir

par Alain Duhamel

Au moment où notre société s'engage inexorablement dans un virage technologique, des voix, de plus en plus nombreuses, font entendre un discours nouveau. Évoquant un siècle de révolution industrielle, elles plaident, encore confusément il est vrai, la conservation et la mise en valeur d'un patrimoine architectural, technique, social et culturel qui fut longtemps méprisé.

L'opinion publique peut encore s'émouvoir, heureusement, à la vue d'une église, d'un manoir seigneurial, d'un moulin ou d'une fortification que l'oubli ou la négligence menace. Elle n'a pas encore pris conscience d'un patrimoine industriel qui, peut-être plus que tout autre, a façonné son habitat urbain et son mode de vie.

Cela tient tout à la fois de la nouveauté du sujet que de la nature même des lieux visés. L'architecture d'une usine n'a pas, à première vue, la puissance d'évocation de l'opulente architecture des banques; les zones industrielles anciennes, délaissées, passent plus facilement pour des zones urbaines à rénover que pour d'éventuels arrondissements historiques; l'usine ou l'entrepôt se prêtent à tous les recyclages pourvu que soit évacué tout rappel de ses fonctions d'origines.

Le symbole le plus représentatif de la révolution industrielle ne se trouve-t-il pas, justement, dans ces ensembles gigantesques, presque monstrueux, qui ont, depuis la première moitié du XIX^e siècle et jusqu'à la Grande dépression, constitué

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Dans le Vieux-Montréal, à proximité du port, les Écuries d'Youville recyclées en bureaux étaient en réalité des hangars à potasse qu'avaient fait construire les frères Jean et Tancrède Bouthillier, au début du siècle.

l'infrastructure de la société industrielle? À leur manière, ces ensembles industriels entreront dans l'Histoire comme des monuments représentatifs d'une époque où la société canadienne, essentiellement rurale, s'est muée en société urbaine, tout comme les cathédrales représentent le Moyen-Âge.

"J'ai souvent pensé", écrit Mme Danielle Dionne, du Service linguistique de la compagnie Northern Telecom qui a toujours ses immeubles au canal Lachine, "en pénétrant dans ces immenses structures de béton et d'acier que sont nos usines d'aujourd'hui, qu'il y a une ressemblance, non pas esthétique, bien sûr, mais humaine et sociale, entre les grands sanctuaires des siècles passés et ces immenses aires de travail collectif que sont nos fonderies, nos hauts fourneaux, nos mines, nos filatures, nos scieries, nos papeteries, nos raffineries, nos moulins, bref, nos usines de l'ère industrielle."

Au Canada, il existe peu d'exemples de lieux industriels qui aient été conservés et mis en valeur en leur qualité de témoins de la révolution industrielle. L'un d'entre eux se trouve au parc historique national des Forges du Saint-Maurice. L'histoire même de cet ensemble industriel, qui débute vers 1730 et se poursuit jusque dans la seconde moitié du XIX^{e} siècle, lui confère un caractère exceptionnel. On ne peut cependant l'identifier sans moult nuances comme un témoin représentatif de la période de la révolution industrielle au Québec.

Dans cette région, la chaîne des barrages et des centrales hydroélectriques, depuis la petite centrale de Saint-Narcisse (1887) jusqu'aux centrales de Shawinigan et Beaumont (mise en service vers 1953) représente beaucoup mieux, parfois d'une manière spectaculaire, le processus d'industrialisation de l'arrière-pays québécois. Shawinigan et Grand-Mère offrent des exemples remarquables de vastes complexes industriels articulés autour d'une source inépuisable d'énergie. Hydro-Québec, avec le concours des autres grandes entreprises de la région et le gouvernement québécois, songe à mettre sur pied en ces lieux un centre vivant d'interprétation de l'industrie.

Plusieurs immeubles industriels ou à caractère industriel dans les zones urbaines les plus anciennes n'ont pas survécu aux profondes mutations du tissu urbain survenues après la seconde guerre mondiale. Les autoroutes en ont arasé plusieurs, la tertiarisation des centre-ville et la "stratégie" du développement industriel, privilégiant les parcs industriels de la périphérie urbaine, ont favorisé un exode de l'activité industrielle vers des quartiers nouveaux.

On reste étonné à la lecture du Répertoire de l'architecture industrielle, que vient de publier la Communauté urbaine de Montréal, de constater qu'il reste encore un bon nombre d'immeubles industriels dans la zone portuaire de Montréal et dans la zone du canal Lachine qui fut, au tournant du siècle, la concentration industrielle la plus importante du pays.

La zone portuaire de Montréal

Dans les zones urbaines qui possédaient déjà un caractère historique, le Vieux-Montréal ou le Vieux-Québec, par exemple, les immeubles industriels, protégés de la démolition sans être directement visés par le classement en arrondissement historique, ont survécu après plusieurs années d'abandon. Il semble totalement exclu, toutefois, qu'ils retrouvent une activité industrielle. La mise en valeur des immeubles industriels des arrondissements historiques et portuaires de Montréal et de Québec suit la bonne fortune du recyclage. Les entrepôts, comme ceux du Cour Le Royer, recyclés en résidences luxueuses, ou ceux des anciens hangars à potasse des frères Bouthillier (Écuries d'Youville, recyclées en bureaux) deviennent les enveloppes d'une stratégie de réappropriation du bâti urbain dans le but de repeupler un quartier déserté.

Dans le vieux port de Montréal, il n'a pas été possible de conserver et de mettre en valeur un des deux élévateurs à grains dont l'architecture, au début du siècle, préfigurait déjà les grandes oeuvres du fonctionnalisme. La Société immobilière du Canada (Le Vieux port de Montréal) a préféré les démolir pour créer de nouveaux espaces à construire et n'a pas retenu les hypothèses de recyclage proposées par des mouvements tels Sauvons Montréal et l'Association du vieux port.

Là où l'industrie a continué d'occuper les lieux où elle s'était établie, les immeubles, dans la plupart des cas, sont méconnaissables au point où il est difficile de retracer dans la lecture des murs et des volumes la chronologie du développement et de l'évolution.

"De tous les édifices répertoriés jusqu'à maintenant", peut-on lire dans le Répertoire d'architecture industrielle de la CUM," les bâtiments industriels sont, de loin, ceux qui ont été le plus souvent agrandis ou transformés et qui ont le plus souvent changé d'occupant ou de fonction. Plusieurs des modifications architecturales associées à ces changements ont souvent été faites à la hâte par des industriels moins préoccupés par un souci d'esthétique que par l'urgence d'agrandir ou de réorganiser leurs bâtiments pour contrer la concurrence, changer leurs techniques de production ou répondre rapidement à une augmentation de la demande pour leurs produits."

Qui pourrait deviner, derrière l'imposant ensemble de la brasserie O'Keefe, à Montréal, le petit immeuble de pierre, encore debout, où logeait vers 1860 la brasserie de William Dow?

La brasserie Molson, l'une des plus anciennes sociétés industrielles du Canada, se trouve toujours au même endroit où elle s'est établie, vers 1786. L'imposante façade en pierre de son immeuble, exceptionnelle pour un bâtiment industriel construit vers 1913, comporte quelques éléments des édifices qui se trouvaient là, au XIXe siècle, à quelques pas du courant Sainte-Marie et de la prison du "Pied du courant".

CUM

La Brasserie Molson, qui s'est établie en 1786, rue Notre-Dame est, à Montréal, est l'une des plus vieilles entreprises industrielles canadiennes et la première à s'être installée dans le quartier centre-sud de la ville. L'immeuble qui l'abritait sera démoli pour faire place à de nouvelles installations modernes. La façade de pierre sera cependant conservée intacte.

En bordure du canal Lachine

Un lieu, plus que tout autre au Canada, se prête à l'aménagement d'un centre d'interprétation de l'industrie. Il s'agit du canal Lachine, vaste complexe industriel qui, pendant tout le siècle de la révolution industrielle, a réuni la concentration la plus importante d'usines de tous les types d'industries (fonderies, filatures, raffineries de sucre, manufactures de machines-outils, entreprises de services, etc.).

"La consécration du secteur du canal Lachine comme zone privilégiée du développement industriel en cette deuxième moitié du XIXe siècle

Qu'adviendra-t-il de la raffinerie de sucre Redpath située en bordure du canal Lachine et aujourd'hui désaffectée? Sera-t-elle démolie, transformée en coopérative d'habitation ou accueillera-t-elle un musée de la science et de la technologie doublé d'un centre d'interprétation de l'industrie?

Fisch et Godin

Dans la zone du canal Lachine, un des plus riches témoins de notre patrimoine industriel, non loin de la raffinerie Redpath s'élève un immeuble industriel remarquable par son architecture. Il s'agit de l'édifice Corticelli, une ancienne filature de soie construite vers 1884. Son avenir est incertain.

Fisch et Godin

a forcément influé sur l'organisation des réseaux de chemin de fer mais, fait encore plus important, a amené la création des villes ouvrières de Sainte-Cunégonde, Pointe Saint-Charles, Côte Saint-Paul et Saint-Henri qui occupent une place importante dans l'histoire ouvrière montréalaise… "L'architecture industrielle du secteur du canal Lachine" lit-on dans le répertoire de la CUM, "est typique de la révolution industrielle et correspond à ce que les Anglais ont appelé, avec raison, une architecture d'ingénieurs…"

Le patrimoine industriel du canal Lachine apparaît, dans l'état actuel des choses, le plus menacé. Nous sommes dans une zone industrielle en déclin où se trouve plusieurs immeubles inoccupés, dans l'attente d'une nouvelle vie ou d'une démolition.

La raffinerie Redpath, imposante par son volume, a été presque continuellement en chantier entre 1854 et 1926. Après l'ouverture de la voie maritime du Saint-Laurent, la raffinerie, ne pouvant plus exploiter un canal désaffecté, a déménagé ses installations, ses archives et sa machinerie à Toronto. Les immeubles de Montréal, inoccupés, vidés de leur contenu, sont destinés à la démolition.

Ce serait chose accomplie si, l'an dernier, des citoyens de la Pointe Saint-Charles n'avaient proposé de recycler ce vaste ensemble en coopératives d'habitation. De son côté, la Ville de Montréal songe à y établir un musée de la science et de la technologie doublé d'un centre d'interprétation. Pour l'heure, l'affaire en est là: la démolition de l'usine Redpath est stoppée mais aucun projet précis de réutilisation de l'immeuble n'est pour l'instant confirmé.

Non loin de la raffinerie Redpath, un autre immeuble remarquable par son architecture, a un avenir incertain. Il s'agit de l'immeuble Corticelli, une ancienne filature de soie construite vers 1884, qui puisait son énergie hydraulique à même un embranchement du canal Lachine aménagé sous l'usine.

Ailleurs, dans la zone comprise entre l'extrémité ouest de l'arrondissement historique de Montréal et la ville de Lachine, on trouve plusieurs autres ouvrages, bâtiments et immeubles désaffectés, abandonnés, sans avenir défini.

D'où proviendront les secours? Ce patrimoine authentique, représentatif de la révolution industrielle, porteur de l'identité de Montréal, métropole industrielle, tombera-t-il dans l'oubli?

Sauver le patrimoine industriel dans les quartiers ouvriers

Deux projets tentent depuis quelques années de mettre en valeur certains aspects sociaux et urbains de la société industrielle. Il s'agit de la "Maison du fier monde", dans le centre-sud de la ville, et de L'Atelier d'histoire Hochelaga-Maisonneuve, dans l'est. Du côté du canal Lachine, il n'y a pas d'organismes correspondant...

La "Maison du fier monde" tente de mettre en valeur le patrimoine social et ouvrier dans un projet d'écomusée (musée sans murs qui loge dans la vie actuelle du quartier). "Comme instrument de rappel du passé et comme lieu de rencontre, la Maison du fier monde est un moyen privilégié pour recréer la fierté des résidents du quartier centre-sud" lit-on dans les documents du projet. Ce quartier avait autrefois ses institutions et sa cohérence sociale. L'autoroute Ville-Marie, l'immeuble de la société Radio-Canada, les incendies et les démolitions lui ont coûté quelques milliers de logements et plusieurs petites entreprises artisanales et commerciales, pourvoyeuses d'emplois. Désarticulé par un développement urbain aveugle, ce quartier tente de reconstituer son tissu social en puisant d'abord dans son identité de quartier ouvrier, en fouillant dans le patrimoine de ses anciennes usines et de ses institutions. "La fierté retrouvée sera le moteur d'une solidarité nouvelle dans le centre-sud et d'une prise en charge de l'avenir du quartier par ceux qui l'habitent."

Plus à l'est, l'Atelier d'histoire Hochelaga-Maisonneuve s'intéresse à l'aventure de l'ancienne ville de Maisonneuve, celle que l'on a surnommé, au début du siècle, la "Pittsburgh du Canada". Son projet consiste à créer un centre d'interprétation du développement industriel et urbain qu'il souhaiterait aménager dans l'ancienne caserne des pompiers de Maisonneuve, rue Notre-Dame, construite vers 1914 par Marius Dufresne dans le style de l'architecte américain Frank Lloyd Wright.

Entre 1883 et 1918, date de son annexion à la ville de Montréal, la ville de Maisonneuve mettra à exécution un véritable plan d'aménagement d'une banlieue industrielle qui n'avait rien à envier aux plans d'urbanisme et de développement industriel qui ont donné naissance, dans les vingt dernières années, à la région métropolitaine de Montréal. Le centre d'interprétation se propose, à l'aide de documents, de modules animés, de cartes et d'objets témoins d'illustrer le processus d'industrialisation, depuis la facture artisanale jusqu'à la robotisation, et le processus d'urbanisation qui se développe en parallèle. Le projet, ambitieux, compte utiliser le quartier Maisonneuve comme un document vivant, témoin de la société industrielle montréalaise et québécoise.

La "Maison du fier monde" et l'Atelier d'histoire Hochelaga-Maisonneuve comptent parmi les plus ardents promoteurs de la sau-

La W.C. MacDonald's Tobacco, rue Ontario est, dans le quartier Hochelaga. Cette usine, encore occupée, est un exemple d'architecture néo-renaissance. L'imposante tour carrée, surmontée d'une balustrade et percée de quatre horloges renferme les escaliers.

vegarde et de la mise en valeur du patrimoine industriel. Au canal Lachine, pourtant si riche de témoins patrimoniaux, nous sommes dans le vide comme si, déjà, son histoire n'avait plus d'avenir…

Les intentions de développement urbain de l'administration municipale prévoient une occupation mixte (zones résidentielles, commerciales, industrielles, etc.) en bordure du

Fisch et Godin

L'American Can, boulevard Pie IX, dans le quartier Maisonneuve, à Montréal, une usine de fabrication de boîtes de conserve, toujours en opération. Ce bâtiment construit en 1918 est intéressant pour l'utilisation du béton armé, une innovation à l'époque, et les éléments Art-Nouveau qui ornent sa façade principale.

canal. La stratégie de développement industriel de la Ville de Montréal, dans la mesure où elle favorise la réhabilitation à des fins industrielles des usines anciennes, pourra, si elle connaît du succès, redonner vie à quelques-uns des immeubles.

Dans d'autres cas, le recyclage et l'insertion de nouveaux bâtiments favoriseront la construction d'habitations. Ces interventions ont certes un évident intérêt urbain, mais elles évacuent en même temps le caractère industriel des lieux et, par là, la valeur de cet exceptionnel et riche patrimoine, témoin d'une époque désormais révolue. L'invasion de la bureautique et de la robotique laisse entrevoir des lieux de travail qui n'auront rien de commun avec les grandes usines du siècle dernier.

Le canal proprement dit appartient à Parcs Canada. Sa mise en valeur, entreprise depuis plusieurs années, doit se poursuivre dans la perspective de l'aménagement d'une longue bande de terrains à des fins récréatives et d'interprétation historique. La seule présence d'un équipement de cette qualité suffit à susciter des pressions de développement urbain dans lequel le patrimoine industriel ne paraît guère y trouver sa place et son rôle.

La mise en valeur du patrimoine bâti peut se présenter comme l'une des avenues d'aménagement, comme l'une des façons de concevoir le devenir du territoire. Il apporte aux lieux une dimension et une valeur d'identité unique. Un parti-pris en faveur du patrimoine industriel, dans le secteur du canal Lachine comme dans tous les autres secteurs industriels anciens, changerait radicalement la perception des lieux urbains et, partant, la nature et l'importance des interventions. Un jour, peut-être, parlerons-nous d'un arrondissement industriel comme on parle aujourd'hui d'un arrondissement historique ou d'un arrondissement naturel. C'est une façon différente et plus respectueuse de l'histoire d'entrevoir l'avenir.

Pour l'heure, des priorités d'intervention se dégagent. En premier lieu, il importe de faire l'inventaire des lieux et des industries, des techniques et des documents. La tâche est urgente dans la mesure où la robotique annonce de profondes transformations.

Les milieux d'affaires et d'industrie doivent être sensibilisés à l'importance et à la richesse du patrimoine qu'ils détiennent. Ils n'ont pas été habitués à tenir pour intéressantes ces vieilles machines et ces boîtes d'archives lesquelles, devenues encombrantes, prennent, plus souvent qu'autrement, le chemin du dépotoir.

En second lieu, les pouvoirs publics devront se préoccuper du patrimoine industriel de la même manière qu'ils se sont intéressés aux oeuvres d'art et aux archives. Non seulement faut-il soutenir et encourager des initiatives comme celles de la "Maison du fier monde" et de l'Atelier d'histoire Hochelaga-Maisonneuve, mais il faudra aussi investir dans des projets publics de mise en valeur et d'interprétation dans les lieux où le potentiel apparaîtra le plus élevé.

Avant que le XX^e^ siècle ne nous conduise au troisième millénaire, il a le devoir impérieux de constituer son patrimoine social, culturel, technique et économique. Les générations à venir ne nous pardonneraient pas de laisser se dilapider une richesse historique sans laquelle elles auront quelque peine à définir leur avenir.■

Alain Duhamel est journaliste au *Devoir*

The liveable winter city

Article by Val Werier

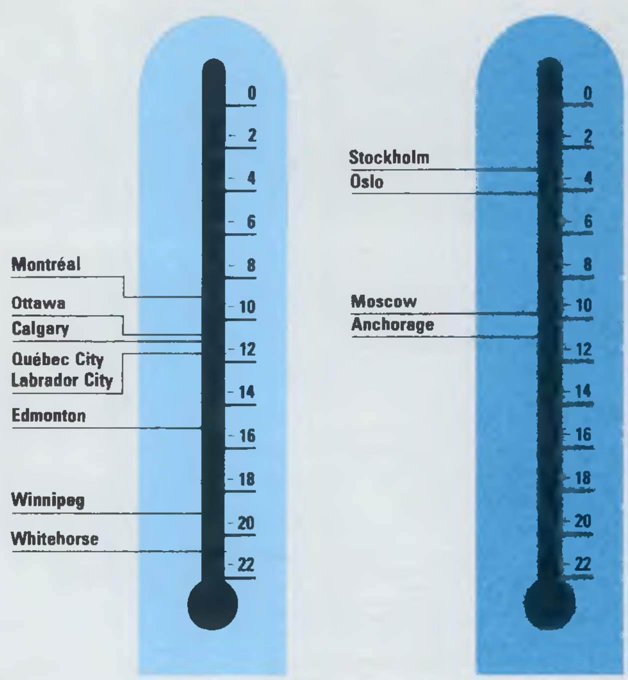
With only the most cursory glance at private housing across Canada, a few facts emerge. The skyline of Calgary is not unlike that of Dallas, Texas. Suburban homes in Winnipeg are similar in design and colour to those in semi-tropical Los Angeles.

The conclusion? Canadian cities have been planned as if winter were a fleeting phenomenon. Yet, Canada, close behind the Soviet Union, is almost the coldest country in the world. Here are a few chilling statistics supplied by Canada's Atmospheric Environment Service:

- the annual average mean temperature in the USSR is 2°C compared to 3.3° in Canada
- Montréal has the same annual mean temperature as Stockholm
- Toronto's climate is similar to that of Oslo
- Saskatoon is colder than Anchorage, Alaska
- Western Canada has the coldest big cities in the world outside the Soviet Union.

It is only in recent years that planning for the winter climate has emerged as an important issue, both in physical design and social structures. The energy crisis, improved technology, and a greater concern for the character of our cities has prompted this interest in the winter city.

Mean daily temperatures for January in degrees Celsius.



It is interesting to note that the mean temperature for Yakutsk, Siberia in January is −43.2°C.

Remarkable advances have been made in designing energy-efficient houses. The first "conservation house" built in Regina is heated at a cost of only $60 a year. In Winnipeg, efficient new houses, highly insulated and tightly sealed, require only four baseboard electric heaters and can be heated for $125 a year at most, depending on orientation to the sun.

City Planners Crusade for Winter Comfort

The winter city campaign in Canada has been sparked by John C. Royle, writer and researcher, one of those public-spirited citizens who devotes his time freely to a cause – his of making our cities more liveable. He drew his inspiration from Ralph Erskine, a brilliant English-born architect, who moved to Sweden and began to crusade for winter living a few decades ago, designing towns and structures sensitive to the climate. Another advocate is William C. Rogers, director of the World Affairs Centre at the University of Minnesota, in Minneapolis, who organized conferences on winter living. "The movement is now firmly entrenched across Canada and has within it some of our outstanding architects," said Royle.

One such architect is Eberhard Zeidler, who designed Toronto's Eaton Centre, the largest enclosed shopping centre in the world. It is an airy, bright structure with orientation to the outdoors and comfortable in all seasons. Recently it has become Toronto's greatest tourist attraction.

In Saskatoon, Raymond Moriyama's conceptual plan of living in harmony with the winter environment, has been approved for the Meewasin Valley Project. The word Meewasin is Cree for beautiful. Moriyama envisions the Saskatchewan River Valley which extends through and beyond the city, as a recreation area for both winter and summer. Behind a riverside promenade lined with shops and hot-snack bars will be glass-enclosed, elevated walkways, linked with theatres, playhouses and restaurants.

Lanes for vehicles, now little used, will become a network of skiing and jogging paths. Open and covered walkways will be available to pedestrians. The principle behind the plan is to allow people to enjoy the winter while being protected from the cold.

That is also the object of Calgary's Plus 15, the skywalk connecting buildings where people can have the opportunity of walking in a controlled climate. The system has already proved successful in Minneapolis, and is being slowly expanded in Winnipeg. The problem is to make these walkways known and accessible.

One of the most striking developments in indoor environment is that of Fermont, a town of 10 000 in sub-arctic Québec. The main street is an enclosed multi-functional centre, three-quarters of a

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1 **Ottawa's Rideau Centre, like Toronto's Eaton Centre, provides tree-lined walkways and glass elevators to winter-weary residents.**

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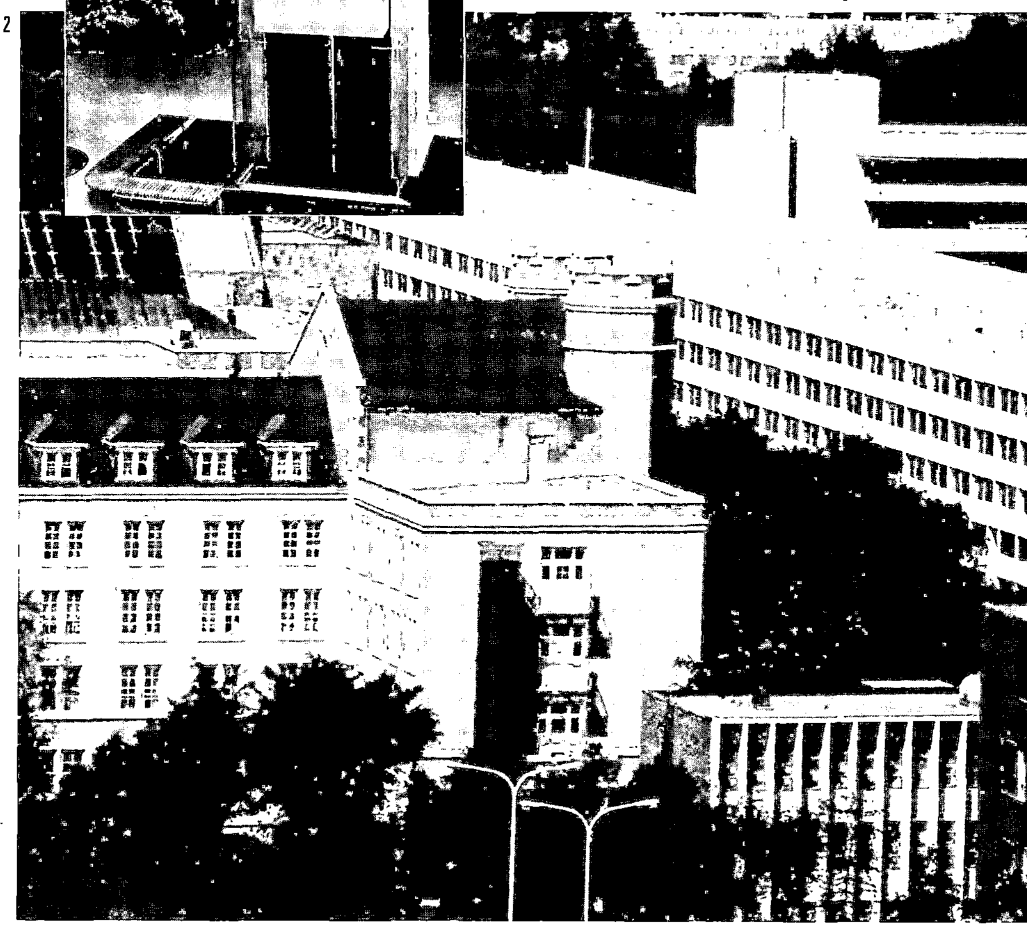

2 **The Housing Union Building at the University of Alberta, Edmonton Campus is sometimes hailed as the winter city prototype. It is a 230 metre long glass-domed street linking northern and southern sections of the campus.**

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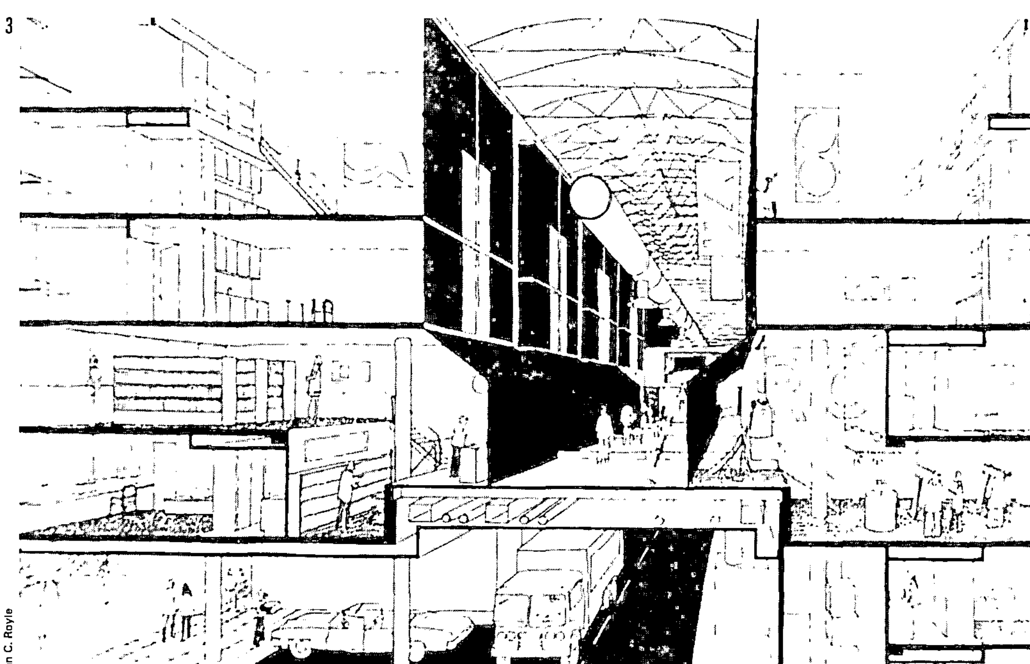
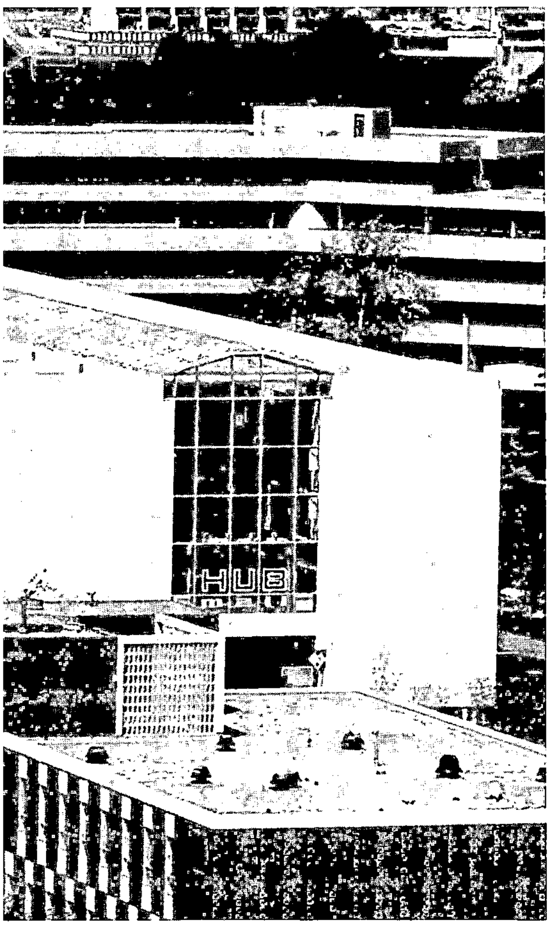

John C. Royle

3 This diagram shows that the HUB building is much more than a domed thoroughfare.

4 Large buildings tend to deflect the wind so that near gale-force winds are sometimes created at the pedestrian level. Correct architectural planning can prevent this problem.



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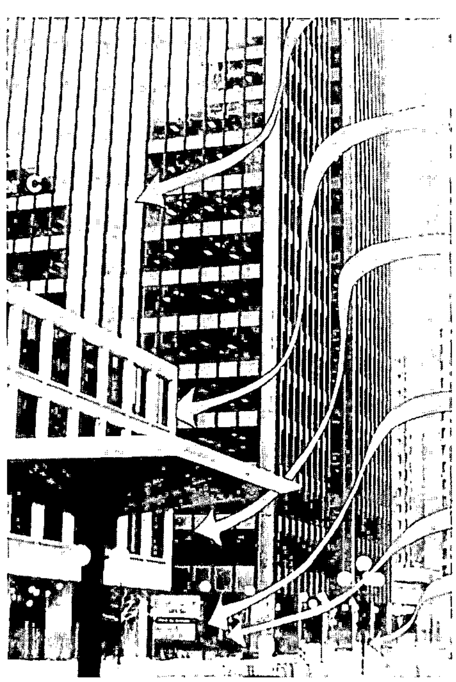

John C. Royle

mile long, which includes all the town services and amenities and is connected to schools, hotels and other institutions. The main street has been designed in a most novel way. It is a windscreen, sheltering Fermont from the prevailing winds. The question arises—will the human dimension be sacrificed in such big projects? This criticism has been levelled at the Eaton Centre in Toronto.

A Conference in Winnipeg Considers Alternatives

Last winter, the Canadian Housing Design Council together with the University of Manitoba held a conference on the "Liveable Winter City" in Winnipeg. At the conference, Jack Diamond, Toronto architect warned against adopting the "monumental solution" executed at the expense of the quality of life.

"Domed cities could create as many problems as they solve," said Mr. Diamond. "The principal problem with such mega projects is the lack of choice... with far less capital cost and much greater individual freedom, the liveable winter city can be created by many small interventions.

"For example, a tall building with vertical fins has the effect of ducting the wind down to pedestrian level. Horizontal breaks can deflect downdrafts of this kind. Canopies or arcades over the sidewalks can also protect the pedestrian. Well-designed sidewalks can be closed-in during winter, opened in summer.

"Building parapets can catch snow rather than dumping it at entrance doors or on paths or drives. Underground hydro substations, which lose heat, can be placed at bus stops to keep sidewalks dry and free of ice. Building profiles can act in the same way as a smoke shelf in a chimney and create air circulation to clean out automobile emissions from the streets. The colour and materials on the face of buildings can reduce glare and increase heat absorption."

Urban sprawl is costly in a winter city for numerous reasons: transportation, snow clearance, the viability of public transit, energy consumption, extension of services and exposure to wind. Sprawling cities are uncomfortable in winter.

Winnipeg, noted Diamond, is similar to most North American cities in the percentage of land devoted to residences. He maintained that residential land consumption can be cut in half, including suburban areas, without changing the house form significantly. He compared Amsterdam, a pleasant city in which to live and work, with Dallas, where he has been a lecturer at the University of Texas. Dallas occupies 620 km^2, more than ten times the area of Amsterdam, which has a slightly larger population.

Wind is the Worst Culprit

Many large cities have simply disregarded the elements, particularly wind. Little or no care is taken to prevent the buildup of winds. In Seattle a bank plaza is so windy that at times the bank must string safety lines to help people across, notes the American Planning Association, in a report on climate and city planning. In Boston, Copley Square was so badly designed that fierce winds were created which blew out the windows of the Hancock Building. Winnipeg's famous

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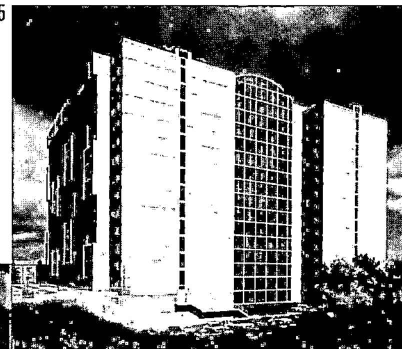

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5 **The exterior of this Winnipeg apartment building presents a pleasing appearance to passersby even though most of the apartment balconies face inward toward the central courtyard.**

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6 **Apartment dwellers in Winnipeg can escape outdoor blizzards in January and relax in a tropical garden.**

Portage and Main is not for the weak or handicapped in winter for they can be blown off their feet.

John D. Welch, a professor in the Faculty of Architecture at the University of Manitoba says: "If challenged to design the windiest environment, one would be hard pressed to find a better solution than dead-straight, wide streets with enough higher buildings on the downwind side to create a gale-force, street-wide vortex. Unfortunately, much of Winnipeg seems to have developed in this way, apparently for the convenience of the land surveyor and the motor-vehicle traffic planner. Long, straight, wide streets are good for high-speed traffic but not for the pedestrian."

The deflection of the wind by high buildings and the resultant vortex action creates winds one-and-a-half to two times greater than normal for pedestrians to fight. It's the worst possible condition for people walking in winter.

"Models of highrise buildings are frequently tested in wind tunnels to determine their structural stability," says Professor Welch, "but seldom are tested to determine the wind effects on pedestrians."

"The solutions are simple," says Professor Welch, and he suggests these measures:

- avoid slab buildings facing prevailing winds
- minimize ground level turbulence by using circular or hexagonal shapes for highrises
- reduce ground-level winds by stepping back and providing podiums at the base of highrises
- construct canopies or roofed enclosures over pedestrian sidewalks and over pedestrian areas at the base of buildings
- do not place doorways near the corners of buildings as these are the areas of greatest wind speed
- modify horizontal winds near ground level by the use of trees, walls and screens.

Some cities are taking action to subdue winter winds. Calgary requires a model simulation study of each proposed development to measure the effects of winds on pedestrians. Edmonton calls for an impact wind statement, as well as an examination of what a proposed building exceeding four storeys will do in creating shadows and blocking out the sun. Ottawa has been conducting a study on the effect of wind

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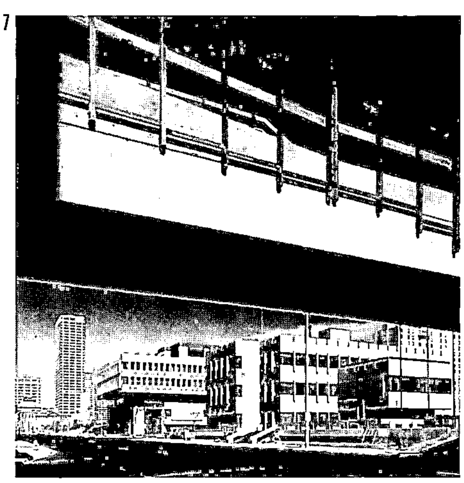

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7 The covered walkways in Calgary, called Plus 15's because they are 15 feet above the ground, allow year-round comfort.

8 Fountains and benches provide space for main-street activities even in the dead of winter. Fountains lend an air of tranquillity to the shopping mall.

8

CMHC

on pedestrians in the downtown core. The aim is to take measures to reduce excessive wind in existing areas and around future buildings.

The Sun can Help

Beneficial sun rays are also ignored in winter cities, such as in Winnipeg, which is in the sunbelt of Canada. The trick is to block the wind and admit the sun. Highrises should be located so as to allow the sun to shine on pedestrians and adjacent buildings.

"If we have sheltered areas with exposure to the sun," advised Professor Welch, "we can reverse the windchill effect. Assuming there is no wind, if you walk from a shaded area into the sun, there is an effective difference of 10°C. It feels that much warmer than it really is, like a reduction in windchill."

Housing subdivisions should be planned to permit solar access, with 50 per cent or more windows facing the sun.

"The orientation of buildings may vary from approximately 20° east to 20° west of south, without losing significant solar warmth. Even if all houses followed the traditional pattern of facing the street, there would still be the possibility of a total of 40 degree variation in east-west street orientation to avoid the monotony of uniform, parallel, straight residential streets."

Regarding snow, Professor Welch warned that wind-sheltered areas may also be subject to drifts. He advised using permanent snow-drift controls such as ditches, earth berms, and landscaping fences in trouble areas.

Gustavo da Roza draws Conclusions

Taking an overall view of the profession, Professor Gustavo da Roza, of the University of Manitoba Faculty of Architecture, and former chairman of the Canadian Housing Design Council, lamented the general indifference to the environment.

"Architectural styles rapidly transported from more temperate regions, and the constant demand for quick solutions by developers continue to erode the efforts to work towards an architecture more responsive to our environment," said da Roza.

"For each successful example of an honest effort to express various logical responses to winter conditions," da Roza said, "we have scores of buildings which ignore our physical environment. This results in a proliferation of projects that cost more to heat, to cool, and to maintain."

In addition to designing for the environment, da Roza urged architects to honour the three conditions set down by John Ruskin in the last century. They were commodity, to meet functional needs; firmness, in making the building sound; and delight. "A building must provide delight and pleasure to the user and the community at large, responding to cultural values, developed sense of composition, use of light, colour, texture, and visually integrated with the surrounding natural or man-made environment."

The Canadian Liveable Winter City Association has been formed partly as a result of the conference in Winnipeg last winter. Members include urban designers, architects, planners, and interested members of the public.

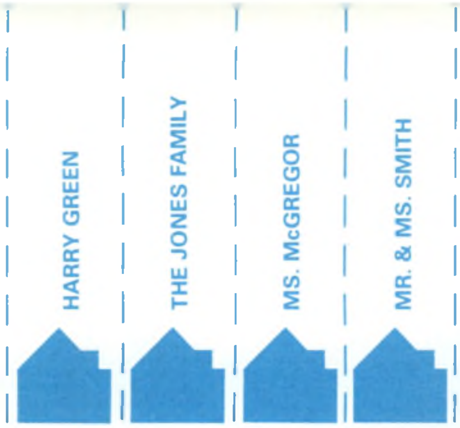
The CLWCA hopes to facilitate communication among those interested in Canadian urban centres and their interactions with winter and/or northern environments, to promote positive approaches to living in "frost belt" communities.

For further information contact: Patrick Chen, Planning Branch, Room 502, Ottawa City Hall, 111 Sussex Drive, Ottawa, Ontario, K1N 5A1, (613) 563-3000.

The future outlook is for improved designs for winter living because of the rising interest in making cities enjoyable in all seasons. Now the Canadian Liveable Winter City Association has been formed, composed of planners, architects and interested citizens to act as a clearing house for new developments and to promote better planning for winter.

John Royle, a founder of the association said, "There is a need for imaginative and innovative solutions to our winter environmental problems. A national concerted effort will find more and more solutions with governments, private firms, researchers, universities, media and the general public working together. The result could be important new industries, huge amounts of work for our architects, planners, builders, developers and others–a major lift to our economy."■

Val Werier chaired last winter's Winnipeg conference on "The Liveable Winter City". He is a member of the Canadian Housing and Design Council.



Small Lot Housing

Text by Russell Kelly

If civic planners and politicians in Vancouver and the surrounding municipalities could have one wish granted, it would be summed up in two words: more land. They all face the dilemma of finding room within their present boundaries for 126 000 more households before the turn of the century. Going beyond those boundaries is out of the question. Vancouver and the municipalities, collectively known as the Greater Vancouver Regional District or GVRD, are enclosed by natural barriers: the north shore mountains, the ocean, the U.S. boundary and the Fraser River Valley. The only solution is to build within the present GVRD, already the densest metropolitan area in North America, and on a par with European cities.

Planners predict the greatest demand will come from baby-boomers as they move into middle-age during the 80s and 90s. It is expected that most will prefer to live in single-family dwellings, but market forces and the economy in general are likely to limit the amount they will be able to pay for housing. In addition, the GVRD is running out of flat land, the cheapest to build on, so construction on sloping sites will further increase costs.

It is small wonder then, that small lot housing has already been attempted in several municipalities in Greater Vancouver. The surprising thing is that the concept hasn't caught on in a major way. It seems that administrative hurdles and red tape for both the construction industry and municipal governments have made development of small lot housing on anything but a trial basis all but impossible.

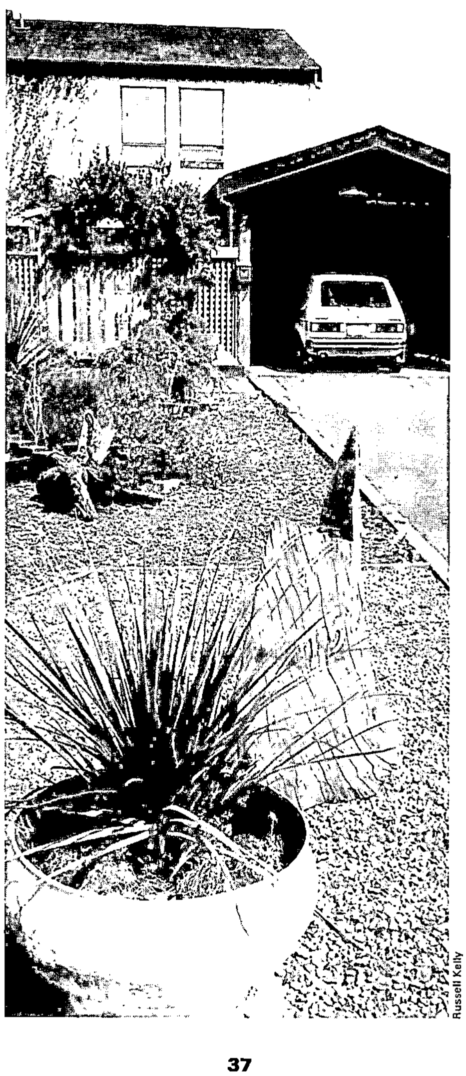
On the other hand, there is no lack of interest from home purchasers. Most small lot homes were bought as soon as they came on the market. They have even held their own in the volatile housing market of recent years.

For example, James Minor bought a semi-detached unit on a zero lot-line project in Richmond in 1976. He paid $38 000 for it and watched its value soar to more than $100 000 by 1981. Today similar units along the block fetch $85 000. Mr. Minor plans to sell soon and move, with his wife and child, into a larger home on a full-sized lot. For him the experience of living in a small home was a happy one.

"We had privacy in the backyard with our high fence. We also added a carport and landscaped the yard. We wouldn't have been able to do anything major to an apartment if we'd stayed there, and furthermore we wouldn't have the equity we have here." Minor and his family have paid off the mortgage on this home, and now have a sizeable down-payment for the next purchase.

Yoshida Court is another success story in small lot housing in Richmond. The development is built in a cul-de-sac on Frobisher Street. It has a picture-postcard appearance that is achieved by the winding street and the variety of house styles and colours. The imaginative design of

Canada Mortgage and Housing Corporation study to pinpoint resistance



Jim Minor bought this semi-detached unit in Richmond in 1976. The value nearly tripled in five years.

This carefully landscaped yard lends a feeling of spaciousness to the property.

the houses make them appear slightly larger than reality. Alex Jamieson, Special Projects Planner for Richmond, likens them to gingerbread houses. High fences surround the backyard of each unit, assuring privacy. Every unit is occupied and turnover is low; there is only one "for sale" sign in the development.

Not all Richmond's attempts at small lot housing were as pleasing. Jamieson traces the problems to the former zoning bylaws, which delineated the overall density of a development but not the individual lot dimensions. People were building regular sized houses without regard to the lot size. The result was some "ugly housing" according to Jamieson, who says the zoning bylaw didn't work in creating affordable, single-family housing. Now the council tries to encourage "comprehensive designing", where the entire project is planned right down to the landscaping and fencing, before construction begins. This avoids the situation where a developer applies to subdivide the property, then sells it piece by piece and lets the buyers build the houses. In Richmond, home builders could legally erect any shoebox-style structure as long as the building code and setback regulations were followed.

Municipal officials don't dispute the fallacy of this approach, and recognize the need to abandon standard practices of subdividing and selling land when attempting small lot construction. Yet many had to learn the hard way.

The City of New Westminster, adjoining the southeast corner of Vancouver, unwittingly permitted the construction of houses with more than 200 m^2 floor space on a lot barely twice that size. The result, according to Planning Technician Stephen Scheving, was the shoebox effect mentioned earlier.

Scheving says the problem was a legal one. The planning department has no legal right to reject the design of a single-family household that meets the standard guidelines.

In order to work within this constraint, New Westminster Council enacted bylaws requiring every applicant for small lot housing to apply for a rezoning permit. Before the permit would be granted, Council would review the designs that included landscaping and community areas. They will no longer rezone for small lot housing, especially large tracts with 40 or 50 lots without these design plans being included.

"It might be preferable eventually to create a 'development permit designation area' which cites environmental considerations to give the municipality power to control house design," adds Scheving.

Delta municipality chose the "designation area" concept and reported considerable satisfaction with the results. Although the controls are stringent, they have permitted the construction off 500 single-family units on small lots, all under 375 m² in area. The Deputy Director of Planning Services, Jag Dhillon, says that each house plan must be approved in advance and so far none of the small lot homes have proven detrimental to the area, either aesthetically or economically.

"In fact, the standard is higher than in the surrounding municipalities which lack design control", he beams. The majority of small lot developments approved were in cul-de-sacs joining internal roads, not the main arteries.

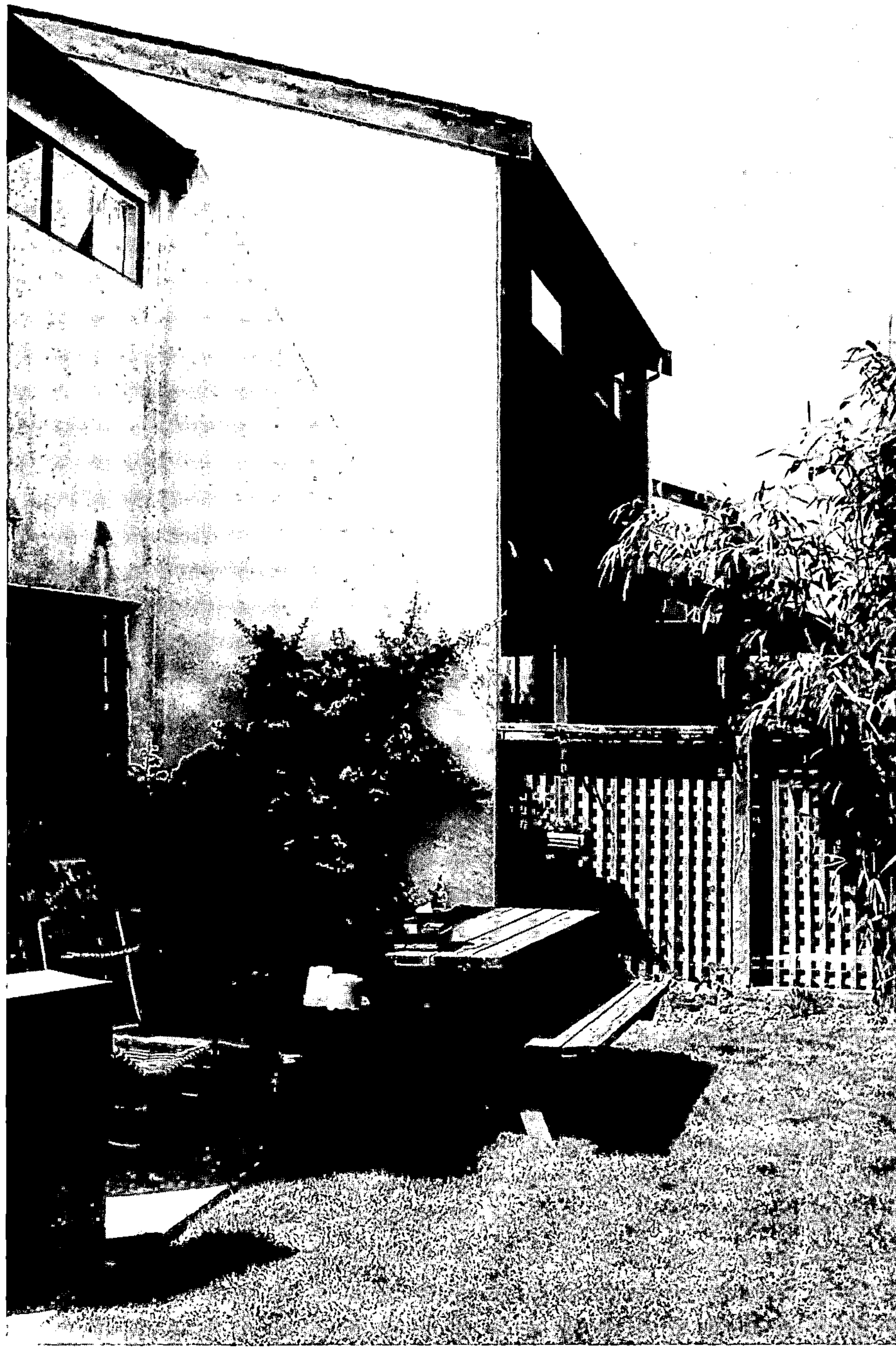
Another advantage of the comprehensive design approach used in Delta is that nearby residents see the complete plans before construction begins. Experience has shown they are more likely to accept a small lot development in their neighbourhood and less afraid of a drop in their own property values if they see the plans first.

The need for comprehensive planning however, deterred planners and politicians in Coquitlam, ironically home of B.C.'s first modern small lot developments. Coquitlam permitted small lot housing in 1976 with the approval of 13 metre wide lots around the Town Centre project and in various housing subdivisions. In the past seven years more than 1 500 small lot houses have been built and sold. However, as Planning Director, Don Buchanan points out, Coquitlam has consistently refused to permit lots smaller than 13 metres wide or 400 m² in area.

"We looked at the experience of other municipalities–the hurdles and problems they were having–and decided it was not something we wanted to become involved in",

he says. But even with 13-metre wide lots there is a new and pressing problem: "We're running out of flat land, and have to force new developments northward onto the slopes of the mountains," he warns.

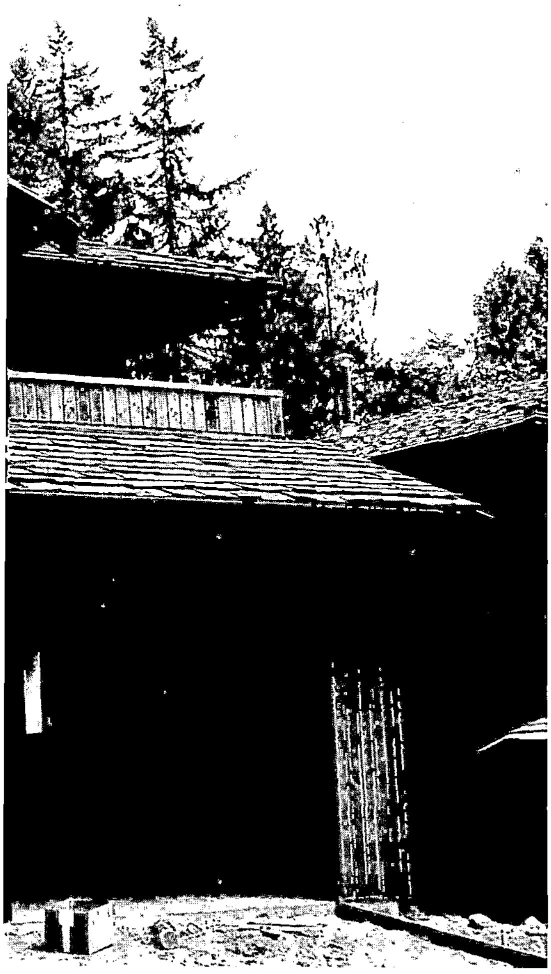
The latest attempt at building small lot houses on a mountain slope is on Banbury Drive in Coquitlam. The developer is incorporating passive solar energy techniques by running the street east-west and



Russell Kelly

Russell Kelly

Fences, trees and shrubs provide privacy for small lot homeowners.



◀Building on these narrow mountain lots presents special challenges to both architects and developers. Coquitlam requires lots to be no less than 13 metres wide.

orienting each house to the south. In addition, as a demonstration, one of the houses is insulated to a much higher standard than the rest with help from a federal 'R-2000' grant. The slope is not so steep that it requires retaining walls, but as new development moves higher up the slopes, these and other costly measures will be necessary, which will put these homes out of reach of most lower and middle-income purchasers. A possible area for small lot housing development is on large tracts of land owned by the B.C. Government on the south-facing slopes of Coquitlam. Buchanan insists they have potential but questions whether the government will sell the land below market price in order to stimulate the industry.

Neither the Coquitlam officials nor their colleagues in the rest of the GVRD, think small lot housing increases servicing costs to the municipality or causes a drop in the tax base. Patricia Baldwin, a Vancouver architect who recently completed a national survey of small lot housing for CMHC, contends that there are no

Russell Ke

losses of tax base because of the greater efficiency of small lot subdivisions.

"If anything, the municipalities do not have to subsidize the cost of services for these units as much as they do for full-size lots, because the frontages of the lots are so much less", she says.

Lorne Scott, Superintendent of Subdivisions in Coquitlam, agrees: "There's no difference to the municipality. The developer pays per lot, based on frontages. The additional connections to the mains would be the only source of increased costs but that would be minimal." While Coquitlam, Delta and other municipalities have never carried out studies of the difference in costs with small lot housing–for example the cost of additional schools, fire protection or garbage pickup–the consensus is that they would be marginal.

This matter is to be the subject of a two-pronged research study by Canada Mortgage and Housing Corporation. The Manager of Special Projects for the B.C. Region, Gary Hiscox, says the study will try to find out why the municipalities are blocking attempts at small lot development; at the moment only 29 per cent of the governments in the GVRD have small lot zoning in place.

"We hope to discern if the resistance is tied to the possibility of greater expenses. For example, more schools may have to be built due to the greater density of small lot construction," explains Hiscox.

In the second part of the study, CMHC is conducting user surveys, to determine how purchasers view the trade-offs. Hiscox says the underlying question will be, "Does it make sense to squeeze lot sizes this much? Smaller lots mean less privacy and flexibility. You can't expand. But when people start out to

Richmond's Yoshida Court has a winding street and imaginatively designed houses that give the feeling of spaciousness. Richmond's Special Projects Planner calls them "gingerbread" houses.

invest in housing, their decision must be based on: 'What can I afford?'" He adds that the basic concern of the municipality is to protect the public interest. "If they get a cookie-cutter approach to small lot housing, and if there is no room for additions, the public will question how sincere and knowledgeable their council is".

Hiscox is convinced that any blockage to small lot development has more to do with changing the zoning regulations and nothing to do with whether the principle of small lot housing is a sound one.

"We developed the criteria and tested them thoroughly in Mill Woods, (a suburb of Edmonton) Alberta." He says the results were satisfactory and became the basis for new CMHC guidelines.

However, not all developers follow the guidelines. "Only if they have to," cautions Patricia Baldwin, "such as, for mortgage approval". This doesn't mean that the houses are being erected below standard, but it does shift the emphasis for enforcement back to the municipalities.

Baldwin adds that she was surprised to find that not all of the municipalities in the GVRD were aware of the guidelines, in spite of an extensive education program four years earlier carried out by the Planning Department of the GVRD. A department planner, Burton Leon, points out that every possible detail was shown, including a model of the proposed bylaws.

Although some municipalities appear to have not noticed or forgotten the advice, others were obviously impressed and some even adopted the model bylaws word-for-word. Leon stresses that sooner or later every district will have to consider the problem.

"We are a land-short region. Access to downtown Vancouver is a consideration too. So while we have enough vacant land to house people at current densities until the year 2010, a lot of that land is far from downtown and would create difficulties getting to and from work. The idea is to economize with improved transportation systems but at the same time approve higher densities in existing residential areas."

Small lot housing in urban cores certainly fits the scenario sketched by Leon and others. So far it has been tried only sparingly, for example in Vancouver's Point Grey area and across the harbour in North Vancouver.

If history is any guide, the concept of small lots has already proved to be successful both in the urban cores and suburbs. Following World War II, "wartime housing" sprang up with distinctive 1½-storey units on small lots. Many of these developments survive. Some, such as small lots in North Vancouver, date back as far as the turn of the century. Then it was common to zone 10-metre wide lots, and city planner Judy Skogdtad says infilling on those lots is permitted to this day.

"Many people want to revert to that size lot," she observes.

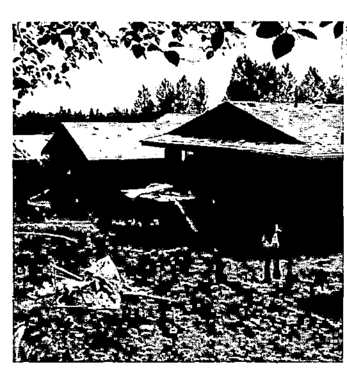
Some small lot subdivisions owe their existence to holiday-makers. In the early 1900s the Burlington Northern Railway subdivided its property in White Rock, 50 km south of Vancouver and now part of the GVRD. The resulting lots ranged in area from 250 m^2 to 320 m^2 and were snapped up by Vancouverites eager to buy a summer cottage lot overlooking placid Boundary Bay. Each weekend cottagers would commute to these hideaways via the BNR train.

A few years ago, at the height of the housing boom, the city of White Rock tried to revive interest in these cottage lots and commissioned a builder to construct 16 architect-designed houses. Unfortunately the market plummeted and the builder went bankrupt after finishing only one house. But Dan Janeski, a consultant planner for White Rock, believes the project will proceed once the market picks up.

"This," he says, "is a living experiment in the concept of small lot housing."

In spite of Janeski's assertion, it is more likely that serious experimentation with small lot housing will be carried out closer to urban cores. As Patricia Baldwin points out, "we have had no great successes here (in the GVRD) but what we have found elsewhere is that small lot developments were acceptable as a transition zone between high-density and single-family housing." Acceptable, that is, so long as criteria for quality and diversity and privacy were met. In the coming years, governments in the land-short GVRD will have little choice but to carefully consider these options.■

Russell Kelly is a free-lance writer in Vancouver.



Russell Kelly

Just about the only free land left for development in the GVRD are the mountain slopes.

Reviews

Mobility and Transport for Elderly and Handicapped Persons
edited by Norman Ashford, William G. Bell and Tom A. Rich.
New York: Gordon and Breach Science Publishers, 1983. pp. 383. Price: $57.50.

This book is one of a series on the planning and technological aspects of transport and on specialized transport. This particular volume focuses on the special transportation problems of elderly and handicapped persons. The reports are, in fact, proceedings from the July 1981, conference held at Churchill College, Cambridge, England.

The concerns of the conference have been divided into several general headings for easy reference, such as methodology and concepts, technology sharing and experiences in the field. Within these broad categories, about 37 papers are presented covering such topics as housing location and transport for the elderly and disabled, physical and attitudinal barriers, provision for the handicapped in bus design, vehicle/platform interfaces, and community initiatives.

The special transport problems of the elderly and handicapped present a paradox: those with the greatest need for mechanized transport tend to have the least access to it. Often they must rely on relatives and friends to drive them to the doctor, to visit friends, or to shops. Many elderly people are still able to walk, at least relatively short distances, to shopping plazas and grocery stores. However, even walking has become an expensive mode of travel since the price of shoes has pushed up the cost of a simple stroll down the street to about six cents per kilometer! The problem is compounded in Canada by the fact that about 10 per cent of the population is over 65 and receives only about 4 per cent of the total personal income of the nation. Statistics show that in fact elderly women receive even less than this overall average.

Inevitably, fifty or so authors of 37 papers will produce work of uneven quality. Overall, however, this volume is most useful as a selective reference. The general impression remains that progress in providing specialized transport for the elderly and disabled is disappointing for fundamental reasons. Low incomes, age and the preponderance of elderly women have discouraged private car ownership making it difficult for the elderly to travel on their own; while technological solutions in the public sector tend to be difficult and costly for the relatively few disabled persons who need special assistance. Considering the few people who need to use them, the elevators in the Washington, D.C. Metro stations are exceedingly costly compared to the heavily travelled escalators.

However, Canadian progress in providing facilities for the disabled in recent years seems quite impressive. In spite of disappointments and feelings of "tokenism", public buildings are now providing ramps for wheelchair access and specially designated parking spaces widened for easier manoeuverability exist in most public parking lots. Certainly, more needs to be done, particularly on the economic front. For example, fixed price automobile licences should be abolished for the elderly car user who usually has lower mileage than someone who drives to work every day. Airlines should be able to allow greater discounts to senior citizens and quotas on cheap, imported shoes should be abolished.

Unfortunately these matters are not usually covered in the conventional transport literature, and the old lady in tennis shoes–if she can afford them–remains a real problem in transport. She is aided mainly by subsidized transit and the inner-city bus. Clearly, as a society, we must address this pressing issue. *Mobility and Transport for Elderly and Handicapped Persons* delineates some of the problems and points towards solutions.

D.J. Reynolds is an author, economist and freelance writer.

Section a
a bi-monthly magazine published by Editions Section a Inc., Montréal.
Price $2.75.

Despite the appalling mortality rate among newborn magazines–witness the recent demise of George Baird's "Trace"–a new bi-monthly journal of architecture, *Section a,* has recently begun publication and three issues have so far appeared. The enterprise of Odile Hénault, the editor, and her colleagues and supporters must be applauded. There is undoubtedly room on the Canadian architectural scene for a serious journal that provides more than news of current projects and practice, and with its arresting cover graphics and unusual tabloid format *Section a* should capture the attention of bookstore browsers.

Even more unusual, perhaps, is that for the most part, the new magazine's content is readily comprehensible, even for those readers not solely concerned with matters architectural. Articles in the first three issues are concise, to the point, and couched in language (either English or French) that is refreshingly free of that miasma of impenetrable jargon so prevalent in the higher reaches of architectural journalism.

The stated purpose of *Section a* is to provide a forum in which architectural topics and issues can be presented and debated. The first three issues achieve this admirably with, inter alia, panel discussions on the federal government's methods of commissioning architects, and on the nature and direction of architectural education. The third issue contains several articles on the byzantine process used to select architects for the new National Gallery and Museum of Man, as well as an interview with Jean Boggs, head of the Canada Museums Construction Corporation. Indeed, with this third issue the magazine seems to have really hit its stride; it also contains a provocative article, by Romedi Passini, on the totalitarian tendencies evident in much of so-called post-modern architecture, and a brief polemic from Mort Rubinger on the current parochial ineffectiveness of Canadian architectural associations. What is lacking now, it seems to me, is a letters column in which readers can respond to the issues raised.

Although the tabloid format of *Section a* is an attention-getter, permits the use of larger than normal illustrations, and possibly is intended to convey an image of news coverage, I do have some doubts about its appropriateness. The large size is awkward to hold while reading and is a problem to store. Moreover, the newspaper image seems to me to conflict with the seriousness and detail with which the contents are presented.

The magazine has not been in existence long enough for an identifiable editorial approach to emerge, although the number of features devoted to Canada's architectural heritage suggests one probable line it may take. Another seems to be a lively scepticism about, or at least questioning of, received opinion and fashionable architectural cant. It is to be hoped that this attitude will develop further and that *Section a* will provide some relief from the interminable disputations about "post-modern" styles and significance.

Section a appears at a time of ferment in architectural thought Architects, having lost or rejected their former certainties, are groping for new directions. In the process they are exploring a great many blind alleys. *Section a* will perform a service if it can continue to provide analyses of the essentials on which to base an architecture that once more conforms to the criteria of "firmness, commoditie, and delight." I wish it well.

Lionel Loshak is an architect and planner of the staff of CMHC.

Just Published from CMHC

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Of interest to anyone who has to make decisions about the way a building should be run. The book promotes the efficient use of energy by encouraging the proper operation and regular maintenance of equipment. Practical guidelines and instructions for the operation and maintenance of various types of equipment are presented. Four appendices provide detailed examples and checklists that will help users apply the methods described in the book.
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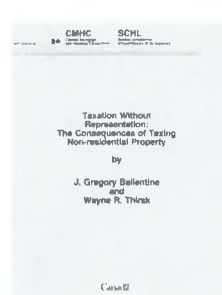

Taxation Without Representation: The Consequences of Taxing Non-Residential Property

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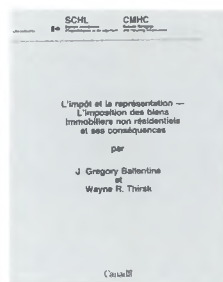

L'impôt et la représentation: L'imposition des biens immobiliers non résidentiels et ses conséquences

Un examen économétrique des conséquences de l'attribution des impôts fonciers sur propriétés non résidentielles aux gouvernements municipaux. On y traite d'autres sources de financement des municipalités pour remplacer l'impôt foncier sur les propriétés non résidentielles.
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Prix: 20,00 $

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Printing: Litho Associates Inc.

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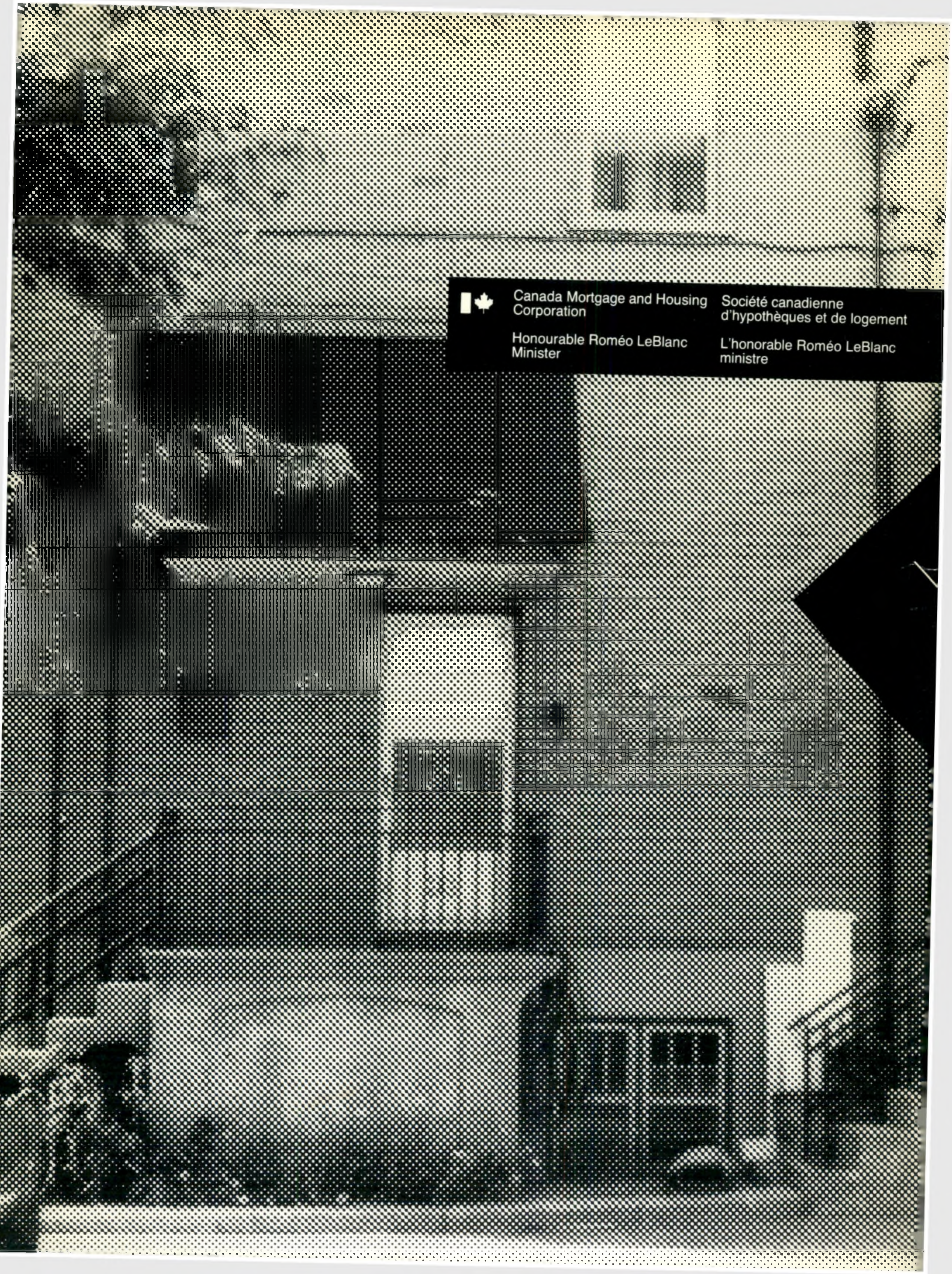

Canada Mortgage and Housing Corporation | Société canadienne d'hypothèques et de logement

Honourable Roméo LeBlanc, Minister | L'honorable Roméo LeBlanc, ministre

Habitat

Vol. 26, N° 4, 1983

"I should like to underline that this tour, as I believe others have in the past, has contributed to a better understanding among people of different ECE countries, and thereby to peace in the world. I would think, therefore, that the best token of our appreciation from the United Nations to our host, and to the organization, would be to present to CMHC the United Nations' peace medal in sterling silver." Klaus Sahlgren
ECE Executive Secretary

CANADA MORTGAGE AND HOUSING CORPORATION ■ SOCIÉTÉ CANADIENNE D'HYPOTHÈQUES ET DE LOGEMENT

Canada Mortgage and Housing Corporation, Canada's housing agency, is responsible for administering the National Housing Act.

This legislation is designed to aid in the improvement of housing and living conditions in Canada. As a result, the Corporation has interests in all aspects of housing and urban growth and development.

Under Part V of this Act, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research. CMHC therefore has a statutory responsibility to make widely available, information which may be useful in the improvement of housing and living conditions.

This publication is one of the many items of information published by CMHC with the assistance of federal funds.

Honourable Roméo LeBlanc
Minister

La Société canadienne d'hypothèques et de logement, l'organisme du logement du gouvernement du Canada, a pour mandat d'appliquer la Loi nationale sur l'habitation.

Cette loi a pour objet d'aider à améliorer les conditions d'habitation et de vie au Canada. C'est pourquoi la Société s'intéresse à tout ce qui concerne l'habitation, l'expansion et le développement urbains.

Aux termes de la Partie V de la Loi, le gouvernement du Canada autorise la SCHL à affecter des capitaux à des recherches sur les aspects sociologiques, économiques et techniques du logement et des domaines connexes, et à publier et diffuser les résultats de ces recherches. La SCHL a donc une obligation légale de veiller à ce que tout renseignement de nature à améliorer les conditions d'habitation et de vie soit connu du plus grand nombre possible de personnes ou de groupes de personnes.

La présente publication est l'un des nombreux moyens d'information que la SCHL a produits avec l'aide de capitaux du gouvernement fédéral.

L'honorable Roméo LeBlanc
ministre

CMHC
Canada's Housing Agency

la SCHL
l'agence canadienne de l'habitation

Habitat

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Manuscripts on issues related to housing and urban affairs are welcome. Query first with a one-page outline. Manuscripts should be about 2 000 words in length, typewritten, double spaced and addressed to the Editor. Material accepted is subject to the magazine's editorial requirements. Where possible, any unused material will be returned.
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Vous pouvez soumettre des articles qui traitent du logement et des affaires urbaines. Mais veuillez nous faire parvenir au préalable un résumé d'une page. Les textes soumis à HABITAT doivent avoir environ 2,000 mots, être dactylographiés à double interligne et être adressés au rédacteur en chef. Les articles acceptés seront assujettis à la politique éditoriale de la revue. Dans la mesure du possible, les textes, photos et illustrations non utilisés seront retournés à leur auteur.

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Building International Understanding

In September, for only the third time since its creation by the United Nations in 1947, the Economic Commission for Europe, Committee on Housing, Building and Planning met outside Switzerland. Canada was the host country.

Text by Doyne Ahern

The Annual Session

Three separate activities coming under the auspices of the Committee were held in Canada during the month of September. The 44th Annual Session was held from September 5 to 9. A study tour across Canada began on the evening of September 9 and ended in Toronto on September 17. Finally, the ECE Group of Experts on Urban and Regional Research met in Ottawa from September 19-22 for a colloquium on the role of human settlement policies in periods of economic stress.

As a founding member of the United Nations, Canada automatically became a member of the ECE when it was first formed. However, active participation in the affairs of the ECE only began in 1973. In 1974, William Teron, then president of CMHC, attended the 34th Annual Session of the ECE Committee on Housing, Building and Planning, launching CMHC into involvement in international housing concerns.

In 1977, acting on a CMHC proposal, Canada held a seminar on energy and human settlements which set the framework for national action and international cooperation on energy conservation in countries both within and outside the ECE region.

All photos: W. Codzow/CMHC

Now once again, CMHC as the federal agency responsible for human settlements, acted as host for Canada at this international meeting, in keeping with its long-standing commitment to foster world understanding. Welcoming the delegates to the opening session, Roméo LeBlanc, Minister Responsible for Housing, said of the Commission's visit: "It is an honour for our country, and it is an honour for the capital of our country, to be the host city for this annual meeting. I know that you rarely meet outside Europe. I thank you, therefore, for honouring us with your presence".

Afterwards the five-day meeting was held at the government Conference Centre. Later, concerning the importance of the work of the ECE, its Executive Secretary, Klaus Sahlgren, said:
"There is a longer-term trend in economic relations in the largest sense of the word between the east and the west, which transcends the vicissitudes of the political nature of the day. In earlier times when nations were evolving and European ships began to sail the wide seas, there was talk of the civilizing influence of trade."

He said he believed that this was still true, and that when people communicate with each other, and deal with each other, they begin to understand one another. Such contacts, he said, help to ameliorate political confrontation.

Canada supports this philosophy and, as described, CMHC has been active since 1976 in fostering international understanding.

The Study Tour

Each year, after the annual meeting, delegates go on a study tour in a member country. As the Vice-chairman of the Committee and Secretary of the Federal Department of Housing in Switzerland, Klaus Baumgartner said, "If you are in housing, building and planning, you can't just remain theoretical in an assembly hall. You must get practical. For instance, in Switzerland, we are particularly interested in construction in seismic regions, non-profit and cooperative housing, rental policies

The Economic Commission for Europe
The Economic Commission for Europe (ECE) (not to be confused with the European Economic Community [EEC] or Common Market), was created 28 March 1947 by the Economic and Social Council of the United Nations and 'made permanent' in September 1951.

The ECE's objectives are (1) to generate and improve economic cooperation, and (2) to strengthen economic relations among its members, and between them and other countries. As a United Nations regional instrument, it is used by member governments for:

- promotion of international trade;
- scientific and technological cooperation;
- policy-making aimed at long term growth;
- improvement of the environment.

The 34 member countries include all Eastern and Western European countries as well as the USA and Canada. While it is identified as European, the ECE region actually extends east from Victoria, Canada, to Vladivostok, USSR.


Klaus A. Sahlgren, Executive Secretary, ECE

The ECE Secretariat headed by an Executive Secretary (currently Mr. Klaus A. Sahlgren of Finland), is located in the Palais des Nations, at Geneva.

The Commission is made up of senior representatives of member governments and meets annually.

Through its 15 principal subsidiary bodies, the Commission studies economic problems of common interest, prepares accords in the form of recommendations to governments for action, intergovernmental agreements and conventions.

For more than 30 years, the ECE has met a basic need of its member countries with differing political, economic and social systems. In favourable political circumstances, the ECE helps to develop and strengthen inter-governmental cooperation; in adverse times, it has been an important factor in maintaining international economic relations. It is a centre where the Member Governments seek practical solutions to problems of general concern and interest.

In 1975, the ECE countries accounted for 25 per cent of the world population, 75 per cent of world output of goods and services, 70 per cent of world trade, and 80 per cent of world energy consumption. While all these percentages are probably lower today, the importance of the ECE region in the world economy remains significant.

Canada is represented in the ECE by a Permanent Representative to the UN-ECE with the Permanent Mission of Canada Office located in Geneva.
D.K.S.

ECE Member Countries

Albania
Austria
Belgium
Bulgaria
Byelorussian SSR
Canada
Cyprus
Czechoslovakia
Denmark
Finland
France
German Democratic Republic
Germany, The Federal Republic of
Greece
Hungary
Iceland
Ireland
Italy
Luxembourg
Malta
Netherlands
Norway
Poland
Portugal
Romania
Spain
Sweden
Switzerland
Turkey
Ukrainian SSR
USSR
United Kingdom
United States
Yugoslavia

Principal Subsidiary Bodies—ECE

Committee on Agricultural Problems
Chemical Industry Committee
Coal Committee
Conference of European Statisticians[1]
Committee on Electric Power
Committee on Gas
Committee on Housing, Building & Planning (see other box)
Inland Transport Committee
Senior Advisors to ECE Governments on Science & Technology
Senior Advisors to ECE Governments on Environmental Problems
Senior Economic Advisors to ECE Governments
Steel Committee
Timber Committee
Committee on the Development of Trade
Committee on Water Problems

[1] Organized jointly by ECE and the UN Statistical Commission

and new methods of establishing human settlements that get away from separating the activities of where people live from the places in which they shop from yet another place in which they work."

After the business meeting in Ottawa, 54 delegates from 20 countries toured building sites, neighbourhood redevelopment projects, senior-citizen complexes and several other projects of interest on the study tour.

In eight days, delegates toured in four provinces. They were able to see how Canadians solve problems related to housing production, rehabilitation, energy conservation, urban planning and neighbourhood redevelopment. The Canadian hosts had the added benefit of seeing Canada through the eyes of Europeans.

Québec
The tour started in Montréal where the theme of renovation and redevelopment began the study. Place Guy Favreau, Milton Park,[1] and Le Vieux Port, offered delegates the opportunity of studying urban renewal and redevelopment as approached by private enterprise and three levels of government: federal, provincial and municipal.

Milton Park is the largest redevelopment area in Canada and comprises 135 buildings covering five blocks of the downtown Montréal area. In 1976, after the developer of the area, Concordia, encountered financial difficulties, citizen groups urged that the buildings as yet untouched should be renovated on a non-profit basis. CMHC and La Société du Patrimoine Urbain de Montréal

The Committee on Housing, Building and Planning (CHBP)

This Committee is one of fifteen principal subsidiary bodies of the Economic Commission for Europe (ECE). It is served by the ECE Secretariat in Geneva through its Environment and Human Settlements Division. Mr. Yngve Palm (of Sweden) is the Chief of the Human Settlements Section, and is responsible for the administration of CHBP's activities.

The CHBP maintains close relationships with many other international bodies, some within the UN and many from outside it. Among those within the UN are the United Nations Commission on Human Settlements (UNCHS) and the United Nations Disaster Relief Organization (UNDRO). Outside the UN are the International Real Estate Federation (FIABCI), the International Federation for Housing and Planning (IFHP), and the Organization for Economic Cooperation and Development (OECD). By arrangement between secretariats, reports and other information are exchanged and representatives of these organizations are invited to attend CHBP sessions.

At its annual sessions the CHBP reviews the human settlements situation in the ECE Region and assesses the work accomplished by subsidiary bodies (working parties, groups of experts) during the year. Programs for future work of these bodies are approved in the light of current circumstances and altered where appropriate. All Committee work programs are assessed each year to ensure they remain valid. The consideration of suggested new activities is part of this assessment.

The work outside the CHBP sessions is done through the Secretariat in Geneva and Working Parties (one on each of housing, building and planning), colloquia and seminars on subjects approved by the Committee, and through other authorized meetings of groups of experts on selected subjects.


Mr. Raymond J. Boivin, Senior Vice-President of CMHC.

CMHC has been identified as the federal agency for Canadian activities relating to the Committee on Housing, Building and Planning. The President of CMHC has the responsibility for consulting with federal and provincial agencies dealing with housing, building and planning activities, and representing Canadian interests on that Committee.
D.K.S.

purchased the properties and eventually transferred them to cooperative and non-profit resident groups. By December 1983, work on all 600 housing units will be completed.

Le Vieux Port has a long history going back to 1600. However, by the twentieth century, the district was in decline and its warehouses had been abandoned and allowed to deteriorate. Two projects are now underway there, Pointe-à-Callière and Le Cours St. Pierre.[2] In Pointe-à-Callière, a variety of buildings remain, displaying architectural styles from the seventeenth to the nineteenth century; however, most of them have been abandoned since they no longer serve current needs. The project will involve redevelopment of the properties and reconstruction of a complete urban environment. It will also open up a window on the St. Lawrence River and stimulate a general revival of Old Montréal.

Le Cours St. Pierre demonstrates how the rehabilitation and re-use of six historic urban structures will provide a mixture of residential, commercial and institutional space.

Many visitors were intrigued by the outside stairs seen on houses on St. Denis Street and elsewhere. These stairways, in all sizes, shapes and colours, permitted the use of more living space on smaller lots, thus reducing land costs.

In St. Jerome, Alderman Gaston Laurier called the international guests "builders of bridges and architects of peace".

A bus tour of St. Sauveur-des-Monts gave participants a chance to view a village in the Laurentian mountains whose economic base is primarily recreation and tourism.

Delegates visited the deep emerald-green council chambers at St. Jerome where they were welcomed by Alderman Gaston Laurier. His genuine sincerity was felt by each delegate, when he called them "builders of bridges and... new architects of peace among nations."

The two days spent in Québec also included visits to Ste. Thérèse and L'Estérel. Senior citizens in St. Jérôme welcomed delegates at Residence Charles Campeau, a 100 unit non-profit housing project. The rent-geared-to-income assistance program employed there was of interest to many delegates. Although concerned about Canada's policies of writing down mortgage rates for non-profit and cooperative housing, one U.S. delegate, Jim Wooten, President of the Mortgage Bankers Association of America, later commented that the U.S. could take some lessons from Canada on the care of the elderly.

Alberta

Provincial and municipal representatives spent the next morning briefing the visitors on the demography, history, economy and planning of

Edmonton and Alberta. Time constraints prevented many on-site visits in Edmonton, but as health care is of prime concern in any discussion of human settlements, a visit to the Walter C. MacKenzie Health Sciences Centre was a major stop.

The complex represents the state-of-the-art in health care facilities throughout the world. There are no wards and no more than two patients occupy any one room. Isolation rooms have a double air-interlock space to protect patients from contamination. Vital monitors in intensive care units are computer-controlled and medicines arrive from the pharmacy by conveyor belt. All-weather connecting links provide ready access from the hospital to the research and support facilities of the University of Alberta, and a central atrium creates an outdoor atmosphere for social gathering throughout the year.

Provision has even been made for future renovations. Hospitals need a lot of hidden space for wiring for specialized electrical equipment from heart monitors to computers, piping for oxygen and anesthesia, as well as space for miles of plumbing. In the past, it has often been too costly to update an old building largely because of these internal systems. This problem has been eliminated at MacKenzie, however, because each of the five floors of the inhabited hospital have been separated by interstitial spaces the height of a regular floor. All of these hidden support systems are totally accessible for renovation or repair.

The relaxed moments in Alberta were supplied in old Fort Edmonton

A Quebec construction site gave delegates an opportunity to see Canadian methods of wood-frame housing.

Tour Diary

by J.P.L. Stilborn

Friday: after a supper at the Conference Centre, 42 delegates and 13 accompanying persons from 20 countries boarded buses for Montreal; one bus was for French or Russian speakers, the other for English. The Canadian study tour was underway.

Saturday morning: we were guests of the government of Québec at a traditional "bûcheron" breakfast which pleased our fellow delegates immensely. The Minister of Municipai Affairs and Housing addressed us briefiy.

We went to Milton Park where we were briefed on the history and the organization of the project which is the largest of its kind in Canada. After viewing "before" slides we went on a short walking tour of the area. One delegate, lagging behind the others, was invited into one of the newly renovated homes. It seemed everyone would have liked the same opportunity.

In the afternoon, whilst touring the city, the group saw more of le Vieux Port, the main harbour, the Olympic site, the residential development of le Domain St-Sulpice, the exterior stairways of rue St. Denis and the view from Mount Royal.

The exterior stairways, in particular, caught the attention of many delegates. They told us that they are common in Mediterranean cities, and thought they must be very dangerous and slippery in winter.

Sunday: we left by buses for the Laurentians—St. Sauveur-des-Monts, Ste. Thérèse, L'Estérel and St. Jerôme. Drove through some of the recreational areas where we could see clearly the slashes through the trees for the ski-runs. Lunched at L'Estérel, looking out of large windows at a lake where people were sailing, wind-surfing or swimming. None of us really wanted to leave.

We drove to St. Jerôme where we were received by the Alderman Gaston Laurier and then we visited an apartment building designed for the elderly or handicapped. There were many questions concerning rent subsidies, services provided, age or health qualifications, etc. We were given to understand by the delegates that none of their countries had anything at all similar for their older or handicapped citizens, but they said there was a real need for such accommodation. One point was the evident pride of the tenants in having such a pleasant environment in which to live.

We left for Mirabel and boarded our P.W.A. Boeing 737 for Edmonton. We arrived after a four and a half-hour flight. The most remarkable thing about it, according to the other delegates, was that we had flown that far and were still in Canada—and still another two-hour flight away from the west coast.

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experimentation, to northern wartime transportation and back to oil production from tar sands, all in less than 100 years. Today, visitors see a thriving town with a typical shopping plaza where one finds the same stores that are available to shoppers throughout Canada such as The Hudson's Bay Co., Big Steel and W.H. Smith and Sons.

Accommodation ranges from units in new residential subdivisions like Timberlea[3], to mobile homes,

Outdoor staircases in Montreal create social areas for residents and save both space and heating costs.

where the city hosted a luncheon in the quadrangle of The Fort – a replica of the original trading post. The old steam train that carried delegates to the meal gave a lively demonstration of transportation in Canada around the turn of the century.

Fort McMurray

Tuesday was spent in Fort McMurray where delegates first had a tour of Syncrude's mining operations and oil extraction plant.

The town has grown from a population of less than 10 000 in 1960 to nearly 35 000 today. The economic base has never been stable. It has changed from fur to timber, to salt, to early oil sands

Tour Diary

Monday: the first briefing was held in the new Convention Centre, which is five storeys tall, all of it underground. It is built into the bank of the North Saskatchewan River in the centre of the city.

Both provincial and municipal officials were present. One thing that puzzled ECE delegates right up until they left, is that housing, building and planning are mainly municipal responsibilities. They heard about the federal or provincial funds which went into housing, but never heard of any federal or provincial planning. In their opinion, those who supply the money have a right to say how it should be spent.

We drove through the city and out to Fort Edmonton. We arrived near the fort and rode the rest of the way on an old three-coach train pulled by a steam locomotive. Fort Edmonton as it is today, is a re-creation of an old fur-trading post.

On our return to the city, we toured some new housing sites, most of which were condominium or rental townhouses. The woodframe construction so familiar to most Canadians seemed to be anathema to certain delegates.

The new Walter C. MacKenzie Sciences Centre which is still under construction, is an integral part of the University Hospital. Its construction and the techniques involved convinced the delegates that our builders do not always use wood. Some $500 millions have been, or will be spent by the time it is completed. The funding comes from the Heritage Fund.

Tuesday: at 7:30 a.m. the plane took off for Fort McMurray and arrived there in less than an hour. At the foot of the steps when we stepped out of the plane was a sight which caused every delegate to ready his camera – there were two Mounties in their dress uniforms. Each one must have had his picture taken two dozen times, usually flanked by delegates.

We bused out to the Syncrude plant, passing a mobile home park. Most of the units are fenced, extend in one direction or the other and are the homes of many Syncrude employees.

Syncrude and its senior people were well prepared for us and for our questions. It is a fascinating operation. The oil obtained is the same density as bunker oil and is piped to a refinery in Edmonton. The size of the equipment used is gargantuan; imagine a truck tire as high as a city bus put in place on a piece of machinery.

The city of Fort McMurray received us at lunch. The mayor was justifiably proud of the construction which has occurred in housing, schools and a splendid new hospital in the past few years.

We flew west from Fort McMurray on our return to Edmonton, so far west that we were right over the Rockies. The peaks, and the immensity of those magnificent mountains, made an indelible impression on everyone and gave them a tremendous respect for those who made Canada – our pioneers.

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Canada Mortgage and Housing Corporation's International Responsibilities

As the agency of the Government of Canada in the field of housing and community development, CMHC engages in exchanges with foreign countries in the broad field of human settlements.

Mr. Robert C. Montreuil, President of CMHC. led Canadian delegation.

Through CMHC, Canada maintains close contact with other countries on housing-related matters by way of:

- membership in the United Nations Commission on Human Settlements (UNCHS) and support for the UNCHS Information Office located in Vancouver to serve North American human settlement interests;
- membership in the Committee on Housing, Building and Planning (CHBP) of the Economic Commission for Europe (ECE);
- membership in the Group on Urban Problems of the Organization for Economic Cooperation and Development (OECD);
- regular exchanges with particular countries – currently, Japan, France, and the USA, generally under ministerial authority through a Memorandum of Understanding which provides a formal structure for bilateral exchanges and shared research;
- bilateral contacts on an ad hoc basis with select countries such as Australia, Sweden, and the Federal Republic of Germany, on research projects, planning policy initiatives, and exchanges of program evaluation results of mutual interest;
- through housing-oriented technical visits – as many as 20 a year – from a variety of developing or industrialized countries. Such visits are generally arranged by, or in conjunction with, the Department of External Affairs and other federal agencies such as Industry, Trade and Commerce or the Canadian International Development Agency;
- contributions to special international projects such as the UN International Year of Shelter for the Homeless (IYSH) – 1987;
- participation in meetings of experts arranged by international organizations such as the International New Towns Association, the International Federation for Housing and Planning (IFHP), the International Standards Organization (ISO), and Centre International du Bâtiment (CIB).

D.K.S.

The magnitude of Syncrude's tar sands operation in Fort McMurray impressed the delegates.

scattered older dwellings, recreational vehicles, and tents and squatters' shacks or huts.

Timberlea is a new subdivision planned for more than 40 000 people. The city of Fort McMurray and Alberta Housing Corporation spent three years and $50 million planning the development; however, as the long-term growth of the town appears uncertain, only part of the site has so far been serviced. Delegates examined how governments and resource companies are now beginning to handle resource communities during times of both boom and recession.

Istvan Géczi, Senior Advisor in the Ministry of Building and Urban Development in Hungary, had a particular interest in Fort McMurray. He said that the first job he held in his working life was in an oil field. "The technology for this plant is very impressive," he said.

Town planning in Fort McMurray also compared well with Hungary.

Chairman of the Committee on Housing, Building and Planning, Lammert, studies a building project in Fort McMurray.

He said that most of the towns in Hungary were medium-sized, and it was interesting to see how planners in Fort McMurray had developed a scheme to accommodate a growing population.

Saskatchewan Wood-Frame Construction

The Saskatoon presentation received close scrutiny on three points: wood-frame construction, energy efficiency[4] and subdivision planning.

Paul Bernard, Ingénieur Général des Ponts et Chaussées, Ministère de l'Urbanisme et du Logement, of France, said that they are just beginning to use wood-frame construction in his country. In fact, throughout Europe, people fear wooden houses because of their flammability. Also, they want houses to last several hundred years and don't believe this would be possible with wood. Bernard said, "We are changing now. We are trying to convince people that wood is good. Canada leads the world in wood-frame construction."

D & D Construction of Saskatoon specializes in ready-to-move, wood-frame, energy-efficient housing. The company welcomed the group and demonstrated features incorporated

Harold Orr, NRC Saskatoon, addressed the delegates and then demonstrated features incorporated in energy-efficient dwellings in Saskatoon.

in energy-efficient dwellings that reduced energy consumption by as much as 80 per cent, without altering their exterior appearance.

D & D houses are constructed on two beams, levelled and blocked to support the weight of the unit. The floor system is framed with double-end joists for added strength, in order to be able to transport the building without damage.

The wall assembly consists of two sections. The inner wall is constructed first and then a polyethylene sheet covers the entire outside of this inner wall. An outer wall is then built on top of the inner wall and the space between is insulated with fibreglass bats. The vapour barrier is *carefully* inspected, and any breaks in the plastic are repaired. Openings for wiring or sockets are carefully caulked to maintain the unbroken barrier.

Paul Bernard
France

"We are changing now. We are trying to convince people that wood is good. Canada leads the world in wood-frame construction."

Derek Stroud, Assistant Chief Planner, Department of the Environment from the United Kingdom said that he would likely be contacting some of the people he met in Saskatoon for further talks. He said that a lot of work in energy conservation is being undertaken in England and felt that the two countries could benefit by a further sharing of their experiences.

Delegates from Denmark were also interested in wood-frame construction. Henning Christensen, Head of Department in the Danish Ministry of Housing, said that he had spent some time in Ottawa before the study tour making inquiries into the possibility of bilateral cooperation between Canada and Denmark. He felt that there were opportunities for both countries in the export of summer vacation homes for Europeans, despite their innate distrust of wooden dwellings.

In the afternoon, delegates toured the Lakeview Neighborhood, located in the southeast section of Saskatoon, where they saw the novel approach employed in Lakeview's system for storm-water retention. A man-made lake has been developed as an economical means of dealing with ground water run-off and creating a practical and attractive recreational focal point for the community. The city and the developer created a district park for recreation and a fitness trail beside the lake.

The developer and the city worked together to establish a pattern of varying densities to accommodate anticipated markets in this large private development. To date, 1 549 one- and two-unit dwellings have been completed and 112 are yet to be constructed. Also completed are 370 condominium units and 372 rental units. Only 473 multiple dwelling units have not yet been finished. There is a wide price spread among the 2 500 housing units. Apartment rents range from $375 to $550 a month, while single-family homes can be costly, as much as $550 000, for those overlooking the man-made lake.

The delegate from Bulgaria, Petko Petrov, inspects building materials on a construction site in Quebec.

Klaus Baumgartner
Switzerland

"We put ideas into a department store and countries can take out what they need.

Ontario
Toronto's Harbourfront and the Niagara Peninsula

The Ontario experience was limited to the Niagara peninsula and Toronto. Ontario is the industrial core of Canada, and manufacturing is the largest industry in Ontario. The group saw evidence of this as they travelled by bus from Toronto to Niagara-on-the-Lake.

In addition they saw the rich crops and beautiful parklands of the Niagara peninsula and could easily appreciate the land use conflicts that plague this very small special section of the province. A stop in Niagara-on-the-Lake gave them a chance to see the care taken in preserving the heritage buildings in the city and to note that wooden structures can

Tour Diary

Wednesday: we left for Saskatoon and Toronto. At the University of Saskatchewan, a spokesman from the National Research Council explained that their experimental and demonstration units in active solar space heating had proved ineffective and too expensive; as a consequence, emphasis is being placed on testing methods of increasing the effectiveness of passive solar heating. Examples of both types were seen later. The National Research Council, the Saskatchewan Research Council and the Housing and Urban Development Association of Canada (HUDAC) are doing much research on wood-frame super energy-efficient housing of all types, including pre-fabs.

Just outside the city limits, on a farm, we visited D & D Enterprises Ltd., a firm which constructs pre-fabricated super-efficient energy-saving wood-frame houses.

The pre-fab operation we saw was a very efficient one, with every component, save plumbing fixtures, made on site. The delegates remarked on the amount of insulation used, the triple-glazed windows and the sealing of every possible source of air-leak. This caused some concern about ventilation and condensation problems should the heat-exchanger system fail. However, the standard of finishing, kitchen, built-ins, large closets, etc. met with very high approval. Several delegates regretted that there was no eating space in the kitchen—but other models may not be the same.

After lunch in Saskatoon, HUDAC took us in hand. We visited Lakeview, an energy-efficient housing subdivision. It was presented as an excellent example of cooperation between the city and the builder. To obviate the problems caused by storm-water run-off, the builder had built an artificial lake, surrounded by houses on one side, and a park on the other. The cost was $500,000 and was a gift to the residents. Not only did the builder solve a problem, he added considerably to the appeal and value of the site.

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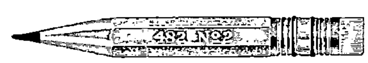
Delegates watched in fascinated silence as one of the ready-to-move houses was loaded onto a truck bed and driven away from the construction site.

Auke Steensma
Netherlands

"There does not seem to be a general housing shortage, not in the way we know it in some European countries."

Tour Diary



Thursday: we were guests at breakfast of the province of Ontario, in Toronto. We were briefed extensively on the planning problems of the Niagara Region. The urgency of protecting the Niagara Region was made abundantly clear. Our route took us through grape and fruit tree growing areas. Many orchards seemed to be abandoned, as the owners await an offer to purchase. When the question of just "freezing" the land for agricultural use was raised, it was explained that the province has no control over what a person does with his private property, provided it does not contravene any laws or bylaws.

We stopped at Niagara-on-the-Lake for lunch, after which many of us strolled around the town. The restoration and renovation make it a most picturesque city.

One does not go to the Niagara peninsula without visiting the Falls, and off we went. Our visitors thought the parkways particularly attractive with the large trees and delightful flower beds all along the route. Everyone thought them magnificent.

Friday morning: Metro and city officials briefed us on their respective areas of responsibility for planning concerning the restoration of the city core. There is a mix of private and public funding. The public funding is provided by the city and province.

One redevelopment we saw was the St. Lawrence Neighbourhood which is a mixture of public, private and cooperative housing. An area which was derelict however, now houses several thousand people in 4 300 units. Many co-ops are owned, managed and occupied by people of one specific ethnic origin. This disquieted some of the delegates who felt that would be tantamount to having small ghettos.

We next visited Harbourfront which is being redeveloped in a similar fashion. However, because of the location, much more attention must be paid to restoring the waterfront itself as a recreational area for all the citizens of Toronto. To this end, there are facilities for many cultural activities already in use.

Saturday morning: we gathered for the traditional wrap-up session at which we would hear from the visiting delegates whether all the planning of the past two years had been successful or not. We heard at the wrap-up that, indeed, the visitors were pleased with what they had heard and seen. After that we said farewell to the many good friends we had met, and made, on the tour. ■

last a long time. The return trip to Toronto included a brief "photo opportunity" at the famous Falls.

In metropolitan Toronto, delegates toured the St. Lawrence redevelopment area[5] and walked through the two completed buildings of the Harbourfront redevelopment.

The St. Lawrence section of Toronto was once dominated by automobile wreckers, garages, parking lots, abandoned sidings and scrapyards. Today, these eleven city blocks are the site of a residential development with quiet inner streets, tree-lined promenades and playgrounds. Despite the rainy day, delegates were shown the cooperative apartments, Cityhome project, and the Harmony Cooperative townhouses along with the St. Lawrence Market. These areas have been developed both by private, non-profit groups, and the City of Toronto through its housing program. Financing has come from CMHC, the Ontario Ministry of Housing and the City of Toronto.


Arno Graef
German Democratic Republic

"Professional contacts ameliorate political difficulties by creating mutual understanding."

Harbourfront was created in 1972 when the federal government assembled 37 hectares of waterfront property between York Street and Stadium Road and established the Harbourfront Corporation. Delegates had an opportunity to study these waterfront lands and see the redevelopment that is underway encompassing a broad mix of uses.

Five man-made slips and quays provide natural subdivisions for development. At the east end, York Quay will provide a link between Harbourfront and the city through its intensive commercial and retail development. It will also be further developed as the principal site for recreational and cultural events.

Eventually, it is expected that Harbourfront will provide its own source of funds to meet operating requirements. Since 1980, the federal government has provided a grant of $36 million to be made available over the course of seven years to build streets, services, parks, other infrastructure and programming activities.

Toronto has a stated policy of neighbourhood preservation and citizen participation in municipal government. In addition to improving neighbourhoods, new policies have been designed to provide housing for various segments of the population.

Low-rent accommodation was mostly reviewed in Toronto for the delegates. As Auke Steensma, Director, State Aid to Housing in the Ministry of Housing and Physical Planning in the Netherlands said, "This is not surprising because in all cities rental accommodation for low-income groups is essential." However, he had some concern about the practice of rent-geared-to-income mixed within projects, even within apartment buildings. It is possible that costs to the government could increase if incomes go down or if the cost of the shelter goes up through, for example, energy prices.

The Wrap-up Session

Unlike most other committees and study tours in the United Nations, the ECE Committee on Housing, Building and Planning always concludes study tours with a discussion in which appointed rapporteurs evaluate what they have seen and studied throughout the tour. It is first, a unique opportunity for the host country to see itself as others see it. Second, delegates may ask questions to get further information. Finally, host country experts are appointed to respond to the questions, comments and suggestions.


Yngve Palme,
ECE

"Everyone in the field of housing, building and planning thinks, initially, that the only way of doing something is the way they themselves do it."

The wrap-up session took place in Toronto on the final day of the tour. Following an introduction by the Chairman, Ule Lammert, the three rapporteurs then spoke about the tour. Auke Steensma, Director, State Aid to Housing in the Ministry of Housing and Physical Planning in the Netherlands, said, "There does not seem to be a general housing shortage, not in the way we know it in some European countries. It appeared to me that there is no extra housing production necessary to make up for shortages, it's mainly the formation of new families.

"I thought that the production cost of new dwellings in this country, by and large, was maybe not as high as I am used to in my own country. I got the impression that the production cost of new housing is, roughly speaking, about two to three times average annual incomes. In my country, it would be closer to four times average annual income.

"As far as land policies are concerned, in Edmonton, Alberta, it was pointed out to us that the city, for many years, had engaged, on a large scale, in the purchase of land which was sold as the city grew and developed. In that way the city had a stable body of land available for urban development – and that sounded like a good idea.

"Fort McMurray was interesting as a frontier town. I was also much impressed to see no fewer than 923 mobile homes together in one park. It was interesting to see how many people took pride in their mobile homes and kept the gardens and flower beds very well. Then, of course, the D&D Construction Company – I shall long remember the rather spectacular departure of one such structure taking up more than the full width of the road."

In assessing construction, Paul Bernard, Ingénieur Général des Ponts et Chaussées, Ministère de l'Urbanisme et du Logement, of France, commented, "Building in Canada seemed to us very similar to what goes on in the United States and there seems to be, in fact, a sort of specific type of North American construction characterized by the predominant use of wood. Brick seems to play an important role especially for the façade; but is any research being done on concrete, particularly light concrete?

"The industrialization of construction in Canada is characterized by the large use of pre-manufactured products, rather than components. Labour is very efficient and a wood house, ready to move, only requires some 500 to 600 hours work; this includes the preparation of the prefabricated parts. The development of mobile homes reflects the same tendency, – this is a very different picture from the evolution which we have seen in other countries, particularly in the industrialization of the manufacture of housing using compatible components."

Felix Nevrela, Advisor to the Minister in the Ministry for Construction and Technology of Czechoslovakia, in reviewing planning remarked, "We observed town planning policy and the architectural styles of buildings, and we learned that regional planning in Canada is the responsibility of provincial governments and their municipalities and not of the federal authorities.

"Many members of our group were impressed by the excellent air and vehicle transportation networks which supply goods and services throughout the vast land. We also observed good use of waterways, for example the harbours of Montréal and Toronto, and the network of channels for transporting products between the ocean and the Great Lakes. It would have been interesting to have had information on plans for regional, industrial, agricultural and recreational zoning and measures to be taken to protect the environment".

In further comments, the delegates concluded that housing, building and planning in Canada is very advanced among countries within the ECE by European standards. They were, however, surprised at the continued use of open electrical high tension wires when this practice has long been abandoned in Europe. They also wondered why skyscrapers had been built in Montréal, Toronto and Edmonton when Canada had plenty of space.

Ray Boivin, vice president of CMHC led the Canadian Group which responded to delegates' questions. The team included representatives from Alberta, Saskatchewan and Ontario, Metropolitan Toronto, the City of Toronto, Milton Park and CMHC.

When asked what benefit the work of the committee has been to them and their countries, most delegates began by mentioning the long-term view... Joao M. Alves De Souza, Inspector General in the Ministry of Housing, Public Work, and Transport in Portugal said he would return to his country and prepare a written report that would be distributed to

Pekka Alanen
Finland

"One's profession-al life is enhanced by these meetings, certainly. You see a wider picture of issues that have a narrow view from home."

Felix Nevrala
Czechoslovakia

"We learned that regional planning in Canada is the responsibility of provincial governments and their municipalities and not of the federal authorities."

various ministries which might be interested. In the past, Portugal had developed bilateral contacts with France on energy, with Bulgaria, Greece and Turkey, among others, on construction in seismic regions, and has had extensive cooperation with Sweden for the past six years. All of these contacts were initiated by work in the ECE.

Yngve Palme, Chief, Human Settlements Section of the ECE in Geneva explained that everyone in the field of housing, building and planning thinks, initially, that the only way of doing something is the way they themselves do it. For example, most Canadians own private cars, and the main form of investment is in a family home. Eastern countries believe that the nation should provide housing as a public service. By joining the ECE and going on study tours, delegates learn how others approach similar problems and pick solutions that might be helpful in their own countries. Compared to the cost of doing it for yourself, though, through international cooperation the savings are enormous.

Committee Vice-Chairman, Klaus Baumgartner, used this analogy: "We put ideas into a department store and countries can take out what they need. The Committee on Housing, Building and Planning shares information on many of these topics."

Despite the great amount of information exchanged, the most valuable part of this tour was in the contacts forged, and the understanding fostered, among nations. Government representatives from several countries echoed these sentiments.

Arno Graef, Chief of Section, German Democratic Republic Academy of Buildings, said that professional contacts ameliorate political difficulties by creating mutual understanding.

Pekka Alanen, the Director General of the National Housing Board of Finland, explained it this way:

"One's professional life is enhanced by these meetings, certainly. You see a wider picture of issues that have a narrow view from home. It is difficult to say exactly what you learn, but if you take the other perspective, you realize what you wouldn't have known if you hadn't gone."

He went on to say: "But there is an even more important aspect of these meetings."

"In Finland, one part of our defence policy is to build contacts and knowledge between people and countries throughout the world."

Obviously, the Committee on Housing, Building and Planning is an important part of that policy for Finland and, from what was said, for many other countries as well. These views, and the function of the Committee, are a more hopeful augury for peace than one would believe from the headlines and news stories of the world's press. They point to a higher bond, which is used, unknowingly perhaps, by meetings of such organizations as the Committee on Housing, Building and Planning.

Doyne Ahern is an Ottawa writer who accompanied the Committee on the Canadian study tour.

1. Goliger, Gabriella, "How the people of Milton Park saved their neighbourhood", **Habitat**, Vol. 25, No. 3 (1982), 2-9.

2. Goliger, Gabriella, "Le Cours St. Pierre", **Habitat**, Vol. 25, No. 4 (1983), 35-40.

3. Dent, Mark, "Timberlea: Fort McMurray's Answer to Unpredictable Urban Growth", **Habitat**, Vol. 26, No. 2 (1983), 34-37.

4. Eamer, Claire, "Homes on the Range are Canada's Most Energy-Efficient", **Habitat**, Vol. 23, No. 4, (1980), 38-41.

5. Weston, Julia, "St. Lawrence Revisited", Vol. 23, No. 3 (1980), 8-17.

These drawings were shown in exhibition and in poster form at the ECE conference.

Some Traditional Forms of Native Housing in Canada

Text and drawings by Maurice Clayton

Northwest Coast Indians

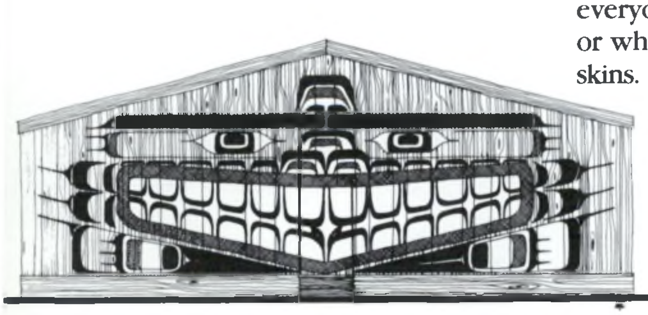
British Columbia's coastal terrain is formidable. Forested mountains reach to the sea, islands abound and fiords strike deep inland. The Indian lived at the water's edge and all communication was done by sea-going canoe. Their housing was constructed of heavy cedar posts and beams with planks attached. This was only possible because of the ease with which western red cedar can be cut and split. These Indians were known for their stylistic art, whose design was similar to that of European heraldry.

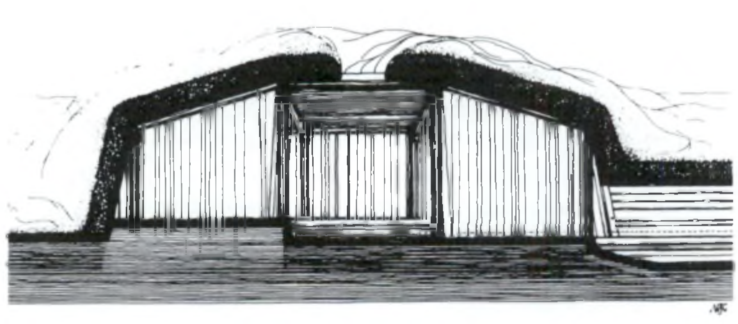
Inuit

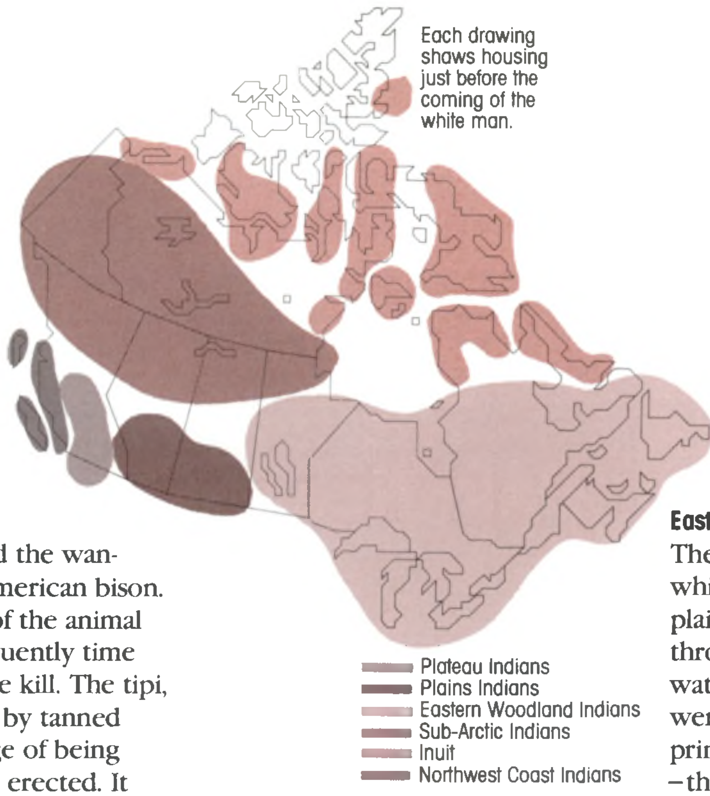
The Inuit, called the Eskimo, included all people living on the Arctic rim. For winter homes, the Inuit preferred a solid form with a covering of snow but wood was only available in quantity in two places: the Mackenzie River delta, where the river carried driftwood down from the south, and southern Labrador where there was some tree growth. Elsewhere, wood and whalebone were used when practical, but the igloo or snow house was usually built. In summer, everyone lived in tents with wood or whalebone frames covered with skins.

Sub-Arctic Indians

The people of the Sub-Arctic lived in houses similar to the Indians further south, but theirs were better insulated against the cold. In the Yukon, for example, brush was used extensively for insulation on the conical or pyramid-shaped houses. Brush, the soft tops of the small pine trees and the pliable ends of branches, were piled up to 1.25 m on the exterior, and about 0.6 m on the inside. The dwellings would be rebuilt each year.

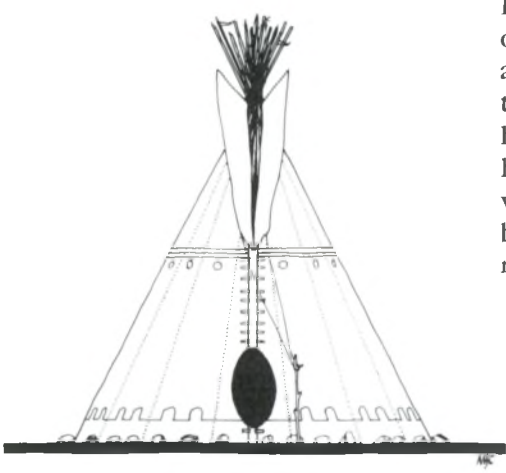






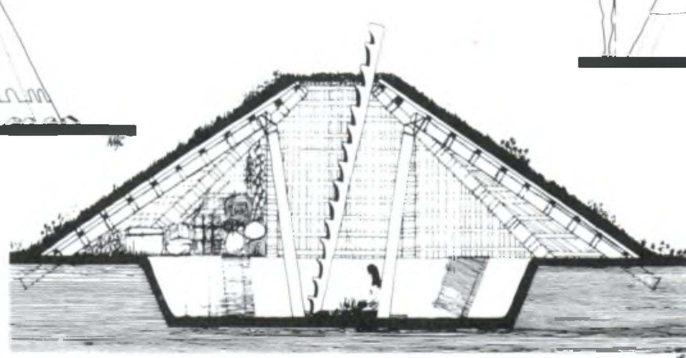
Plains Indians

These nomads followed the wanderings of the North American bison. After a kill, every part of the animal was put to use. Consequently time was needed to dress the kill. The tipi, made of poles covered by tanned hides, had the advantage of being quickly dismantled and erected. It was oval in shape with the front poles set at a lower angle than the back poles to provide bracing against the wind. The interiors were lined. A lining under the outer cover was directed upwards and drew smoke with it past the adjustable smoke flaps. Not all tipis were painted.



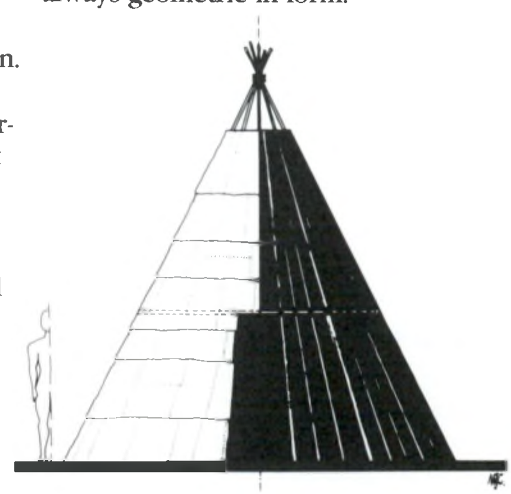
Plateau Indians

Plateau refers to the habitable valleys between the mountain ranges of the interior of British Columbia. The climate varies enormously in this region. In winter there may be heavy snow or no snow at all; in summer, temperatures can range from extremely hot to mild. These Indians lived in pit-houses in winter. In summer, while hunting, they lived in tents. These were of many shapes, the most usual being conical with a cover of mats made from cattails.



Eastern Woodland Indians

These people lived in vast forests which stretched from the central plains to the Atlantic seaboard. Travel through the forests was easier by water so efficient birch-bark canoes were developed. By adapting the principle used in canoe building – that of constructing cage-like forms – many shapes and sizes of wigwams were evolved. Saplings, either bent together or straight, were used, and they were mostly covered with birch-bark. In common with all other Indian housing, their wigwams were always geometric in form.



These extracts are taken from a book being written by Maurice Clayton, an architect, who works for CMHC.

Article by Lori M. Wester

LIGHTING THE DARKNESS

Everyone has been afraid of the dark at some time in their lives–some still are. Effective artificial lighting can do a lot towards mitigating those fears. Good lighting can provide safety for people and security for buildings. It also has an aesthetic function in enhancing outdoor living areas.

Because of the increased costs of both fixtures and electricity, nighttime illumination can no longer be taken for granted, but must be carefully planned. This applies not only to new lighting but to areas which are being retrofitted or upgraded. With the availability of new energy-efficient lighting fixtures, particularly for lighting streets and large public areas, designers and engineers are beginning to produce well-lit and pleasant exterior environments.

When assessing the quality, function and energy efficiency of lighting for an exterior, nighttime environment, whether it be that of a home, a community or recreation centre, a housing complex, or a total neighbourhood, a number of important factors must be considered.

Safety

In daylight people can see and be seen. They can see their surroundings, and identify obstacles appearing in their path. They see people both near and far and they can be seen by others around them. These perceptions provide a feeling of safety. Artificial lighting should continue this feeling of safety into the night. Sufficient light must be available for a person to see an entire pathway before stepping on it. Paths should be well lit–especially stairways or sloping paths that could become ice-covered in winter.

Consideration must also be given to the best locations for lighting fixtures, and to the intensity of the light required in each place. Controls for the light sources should be conveniently located and accessible to the users.

The amount of illumination required by building and fire codes has increased over the years. These codes have established the locations of fixtures and the proper switch controls that will maintain a minimum standard of safety. Codes differ in cities and regions across the country, and are intended only as minimum standards–the lighting required is usually just sufficient but is often of inadequate quality. Therefore designers exceed these codes in most developments.

Public areas can often be adequately illuminated through proper integration of the lighting system, rather than by installing additional fixtures. The intensity of the lighting must be controlled, however, as some fixtures produce a blinding light that may itself be hazardous.

In single-family homes, safety lighting usually consists of exterior fixtures at front and rear entries, with perhaps a light over the garage door. Codes are more stringent for multi-unit housing and commercial developments. They sometimes stipulate automatic switching with photo-electric cells, lighting that remains on during the hours of darkness, and extra lighting for stairs and steps.

Security

Achieving security has two separate aspects. As with safety, feeling secure is imperative. Of equal importance, however, is being able to check out those "things that go bump in the night".

Security lighting in residential areas need not remain on all the time, because silhouette or backlighting also allows an area to be seen. Switches to turn on security lighting should be located near doors and bedsides. Family members may carry remotecontrol switching units to activate a variety of lighting circuits. For example, a garage door opener unit may be wired to control both interior and exterior lighting.

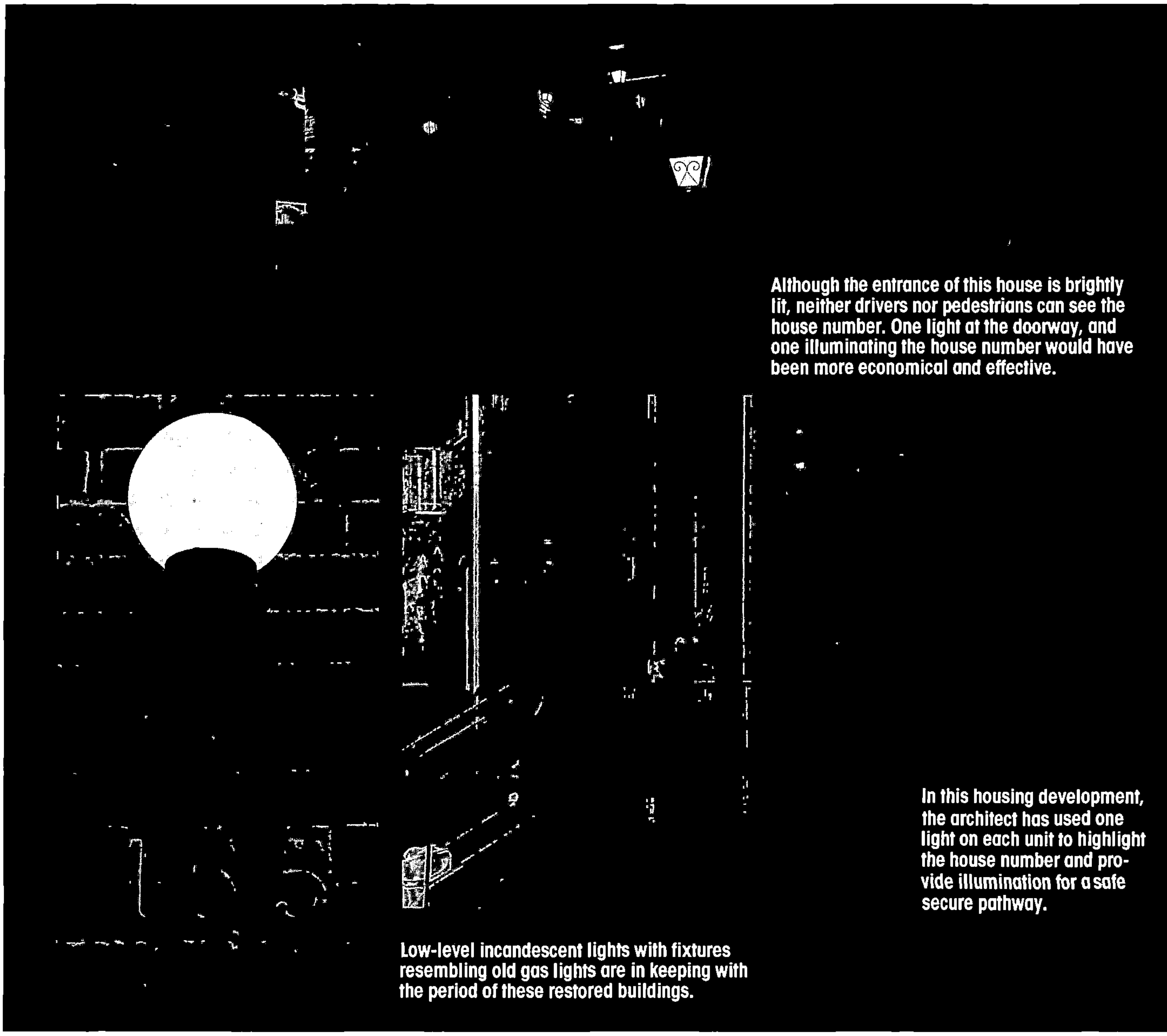
In larger projects, security circuits usually operate automatically and are on throughout the hours of darkness. Timing controls can be set so that lights will come on at different times and provide more continuous security.

Developing plans for security lighting depends on the specific needs and attitudes of the people who will be using the areas. The lighting system must be flexible as these needs will change with the seasons.

Orientation

A third consideration, often ignored by planners, is orientation. People should be able to identify where they are, and be able to see where they are going. If lighting is insufficient to show a landmark, then visually, it does not exist. At night, visitors often have problems identifying public and private entries to single-family residences, particularly in housing projects where entries to the units and garages or parking places are lacking proper identification.

The correct use and organization of exterior lighting explains the nighttime landscape so that users can un-



Although the entrance of this house is brightly lit, neither drivers nor pedestrians can see the house number. One light at the doorway, and one illuminating the house number would have been more economical and effective.

Low-level incandescent lights with fixtures resembling old gas lights are in keeping with the period of these restored buildings.

In this housing development, the architect has used one light on each unit to highlight the house number and provide illumination for a safe secure pathway.

derstand it. Lighting intensity plays a role in doing this. The brightest, most intense lighting, should be directed on the most important areas or objects. Secondary areas should have lower intensity lighting.

Providing Direction

Closely related to orientation is the sequence of nighttime movement. People tend to follow a logical sequence of movement. For example, arrival and parking areas are followed by pathways, which in turn lead to individually illuminated residences. Sequencing adds logic and order to the night environment by clustering, combining, interconnecting and seasonally adjusting the lighting sets. Efficiency, quality and energy savings will result.

An example of sequential lighting is the provision of lights on both sides of main walkways, and on only one side of secondary pathways. Ignoring one part of a sequence may cause someone using the path to become disoriented and apprehensive. Where paths converge, good lighting is essential to show up signposts or pathway directions.

In many large housing developments where both public and private sequences are being created, responsibility for coordination can become complex. If the lighting systems do not interconnect, the users suffer, and both public and private funds are being incorrectly used. In many cases, interconnecting errors are not discovered until after the housing development has been completed.

Making changes after the fact is usually a slow and expensive process. Double checking the lighting sequencing during the planning stages should be a high priority for public agencies, private developers and home renovators.

Neighbourhood Lighting

It is important to consider surrounding areas when introducing new lighting into previously established patterns. Improved street lighting, for example, upgrades the appearance and security of a neighbourhood, but intense lighting may flood into rooms on which the former lighting had little effect.

When installing new exterior lighting, homeowners should take precautions to ensure it will not disturb neighbours. Including neighbours in discussions of plans for new lighting is a good idea. Flexible direction control of fixtures, and use of lower wattage bulbs or a dimmer switch will solve many problems. A dimmer switch will also allow the homeowner to alter lighting effects, and create different moods in addition to accommodating the neighbours.

Minimizing Vandalism

In many areas vandalism is an increasing problem, and the costs of replacing damaged property are mounting. Unfortunately there are no vandal-proof lighting fixtures, but there are some guidelines that may reduce the opportunity for vandalism. For example, in the darkness, the eye is automatically drawn to a light source – this is a human visual reflex. If the source of light is not directly visible, there is less chance of the light becoming an object of attack. When the light source is recessed, the next brightest object to be seen is the surface or object illuminated by the fixture. The light fixture itself is therefore not the dominant visual attractor, and thus is less likely to become the object of a random attack. Hardened or high impact plastic lenses or glass parts can be used, although providing all fixtures with special protection can be costly.

Records should be kept of breakage resulting from suspected vandalism. If the target of attack is a pole or light standard, rather than the fixture itself, it usually indicates that it has been placed in an attractive, but incorrect, location. The best locations are generally convenient, but out of reach. When selecting and locating lighting fixtures, functional location and visibility of the light must therefore be considered very carefully.

Enhancing the Garden

The mood and effect created by lighting the outdoor environment can provide a pleasurable or exciting experience. Lighting for special effects should be considered initially as part of the functional lighting scheme. Then, by adding fixtures and circuits, a range of special effects may be achieved. Making slight changes in the colour of the light as the seasons change is an effective method of producing different visual effects. Cool range colours (blue-whites) enhance green foliage or fountains, and at low intensities, give a wintry, snow-covered effect. Fall foliage or flowering shrubs, on the other hand, require the warmer ranges of incandescent, bright white, or colour-corrected mercury vapour lighting. The yellow lights used for street and highway lighting should not be used in landscape lighting or in areas where people are likely to gather.

One of the important aspects of a garden lighting system is that it should not attract flying insects. To solve the insect problem, only reflected light should reach the areas where people gather. The human eye will easily adjust to the lower levels of reflected light and the result will be an attractive, insect-reduced, nighttime environment. Several types of "insect killer" fixtures are available on the market, but these make an unpleasant noise when destroying the insects and should only be used as a last resort.

Historical Restoration

In historical restoration it is important to select fixtures which match the specific period of the residence or building, and locate them in context. Incorrect lighting will detract from the restoration effort. The colour of the light should support and illustrate the historical period. Both the colour and pattern of light coming from most fixtures can be modified by using filters or different glass patterns to obtain a specific feeling or effect with contemporary fixtures, for a relatively low cost.

In adapting the lighting of restored buildings to present-day standards, any necessary additional lighting fixtures should be hidden, with only the effects of the illumination visible, thus preserving the atmosphere of the period.

Remember: It Takes Planning

Lighting the night environment so that it can be used and enjoyed, will not happen without people who can recognize its potential and limitations. Careful, knowledgeable thought and planning are required. It is our right to expect to be safe and secure, and to enjoy being out of doors at night. For this to happen at our own homes, in housing developments or commercial installations we must give more consideration to LIGHTING THE DARKNESS.

Lighting Checklist

Single Family Residence:
Is the house recognizable?
Is the driveway entry lighted?
Are the steps and entry lit?
Can the house number be read?
Is the path well lit?
Is the doorbell visible?

Multi-unit Development:
Are visitor parking areas obvious?
Are exit points from the parking area well lit?
Are pathways from parking areas properly illuminated?
Are the numbers on individual units clearly visible?
Are all steps and slopes properly lighted?

Lari M. Wester is an associate professor of landscape architecture at the University of Guelph, Ontario.

L'Opération 20 000 logements ramène-t-elle les banlieusards en ville?

par Jean-Pierre Dagenais

"Le 10 septembre 1979, la ville de Montréal lançait l'Opération 10 000 logements. Les résultats de ce programme furent à ce point encourageants que le Comité exécutif de la Ville décidait, lors d'une réunion spéciale tenue le 7 juin 1982, de doubler l'objectif initial et d'en faire l'Opération 20 000 logements."[1]

Ainsi commence l'avant-propos d'un cahier présentant la dixième phase de l'Opération 20 000 logements. Cette déclaration témoigne de l'optimisme des dirigeants municipaux et laisse entendre que l'Opération répond aux objectifs fixés au départ: relancer l'industrie de la construction à Montréal, élargir l'assiette fiscale de la Ville, rentabiliser ses équipements collectifs, favoriser l'accès à la propriété, freiner l'exode des jeunes ménages vers la banlieue ou, mieux encore, inverser carrément le processus.

Assez curieusement cependant, il existe peu d'études évaluant les résultats de l'Opération entreprise par la ville de Montréal. En effet, seulement trois enquêtes d'évaluation des objectifs socio-économiques de ce programme ont été réalisées à ce jour: la première par le Service d'urbanisme de la ville de Montréal, la seconde par l'économiste Pierre Bélanger pour le compte du président du Comité exécutif de la ville de Montréal et la dernière, par l'Institut d'urbanisme de l'Université de Montréal. De ces trois études, seule la dernière a été subventionnée par un organisme indépendant de la ville de Montréal, la Société canadienne d'hypothèques et de logement[2], ce qui lui confère, sinon une meilleure crédibilité, du moins une plus grande indépendance d'esprit. L'étude réalisée pour le compte de la SCHL, par les professeurs Parenteau, Charbonneau et Beaudoin, est aussi la plus récente des trois études et, partant, celle qui offre une analyse plus complète de l'évolution du programme en cause.

Le contexte

Examinons d'abord le contexte dans lequel Montréal a enclanché son programme 10 000 logements. Ce qui s'est passé dans la métropole, après les Jeux Olympiques de 1976, a été sensiblement la répétition de la situation qui a existé après Expo 67. Les grands travaux publics terminés ou bloqués (stade olympique, arrêt des prolongements du métro en raison du moratoire décrété par le gouvernement Bourassa, etc.), l'industrie de la construction bat de l'aile. En outre, à Montréal, la construction résidentielle plafonne à un niveau alarmant. De 1976 à 1978, moins de 9 000 logements sont construits par le secteur privé. Par opposition, la banlieue poursuit allègrement son développement. Au cours de la même période, on dénombre 74 186 logements achevés dans la banlieue métropolitaine.[3]

Par ailleurs, au plan financier, la ville de Montréal sort amoindrie de l'embardée olympique. Les firmes Moody's et Standard Poor's iront même jusqu'à abaisser la cote d'emprunt de la Ville (de AA à A). Pour compléter le tableau, considérons le phénomène de l'exode urbain. Entre 1970 et 1979, près d'un quart de million de Montréalais ont quitté la grande ville pour les municipalités périphériques.[4] Enfin, selon les études réalisées par Martial Fauteux, Montréal a perdu son hégémonie au plan de la création d'emplois, même dans le secteur tertiaire (exception faite des emplois créés dans le tertiaire avance, c'est-à-dire le quaternaire — recherche et développement, informatique, etc.).[5]

Cette situation n'est pas exclusive à Montréal. À peu de choses près, le même scénario s'est reproduit à l'échelle des grandes villes nord-américaines: exode des jeunes ménages vers la banlieue, vieillissement et paupérisation des populations des centre-ville, fermeture ou départ des

Photo Fisch & Godin

Maisons unifamiliales en rangée dans le domaine Saint-Sulpice dans le nord de Montréal.


Photo Fisch & Godin.

Maisons unifamiliales en rangée rue Elwyn près de la rue Ontario, au coeur de la ville.

industries traditionnelles, émergence de parcs industriels en banlieue, étranglement fiscal des métropoles aux prises avec des équipements sous-utilisés.

C'est donc dans un contexte de crise que survient l'Opération 10 000 logements. En initiant un tel programme, la Ville voulait renverser le processus et, ce faisant, tirer profit d'une nouvelle tendance: le retour à la ville.

Les objectifs économiques

Quand fut mise en branle l'Opération 10 000 logements, la Ville s'était fixé comme objectifs d'ordre économique d'élargir l'assiette fiscale municipale et de rentabiliser les équipements collectifs.

Bien que l'Opération 20 000 logements entre à présent dans sa cinquième année d'existence, il est difficile d'en évaluer le succès sur le plan économique à cause du manque de renseignements essentiels. Par exemple, il n'existe aucune donnée sérieuse ou étude permettant d'analyser la rentabilité financière de l'Opération pour la Ville de Montréal. Pourtant, certains observateurs (et ils sont nombreux) affirment déjà que le programme s'avère un franc succès économique. À preuve, disent-ils, l'abaissement du taux de la taxe foncière en vigueur à Montréal. Certes, ce taux a diminué sensiblement depuis 1980, passant de 3.14 à 2.76 du cent dollars d'évaluation en 1983.[6] Mais peut-on établir un lien de causalité entre l'Opération et le fait d'un allègement de la taxe foncière? Sur l'ensemble de l'île de Montréal, nombre d'autres municipalités ont, elles aussi, bénéficié d'une réduction de leur taux de taxation foncière. Ainsi sommes-nous en présence d'une tendance générale et non devant un cas d'espèce.

Qui plus est, selon le bilan financier établi par la ville de Montréal, l'Opération devait possiblement générer des taxes foncières d'environ 13 millions de dollars au 31 mai 1983.[7] Compte tenu de l'importance du budget de Montréal — 1,2$ milliard en 1982 — l'apport fiscal de 13 millions de dollars représente de fait un revenu marginal.[8] Par ailleurs, on doit préciser que les projections fiscales de la Ville se situent bien au-delà de la réalité. L'apport de 13 millions de dollars aurait été possible dans la mesure où l'Opération ne rencontrait aucun retard dans son échéancier, c'est-à-dire qu'au 31 mai 1983, les dix premiers mille logements devaient être bel et bien réalisés. Or, nous sommes loin du compte. À ce jour, moins de 3 500 logements sont effectivement construits.

Les objectifs sociaux

De tous les aspects reliés à l'Opération, les mieux connus sont certainement ceux ayant un caractère social ou démographique. À ces égards, l'étude du professeur Parenteau démontre le relatif succès de l'Opération, particulièrement en ce qui regarde l'accessibilité à la propriété, les couches sociales visées, l'effet du programme sur les mouvements de population, entre autres, sur l'exode urbain.

À l'origine, l'Opération avait été conçue afin d'apporter un frein à l'exode des jeunes ménages vers la banlieue. "En effet", explique le rapport Parenteau, "la clientèle visée en est une de jeunes ménages familiaux (25-45 ans). Seul l'arrondissement de Rivière-des-Prairies répond à cet objectif. Les arrondissements de Ahuntsic, de Mercier et du Sud-ouest

Unités de logements construites à Montréal et dans la banlieue métropolitaine

	Montréal				Banlieue métropolitaine
	Logements publics			Logements privés	Logements privés
	Office municipal d'habitation	SOMHAM	SODEMONT		
1976	278	–	–	3 589	23 065
1977	557	–	–	2 759	28 322
1978	867	–	–	2 631	22 536
1979	698	–	–	3 127	15 743
1980	911	362	–	482	12 083
1981	600	212	–	2 427	11 539
1982	524	246	130	1 365	8 970

Bungalow dans Rivière-des-Prairies.

Photo Fisch & Godin.

ont une forte proportion de ménages familiaux; par contre l'âge des chefs est dans une proportion de 50 pour cent et plus de plus de 45 ans. Dans les arrondissements de Côte-des-Neiges, de Notre-Dame-de-Grâce et du Centre, on remarque, à tout le moins pour CDN et NDG, qu'ils sont les arrondissements dont la description correspond le moins aux objectifs visés. Ils ont un fort taux de ménages non-familiaux qui s'explique par l'âge, plus de 40 pour cent des chefs ayant 55 ans et plus".[9] Quand à l'arrondissement du Centre, le haut taux de familles sans enfants peut s'expliquer en raison du jeune âge des chefs de ménages.

En somme, le nombre relativement faible de jeunes familles qui se relocalisent grâce à l'Opération 20 000 logements met directement en cause l'accessibilité à ce programme. En visant une clientèle de ménages à la fois jeunes et financièrement à l'aise, les dirigeants municipaux ne se sont-ils pas fixés un objectif contradictoire? D'une part, on doit considérer qu'un jeune ménage — surtout s'il se situe dans la tranche des 25-35 ans — jouit de revenus limités, du fait même de son entrée récente sur le marché du travail. D'autre part, cette période coïncide avec un moment où les charges familiales demeurent élevées pour de multiples raisons: remboursement des dettes d'études, naissance des enfants, frais de garderie, achats importants de biens mobiliers, d'une auto, etc.

Compte tenu de la cherté relative des logements (dont les loyers excèdent souvent les 400$ par mois), il ne faut pas se surprendre que ce soient les couples âgés, bien établis, qui aient surtout accès aux logements construits dans le cadre de l'Opération menée par la Ville. Bien que peu nombreux, quelques indices tendent à confirmer cette hypothèse. Alors que le revenu moyen des nouveaux habitants de l'Opération était de 29 439$ par année, celui des ménages montréalais s'établissait en moyenne à 19 366$ en 1981.[10] Autre indice révélateur, 40 pour cent des résidents de l'Opération disposent de revenus variant de 35 000$ à 50 000$ par année.[11] Or, on ne trouve de tels revenus que dans une proportion de 15 pour cent des ménages montréalais.[12] C'est dire par là que cette couche de la population obtient plus que sa part des logements construits dans le cadre de l'Opération.

Opérations 20 000 logements

Nombre de logements prévus au 31 mai 1983

Entreprise privée	7 380	76.1%
Coopératives et organismes sans but lucratif	1 240	12.8%
SOMHAM et SODEMONT*	1 081	11.1%
Total	9 701	100.0%

* SOMHAM: Société municipale d'habitation de Montréal

SODEMONT: Société de développement de Montréal

Ces deux organismes de la Ville de Montréal font la construction de logements à loyer modéré.

Ce retard s'explique en partie par la prudence qu'affichent les entrepreneurs devant un marché urbain nouveau et qui, de surcroît, vient tout juste d'émerger d'une torpeur dans laquelle l'avaient plongé des taux hypothécaires records. L'autre explication réside dans les modalités mêmes d'adjudication des emplacements à construire. En effet, la vente des terrains par la Ville n'est sujette à aucun échéancier des travaux, de telle sorte qu'un entrepreneur peut les retarder quelles qu'en soient ses raisons.

En ce qui a trait à la rentabilisation des équipements collectifs existants, la Ville avait prévu, au départ, construire sur des espaces vacants dans des secteurs déjà pourvus de services. Mais elle a du, pour répondre à la demande, dans les zones périphériques, reviser son objectif. Bon nombre d'emplacements, notamment parmi les plus grands, ne sont dotés d'aucun des services de base: égoût, aqueduc, etc. Aussi, la Ville devra-t-elle entreprendre des travaux publics d'envergure.

Les questions suivantes devraient, elles aussi, être examinées avec soin. La politique de vente à rabais des terrains municipaux parmi les mieux situés (parfois cédés au quart de leur valeur réelle) n'aura-t-elle pas pour conséquence de priver Montréal d'emplacements de choix pour ses projets futurs (espaces verts, logements à loyer modéré, etc.)? À plus ou moins long terme, la relative rareté foncière ainsi créée ne présentera-t-elle pas pour la Ville le risque de devoir acquérir au prix fort de nouveaux terrains pour ses projets futurs? De plus, à qui profitera la vente à rabais des terrains offerts par Montréal? Au constructeur qui, au moment de la revente, en encaissera la plus-valeur foncière? Ou, au contraire, à l'acheteur éventuel? À l'instar des programmes d'aide à la rénovation, l'Opération 20 000 logements n'aura-t-elle pas aussi pour effet de favoriser la spéculation immobilière et, par contrecoup, de contribuer au relèvement rapide des loyers en certains endroits? Ces questions devront un jour trouver réponse, ne serait-ce que pour nous éclairer sur les retombées réelles de ce programme.

Revenus des ménages montréalais–1981[13]

Catégorie	Nombre de ménages	En pourcentage
5 000 et moins	58 075	14.14%
5 000 à 10 000	73 775	17.96
10 000 à 15 000	62 435	15.20
15 000 à 20 000	56 705	13.80
20 000 à 25 000	46 655	11.36
25 000 à 30 000	35 750	8.70
30 000 à 40 000	40 800	9.93
40 000 et plus	36 670	8.93
Total	410 855	100.02%

Aussi élastique et subjective que soit la notion de classe moyenne, on ne peut s'empêcher de remarquer que, dès le départ, le programme ne devait concerner qu'une fraction de la population montréalaise, c'est-à-dire les ménages dont les revenus se situent dans la catégorie des 25 000$ à 40 000$ par année, soit approximativement le cinquième de la population montréalaise. Le prochain tableau confirme l'intérêt des couches moyennes supérieures à l'endroit de l'Opération.

Bien que l'Opération exerce un attrait indéniable auprès des couches sociales supérieures, on doit s'interroger sur la pertinence de miser uniquement sur cette clientèle plutôt que sur un éventail social plus large, en tenant compte des besoins en logement des couches moyennes inférieures et intermédiaires. On peut s'étonner qu'une entreprise de cette envergure ait ignoré les besoins des trois quarts des Montréalais.

Revenu familial moyen des résidents de l'opération[14]

Arrondissements	Revenu moyen
Population totale	29 439$
Ahuntsic	29 172
Mercier	31 242
Côte-des-Neiges	17 066
Sud-ouest	24 746
Rivière-des-Prairies	24 700

Par ailleurs, depuis le lancement de ce programme, la Ville tendrait à ralentir le rythme de mise en chantier de ses logements sociaux: 1 273 unités furent achevées en 1980, 812 l'année suivante et, en 1983, quelques 924 logements furent terminés. Pourtant, la demande pour ce type de logement demeure très forte: pas moins de 15 000 personnes sont inscrites sur les listes d'attente de l'Office municipal d'habitation. Ce chiffre impressionnant laisse entrevoir qu'il existe un besoin social réel mais cette fois à l'autre extrémité de l'échelle des revenus.

L'accès à la propriété

La Ville espérait que son programme favoriserait l'accès à la propriété. Là encore, la réalité s'avère plutôt décevante. "L'Opération 10 000 logements ne favorise vraiment pas l'accession à la propriété puisque seulement 26 cas sur 284 ou 9.2 pour cent des ménages y deviennent de nouveaux propriétaires dans la phase actuelle du projet".[15]

"À l'inverse, un phénomène intriguant se produit: 14.5 pour cent des locataires actuels de l'Opération étaient auparavant propriétaires".[16] On constate cette démarche en particulier chez les jeunes ménages professionnels. Puisqu'il n'y a pas de barrière à l'accès à la propriété pour ce groupe, des motivations liées à la recherche optimale de la mobilité pourraient expliquer ce comportement. En d'autres mots, chez ce groupe social, le désir de mobilité surclasse le désir d'appropriation, ce qui proviendrait de changements fréquents du lieu d'emploi et de l'emploi lui-même, ainsi que du jeune âge du groupe en question. Telle est du moins l'explication avancée dans l'étude du professeur Parenteau.

Les mouvements de population

En ce qui a trait au "brassage de population", deux aspects retiennent notre attention: celui du retour à la ville et celui de l'impact du programme sur les résidents des quartiers anciens.

Dans sa première partie (la construction des premiers 10 000 logements), ce programme n'a pas eu pour effet de chasser les populations anciennes des vieux quartiers. Exception faite de l'arrondissement Sud-ouest (Petite Bourgogne, Pointe Saint-Charles, etc.), l'Opération touche peu les quartiers centraux de Montréal. Le nombre réduit de logements prévus pour ces quartiers ne pourra donc entraîner de profonds bouleversements du tissu social, à moins que l'Opération, dans un deuxième temps, ne prenne de

l'ampleur dans ces quartiers. Si cela devait se produire, l'effet de ce programme combiné à celui des autres politiques de revitalisation pourrait risquer d'amplifier le processus bien connu: rénovation-spéculation-hausse de loyers avec pour résultante de forcer le départ des locataires âgés ou pauvres.

Concernant le retour à la ville, peut-on parler d'un mouvement véritable et significatif? "Peut-être", affirme le rapport Parenteau, "puisque 15 pour cent des ménages (relocalisés dans le cadre de l'Opération) effectuent au sens général un retour à Montréal. Cependant, lier ces mouvements de retour à l'impact de l'Opération sur le marché du logement à Montréal semble plus hasardeux. Surtout, parce que bon nombre des ces retours semblent déterminés par la mobilité occupationnelle. En effet, si nous excluons les retours qui impliquent des migrations interrégionales (inter-provinciales et autres), pour ne retenir que les retours effectués à l'intérieur de la région métropolitaine, seulement 9.8 pour cent des ménages effectueraient ce type de mouvements de retour. D'ailleurs, il faudrait encore réduire ce pourcentage si on devait retenir les retours contraints par des situations familiales et des situations de travail puisque ces retours n'expriment pas vraiment la concurrence proposée par l'Opération entre le marché du logement de Montréal et celui des villes de banlieue de la région métropolitaine".[17]

L'étude Parenteau est formelle. Jusqu'à ce jour, le programme 20 000 logements n'a guère canalisé ni encouragé ce mouvement du retour à la ville. Dans ce cas, de deux choses l'une: ou l'Opération présente des lacunes inhérentes à son fonctionnement et ses objectifs ne sont pas complètement adéquats, ou elle a tablé sur un phénomène dont l'existence même semble fortement exagérée. Au pire, une troisième éventualité combinerait les deux hypothèses précédentes.

Concernant la première hypothèse, les études socio-démographiques déjà réalisées à ce jour, notamment celle du professeur Parenteau, suggèrent une révision des objectifs et du fonctionnement du programme 20 000 logements. Quant à la deuxième, le peu de connaissances que nous avons du phénomène du retour en ville devrait inciter à la prudence. Nous ne savons pas en quoi ce phénomène se distingue des mouvements démographiques traditionnels entre ville et banlieue et s'il existe réellement. À l'heure où la création d'emplois se localise surtout à la périphérie des grands centres urbains et ce, tant dans les secteurs industriel que commercial, on comprend mal pourquoi les banlieues deviendraient des lieux de désertion. Enfin, nous pourrions nous demander si la revitalisation des quartiers centraux (souvent associée au retour à la ville) ne serait pas simplement le fait d'un nouveau dynamisme interne.

Comment expliquer ce renouveau urbain? Peut-être et tout simplement par le fait que la nouvelle génération, issue de la révolution tranquille, s'étant fixée dans les quartiers centraux pendant ses études, ne peut ou ne veut plus opter pour la vie en banlieue. Si l'hypothèse se vérifiait, nous serions plutôt en présence d'un phénomène de non-retour en banlieue. Au lieu de susciter de manière quelque peu artificielle un retour à la ville, Montréal pourrait appuyer ces nouvelles forces vives qui émergent des vieux quartiers, entre autres, le mouvement coopératif et les groupes communautaires soucieux de l'aménagement urbain. Ainsi, en laissant aux individus le loisir de réaménager leur environnement, la qualité de la vie en milieu urbain s'améliorerait. Alors et seulement, peut-être, les banlieusards reviendront-ils en ville.

Références

1. Service d'urbanisme de la ville de Montréal. **Opération 20 000 logements, phase X.** Montréal, décembre 1982. Avant-propos, p. 4.

2. Parenteau, René; Charbonneau, François; Beaudoin, Chantal. **L'Opération 10 000 logements.** Rapport de recherche. Institut d'urbanisme de l'Université de Montréal. Montréal, 23 décembre 1982. 209 pages.

3. Statistique Canada. Catalogue 64-002, **Logements mis en chantier et parachevés.**

4. Berger, François. "Ce sont les taxes qui vident Montréal", **La Presse,** 24 novembre 1979. p. A-10.

5. À ce sujet, voir les études de Martial Fauteux de l'Office de la planification et du développement du Québec.

6. Bureau de la statistique de Québec. **Analyse budgétaire des municipalités du Québec,** 1978-1982.

7. Service d'urbanisme de la ville de Montréal. **Opération 20 000 logements, phase XI.** Montréal, août 1983. p. 44.

8. Ville de Montréal. **Rapport du directeur des finances.** Exercice terminé le 31 décembre 1982. p. 9.

9. Parenteau et al. op. cit., p. 97.

10. Parenteau et al. op. cit., p. 115.
Statistique Canada. Catalogues E-575, E-563. **Certaines caractéristiques sociales et économiques du recensement du Canada, 1981.**

11. Parenteau et al. op. cit., p. 43.

12. Approximativement, déduction faite du tableau intitulé "revenu des ménages montréalais".

13. Statistique Canada. Catalogues E-575 et E-563.

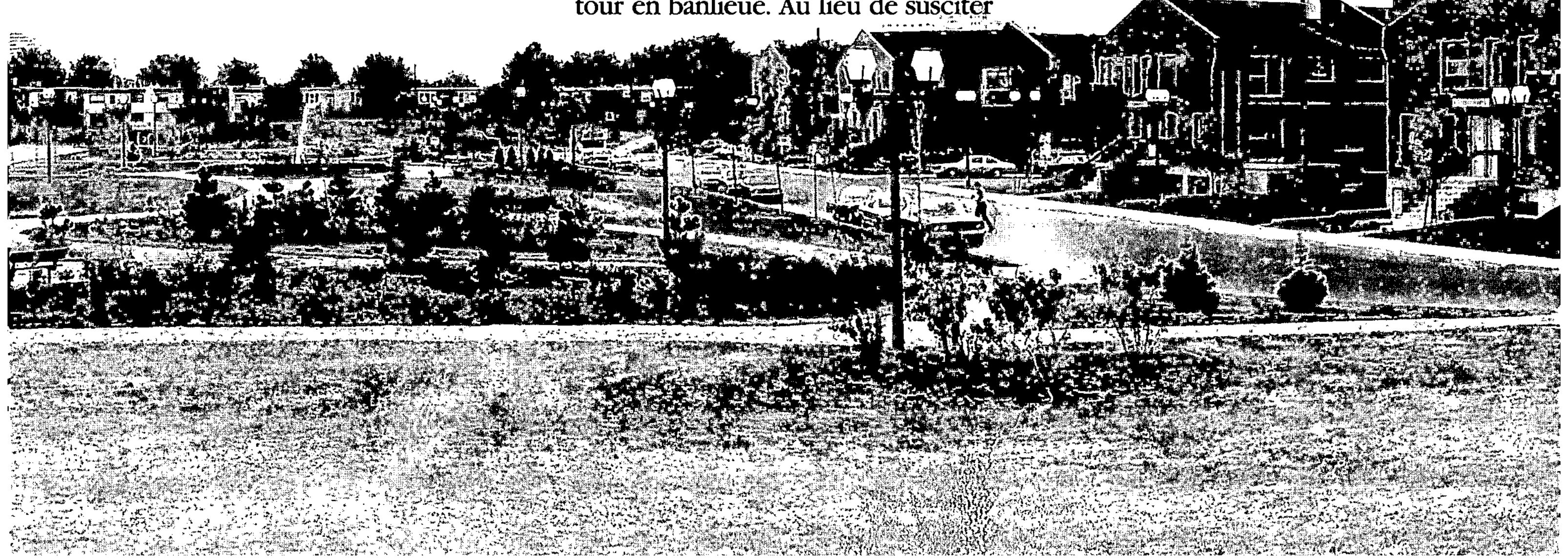
14. Parenteau et al. op. cit., p. 115.

15. Parenteau et al. op. cit., p. 142.

16. Idem.

17. Parenteau et al. op. cit., p. 191.

Jean-Pierre Dagenais est journaliste à la pige, secteurs de l'habitation et du transport.



Three Cheers for CHRP

–the program that pleased everybody

Text by Christine Tausig

The Canada Home Renovation Plan (CHRP, or "Chirp" as it was called), was one of those rare events–a program that made almost everyone happy. It was introduced in May 1982 by the federal government to create jobs in the then-lagging home renovation and construction industry.

Under the program, which was to be administered by Canada Mortgage and Housing Corporation (CMHC), homeowners could receive forgivable loans of up to $3 000 to cover up to 30 per cent of the cost of improvements on their principal residence.

In all, more than 130 000 homeowners across Canada took advantage of this help to make their homes bigger, more attractive, more modern, or just more comfortable.

For some, the financial aid meant better windows and new doors. For others, it was the family room they had always wanted. And for a few, it helped to turn a run-down old house into a dream home again.

CHRP even made homeownership feasible for some. Ian Hepburn, for instance, a self-employed weaver and piano teacher, now owns a home in Vankleek Hill, Ontario. He was living nearby on his parents' farm when he spotted a dilapidated, century-old house that was being used as a storage shed.

"When I was considering buying the house, I looked into every grant available," Hepburn admits. "I actually based the idea of purchasing the house on the assumption I would get CHRP."

Without CHRP funds and the federal government's now discontinued grant for first-time homebuyers, Hepburn says he probably wouldn't have been able to buy the house... "it would have been beyond me."

There were some strings attached to the CHRP loans, however. The renovations had to cost at least $2 500 and, in order to meet CHRP's objective of creating jobs, at least one-third of the loan had to be spent on contracted labour.

Applicants could not rent or sell their newly renovated home for at least one year after all work had been completed. In addition, only homeowners whose total household income was $48 000 or less were eligible to take advantage of CHRP.

Owners of condominiums, individually owned cooperative housing units and residences on Indian reserves were also eligible for the loans, but dwellings which contained more than two units were not. The home improvements had to be completed within six months of the approval of the CHRP loan.

If all conditions were met and CMHC inspectors had verified that the renovations were complete, the loans were "forgiven" after a year and did not have to be repaid.

The program was popular. By the end of 1982, the $30 million originally allocated by the federal government to cover the cost of the loans had run out. Another $85 million was added to the program's budget. When this, too, showed signs of running out, the government made available an additional $120 million in its April 1983 budget, bringing the total funding to $235 million. By 12 July 1983, all the money had been spent and the program was ended.

CHRP had originally been aimed at areas of high unemployment but it soon became apparent that homeowners in such areas often could not afford to renovate. Consequently most of the funds went to "average" homeowners, according to CMHC officials.

The program was widely used in Ontario, where homeowners had been allocated $76.6 million up to the end of July 1983. Québec applicants were a close second with $61.2 million while in British Columbia they received $22.9 million.

The rest of the money was divided as follows: Alberta and New Brunswick were each allocated $17.4 million, Nova Scotia $14.7 million, Manitoba $11 million, Saskatchewan $6.2 million, Newfoundland $5.6 million, Prince Edward Island $2 million, and $0.2 million in the Yukon.

CHRP seems to have been universally successful with homeowners, contractors and CMHC officials alike.

"There was a real need for this sort of thing," comments Larry Kidd, a program officer at the CMHC Ottawa branch office. "It created a lot of jobs."

The program was "very successful, well-liked and relatively easy to administer," adds Evelyn Mews, a program officer in the National Residential Improvement Division at CMHC's National Office. CHRP was designed as a short-term plan to fill a specific need for both homeowners and building contractors, Mews explains. As such, it was different from on-going programs with complicated systems of grants and loans such as the Residential Rehabilitation Assistance Program (RRAP).

Paperwork for CHRP was purposely kept to a minimum. Homeowners had only to fill out a single application form. In spite of the flood of applications CMHC personnel at local offices across the country were able to advise and help guide homeowners through the application process.

The program was geared primarily to the average income earner, according to Mews. "The income limits were higher (than for other CMHC programs) because we wanted to get to the people who had money to spend," she notes. Despite the wage ceilings of $48 000, however, the average income of CHRP applicants was $23 000 and more than three-quarters earned $30 000 or less.

The scope of CHRP also added to its popularity, Mews points out. Although other CMHC loans and grants place a number of restrictions on the work that can be done, the CHRP loan was available for a wide

Under a grey stucco exterior that had been applied at some point during the life of the house, Hepburn found and restored the original board and batten siding.

variety of large and small projects.

To be eligible for CHRP funding, the home improvements had to be for residential purposes and permanently installed. However, "luxury" items such as swimming pools, greenhouses and saunas or work such as landscaping, fencing or driveway construction were not eligible.

(Mews also turned down loan requests for satellite dishes and a bomb shelter–"neither required for residential purposes!" she explains.)

The largest group of homeowners (41 per cent) spent the CHRP funds on exterior renovations. Additions, plumbing, insulation and interior renovations were also popular uses.

Many of the home improvements involved energy conservation, often indirectly. Approximately 70 per cent of the applications received by

Allocation of CHRP Funds by Province

Province	Millions of dollars
Ontario	76.6
Québec	61.2
British Columbia	22.9
Alberta	17.4
New Brunswick	17.4
Nova Scotia	14.7
Manitoba	11.0
Saskatchewan	6.2
Newfoundland	5.6
Prince Edward Island	2.0
Yukon	0.2

Types of Work Completed under CHRP

Insulation	10%
Additions	11%
Plumbing	5%
Electrical	3%
Heating	2%
Interior renovations	19%
Exterior renovations	41%
Structural	9%

the Ottawa CMHC office, for example, included some form of energy savings such as new, thicker windows or insulated siding, points out Larry Kidd.

The CHRP program left most decisions about the type of home improvements needed to the homeowners themselves.

Ian Hepburn, for example, changed his plans somewhat as the renovations of his Vankleek Hill home progressed.

"Once we got going and took down the inside walls we discovered log walls underneath," he says. "We wanted to expose these, so we had to change our ideas a bit".

Hepburn also found and restored the original board and batten siding under the house's grey stucco exterior. Other renovations–not all paid for by CHRP–included new wiring, added insulation, new floors and support beams.

"I'm really grateful for the grant," Hepburn observes today.

Jacques Shore, a lawyer with the Royal Commission on the Economic Union (Macdonald Commission), and his wife Donna, a medical student, decided to use their funds from CHRP for renovations to the exterior of their 86-year-old house.

Ian Hepburn discovered the original log walls of his house when he took down the existing interior walls.

"We had wanted to do the exterior for quite a long time," says Jacques Shore. Interior renovations had been completed at their own expense two years earlier when the couple bought the house. The exterior was so "ugly", however, jokes Shore, that whenever people dropped him off in front of his house he always wanted to invite them in for coffee in order to show them the interior.

Using both CHRP funds and additional money of their own, the Shores wanted to bring their house more in line with the neighbourhood's character. They ripped out an "unusually ugly" cement porch with a wrought iron fence, replaced stucco where the porch had been, added a "plain, but pleasant" new porch, replaced aluminum fascia at the top of the house with re-conditioned wood mouldings, took down aluminum shutters, and painted the stucco walls a peach colour.

The CHRP loan speeded up the process of renovating for the Shores. "Without it, we probably would not have had it done so quickly," Shore explains.

▲ CHRP funds helped the Kells move into their new home months earlier than they had thought possible. When they bought the older home, it needed extensive renovation. ▶

For another Ottawa couple, CHRP funds meant that they could move into their new home sooner than planned. Peter Kells, an industrial design student at Carleton University, and his wife Marlene, who works at the House of Commons as head of committee indexes for *Hansard,* were the first in the Ottawa area to apply for a CHRP loan.

"We were knocking on the door of the local CMHC office before the funds were even released," says Peter Kells, explaining that his wife had read the Housing Minister's statement about the program at work.

The Kells had just bought an older house that was in such poor condition it needed extensive renovations. They received the maximum loan of $3 000 from CHRP and estimate that they spent about $13 000 altogether on the project. "The day the money (from CHRP) was approved, we started reconstruction," Peter Kells says.

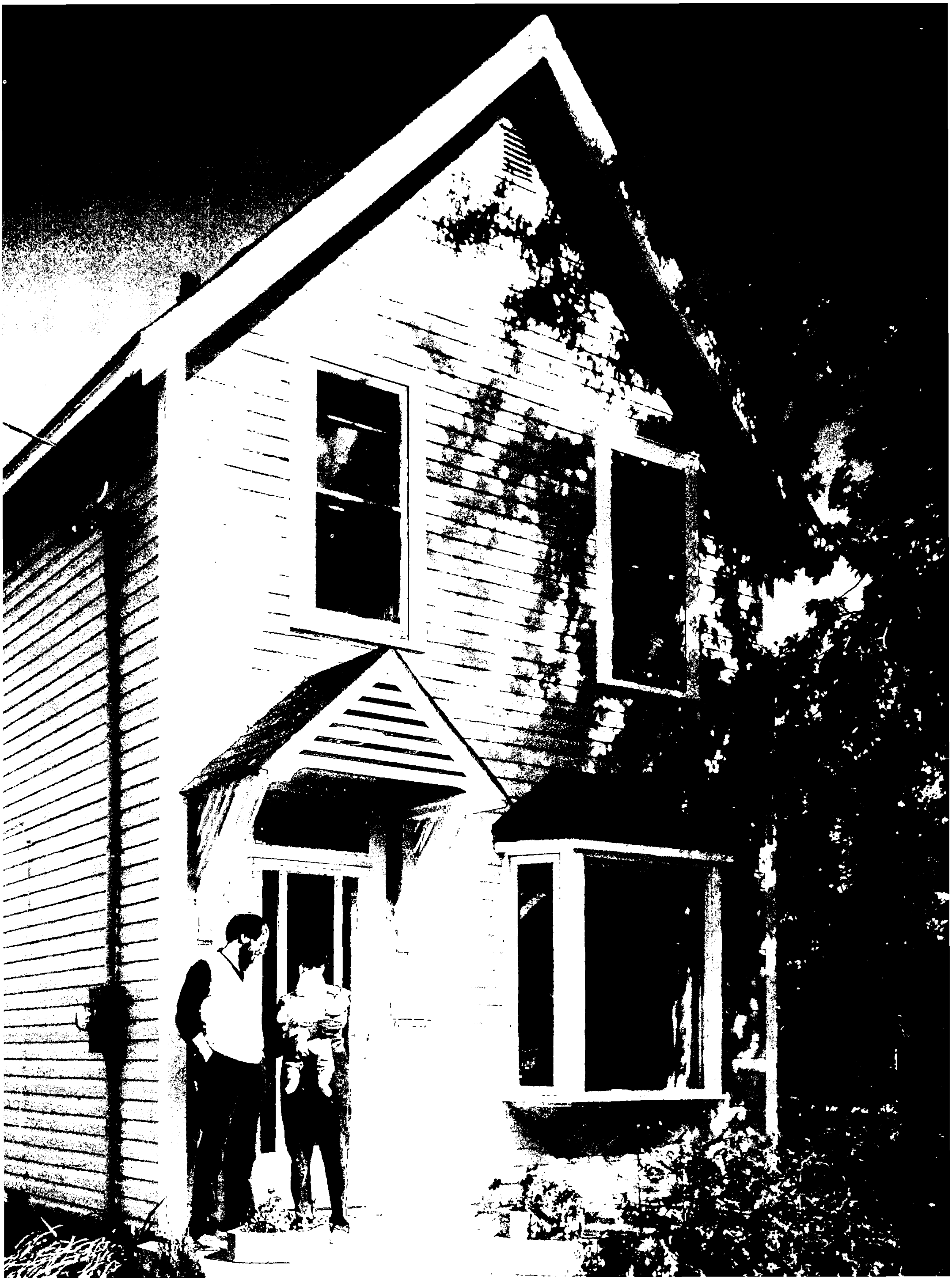
The interior of the house was "more or less gutted", new plumbing and wiring were installed, insulation added, and new windows put in place. The Kells were able to move into their new home by mid-summer 1982, only a few months after they had purchased it.

Not all projects using CHRP loans were so extensive, however. Patrick and Mary Kelly, both retired, live in a 25-year-old house in an Ottawa suburb. They used CHRP funds to install new windows, eavestroughing and aluminum siding. Mary Kelly feels the improvements made to the house are a "real asset". Her husband no longer has to climb ladders to paint the house every few years and she finds that her new windows open more easily.

The Kellys would not have fixed up their house without CHRP. "We would never have considered it before," Mary Kelly says. "We thought the cost was over our heads."

CHRP was not only designed to make homeowners happy, however. Its primary target was to create jobs by encouraging people to hire labour to fix up their houses. In that respect, it also seems to have been successful.

During the plan's 14-month operation, approximately 40 000 "people-



years" (12 months of work for one person) were created in Canada, say CMHC officials. The government estimates that 42 per cent of CHRP funds went directly to workers in the construction and renovation industry, while the rest were spent on materials.

CMHC's job creation figure is based on a research study which shows that one "person-year" is created for every $27 000 spent on renovations, according to CMHC planning analyst Peter Keilhofer. The 40 000 figure takes into account not only direct jobs in the construction industry but also the "spillover" effect, points out Keilhofer. For example, he explains, when a homeowner rewires a house, a worker may be hired to make the electrical wire. This person may then spend the earnings on a new car, thus creating jobs in the automotive industry.

Government officials reasoned, however, that the program was no longer needed. The sizeable number of applications for funds was in itself a sure indication that the economy was recovering, stated Housing Minister Roméo LeBlanc as he announced the program's demise.

(In the Ottawa area alone, for example, loans rose to $785 048 in June just before the program was cut off, compared to the $85 099 paid out the previous May.)

The government recognized that the incentive to renovate provided by CHRP funds was no longer needed by July 1983, adds CMHC's Evelyn Mews. "With interest rates lower and more disposable income around, enough renovation is going on now without CHRP."

Even some contractors–who stood to gain the most from CHRP funds–believed that the plan had run its course. "We don't really need it right now," states Mario Filoso. "We're paying our bills... making a little profit.

"People are starting to spend their own money, so why should the government pay out taxpayers' funds for such a program?".

In the words of one CMHC official, CHRP was an "extremely popular" program for thousands of workers and homeowners across the country. However, the program was more than that. It provided workers in a variety of trades and skills with valuable jobs at a time when they might otherwise have been laid off or unemployed. For homeowners using CHRP funds, it helped them to renovate their houses so that they could enjoy them to the fullest. In all, CHRP was a program that left almost everyone happy.

"Some contractors were very disappointed when the CHRP program ended," says Patricia Batiuk, an official at CMHC's Ottawa office. "It made a big difference to them," she adds. "They were getting a lot of work".

"We had wanted to renovate the exterior for a long time," said Jacques Shore. CHRP made it possible for the Shores to make the exterior of their home more similar in character to other houses in the neighbourhood.

Mario Filoso, general manager of an Ottawa renovation firm, agrees. "It created a lot of work when the economy was down," he comments. His company hired five extra workers during the course of the program.

In British Columbia, a Burnaby-based company was able to create work for about 15 new employees with the help of CHRP. The program increased sales volume so much, explains Ken Gillies, general sales manager of a vinyl siding company, that approximately 15 workers were hired to sell and install siding on area homes. All employees hired while the plan was in effect are still working for the company, adds Gillies, although business has since "gone back to normal."

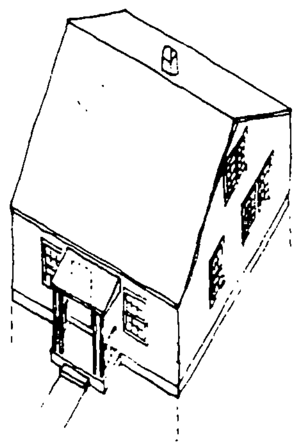
East of Vancouver in Coquitlam, B.C., another company used the extra work created by CHRP funds to avoid layoffs that would otherwise have been necessary. The program "certainly stimulated business and we all needed that," observes Phonie Seward, part-owner of a home renovation company.

According to Seward, the program provided a "good impetus" to encourage homeowners to add their savings to government funds and carry out much-needed repairs. The projects funded by CHRP were unusually large. "It motivated people to do a bigger job than they might otherwise have considered," he adds.

One of the few complaints about CHRP is that the program did not run long enough. Some homeowners across the country were dismayed when the federal government announced that it would no longer accept applications after 12 July 1983.

Christine Tausig is a freelance writer living in Ottawa.

Note: Le présent article fait suite à un récent rapport de recherche subventionné par la Société canadienne d'hypothèques et de logement intitulé "W.H.L., 40 ans de transformation".



La maison des vétérans en mutations constantes

par Denys Marchand

Les gens qui connaissent un peu le quartier Rosemont réagissent spontanément à la photo d'une "maison des vétérans". Immédiatement, ils expriment la même réaction: "Ah oui, ces petites maisons-là! Il y en a plein sur... euh... enfin, dans le coin de... euh..., je pense, la 11e ou la 12e Avenue, quelque part par là. Tiens! on les voit en passant sur le boulevard Métropolitain!"

On peut dire que ces petites maisons constituent, on ne peut mieux, un archétype. On les a tous vues, on sait tous à peu près où elles sont. À peu près. Car quand il s'agit de les situer, rares sont ceux qui peuvent le faire avec exactitude. La raison en est qu'il s'agit d'un modèle de maison dans sa forme la plus simple, la plus expressive et, en même temps, la plus répandue. Mais la confusion va plus loin. Dans le cas cité plus haut des 11e et 12e Avenues à Rosemont, il ne s'agit pas de la "maison des vétérans" mais bien d'un modèle de seconde génération, issue des expériences de la Wartime Housing Ltd. et qui fut construit à des centaines d'exemplaires par la compagnie Cummings Homes Ltd. de Montréal, entre les années 1949 à 1955. Et cette dernière ne s'est pas sentie obligée d'offrir de la diversité, du moins dans Rosemont: mêmes terrains, mêmes alignements, même matériau de revêtement, soit le bardeau d'amiante ciment, et un seul modèle de maison. C'est rendre bien peu justice aux efforts de cette compagnie de la couronne, la Wartime Housing Ltd., qui avait, malgré des conditions de production particulièrement difficiles, fait certains efforts de diversification dans les revêtements, les implantations et les modèles.

Pourquoi ce stygmate alors? Sans doute, parce que ces maisons constituaient une première sur bien des plans. Première intervention massive du gouvernement canadien dans le domaine de l'habitation, premier exemple de production en préfabrication d'une quantité importante de maisons somme toute, assez semblables, regroupées en des ensembles assez importants pour être identifiables comme des secteurs de quartier ou même des villages. Mais surtout, elles marquaient l'amorce d'une profonde transformation des politiques urbaines au pays, elles constituaient le premier modèle et le premier laboratoire de la future banlieue accessible à tous. Elles contrastaient de façon fondamentale avec le logement, le "flat" d'un seul niveau, situé dans une maison de trois étages, elle-même installée dans la contiguïté de ses voisines par les traditionnels murs mitoyens. En fait, pour les contemporains, c'était peut-être une vision de l'avenir qui s'annonçait par la nouveauté de l'implantation en même temps que par la banalité de l'apparence.

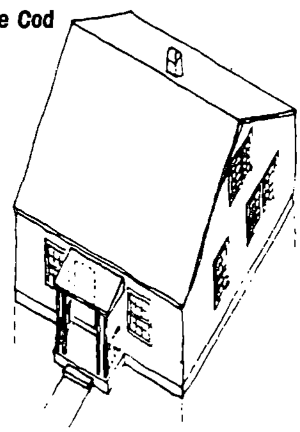
Mais, d'où nous venaient donc ces fameuses "maisons des vétérans"? Il faut remonter bien avant la période 1939-1945 pour comprendre le phénomène qui répond à une situation de pénurie de logement.

L'arrivée de la Wartime Housing Limited

L'activité dans la construction résidentielle est presque réduite à zéro par le crash de 1929 et la crise qui s'ensuit. La période 1930-1940 voit très peu de mises en chantier tandis que la population ne cesse de croître et que les ruraux, chassés par la crise, convergent vers la ville. Les conditions de vie en milieu urbain, surtout dans les quartiers populaires vont en se dégradant. D'autant plus que nombre de ces quartiers, construits dans des moments de spéculation fiévreuse, laissent beaucoup à désirer sur le plan de la qualité de la construction et de la salubrité. De nombreuses études effectuées alors par la Ligue d'action civique et le Montreal Board of Trade en témoignent.

La Loi nationale de l'habitation de 1939 reconnaît l'existence du problème et, si elle ne le résoud pas, elle indique la direction des politiques à venir. En effet, cette loi encourage et supporte la construction dans les zones périphériques en voie d'expan-

Cottages Cape Cod état original.



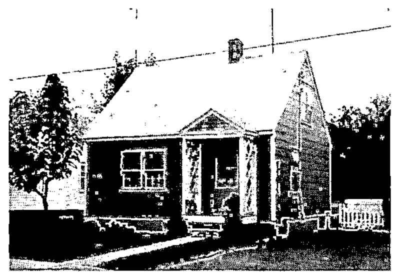


Photo D. Marchand

Photo D. Marchand

Deux modèles originaux à peine modifiés qui ont conservé leur revêtement original de bardeaux d'amiante ciment.

sion et rejette les vieux quartiers comme des endroits peu sûrs pour l'investissement, confirmant ainsi leurs mauvais état et consacrant leur détérioration comme inévitable.

C'est cependant la guerre et ses besoins de main-d'oeuvre qui va relancer l'activité de construction domiciliaire. Les industriels ne peuvent répondre aux exigences de la production de guerre, faute de logements adéquats pour la main-d'oeuvre. L'industrie privée de la construction, empêtrée dans les législations de guerre, ne peut répondre à la demande et c'est bien à regret que le gouvernement canadien décide d'intervenir dans ce secteur sacré de l'entreprise privée.

La "Wartime Housing Limited" est formée comme compagnie de la couronne sous l'égide du "Department of Munitions and Supply". Cette compagnie va construire 19 000 unités de logement entre 1941 et 1945 et 27 000 autres entre 1945 et 1949. La première production va servir à loger les travailleurs des industries. Après 1945, on répond surtout aux besoins des vétérans, mais, très bientôt aussi, aux demandes de plus en plus pressantes de la population qui souffre depuis 1929 d'un manque de logements.

Ce qu'il faut retenir de l'expérience, c'est la longue hésitation du gouvernement à agir dans un secteur considéré comme exclusivement du ressort de l'entreprise privée. Les longs débats en chambre et les discours des critiques de l'opposition en font foi; les expériences sociales européennes et le livre de Catherine Bauer qui rapporte les différentes tendances mondiales de l'époque, y sont mentionnés. Le gouvernement hésite et ce n'est, finalement, que par un habile stratagème que l'on acceptera de faire un accroc à une politique continue de non intervention: les maisons de la Wartime Housing seront des maisons temporaires, démontables, pouvant être vendues à l'entreprise privée après la guerre et transportées sur un autre site.

Cette décision va déterminer la *forme* et l'*avenir* de la "maison des vétérans". La forme, c'est celle de la maison unifamiliale isolée, l'avenir, celle des transformations successives effectuées par les différents propriétaires dans bien des cas.

La maison unifamiliale isolée: idéologie ou nécessité?

La formule de la maison unifamiliale comme lieu d'habitat est un phénomène relativement récent provoqué par les besoins de la révolution industrielle. Les nouvelles industries d'Europe ont alors besoin d'une main-d'oeuvre stable sur laquelle elles pourront compter à tout moment de l'année, ce qui rompt avec les habitudes d'emploi de la main-d'oeuvre agricole migrante au gré des récoltes. Le XIX^{e} siècle, tant en Angleterre qu'en France, principalement, va expérimenter trois grandes façons de répondre au problème. Soit par l'accroissement des villes existantes avec la prolifération des faubourgs ouvriers ou la surdensification des quartiers anciens, c'est-à-dire, le laisser-faire. Soit par la création des palais de travailleurs, phalanstères ou autres dans lesquels habitat et industrie, logement et travail se mêlent suivant un socialisme plus ou moins égalitaire. Soit, enfin, par la construction de cités ouvrières où l'on va fournir à l'ouvrier une petite maison plus ou moins isolée pourvue d'un jardinet. Cette dernière formule va évoluer vers la création des cités-jardins.

De ces trois "réponses", la première a longtemps été pratiquée puisque c'est celle qui commande le moins de déboursés directs tout en laissant le champ libre à l'entreprise privée. Elle a aussi été combattue tant pour des raisons d'humanisme social que pour des raisons politiques, les mauvaises conditions de vie et l'entassement favorisant l'activisme et la contestation chez les ouvriers. La seconde, préconisant plus ou moins un égalitarisme humanitaire ou utopique ne recevra pas l'assentiment des diverses société capitalistes qui y verront des foyers de socialisme. La troisième enfin, en préconisant la maison individuelle, rencontrait plusieurs objectifs: fixation du capital et de l'épargne de l'ouvrier, isolation de l'individu et de sa famille d'un contexte social dangereux, assiduité et constance dans le travail.

C'est résumer en très peu de mots toutes les connotations idéologiques de l'habitat et tous les débats plus ou moins acerbes qui ont entouré l'avènement de la maison unifamiliale comme forme préférée d'habitat. Mais, au-delà des luttes à caractère idéologico-politique, il est apparu une constante qui ne s'est jamais démentie, celle de l'amour du petit propriétaire pour sa maison et sa tendance à la transformer, à l'adapter à ses beoins, à l'approprier à son idée de la "Maison". Au-delà des si-

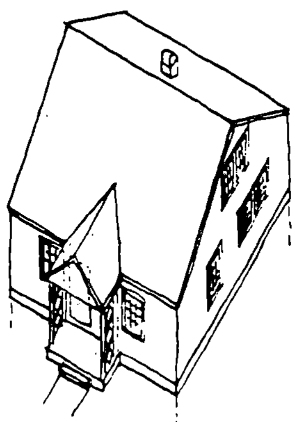
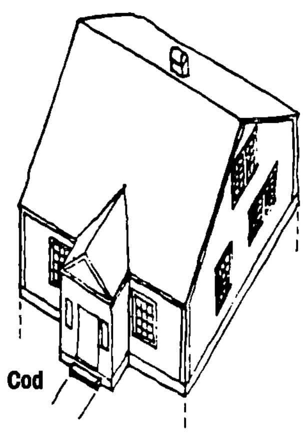


Photo D. Marchand

Règle générale, le plus petit modèle de maison n'a pas vraiment fait l'objet d'actes d'appropriation, comme si leurs faibles dimensions ne s'y prêtaient pas. On trouve ces maisons, soit en état de délabrement avancé, soit, comme dans cet exemple, ayant fait l'objet d'un maquillage superficiel.



Modèle Cape Cod consolidé.

gnifications politiques, nous trouvons une dimension "existentielle" de la demeure; c'est ce qui nous a attirés à considérer de plus près le phénomène de la "maison des vétérans" qui marque une rupture catégorique dans la façon de concevoir l'habitat et le développement urbain au Canada, en 1945.

Ici, nous n'avons eu que de faibles échos des débats idéologiques mentionnés plus haut et qui se sont déroulés enssentiellement en Europe entre 1800 et 1940. La question du logement n'a que rarement fait l'objet de revendications des mouvements ouvriers au Canada ou à Montréal dans la période équivalente. Bien sûr, nous avons eu H.B. Ames qui a construit quelques logements ouvriers à la fin du XIX^{e}. Nous avons reçu les avocats des cités-jardins, tels Adams et Unwin qui ont connu un certain succès auprès de certaines couches de la population, comme en témoignent Ville Mont-Royal et Hampstead, ou, plus tard, la Cité-Jardin du Tricentenaire à Rosemont. Ce n'est, en définitive, qu'avec la guerre et l'après-guerre que la crise du logement se fait sentir de façon plus particulièrement aigüe et que le gouvernement va devoir chercher à y répondre.

Si la réponse est apportée par le biais de la petite maison unifamiliale isolée, faut-il en chercher la raison dans la préférence du monde capitaliste pour cette formule ou ne faut-il pas plutôt regarder du côté des raisons techniques dérivant de la décision gouvernementale de construire des maisons temporaires et transportables? Un article du Journal of the Royal Architectural Institute of Canada de 1942[1] nous apporte peut-être la réponse. D'après l'auteur, ces maisons, étant temporaires et démontables, donc construites en bois et hautement ignifuges, ne pouvaient être qu'isolées pour éviter la propagation des incendies! Pragmatisme politique, nécessité technique ou idéologie, le débat reste ouvert quant aux motivations concernant la formule adoptée.

La préfabrication

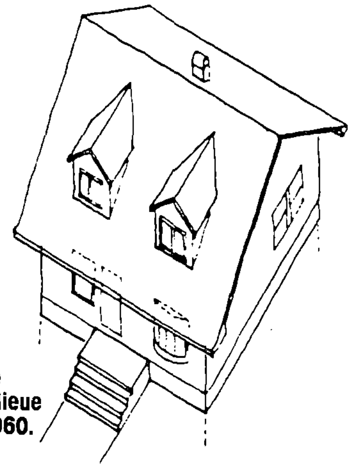
La notion de maisons temporaires, démontables et transportables ne pouvait se dissocier de l'idée de préfabrication. Or celle-ci n'est pas nouvelle. On connaît l'exemple d'hôpitaux militaires préfabriqués lors de la guerre de Crimée, celle de maisons préfabriquées en Angleterre à la fin du XIX^{e} et expédiées en Australie ou aux Indes. En Amérique, ces bâtiments préfabriqués circulent de l'est vers l'ouest, maisons, banques ou églises. Cependant, la période de 1930 à 1940 voit se préciser un effort sans précédent de rationalisation et d'industrialisation comme en témoignent les centaines d'articles publiés dans les revues d'architecture d'alors. C'est dire qu'en 1942 l'industrie est prête à relever le défi.

L'émergence d'un modèle

Les années qui ont suivi la première guerre mondiale ont vu l'émergence aux États-Unis, notamment en Nouvelle-Angleterre, d'une élite intellectuelle nouvelle. Celle-ci jouit de la prospérité grandissante du pays et des possibilités de plus en plus grandes de déplacements. Au sud-est de Boston, la région de Cape Cod devient le lieu de villégiature par excellence où se retrouvent peintres, poètes, écrivains, dramaturges. Une vie intellectuelle active et une production littéraire importante en découlent. Et, dans ce lieu idéal de vacances et de culture, on trouve un modèle de maison qui connaîtra un avenir important. Petite maison de bois perdue dans les dunes, résultat d'une économie de moyens imposée par le contexte, le "Cape Cod Cottage" enveloppé du romantisme naturaliste et patriotique des années 20 va connaître une carrière foudroyante. Il sera repris par tous les constructeurs de l'époque aux États-Unis et l'on voit apparaître notamment dans la revue "Building in Canada" des années 30, des articles et photos nous proposant le style Cape Cod et le "Cape Cod Cottage".

La simplicité des formes de ce modèle, la facilité de construction du toit à deux versants en faisait un objet idéal de préfabrication. Très rapidement, les constructeurs américains et canadiens l'ont compris et il n'est guère surprenant de le voir surgir comme produit de la Wartime Housing. L'économie de moyens qui avait présidé à l'éclosion du modèle de base dans un contexte relativement pauvre rejoignait les exigences de l'économie du temps de guerre.

Paradoxe toutefois, et ce n'est pas le premier, la petite maison de bois dans les dunes devient un objet industrialisé, produit à des centaines d'exemplaires et implanté indifféremment sur des lots de banlieue planifiée ou sur des lots vacants dans


Cottage de banlieue post 1960.

Cette maison constitue l'exemple type des modifications symboliques maximales (Groupe B-6): saillie latérale de la toiture et avant-toit, entrée soulignée par une ample marquise triangulaire, fenêtres panoramiques de part et d'autre de l'entrée, enfin, la base où l'assise de la maison est fortement soulignée.

une trame urbaine déjà établie dans sa rigidité. Autant il est absurde de prétendre que l'aménagement du milieu physique va changer un groupe social, autant il est dangereux de présumer de la neutralité des formes construites.

L'apparition, dans le paysage urbain, de ces petites maisons à des centaines d'exemplaires va provoquer des réactions diverses de critique ou de rejet. La similarité des maisons, malgré les tentatives de la Wartime Housing Ltd. de varier les revêtements et les alignements fournit à la critique son argument principal.

Mais, aussi, suivant les milieux et les localisations géographiques, une "réception" différente sera accordée à la maison des vétérans. Implantées à Québec, aux confins extrêmes de la basse-ville d'alors, entourées d'un cimetière, d'une ligne de chemin de fer et de terrains à vocation indéterminée, ces maisons seront considérées longtemps comme des cabanes. D'autant plus que le romantisme anglo-américain du Cape Cod Cottage n'a pas atteint la culture québécoise d'alors. La maison ne correspond pas à un modèle. Par contre, dans le quartier Snowdon, à proximité de Hampstead, le groupe de résidents anglophones retrouve là un modèle culturel qui sera conservé.

L'intérêt de la maison des vétérans

La production de la Wartime Housing Ltd. va comprendre des bâtiments de type dortoir mais surtout des maisons unifamiliales isolées. Comme échantillonnage pour une étude comparative, ces maisons offrent un avantage exceptionnel: elles sont, à peu de choses près, toutes pareilles. La similitude des maisons entre elles va faire ressortir de façon plus manifeste les opérations de transformation effectuées par leurs habitants. La variable de base, la maison, étant réduite au minimum, l'originalité des transformations va ressortir plus sûrement. Rappelons cependant que les architectes de la Wartime Housing Ltd. on cherché à apporter une certaine diversité en variant les implantations et les revêtements; ces derniers étaient de quatre sortes, soit la planche à déclin, le bardeau de bois, le panneau de contreplaqué avec joint à baguette et enfin, le bardeau d'amiante-ciment que l'on retrouve encore sur plusieurs maisons.

Pignon sur rue

Dans l'expression populaire "avoir pignon sur rue", on fait référence à la maison qui présente à la rue le mur triangulaire qui ferme l'extrémité des deux versants de la toiture, comme dans de nombreuses villes anciennes d'Europe. Cette implantation s'oppose à une autre où la toiture à deux versants est parallèle à la rue, de sorte que la maison ne présente à l'oeil du passant qu'un pan oblique de toiture.

Ces deux types d'implantation génèrent des formes différentes d'intervention. Nous avons préféré retenir le second type, celui de la toiture parallèle à la rue parce qu'il semble déclencher davantage d'actions de transformations, comme si le plan du toit, plat et sans ornement, provoquait davantage le propriétaire-bricoleur.

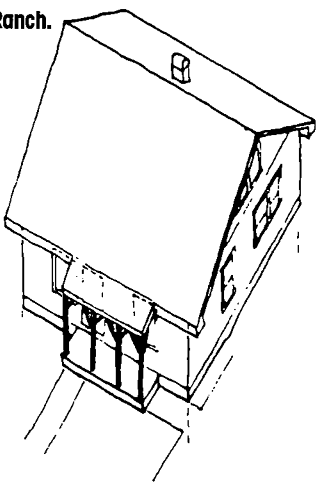
Appropriation

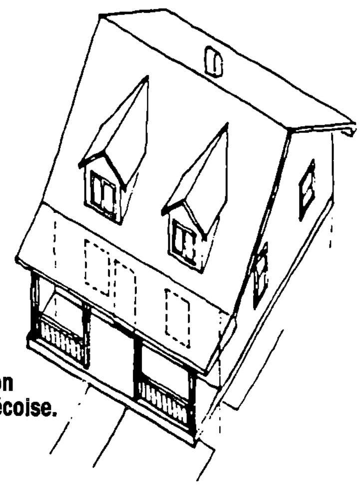
Dans les cadres de notre recherche, nous avons défini l'appropriation comme le résultat de l'ensemble des opérations effectuées par le propriétaire-occupant sur sa maison et qui ont pour effet de transformer, de façon *significative*, soit l'apparence de la maison, soit la fonction des espaces internes ou encore l'interrelation de ces espaces. Enfin, ces opérations peuvent avoir eu pour but d'ajouter des espaces à ceux déjà existants. L'appropriation peut être vue comme toute combinaison des quatre actions précitées.

L'ensemble de ces transformations a été considéré comme visant à modifier l'édifice dans le but de répondre aux besoins et aux aspirations du propriétaire dans la conception qu'il a de la maison. Ces interventions peuvent être classées en trois catégories distinctes qui permettent une analyse plus précise:

1. La première catégorie réfère à la fonctionnalité du bâtiment en terme d'espace. Il permet de rendre compte des transformations/interventions ayant pour but un gain d'espace interne de la maison.
2. La deuxième catégorie réfère à la fonctionnalité du bâtiment en terme d'utilisation et d'entretien. Il permet de rendre compte des interventions ayant pour but premier d'améliorer les performances de la maison dans son utilisation quotidienne.
3. La troisième catégorie réfère à l'apparence du bâtiment, c'est-à-dire aux transformations effectuées dans le seul but d'en transformer l'apparence ou dans un double but de fonctionnalité et d'apparence. Dans

Ranch.





Maison québécoise.

Une variante "ethnique": dans ce cas l'image de la Madone à gauche de la porte nous annonce une famille portugaise. À noter, la fontaine à l'avant-plan. (Groupe B-6).

Photo D. Marchand

ce dernier cas, le geste fonctionnel sera renforcé par un geste visant l'image et la signification. Il permet donc de rendre compte de la totalité des interventions touchant l'apparence et transformant l'image du bâtiment.

Ces trois niveaux d'intervention sur la maison originale permettent d'établir une typologie des transformations qui se répartissent en trois groupes correspondant à l'importance de la transformation de l'image de la maison, c'est-à-dire à l'acceptation ou au rejet du modèle original.

Dans le groupe A, on retrouve le modèle de base essentiellement non modifié. On y retrouve quatre cas, soit 1, l'abandon; 2, l'entretien circonstanciel; 3, l'entretien régulier, qui correspond alors au maintien du modèle original en bon état, donc à son acceptation; 4, la consolidation du modèle, l'entretien et l'ajout d'éléments mineurs dans la tradition du modèle.

Le groupe B marque le début du rejet du modèle de base qui, à partir de ce point, sera de plus en plus transformé. Un trait significatif que l'on remarque dans tous les cas à partir de ce point: la toiture est élargie en saillie sur les côtés et vers l'avant en larmier. Le modèle de base n'est pas entièrement transformé de sorte que nous constatons deux cas: 5, les modifications symboliques minimales; et 6, les modifications symboliques maximales.

Au-delà de ces dernières, le modèle original disparaît pratiquement derrière les transformations, de sorte que nous avons dans le groupe C les catégories suivantes: 7, la réinterprétation de la maison, où un modèle nouveau est superposé à l'original, comme la maison traditionnelle québécoise, le ranch, etc.; 8, l'addition d'espace frontal; 9, l'addition d'espace partiel à l'étage (lucarne); 10, l'addition d'espace global à l'étage, i.e. un nouvel étage; 11, l'addition d'espace latéral. Enfin, on peut ajouter une douzième catégorie qui n'en est pas une, celle de l'addition d'espace au sous-sol qui peut se combiner avec tous les cas précédents avec ou sans transformation de l'image de base.

Dans les interventions effectuées sur les maisons et, notamment, dans les interventions symboliques du groupe B, 5 et 6, on a pu relever des constantes quant aux points d'interventions suivants:

La toiture (le mur pignon et les lucarnes)

Parce que, sans doute, elle est visuellement un des éléments les plus forts de la maison, elle fait automatiquement l'objet d'intervention dès que le modèle Cape Cod est rejeté.

L'opération consiste à prolonger la toiture en saillie, latéralement, au-dessus du mur pignon, comme si les pannes, posées horizontalement sur les fermes de la couverture dépassaient le droit du mur, comme dans les architectures alpines. Le toit s'avance pour protéger le mur et, par le fait même la maison: il affirme la protection de la famille. Au cours de la même opération, la toiture est prolongée vers l'avant et l'arrière, sous forme d'avant-toit ou de larmier. Dans certains cas, pour les mêmes raisons et, dans d'autres, pour protéger la galerie construite à l'avant.

Seule, la protection de la galerie justifie l'opération, car, on peut le constater, les maisons qui n'ont pas subi ces transformations (les Cape Cod inconditionnelles) n'ont pas souffert de l'absence d'avant-toit ou de saillies latérales, les murs latéraux ne présentant pas de marque d'usure ou de vieillissement excessif.

Le geste serait donc essentiellement figuratif. Est-il seulement d'origine vernaculaire? Dans la dimension psychanalitique, le toit symbolise l'union avec le ciel, dimension que souligne le triangle du mur pignon pointé vers le haut.

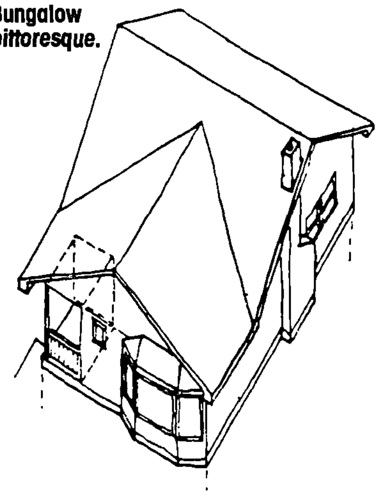
Le pignon

De très nombreuses transformations viennent souligner le triangle du pignon, soit par une ligne formant la base du triangle, soit par une couleur, un matériau différent, ou un revêtement posé verticalement.

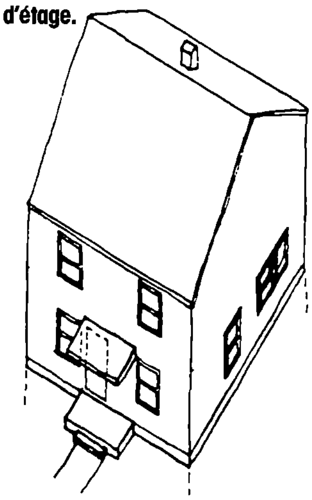
Ici, encore, la symbolique rejoint l'analogie vernaculaire où dans les constructions traditionnelles, le côté de la dernière ferme de la toiture reçoit un revêtement de planche verticale au-dessus du corps de la maison qui, lui, est constitué de maçonnerie ou de pièces sur pièces posées horizontalement.

Les lucarnes

On retrouve des vrais lucarnes indiquant des modifications internes d'espace. Ce n'est que dans les "modèles" que l'on retrouve les fausses lucarnes, soit le modèle "québécois", soit le modèle "maison de banlieue". La volonté d'union avec le ciel est réaffirmée par la possibilité d'habiter



Bungalow pittoresque.



Addition d'étage.

plus haut, dans la toiture, tout en annonçant à l'extérieur l'ampleur de la maison familiale.

L'assise

John Wood, un des premiers architectes à se pencher, en 1781, sur le logement ouvrier, établissait sept principes essentiels à la construction d'habitations saines. Le premier concerne directement l'assise du cottage au sol: la maison doit être sèche et salubre, elle doit donc se situer plus haut que le niveau du sol. D'où l'importance des fondations et des matériaux utilisés.

Nous n'avons pas pu vérifier si, dans nos secteurs, certaines maisons avaient été construites sur pilotis comme cela fut le cas à Halifax et dans bien d'autres villes. Cependant, de très nombreuses interventions ont consisté à creuser la cave et à augmenter la hauteur du sous-sol et, souvent, à surélever la maison de façon marquante par rapport aux voisines. Ce qui est touché ici, c'est la relation de la maison au sol ou plus profondément la liaison de l'Habitat à la Terre.

L'entrée

Depuis toujours, tant dans les civilisations primitives que dans nos civilisations de l'époque historique, l'entrée de la maison a fait l'objet d'un cérémonial et d'un décor particulier. La tradition s'est poursuivie dans les temples et les églises, dans les palais et les villas princières, dans les édifices gouvernementaux et officiels.

Plus que toute autre partie de la maison, l'entrée est chargée du symbole, du signe de la naissance au monde. C'est à la fois le départ, l'expulsion de la matrice originelle et le retour à celle-ci. Socialement, elle sert à affirmer la puissance ou l'importance des secrets recelés par la maison; la vie de la famille devient le trésor à préserver du regard furtif.

Premier signe, la porte est transformée, changée par une porte plus solide, plus décorée. Mais l'entrée va, par ailleurs, se refermer davantage par l'addition d'un porche ou vestibule fermé qui s'ajoute parfaitement au modèle Cape Cod dans la tradition puritaine. Mais aussi, ailleurs, on retrouve très souvent le porche ou le vestibule fermé: protection des intempéries ou des regards? A Sainte-Thérèse, aux contreforts des Laurentides et du pays des neiges, l'addition d'un vestibule fermé est pratique courante. Toutefois, la transformation la plus souvent rencontrée c'est l'addition d'une toiture à deux versants donnant un fronton triangulaire audessus de l'entrée coiffant un porche ouvert ou fermé. Ce triangle fait rappel du mur pignon du côté de la maison qui est ainsi affirmé sur la rue et, par ailleurs, souligne la verticalité dans la façade, verticalité qui s'oppose à l'horizontale de l'assise.

Les fenêtres

Objets fréquents d'intervention, les fenêtres cachent et révèlent à la fois. Elles ouvrent la maison sur la rue et annoncent son bien-être.

L'introduction de fenêtres panoramiques se fait très souvent en double, symétriquement, de chaque côté de l'entrée. Cette recherche de symétrie semble une constante fréquente dans les transformations de la maison de banlieue ou du pavillonnaire, ainsi que constaté en France et ailleurs. L'addition de la fenêtre panoramique au salon provoque presque toujours la fermeture de la fenêtre latérale existante. Quand on n'ajoute pas de fenêtre panoramique on va souvent doubler la fenêtre simple située de l'autre côté de l'entrée pour assurer la symétrie.

L'encadrement des fenêtres est souvent souligné par une peinture foncée insistant sur leur importance. Les faux volets sont un élément de décor plus que courant. Tout en soulignant la présence de l'ouverture, ils viennent annoncer sa fermeture possible: la mise à l'abri des regards étrangers étant une condition essentielle à l'intimité de la famille.

La façade et l'unification de l'ensemble

De nombreux gestes d'appropriation se font souvent de façon non coordonnée, sans vue d'ensemble de l'effet général. Cependant, certains gestes tendent vers la cohérence de l'image de la maison. Ainsi, la symétrie des fenêtres mentionnée plus haut est un de ces gestes significatifs.

Par ailleurs, on rencontre souvent un traitement semblable, sinon des quatre élévations, du moins des trois façades visibles de la rue, traitement effectué à l'aide d'un même matériau, le plus souvent la planche à déclin (en aluminium, vinyl ou autre matériel synthétique) ou du stuc ou encore par l'application d'une seule couleur de peinture, le plus souvent forte. L'unité de la maison est ainsi affirmée.

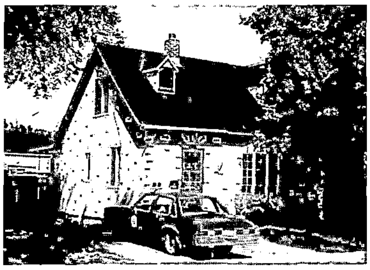
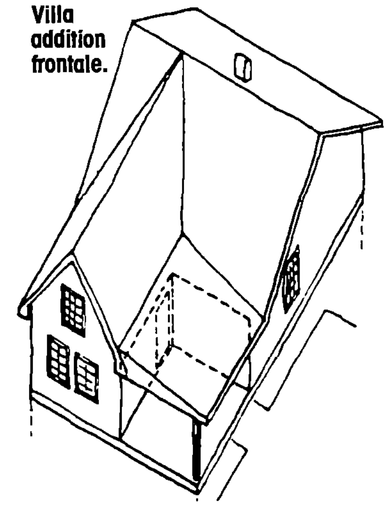


Photo D. Marchand

juxtaposition fréquente d'un modèle cultu-
l, celui de la maison québécoise tradition-
ille avec galerie et lucarnes (fausses).
iroupe C-7).

Un exemple d'addition partielle d'espace à l'étage par le truchement d'une large lucarne. On constate en même temps une revision totale de l'image originale de la maison. (Groupe C-9).


Photo D. Marchand


Villa addition frontale.

En conclusion: "l'habiter" et son expression

La maison des vétérans par sa forme simple et dépouillée constitue l'archétype de la forme et de l'implantation suburbaine. Le choix comme échantillon d'un nombre restreint de modèles de base hautement similaires nous a donc permis de déceler les divers types d'intervention apportée dans le temps par divers propriétaires.

La variété et la qualité de ces interventions qui avaient attiré notre attention au début n'ont jamais cessé de nous surprendre. Cependant, une seconde observation doit s'ajouter, celle de la régularité d'intention et de constance dans la forme de ces interventions qui visent un nombre limité de points sur la maison. Nous les rappelons à nouveau ici, suivant l'ordre d'importance constaté: la toiture et le pignon, l'assise, l'entrée, la fenestration (fenêtres panoramiques, baies, etc.).

Le nombre et la variété des transformations qui s'attachent à ces quatre points de la maison nous obligent à nous poser la question: pourquoi cette énorme importance accordée à ces éléments par les résidents? Disons d'abord qu'ils semblent être essentiels au discours architectural de chaque maison transformée. Ou, plus simplement et plus profondément à la fois, ces éléments redisent ce que doit être la maison, ils symbolisent la maison type, le foyer, ils traduisent la volonté d'"habiter".

Quelle leçon pouvons-nous tirer de cette insistance sur la toiture, le pignon, l'entrée, etc. si ce n'est que la traduction de cette notion d'habiter est perçue comme nécessaire par les habitants et qu'elle parle de leurs besoins et de leurs aspirations.

Cette affirmation en apparence simple, sinon simpliste, devient plus significative lorsqu'on la compare aux grands projets d'habitation de l'architecture moderne où l'on s'est efforcé de supprimer systématiquement ces mêmes éléments. La réaction négative de bien des habitants, le sentiment d'aliénation que l'on reproche à ces ensembles ne vient-il pas, en partie du moins, de ce mutisme architectural?

L'expérience doit aussi servir de leçon. En mettant sur le marché des maisons d'apparence fragile et conçues comme temporaires, la Wartime Housing Ltd. n'avait probablement pas prévu le phénomène d'appropriation tel que nous le constatons aujourd'hui. En fournissant une maison minimale tant dans ses espaces que ses équipements (il n'y avait pas de portes aux armoires de cuisine et aux placards), on a presque provoqué le phénomène d'appropriation. En ajoutant peu à peu au minimum fourni, les gens se sont attachés à cette maison dans l'aménagement de laquelle ils devaient investir pour s'y sentir à l'aise.

Dans un contexte de crise économique et de resserrement, cette expérience doit être analysée de plus près. Les maisons considérées au début comme des cabanes recelaient le potentiel de permanence qui en a permis la transformation. De temporaires, elles sont devenues permanentes et, d'un investissement minimum, ont permis en définitive un accroissement de capital intéressant.

Il faut se rappeler, en terminant, une remarque des auteurs de "L'habitat pavillonnaire"[2] qui soupçonnent que la dispersion des grandes familles traditionnelles (le regroupement grands-parents, parents, enfants, oncles et tantes, etc.) serait à l'origine de l'importance accordée à la maison et des travaux de transformations effectués sur celle-ci. "Ce passage de la famille large à la famille restreinte explique-t-il l'investissement moral dans le chez-soi?"

Autrement dit, est-ce que l'isolation de l'individu et de sa petite famille ne serait pas une des principales motivations des transformations permettant d'affirmer sa présence, son existence qui n'est plus soutenue par le clan? Par ailleurs, cette isolation n'est-elle pas le fruit de la conquête de l'autonomie et, les transformations, l'affirmation de celle-ci?

1. Journal of the Royal Architectural Institute of Canada. Vol 19, no. 1, 1942.

2. Raymond, H. et al., **L'habitat pavillonnaire**, C.S.U., Paris 1966. Ce remarquable ouvrage réédité plusieurs fois depuis sa parution constitue un classique sur le sujet.

Denys Marchand est architecte et professeur à l'École d'architecture de l'Université de Montréal.

Par derrière chez nous, il y a une ruelle...

par Alain Duhamel

Quelque peu en recul par rapport à la rue—en vérité, tout juste assez pour installer un escalier—le bâtiment donne à l'arrière sur un petit terrain ouvrant sur une voie de service, la ruelle.

Les symboles de l'identité montréalaise resteraient incomplets s'ils n'évoquaient que les escaliers en colimaçon et les grands balcons.

Les images caractéristiques de Montréal comprennent, entre autres choses, un ciel de draps propres, étendus sur une corde à linge, et des enfants, vêtus du chandail tricolore (Le Canadien oblige!), se disputant vaillamment une balle de crosse avec des bâtons de hockey. Ces images, qui suscitent parfois un souvenir ému chez les Montréalais d'un certain âge, proviennent du même lieu social et urbain: la ruelle.

La ruelle montréalaise, étroite et longue, appartient au patrimoine social tout autant que les balcons et les escaliers extérieurs. Elle complète le tissu social et urbain amorcé à l'avant, sur le balcon face à la rue.

Aux yeux de plusieurs, pourtant, la ruelle a si mauvaise réputation qu'elle exprime la ville grise et sordide, polluée et porteuse de misère. Quelle autre impression pourrait dégager ce couloir étroit bordé de remparts de tôle rouillée, encombré de vieilles voitures, de déchets et autres objets inutilisés?

Or, depuis quelques années, les ruelles de Montréal se transforment en des lieux ensoleillés et verdoyants, propres et gais. Elles sont méconnaissables dans leur nouveau rôle de lieu urbain où se concrétise une certaine idée de la qualité de vie citadine.

La ruelle apparaît dans la trame urbaine montréalaise vers la fin du XIX^{e} siècle, au moment où Montréal devient un grand centre industriel et financier et s'affirme comme la métropole du pays. Sa population s'accroît rapidement. Pour la loger près des lieux d'emploi, apparaît un modèle d'habitat qui deviendra le modèle type de l'habitation montréalaise: le triplex.

Des rangées de triplex contigus, longs et étroits, s'érigent sur une grille cadastrale parfaitement régulière et forment de nouveaux quartiers au nord de la rue Sherbrooke (Le Plateau Mont-Royal, par exemple) et à la périphérie des anciens faubourgs. Le terrain a 25 pieds de largeur sur une centaine de pieds de profondeur.

Le bâtiment, de construction simple (charpente de bois et revêtement de brique) et standard, a deux murs mitoyens et aveugles, un toit plat, des escaliers extérieurs (pour gagner de l'espace à l'intérieur) en avant et en arrière où se trouvent les deux seuls murs avec des ouvertures.

Dans les quartiers plus anciens, entre le fleuve Saint-Laurent et le plateau de la rue Sherbrooke, la grille urbaine, tracée irrégulièrement et composée de lots de toutes dimensions, ne comporte qu'exceptionnellement des ruelles. Dans le Vieux-Montréal, l'accès à l'arrière du bâtiment, lorsqu'il n'est pas adossé à un autre, se faisait plutôt par une cour intérieure, accessible directement de la rue ou par une porte cochère. Les faubourgs ne s'éloigneront guère de ce modèle. On trouve encore aujourd'hui, dans la terrasse Ontario, dans le voisinage de la société Radio-Canada, des rangées de maisons en brique, de deux étages, avec façade sur le trottoir, sans recul, percées de portes cochères. Elles conduisent à une cour intérieure où se trouvent des bâtiments de service: hangar, remise, écurie. Parfois, on y trouve même d'autres petits logements.

L'étroitesse des lots de terrain sur le plateau de la rue Sherbrooke ne permet pas l'aménagement d'allées ouvertes ou de portes cochères. Il en résulterait une perte d'espace considérable au rez-de-chaussée. Ainsi apparaît la ruelle, voie de service donnant accès directement à l'arrière du bâtiment.

Par là, viendront les livreurs de glace, de combustible, les éboueurs, etc.

Le réseau de ruelles de Montréal fait environ 300 milles. Dans la plupart des quartiers au sud du boulevard métropolitain, les ruelles dans l'axe nord-sud débouchent sur d'autres ruelles, dans l'axe est-ouest, qui elles rejoignent les rues. Au nord du boulevard métropolitain et dans les quartiers de l'est de la ville, les ruelles coupent en deux les quadrilatères urbains dans l'axe nord-sud et rejoignent directement les rues est-ouest. En approchant de la rivière Des Prairies, dans le quartier Ahuntsic, les ruelles, moins nombreuses, ne sont que des voies de service parallèles aux principales artères commerciales. Il n'y en a pas derrière les rues résidentielles.

La vie sociale a d'abord lieu à l'avant, sur les larges et profondes galeries, véritables prolongements extérieurs de l'habitation, où il est aisé, les soirs chauds d'été, d'installer quelques chaises, pour jaser ou pour observer l'animation de la rue. L'arrière, voué à des fonctions de service, comporte habituellement des galeries plus étroites, des espaces de rangement et une corde à linge. À une certaine époque, tous les lundis, s'étalait, propre et blanc, tout le "butin" de la famille.

Il n'y a pas de place ou si peu pour des jardins. Une structure distincte de la maison occupe l'essentiel de l'espace. C'est le hangar, lieu d'entreposage du combustible à l'origine (bois et charbon), comportant parfois un escalier intérieur, devenu avec le temps le lieu de rangement de toutes ces choses parfaitement inutiles que l'on n'ose pas encore jeter et des équipements hors saison (pneus, pelles, bicyclettes, etc.). Dans les meilleurs cas, cette structure, en bois ou en tôle, toujours grise, s'est intégrée à la maison pour devenir une dépense, une chambre froide ou une pièce supplémentaire.

La cour arrière de l'habitation type montréalaise compose un paysage urbain inoui, fait d'une accumulation de voies de communication aérienne si développées que l'on a peine à voir la maison elle-même.

Jean-Claude Marsan, architecte, écrit dans *Montréal en évolution* (Fides, 1974), qu'elles rappellent les installations portuaires. "Cette habitation type, avec son plan tout en long, ses pièces souvent étroites, insuffisamment ventilées ou éclairées, n'est pas sans défaut. Mais on aurait tort d'imputer ces défauts à l'architecture elle-même; ils ont pour cause la pauvreté des ressources préalables à l'expression architecturale. Celle-ci, au contraire, véritable architecture sans architecte, est remarquable pour son taux élevé de préfabrication, pour ses fonctions exprimées spatialement, sans détour ni camouflage, pour son potentiel cycbernétique qui fait ressembler ses galeries, ses passerelles et ses escaliers extérieurs aux convoyeurs aériens des entrepôts à grains, près du port. Originales en elles-mêmes, ces habitations ont engendré un environnement urbain également original, qui a marqué profondément l'identité et l'image de Montréal."

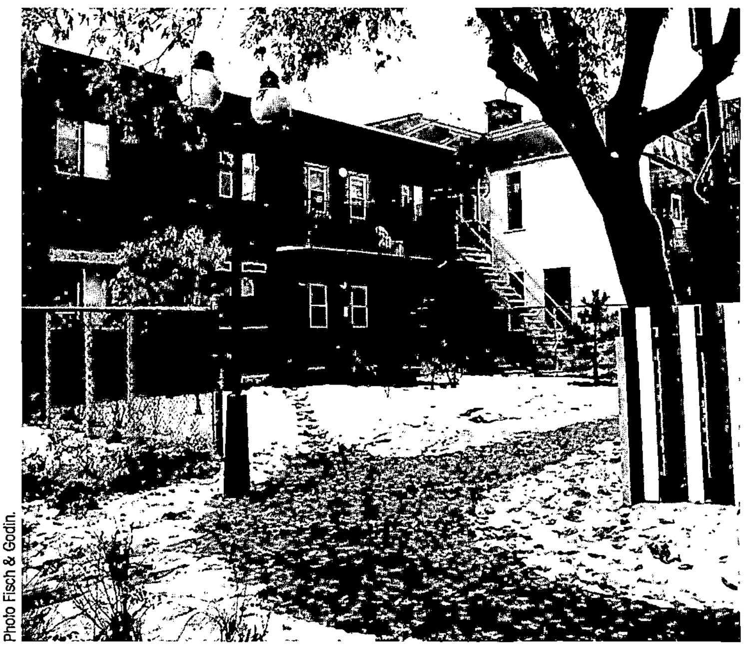


Photo Fisch & Godin.

La "nouvelle" ruelle Drolet derrière la rue du même nom.

Les profondes mutations de la société urbaine de l'après-guerre ont atteint les ruelles et les cours arrières jusqu'au point de les rendre infréquentables.

À mesure que l'automobile s'arrogeait tout l'espace de la rue, les enfants, refoulés à l'arrière, transformaient les ruelles en terrain de jeu improvisé. Puis, les rues étant insuffisantes pour y tenir tout le parc automobile montréalais (au début des années 60, il y a en moyenne une automobile par foyer), les ruelles servent de plus en plus au stationnement des voitures et à la circulation motorisée de la rue à la cour arrière.

L'air se pollue au point où il n'est plus possible d'étendre sur la corde à linge son lavage (surtout pendant la période où aucun règlement n'interdisait les incinérateurs dans les grands immeubles). Elle devient inutile à mesure que se répand dans les foyers l'usage de la sécheuse automatique.

Le chauffage à l'huile, au gaz ou à l'électricité rendent inutiles les hangars puisqu'il n'est plus nécessaire d'entreposer le charbon et le bois.

Abandonnées, laissées sans entretien, les ruelles et les cours arrières passent désormais pour des monstres urbains. Les pompiers les jugent comme l'un des principaux foyers d'incendie; les policiers les reconnaissent comme des lieux de délinquance; les assureurs n'émettent plus de police contre le feu, le vol et le vandalisme dans les quartiers centraux; les personnes âgées n'osent plus y marcher; les voisins ne s'y rencontrent plus au hasard d'une sortie. Seuls les éboueurs, l'été seulement, et les fournisseurs d'huile à chauffage, en hiver, s'en servent encore. En 1960, les journaux de Montréal les appelaient des boulevards du vice, de la laideur et de la saleté...

Les élus municipaux commencent à s'y intéresser et, en 1965, la Ville de Montréal obtient la permission du gouvernement du Québec d'intervenir par des programmes de subventions qu'elle puisera à même le produit de ses taxes.

Nous sommes encore loin des programmes d'amélioration urbaine d'aujourd'hui. L'incitation municipale consiste en quelques centaines de dollars pour la démolition des hangars. Les subventions ne couvrent pas, en général, la moitié des frais réels de démolition et de réaménagement des cours et des ruelles. En une douzaine d'années, l'administration municipale éliminera un peu plus de 7 000 hangars et bâtiments secondaires jugés dangereux et inesthétiques... un rendement qu'elle juge insatisfaisant compte tenu des dizaines et des dizaines de milliers de structures désuètes encore debout.

Photo Ville de Montréal.

La ruelle Lusignant entre les rues Saint-Antoine et Saint-Jacques, avant son réaménagement.

L'administration municipale souhaiterait atteindre l'objectif de 4 000 hangars par année. Pour y parvenir, elle propose deux opérations: “Tournesol” et “Place au soleil”. Toutes deux proposent en fait la réhabilitation des cours arrières et des ruelles en un milieu de vie urbaine agréable.

En vérité, Montréal n'a guère le choix. Pour contrer l'exode massif de ses citoyens vers la banlieue, elle doit réhabiliter le milieu urbain, offrir des avantages comparables à l'habitat de banlieue en sus des qualités d'urbanité d'une grande ville pourvue de tous les services. Dans cette perspective, la réhabilitation des cours et des ruelles apparaît comme une absolue nécessité.

L'opération “Tournesol” incite les propriétaires à démolir les structures accessoires et à réaménager les galeries, les escaliers et la cour. Elle offre jusqu'à 3 500 $ en subvention dont 10 pour cent doit être obligatoirement réservé à l'aménagement du terrain.

“Il y a un effet d'entraînement indéniable” affirme M. Paul-Émile Sauvageau, responsable à la Commission d'initiative et de développement économique de Montréal (CIDEM) des programmes d'embellissement. “Il suffit que deux ou trois propriétaires le fassent pour que, deux ou trois ans après, tous les autres aient entrepris les mêmes travaux.”

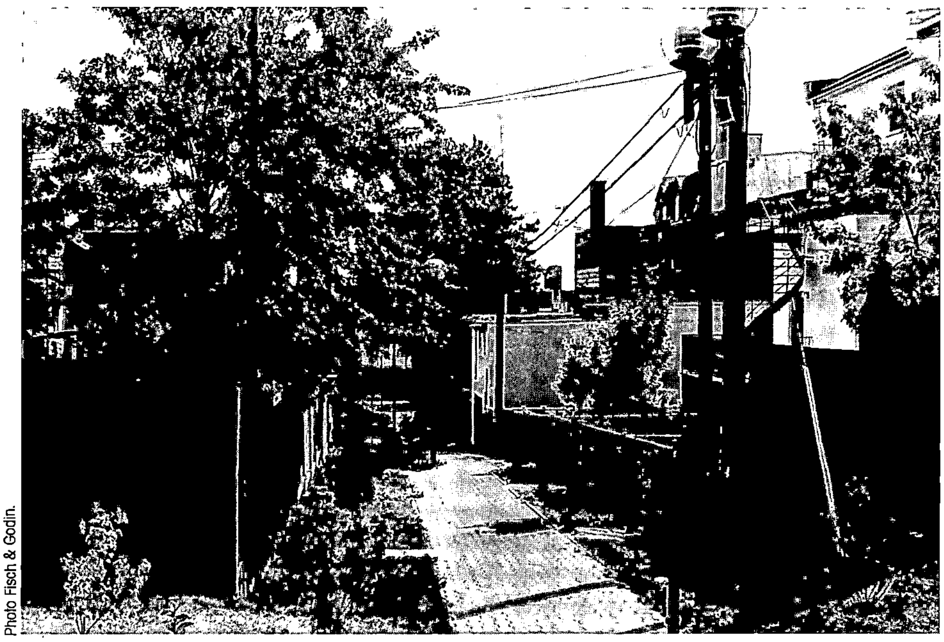


Photo Fisch & Godin.

La même ruelle, aujourd'hui.

La disparition des structures auxiliaires a un effet immédiat sur la qualité de l'habitation. Dans la plupart des cas, pour la première fois, le soleil pénètre dans les pièces à l'arrière.

Les habitants de Montréal, habitués à faire ailleurs que dans leur voisinage le plein d'espaces verts, retrouvent un carré de verdure et se mettent à jardiner fleurs et légumes.

Il n'y a vraiment que la Régie du logement pour y trouver un inconvénient. La disparition d'un hangar, donc d'un lieu de rangement, constitue à ses yeux une diminution de service, même s'il n'était plus utilisé, qui justifie une requête en diminution de loyer. Malgré ses démarches, l'administration municipale n'a jamais pu convaincre les régisseurs de s'intéresser aux effets bénéfiques de l'opération sur l'environnement urbain et sur l'habitat.

L'opération “Place au soleil” porte sur les ruelles proprement dites dans les quartiers les plus anciens, au centre de la ville. Elle consiste à refaire la ruelle ou à la transformer en une voie piétonnière et à aménager les cours de manière à constituer des places vertes, des mini-parcs.

À la demande des citoyens ou à l'initiative de l'administration municipale (avec le consentement des citoyens), la Ville de Montréal pose le gazon, plante des arbres et des arbustes, installe des clôtures, des cordes à linge, des lampadaires le cas échéant. Elle fait tout jusqu'au perron. En 1981, elle avait prévu des dépenses d'un peu plus d'un million de dollars pour le réaménagement d'une quinzaine de ruelles. Ce faisant, elle se proposait d'aménager 400 cours derrière quelque 2 000 logements où habitaient plus de 7 000 personnes. L'année suivante, son programme portait sur 17 ruelles et, cette année, elle compte en réaliser une dizaine d'autres.

De ce nombre, une demi-douzaine se sont transformées en voie piétonnière. Les autres demeurent ouvertes à la circulation automobile locale. Aux extrémités, l'administration municipale a installé des dos d'âne afin de décourager la circulation de transit et les excès de vitesse.

L'effet d'une intervention de cette nature est radical. Le paysage urbain a pris des couleurs et une animation qu'il avait perdu depuis si longtemps. Pour les habitants, ce carré de verdure retrouvé devient un environnement qu'ils peuvent de leurs mains transformer, adapter à leurs goûts et à leurs habitudes de vie.

"C'est certainement stimulant" affirme M. Guy Legault, directeur du Service de la restauration de la ville de Montréal. "Du côté de la rue, tout est déjà pas mal décidé."

Nous sommes probablement la seule ville d'Amérique du nord, et peut-être au monde, qui ait des programmes comme ceux-là. C'est un très bon exemple de la nécessité d'avoir des programmes locaux d'intervention urbaine." Les programmes nationaux d'intervention dans les quartiers anciens d'aide à la restauration ou à la rénovation comportent toujours quelques éléments d'inadaptation aux réalités locales.

Dans la conduite des opérations "Tournesol" et "Place au soleil", la ville de Montréal a elle-même défini l'intervention et l'a financée de ses propres deniers. Sauf pendant l'année 1981 où elle a reçu une contribution de 2 millions de dollars du gouvernement québécois pour la démolition des hangars, elle n'a jamais pu compter sur des contributions des gouvernements supérieurs pour accroître les fonds et accélérer le rythme d'exécution.

On n'a pas encore mesuré les effets de ces opérations sur la valeur foncière et marchande des propriétés. Il est certain que la réhabilitation des cours et des ruelles constitue un enrichissement urbain et social qui aura, indirectement au moins, un effet sur la valeur marchande de la propriété et sur sa valeur foncière imposable aux fins municipales. Il n'est pas rare que l'opération "Tournesol" incite le propriétaire à entreprendre la rénovation de son immeuble qu'il redécouvre sous un jour nouveau.

Les ruelles, sales et grises, disparaissent peu à peu du paysage montréalais. Réhabilitées, elles redeviennent des lieux sociaux et urbains habités, animés, vivants.

Déjà, elles contribuent à des nouveaux rapports d'urbanité plus harmonieux. En plusieurs endroits, les citoyens entretiennent eux-mêmes la voie piétonnière municipale.

Une promenade révélera un avantage auquel personne n'avait pensé en se lançant dans pareille aventure. Les bruits de la ville n'y pénètrent pas de telle sorte qu'elles offrent un paysage sonore d'un calme et d'une douceur que l'on ne croyait possible que dans des lieux retirés.

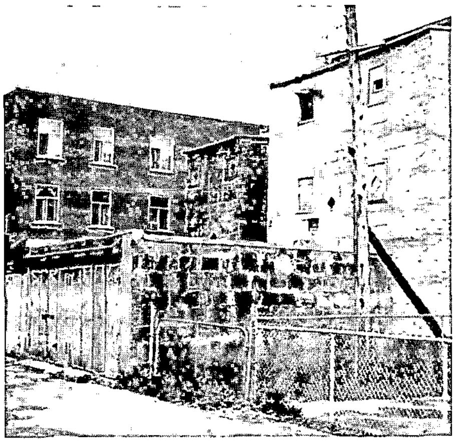


Photo Ville de Montréal.

La ruelle Jeanne-d'Arc derrière le boulevard Pie IX, avant l'opération Place au soleil.

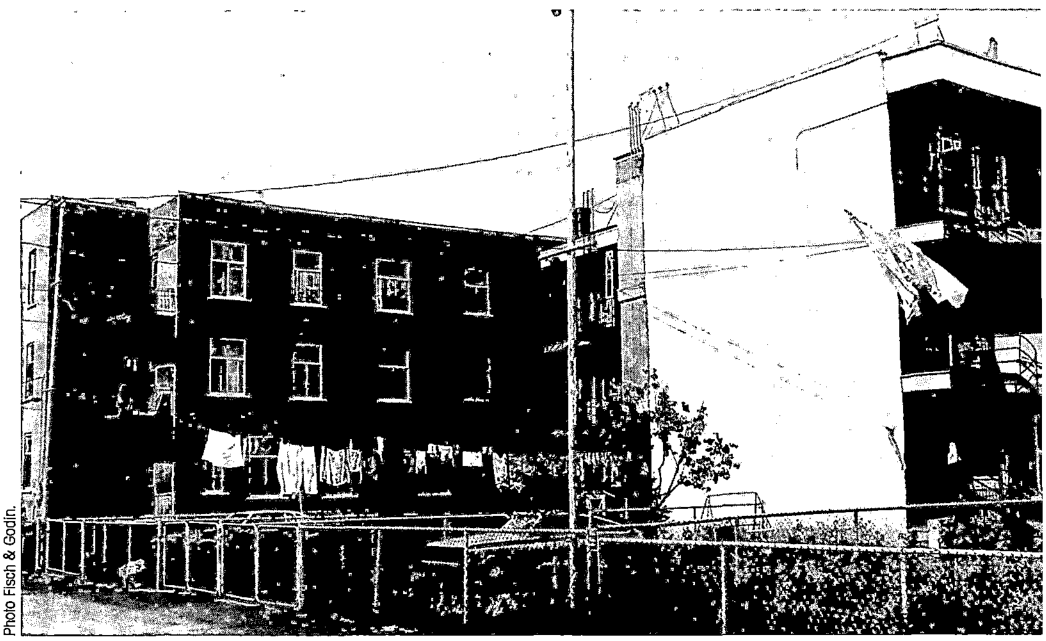


Photo Fisch & Godin.

La ruelle Jeanne-d'Arc, aujourd'hui.

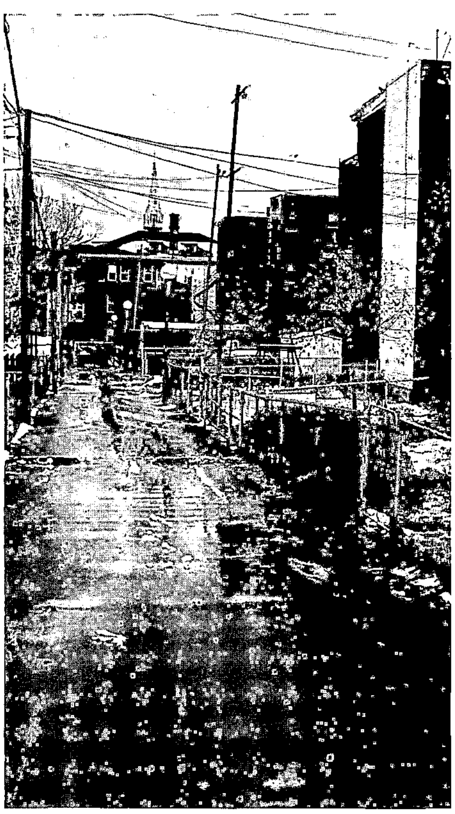


Photo Fisch & Godin.

A proximité de la rue Fullum, la ruelle Sheppard dans ses "nouveaux atours".

Alain Duhamel est journaliste au quotidien Le Devoir.

The Aging of Canada: Implications for Housing and Urban Development

Text by D.J. Reynolds

Introduction

Since World War II Canada has enjoyed an unprecedented boom in both population and economy. The population has doubled and gross national product has quadrupled. Confident predictions were being made in the early 1960s of a population of 43.0 million by the end of the century and a second quadrupling in real output of goods and services. However, falling birth rates, the energy crisis, the current recession, and longer range views of economic conditions, are leading to a levelling off of pop ulation and economic growth. What are the consequences of this levelling process in housing demands going to be?

Demographic Outlook

According to the 1982 Canadian Housing Statistics[1], the current birthrate is slowly beginning to rise. Nevertheless, children born during the post-war baby boom of the 1950s are not producing children at the rate predicted at that time. Today's reproduction rate stands at about 0.85. For the population to reproduce itself, a ratio of at least one is required, and each family must have at least 2.1 children. Since there will be no second "baby boom" as expected, Canada must look forward to an aging of its population.

Population and Age Structure. Canada 1981–2011

Year	Total Population	Distribution by Age Percentage		
	millions	0-14	15-64	65+
1981	24.2	22.8	67.7	9.5
1986	25.4	22.0	67.8	10.2
1991	26.5	21.7	67.2	11.2
1996	27.4	20.7	67.5	11.8
2001	28.0	19.2	68.2	12.1
2011	29.0	17.4	69.3	13.3

Source: Statistics Canada. Series D estimate, assuming net annual immigration of 50 000 and total fertility rates at 1.9 children 1981-1991 and 2.1 thereafter.

Statistics Canada[2] recently predicted that the Canadian population would reach about 28.0 million by the end of the century, up 3.0 million from today's figure. They further predict that after reaching a peak of 29.0 million by 2010, the population will level off for a period of time and then begin to decline.

The pattern of aging up to the year 2011 can be briefly illustrated as follows.

Reviewing this table, in absolute numbers children between the ages of 0 and 14 will remain constant at 5.5 million from 1981-2001, and then fall to about 5.0 million within the first ten years of the next century. The working population between the ages of 15 and 64 will in crease from 16.4 to 19.0 million from 1981 until the turn of the century, and then rise to about 20.0 million in the following decade. The number of senior citizens will increase by just slightly more than 1.0 million between 1981 and 2001, and by less than 0.5 million by 2011.

Thus, most of the increase in population by the end of the century will be in the working-age members of the population. There are serious implications for employment and unemployment in this. To accommodate this increase and to reduce unemployment to a reasonable level, approximately 3.0 million additional jobs will have to arise by the end of the century, over and above the 10.5 million existing now. However the economy also faces the following potential employment problems:

a. Increasing competition from lower wage economies which is difficult to resist. e.g. higher consumer prices, retaliation against exports
b. Further displacement of labour by machinery, computerisation and the use of robots
c. Discrepancies in job opportunities between males and females
d. High savings and low investment which will tend to depress the economy.

The proportion of dependents, both children and senior citizens, will tend to fall until the end of the century. Therefore, the median age of the population will increase only slightly from 32 to 36 years of age by the year 2001. This figure will increase to 44 years within the following decade, and eventually the elderly will become a more serious burden, primarily because of the low birth rates predicted for subsequent generations.

On the other hand, the role of the elderly in an economic sense must be recognized. They create and transfer real wealth to future generations through their work, savings and investments, and increase our stock of social capital. In terms of housing this is a huge transfer, because out of a total real capital stock now worth probably $900 billion, housing probably accounts for about half ($450 billion) or about 15 months' national income.

Partly for this reason there have been some suggestions that an experimentation with reverse mortgages for the elderly might be in order. That is, the elderly live in their own dwellings and consume part of their capital value and then surrender them to the investor upon death. However, the economic and practical difficulties are so great that these schemes are generally a poor bargain for both mortgagor and mortgagee. At this time, it is probably better for elderly homeowners to sell and rent other accommodation, particularly on the death of a spouse.

An additional factor to be considered is the increasing gap in life expectancy between men and women. According to Statistics Canada data[3], women can now expect to be widowed an average of ten years. Widows thus account for a substantial proportion of households living in poverty. Often they have only small pensions and the Guaranteed Income Supplement and the Old Age Pension do not raise their incomes above the poverty line in many cases.

Although it is possible to paint a grim statistical picture of the elderly, the 1978 Statistics Canada Household Expenditure Survey[4] shows that mortgage-free homeownership and savings provide a valuable cushion.

Projected Households by Age Group Canada 1981–2001 (000's)

Year	Age Group 15-24	25-34	35-44	45-54	55-64	65+	Total	Annual Increase (%)
1981	695	2089	1566	1339	1209	1380	8,278	+210 (2.5%)
1986	705	2391	1977	1377	1313	1567	9,330	+181 (1.9%)
1991	661	2502	2371	1582	1334	1786	10,236	+132 (1.3%)
1996	676	2282	2649	1980	1365	1943	10,895	+99 (0.9%)
2001	721	2007	2726	2341	1558	2034	11,388	
Increase + or Decrease–	+26	−82	+1160	+1002	+349	+654	+3109	+155 (1.6%)

Source: See Footnote 5.

Implications for Household Formation

The effects that the aging process will have on household formation have been worked out in considerable detail by CMHC[5] in terms of the age of household heads up to 2001. CMHC estimates a slightly larger population than the 28.0 million forecast above, but since most of the people who will be heads of households by 2001 have already been born, the differences are comparatively small. The estimates are given in Table 2.

It can be seen from Table 2 that the total number of households is expected to increase by about 3.0 million over the twenty year projected period, an increase of 38 per cent. However, household increase will decline from about 210 000 per annum to about 100 000 per annum at the turn of the century.

Of the three million increase in households, about 2.0 million will take place within the 35-54 age group while people over the age of 60 will increase in number by slightly more than 1.0 million, which reflects the aging of the Canadian population.

More importantly Tables 1 and 2 both show that the average size of households will continue to decrease. From 2.9 in 1981, the average size of a family will fall to 2.5 by the end of the century. This will certainly affect the size of newly constructed dwellings.

New Housing Needs 1981-2001

Two factors affect any consideration of new housing needs in future years. First, it can be assumed that any demolitions will be compensated by conversions. In a normal market, there is a constant 3.0 per cent vacancy rate. During the years from 1976 to 1981 new housing needs were not met by new construction; therefore, these needs have been met partly by consuming this housing inventory. This is particularly reflected by low apartment vacancy rates which averaged only 1.2 per cent in Census Metro Areas in 1981.[6] To restore rental vacancy rates to a more normal 3.0 per cent by 1991, some units must be added to the present housing stock.

Presently, about 63 per cent of the housing stock in this country is owner-occupied. Within this pattern of declining needs for new housing, combined with the growth in households whose members fall within the age range of 35-55, there is expected to be a substantial change towards even greater homeownership in Canada.

Thus while the demand for owner-occupied dwellings is only expected to fall from 124 000 per year until the middle of the 1980s and fall to about 73 000 between 1996 and 2001, annual demand for new rental dwellings is expected to decline even more. Over the same periods, rental demand is expected to fall from 87 000 to about 26 000.

The demand for rental dwellings from senior citizens, however, is not expected to fall so dramatically. During the same time frame, senior citizen demands are only expected to fall by slightly less than 50.0 per cent, from 16 000 to 8 500 by 2001.

In addition to the demand for smaller dwellings in the future, it should be noted that the declining trend in new housing needs will lead to an aging of the housing stock. The median age of houses constructed across the country will increase from 21 years in 1981 to 31 by 2001. Demands for maintenance and rehabilitation will be greater, not only for housing but for other buildings such as schools and hospitals which will undergo a similar process of declining new construction and aging.

Conclusions

From the demographic and other evidence it can be concluded that Canada, its population, housing, buildings, and other social capital, will undergo a rather gentle process of aging in this century, which will probably accelerate in the next. New housing output will decline and change towards homeownership in somewhat smaller sizes of dwelling for smaller households. The proportion of senior citizens, and in senior citizen and social housing, will probably increase, but not significantly until the next century.

Somewhat surprisingly, however, it appears that the process of urbanisation in Canada has stopped at the present level of 75.0 per cent[7] so that the growth of urban areas can be expected to slow down, e.g. an increase in urban radii of up to 20.0 per cent, but with more exurban settlement.

These trends towards low population increase and low economic growth, and thus the aging of populations and capital stocks, are appearing over most of the industrialised world, i.e. North America (Mexico excepted), Europe, Japan and Australia.[8] For the much more populous developing and urbanising remainder of the world, however, the future seems to be one of poverty and high population increase with almost insoluble housing problems, particularly in urban areas.[9]

D.J. Reynolds is a freelance writer living in Ottawa.

1. **Canadian Housing Statistics 1982.** Ottawa: Canada Mortgage and Housing Corporation, 1983.
2. **Population Estimates, Series D.** Ottawa: Statistics Canada, 1982/83.
3. **Perspectives III.** Ottawa: Statistics Canada, 1981.
4. **Household Expenditure Surveys, 1976 onwards.** Ottawa: Statistics Canada, 1982.
5. Divic, A. **Population, Households and Housing Requirements Projections for Canada, the Provinces and Census Metro Areas, 1976-2001.** Ottawa: Canada Mortgage and Housing Corporation, 1981.
6. See Footnote 1.
7. See Footnote 5.
8. **World Bank Atlas.** Washington D.C.: World Bank, 1983.
9. **Shelter.** Washington D.C.: World Bank, 1980.

Reviews

Federalism and the Poor:
A Review of the Canada
Assistance Program
by Derek Hum.
Toronto: Ontario Economic
Council, 1983.
pp. 117. Price: $4.50.

This monograph (which is inevitably complex and specialised) deals with two major matters, the Canada Assistance Plan (CAP) and the wider question of the distribution of income in Canadian society. Historically, the CAP evolved in the 60s. The federal government had the resources but the provinces have the jurisdiction for welfare, so the typical Canadian arrangement was made whereby costs would be shared between the federal and provincial governments on a 50:50 basis.

The CAP is based on a needs approach to welfare, i.e., general assistance which covers food, shelter, clothing, utilities, household supplies, travel needs, health requirements and so on. However, these needs are measured differently by each province, and the poorer provinces have tended to provide lower levels of federal aid. The Plan does not concern itself with the problems of the working poor (e.g., those with children, receiving the minimum wage, who would actually be better off on CAP). Saskatchewan, Manitoba and Québec have family-income plans that do help this group but they do not receive financial aid from the federal government.

Another criticism of CAP is that social assistance (i.e., on income) and social services (e.g., counselling) are dealt with by the same system, so that social services are restricted to those receiving social assistance.

For these reasons the study suggests the establishment of a nationwide standardised basic allowance, a higher federal cost-sharing rate for the poorer provinces, supplementation of the incomes of the working poor on a cost-shared basis, and separation of social assistance from social services.

On wider questions of the distribution of income and poverty in Canada, a paradox seems to arise because, whilst Canada is a remarkably egalitarian nation compared with others, some 15 per cent of the population live below poverty lines, (e.g., $12 000 for a family of four), which are generally above CAP levels of assistance. As a comprehensive remedy, a guaranteed annual income (or negative income tax) has long been discussed, although it does have the defect, as do the provincial family-income plans, of penalising heavily, extra earnings by the working poor. More information on the experimental guaranteed annual income scheme in Dauphin, Manitoba in the 70s would have been welcome here. However, the author proposes that a more progressive income tax system, based on household incomes and starting at poverty lines, rather than below them, might be a useful intermediate measure to aid the working poor.

In summing up, the book says there is little doubt that the whole questions of poverty, social assistance, related matters such as pensions and unemployment insurance, and the distribution of income, require fundamental review and evaluation rather than ad hoc adjustment. This study makes a useful contribution to this formidable task.

D.J. Reynolds

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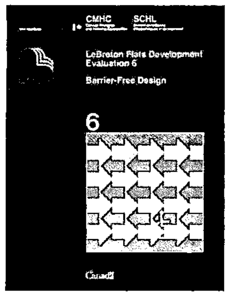

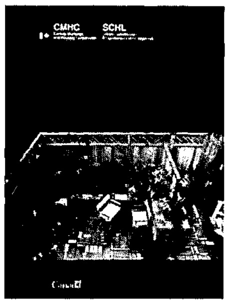

LeBreton Flats Development Evaluation 6 –Barrier-Free Design

This pamphlet describes the barrier-free design of a medium-density housing project at LeBreton Flats, Ottawa, where units for the disabled were dispersed throughout the site. Plans and photographs show the modified layout of the dwellings which were specially designed for various types of disabled households. A table lists the disabled-specific characteristics incorporated in the units, with CMHC's recommended dimensions.

The booklet is one in a series which discusses new approaches to noise reduction, energy conservation, privacy and security, recreational space and user satisfaction.

NHA 5664
15 pages
Bilingual
215 × 278 mm
Free publication

Site Improvement of Older Housing

This book examines typical issues and specific problems encountered in the site improvement of older homes, and illustrates procedures for analyzing and solving them. It provides guidelines for the site rehabilitation of detached houses and low-density multiple dwellings. Six case studies illustrate comprehensive site improvements of older detached, row and walk-up housing in different parts of the country.

NHA 5602
72 pages
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59 illustrations. 99 photographs
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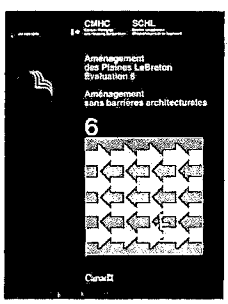
Récentes publications de la SCHL



Aménagement des Plaines LeBreton– Évaluation 6 Aménagement sans barrières architecturales

La présente brochure sert à décrire l'aménagement sans barrières architecturales d'un ensemble d'habitations de densité moyenne aux Plaines LeBreton, à Ottawa, où les logements destinés aux personnes handicapées ont été intégrés dans tout l'ensemble. Des plans et des photographies indiquent le plan modifié des logements qui ont été conçus spécialement pour convenir à divers types de ménages de personnes handicapées. Un tableau renferme une énumération des particularités de l'aménagement des logements répondant aux besoins des personnes handicapées, aux Plaines LeBreton, ainsi que les dimensions recommandées par la SCHL.

Cette brochure est la sixième d'une série qui décrit diverses expériences tentées aux Plaines LeBreton pour l'atténuation du bruit, l'économie d'énergie, l'intimité et la sécurité, les aires de récréation et la satisfaction des usagers.

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Amélioration des espaces extérieurs des vieilles maisons

Cet ouvrage examine les questions courantes et les problèmes précis qui se rattachent à l'amélioration des espaces extérieurs des vieilles maisons et illustre diverses façons de les analyser et de les résoudre. Il fournit des directives pour le réaménagement des terrains sur lesquels s'élèvent des maisons individuelles et des collectifs d'habitation à faible densité. Six études de cas illustrent abondamment les grands travaux d'amélioration des espaces extérieurs des vieilles maisons individuelles ou en rangée ou encore, des immeubles d'appartements anciens sans ascenseur dans diverses régions du pays.

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59 illustrations. 99 photographies.
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Prix: 8,00 $

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Canada Mortgage and Housing Corporation

Honourable Roméo LeBlanc
Minister

Société canadienne d'hypothèques et de logement

L'honorable Roméo LeBlanc
ministre

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