habitat

Special issue:

The Vincent Massey Awards for Excellence in the Urban Environment 1975

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Les prix Vincent Massey pour l'aménagement urbain 1975

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The Vincent Massey Awards for Excellence in the Urban Environment 1975

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* Award/Prix d'excellence
* Special Mention/Mention honorable

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Background to the Awards

The Idea
Several years ago the Trustees of the Massey Foundation gave thought to the idea of drawing special attention to those projects which made significant and humane contributions to Canadian urban life. Their objective was not simply to recognize individual buildings but to celebrate those developments which married a variety of urban elements in an admirable and enjoyable fashion. By doing so, the Trustees hoped this would encourage individual Canadians to create still further examples of urban excellence.

This special issue of Habitat chronicles the results of the second Vincent Massey Awards Program. The first – also recorded in Habitat – was made four years ago.

The Sponsors
For the first program the Canada Council joined the Massey Foundation as an equal partner, thus bringing to bear on the undertaking the benefits of the Council's extensive experience in other kinds of awards programs. This year the two partners also asked Central Mortgage and Housing Corporation to join them, as an equal, in sponsoring the awards. Together the sponsors invited a small group, known as the Advisory Committee, to recommend on terms and procedures for making the awards.

How the Awards were Made
Any person or group could submit entries to the awards program. Over 100 did so and of these, 31 were selected as finalists. After review by a Jury which travelled from Halifax to Victoria, eight were selected as deserving Awards and six as meriting Special Mentions.

Canada Mortgage and Housing Corporation
Société canadienne d'hypothèques et de logement

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Historique du prix Vincent Massey

L'idée
Il y a quelques années, les administrateurs de la Fondation Massey eurent l'idée de souligner publiquement les réalisations ayant apporté une contribution notoire à la qualité des lieux urbains. La réputation de certains immeubles étant établie, il s'agissait d'aller plus loin et de découvrir des ensembles dignes d'admiration d'une part et agrémentant la vie communautaire d'autre part.

Un premier numéro d'Habitat leur était consacré, il y a quatre ans. Celui-ci constitue le second chapitre des annales du prix Vincent Massey.

Les promoteurs
Dès le début, le Conseil des Arts du Canada accepta de s'associer à la Fondation Massey pour mener à bien cette entreprise. C'était ainsi s'assurer de la vaste expérience du Conseil dans l'octroi de prix de cette nature. En 1975, ces deux organismes invitèrent un nouveau partenaire, la Société centrale d'hypothèques et de logement, à se joindre à eux et prièrent, cette fois encore, un petit groupe de personnalités de former un Comité consultatif dont le rôle serait de faire des recommandations sur les termes et les modalités d'attribution du prix.

La sélection
Le public, particuliers et groupements, fut invité à y participer. Plus de cent soumissions parvinrent au Comité parmi lesquelles on distingua trente réalisations qui furent visitées à tour de rôle par les membres du jury. Huit prix et six mentions viennent couronner aujourd'hui les efforts de tous ceux qui ont bien voulu participer à cet événement. □

The Vincent Massey Awards are named for the first Canadian-born Governor General, a man whose abiding concern for the quality of the life of this country showed itself in many ways, one of which was in a wise sponsorship of cultural activity and achievement.

For more than forty years, Vincent Massey was chairman of the Massey Foundation. He was chairman of the Royal Commission on National Development in the Arts, Letters and Sciences in 1951-52 and, as such, was one of those responsible for the creation of the Canada Council.

The awards are sponsored jointly by the Massey Foundation, represented by Hart Massey; the Canada Council, represented by Alan Armstrong; and Central Mortgage and Housing Corporation, represented by Ian Maclennan. The sponsors were also aided by Blanche Lemco van Ginkel who was, as well, Chairman of the Advisory Committee.

In this regard the Massey Foundation, the Canada Council and CMHC gratefully acknowledge the advice and assistance of the Advisory Committee who, in addition to the Chairman, included: Michel Barcelo, Sonja Bata, Norman Hallendy, Jack Long, Jean-Marie Roy, Robbie Shaw, Michelle Tisseyre and Terry Williams.

Jury for the 1975 Vincent Massey Awards
Allan O'Brien (Chairman), professor of political science, London, Ontario; Shirley Chan, welfare consultant for National Health and Welfare, Vancouver; Jean-Claude Marsan, architect and urban planner, Montreal; June Rowlands, housing consultant, Toronto; Clifford Wiens, architect, Regina.

Le nom donné au prix Vincent Massey évoque la mémoire de celui qui fut le premier Canadien de naissance à accéder à la fonction de gouverneur général et dont les qualités d'esprit et d'imagination s'exprimèrent, en particulier, par la promotion de la culture et du mieux-être de ses concitoyens.

Vincent Massey fut, pendant plus de quarante ans, président de la Fondation Massey. A titre de président de la Commission royale d'enquête sur l'avancement des arts, des lettres et des sciences (1951-52), il fut l'un des architectes du Conseil des Arts du Canada.

Les promoteurs du prix Vincent Massey 1975 étaient représentés par Hart Massey, président de la Fondation Massey, par Alan Armstrong du Conseil des Arts du Canada et par Ian Maclennan de la Société centrale d'hypothèques et de logement aidés de Blanche Lemco van Ginkel, présidente du Comité consultatif.

La Fondation Massey et le Conseil des Arts sont également reconnaissants aux autres membres du Comité consultatif de les avoir éclairés de leurs conseils. Ce sont: Michel Barcelo, Sonja Bata, Norman Hallendy, Jack Long, Jean-Marie Roy, Robbie Shaw, Terry Williams et Michelle Tisseyre.

Le jury de ce second prix Vincent Massey était composé de la manière suivante: Allan O'Brien (président), professeur de sciences politiques, London, Ontario; Shirley Chan, conseillère du ministère fédéral de la Santé et du Bien-être social, Vancouver; Jean-Claude Marsan, architecte et urbaniste, Montréal; June Rowlands, conseillère en logement, Toronto; Clifford Wiens, architecte, Regina. □

Manfred Klenke

Report by the Chairman of the Advisory Committee Blanche Lemco van Ginkel

In August 1975 five people met in Halifax to embark on a cross-country tour. Of diverse occupations and from different regions of Canada, they had as common cause a concern for the Canadian city. This was the jury of the Vincent Massey Awards for Excellence in the Urban Environment. A former mayor, a social worker, an architect, a city planner and a housing consultant each jury member had been active at some time in shaping the environment of his own city, not only as a professional but by participation in citizen action groups and political involvement.

The objective of the tour was to discover what had been built, planned or planted that enhanced the urban environment and made Canadian cities more livable and, by identifying the most noteworthy achievements, to encourage other cities and other people to improve their own living place.

Prior to this progress from Atlantic to Pacific, the sponsors of the Awards, the Massey Foundation, the Canada Council and Central Mortgage and Housing Corporation had asked nine people from across the country to serve as an Advisory Committee to guide the program. Besides acting in this capacity, each committee member sought out projects in his own region and encouraged their submission for an award.

From the more than 100 entries received in Ottawa, the jury selected 31 finalists. The five-member jury then embarked on its journey, to visit the 31 projects, to see what they looked like, how people lived in them and with them, and to what extent they had improved life in the city. The results are the eight award winners, and six special mentions recorded here in Habitat.

This is the second time the Massey Awards for the Urban Environment have been given. Since the first Awards program in 1971, changes in the Canadian urban scene have accelerated. It is only in recent decades that Canadians have begun to realize fully the impact of urbanization in changing modest towns to bourgeoning cities. At the same time there is a growing awareness of individual and institutional responsibility for the quality of our living places. The excesses of waste of our resources—of land, forest, water, fuel and people—prompted indignation and confrontation. There was a questioning of heretofore accepted modes of urban development. The citizen became more city conscious.

The individual no longer considers the city merely as a convenient place to live while earning a living—a place to escape from as much as possible. Rather, we demand that our cities provide a positive environment for the enjoyment of life. The seeds of a new urban spirit are taking root.

There was evidence of this changing perspective in the initial series of Massey Awards—pedestrian malls, city parks and city hall squares—places not only for shopping, administration or formal ceremony but where people enjoyed walking, sitting, meeting.

Looking through the submissions of the second program, it is difficult to classify them by function. There is a proliferation of projects which integrate housing, commercial and recreational uses in a single complex, and which include public open space in the form of plazas or walkways. The award winning Leaf Rapids Centre brings local administration, commercial enterprises, recreation and education facilities under one roof, a marked change to previous Canadian urban development. Until recently, urban patterns were dictated by segregated uses—an administrative centre, shopping area, commercial district, residential neighborhood, each in its own firmly circumscribed zone. This rigidity of the Canadian city in the mid-twentieth century fragmented communal activities and resulted in lifeless urban places. As the city is a container for the life of the people within it, so its buildings and open spaces are richer and more lively when they correspond to the many facets of the inhabitants. It is the same person who works, plays, shops, eats, sleeps—the citizen is not divisible into separate parts.

Albert Campbell Square is an embellishment of the Borough of Scarborough, but its success lies not only in its aesthetic qualities. It is part of a civic centre which houses public administration, commerce and recreation so that the square becomes the foyer, entrance and gathering place of city people engaged in diverse activities. It is in the path of people of all ages going about their daily rounds, who can enjoy it in the course of their normal pursuits. As a focus for the community it is useful and enjoyable and, at the same time, a symbol of civic pride.

At a smaller scale and in a different way, but equally significant in its multiplicity of purpose, is the Penticton Retirement Centre. Here the primary goal was a home for the aged, but the designers recognized that "home" was more than a place to hang your hat and that advancing age should not remove people from the community of which they have been an integral part all their lives. And so the Retirement Centre is also a recreation centre and meeting place for all ages and a strong focus for community life. This project

demonstrates how a small group of people with little financial means can rally a community to fulfill a dream. Hard work and good organization brought into play the material and financial resources needed for construction, and volunteers still staff some activities.

When one sees it today, it is hard to realize that the Strathcona Rehabilitation project had similar small scale beginnings. Originally an old residential area, industry and commerce were competing for use of the land where a Chinese community had lived for generations. Strathcona was threatened with extinction as a place to live when members of the community took up arms to save it—the place they called home. As a result, three levels of government were persuaded not merely to save Strathcona, but to transform it. Old houses were rehabilitated, new ones constructed and the streets and public spaces improved. The change is perceived in the physical reality, but underlying it is another change—in the strengthening of community spirit, in pride of place.

The urban environment involves the entire built city. Although a visitor's image is generally derived from the central area and public spaces, the environment of the citizen becomes apparent when he opens his door and stands on the threshold of his dwelling. The Strathcona project is concerned with this more personal aspect of the urban environment, as is Pointe St. Charles in Montreal and the De Cosmos housing project in Vancouver.

The De Cosmos cooperative achieved its goals of lower housing costs and creating a delightful place to live. And in doing so, it contributed to the built city a new sector which enhances the urban fabric and the total environment.

Three projects reflect current concern with our urban heritage – Les Jardins Prince Arthur in Montreal, Gastown in Vancouver and Smith Street in Halifax. Notwithstanding the common goal of conservation, each is quite different.

Under a single ownership, the six Victorian houses of Les Jardins Prince Arthur were converted to apartments and offices, with the addition of a new building in contemporary style which harmonizes with the old. The formerly luxurious old houses have become luxurious new apartments, whose economic viability assures their remaining part of the city fabric.

The houses of Smith Street are more modest and in separate ownership, some owner-occupied, others rented. Working together, the residents of Smith Street renovated their homes and fought the legal/financial impediments of separate property to achieve a common use of the open space at the rear of the buildings.

Gastown, the historic centre of Vancouver, represents the commercial revitalization of the old heart of a city—thereby making it once more a living, contributing element in today's metropolis.

The Promenade des Gouverneurs in Quebec preserves and enhances an historic asset of a different order—a site instead of a building. It creates an enjoyable promenade on the ground where Canadian history was made, with views of the magnificent river which was the main road of explorers, colonists, invaders and, since time immemorial, of the indigenous people.

Public land assembly is a current issue in many Canadian cities. In Regina, the city, the province and the University of Saskatchewan combined their resources in the Wascana Centre Authority to assemble 2,300 acres of land in the public domain for public purposes. Early in this century, the city fathers and the provincial government created Wascana Park and the Legislative Grounds, planting trees and shrubs around an artificial lake in the midst of the dry prairie. This became the nucleus of today's Wascana Centre—an extensive park in which are set an art gallery, recreation centre and other public facilities all readily accessible by public transportation. Enhancing the old, serving the present and creating a reserve of open space for future generations, this is a heritage project with a future.

More difficult to categorize, but more pervasive in their effects on the urban environment, are those projects which are not confined to a single specific location. These are ideas for general improvement, such as the Calgary tree planting project, Winnipeg's Port-a-Park and "Assainir et fleurir" of the Saguenay-Lac-Saint-Jean Region. The latter represents the concerted effort of many small women's groups to improve life in their entire region by planting trees and flowers in small communities. Considering the vastness of the region and the limited resources of the people involved, this was a remarkable achievement.

The Port-a-Park idea transforms a small area of open land along city streets into a pleasant place to sit or wait for a bus. It converts a negative element, such as a vacant lot, into a positive asset and does so with modest resources.

Every city should plant trees, but planting trees on the grasslands of the prairie is not a simple matter. The significance of the Calgary tree planting project is in its comprehensive nature. A joint project of the municipality and a citizen group, it is but one project of many in a broad program to improve the livability of the city.

It is difficult to judge the relative merit of diverse projects each of which in a different way and at a different scale attempts to improve the urban environment. The jury tried to assess each project on its own terms, in the light of local conditions and available resources. They were also preoccupied with the human significance of the project, the efforts and organization which brought it into being and with the enjoyment it brings to the people of the community. Sometimes the jury could not fully appreciate the impact of the project because it had insufficient information of what was there before.

But these are inevitable hazards. It is hoped that some of the submissions, which did not yet demonstrate their final form and community impact, will be resubmitted in a future Vincent Massey Award Program.

But the prime aim of this program is not to present awards or to mount commemorative plaques. A more important objective is to focus attention on the physical amenity of Canadian cities and the capacity for transformation. The projects in this publication illustrate different means of improving the urban environment initiated by varied associations of individuals and institutions. Hopefully, there will be more action by other people, perhaps in new directions, to make our cities more livable and more enjoyable. □

En août 1975, cinq personnes entreprenaient à Halifax une tournée du Canada. Représentant les principales régions du pays, ces gens de professions diverses avaient en commun le souci de voir se développer des villes canadiennes de qualité. Ils formaient le jury du prix Vincent Massey pour l'aménagement urbain. En faisaient partie: un ancien maire, un travailleur social, un architecte, un urbaniste et un expert de l'habitation. Chacun d'eux avait précédemment collaboré activement au façonnement de sa ville, à titre professionnel et en tant que citoyen intéressé à la chose publique.

Cet itinéraire, de l'Atlantique au Pacifique, venait compléter plusieurs mois d'activité. Il avait pour but de découvrir ce qui avait été construit, planifié et planté pour rehausser la qualité des ensembles urbains canadiens et les rendre plus habitables, et d'encourager gens et localités à améliorer leur propre cadre de vie, en désignant à leur attention les réalisations les plus méritoires.

La Fondation Massey, le Conseil des Arts du Canada et la Société centrale d'hypothèques et de logement, les trois parrains de cet événement, avaient chargé un comité consultatif de neuf Canadiens d'orienter le programme. Chaque membre de ce comité devrait en outre sélectionner les initiatives les plus valables de sa région et inciter leurs auteurs à concourir.

Trente et une oeuvres furent choisies parmi plus d'une centaine d'inscriptions reçues à Ottawa et visitées par le jury qui put apprécier de visu leurs qualités esthétiques, le mode de vie des occupants, et constater jusqu'à quel point ces différentes opérations avaient amélioré la vie dans la cité. Huit prix et six mentions honorables furent décernés. Habitat leur consacre ce numéro.

C'est la seconde fois que l'on adjuge le prix Vincent Massey. Depuis le premier concours qui eut lieu en 1971, la scène urbaine s'est notablement modifiée. Ce n'est qu'au cours de la dernière décennie que les Canadiens ont commencé à se rendre pleinement compte des répercussions de l'urbanisation sur leurs cités qui, de modestes qu'elles étaient, sont devenues prospères. De façon concommittante, s'est développé le sens de la responsabilité à l'égard de la qualité de nos cadres de vie, à la fois chez les particuliers et au sein de nombreuses associations. Le gaspillage excessif de nos ressources naturelles—terrain, forêt, eau, combustible—et humaines, soulève partout l'indignation et donne lieu à de nombreux débats. On remet en question l'aménagement de l'espace urbain tel qu'on l'a pratiqué jusqu'à présent, et les citoyens sont devenus plus conscients à cet égard.

Le citadin ne conçoit plus la ville simplement comme un lieu de travail d'où il faut se soustraire aussi souvent que possible mais il exige désormais qu'on y puisse jouir de la vie, qu'elle soit le lieu d'éclosion d'un véritable esprit civique.

Les signes de ce changement d'attitude se sont manifestés nettement dès le premier prix Vincent Massey; espaces piétonniers, jardins publics, ensembles situés au coeur de villes, places se prêtant aux rencontres y furent primés. Leur importance ne résidait pas tant dans la réalisation de leur objectif premier, que dans leur incidence sur la vie de l'ensemble des habitants.

Lorsqu'on examine les cent inscriptions et plus de ce deuxième Prix, toute classification par fonctions se révèle difficile. Il y a prolifération de réalisations intelligemment conçues qui regroupent des logements, des négoces ainsi que des installations récréatives à l'intérieur d'un même ensemble où l'on retrouve toujours des espaces publics découverts sous forme de places ou de promenades. Le centre municipal de Leaf Rapids, l'un des lauréats de cette année, réunit sous un même toit l'hôtel de ville, des galeries commerçantes, un équipement récréatif et une maison d'enseignement; il marque un changement de taille par rapport à l'aménagement traditionnel. Jusqu'à tout récemment, l'urbanisme tendait à isoler les fonctions dans l'espace: ici l'administration, là une aire commerciale, ailleurs le quartier des affaires ou un îlot résidentiel. Chaque composante de la ville était située dans une zone rigoureusement définie. Au milieu du 20e siècle, on assista à l'échec des villes canadiennes et leur fragmentation donna lieu à l'apparition d'immenses surfaces inanimées. Puisque la ville est censée être un cadre de vie, ses bâtiments et ses espaces découverts doivent

correspondre aux multiples facettes de l'activité des habitants. N'est-ce pas la même personne qui fait ses emplettes, qui mange, qui dort? On ne peut pas séparer le citoyen en plusieurs éléments distincts et disjoints.

La place Albert Campbell enjolive à coup sûr Scarborough. Sa réussite repose non seulement sur des qualités esthétiques mais également sur le fait qu'elle constitue une partie du centre municipal, lequel, en regroupant l'hôtel de ville, les commerces et la fonction récréative en un seul immeuble est devenu le foyer de toutes sortes d'activités. Des gens de tout âge, vaquant à leurs occupations quotidiennes, s'y croisent le plus naturellement du monde et la place devient partie intégrante de leur vie, un véritable centre-ville utile et agréable en même temps qu'un sujet de fierté.

De dimensions plus restreintes et de caractère différent, mais tout aussi importante quant à la multiplicité des fonctions est la maison des Retraités de Penticton. La raison première de cette réalisation était de fournir un foyer aux personnes âgées de cette ville. Les concepteurs admirent, cependant, qu'un foyer doit être plus qu'un chez-soi et que le fait d'avancer en âge ne doive pas être une raison pour ne plus faire partie de la collectivité. Ce centre

dispose donc d'un bâtiment servant aux loisirs et que fréquente toute la population qui le considère comme le lieu par excellence de ces rencontres. Il démontre qu'un petit groupe de personnes ne disposant que de moyens modestes peut rallier à sa cause une collectivité importante et l'amener à participer à la réalisation d'un grand rêve, pourvu que l'on conjugue aux ressources matérielles et financières existantes, des efforts soutenus et une saine organisation.

Il est difficile de concevoir que la réanimation du quartier Strathcona ait connu des débuts aussi modestes que ceux de Penticton lorsqu'on voit ce qu'il est devenu aujourd'hui. Secteur résidentiel vieilli promis à l'industrie et au négoce et où une communauté chinoise avait vécu pendant des générations, Strathcona était menacé d'extinction lorsque ses habitants prirent son sort en main. Ils étaient chez eux et on n'allait pas les en déloger facilement. Par suite, la ville, le gouvernement provincial et le gouvernement fédéral se mirent d'accord, non seulement pour épargner Strathcona, mais pour le transformer. Les maisons dégradées furent remises en état; on en construisit de nouvelles et les rues et les places publiques furent améliorées. Le visage de Strathcona s'en est trouvé changé; mais une mutation plus profonde a marqué l'esprit du quartier qu'un orgueil légitime est venu renforcer.

Si l'image que se fait un visiteur d'une ville est généralement formée du centre et des places publiques, la perception qu'en a le citoyen prend naissance dans le spectacle qui s'offre à ses yeux lorsqu'il entrouve la porte de sa maison. Strathcona incarne cet aspect personnel du milieu urbain, tout

comme le fait Pointe-Saint-Charles, à Montréal, et la coopérative d'habitation De Cosmos. Celle-ci a atteint son but; construire des habitations à prix modiques dans un cadre enchanteur. Par ricochet, toute la ville de Vancouver s'en est trouvée embellie.

Trois réalisations témoignent de nos efforts actuels pour conserver notre patrimoine architectural: Les Jardins Prince Arthur, à Montréal, Gastown, à Vancouver et Smith Street, à Halifax. Bien qu'ayant un même but, elles diffèrent sensiblement.

Les maisons formant les Jardins Prince Arthur sont d'anciennes résidences victoriennes converties en appartements et en bureaux par un propriétaire unique. Le bâtiment contemporain qui est venu s'y ajouter s'accorde harmonieusement avec elles. Les nouvelles habitations n'ont rien perdu du caractère somptueux des premières. C'est dans leur rentabilité, d'ailleurs, que repose leur survie.

Les maisons de Smith Street présentent un caractère plus modeste et appartiennent à plusieurs propriétaires qui les habitent ou les louent. Voici des gens qui ont travaillé la main dans la main à la restauration de leurs maisons. Au lieu de suivre les sentiers battus de la division foncière, ils ont préféré remembrer leurs fonds particuliers, de manière à créer, à l'arrière des habitations, un espace collectif utilisable par tous.

Gastown, quartier historique de Vancouver, atteste de la reprise économique du vieux centre et contribue à la revitalisation de la cité.

La promenade des Gouverneurs, à Québec, rehausse, elle, non pas un monument mais tout un site historique. Elle propose au piéton une promenade agréable et forme un belvédère duquel on aperçoit le majestueux Saint-Laurent qu'empruntèrent à tour de rôle explorateurs, aventuriers, colons, envahisseurs et indigènes.

Les programmes municipaux de réserve foncière occupent la fine pointe de l'actualité dans bon nombre de villes canadiennes. C'est le cas de Regina où la municipalité, la province et l'université se sont unies pour fonder la Société du centre de Wascana à seule fin de constituer une réserve publique de 2,300 acres. Au début du siècle, la ville et la province créèrent le Parc Wascana et destinèrent de larges superficies à un futur usage gouvernemental. Des arbres y furent plantés en abondance autour d'un lac artificiel situé au milieu d'une plaine aride et désertique. Ce lieu est le noyau du Centre Wascana que nous connaissons aujourd'hui: un vaste parc et une réserve d'oiseaux où ont été érigés une galerie d'art, une maison de loisirs et plusieurs immeubles publics que d'excellents moyens de transport en commun rendent facilement accessibles. Rehaussant le passé, servant bien le présent et prévoyant une réserve suffisante de terrains pour l'avenir, cette réalisation prendra toute sa valeur demain.

Les créations qui ne se confinent pas à un seul emplacement demeurent plus difficiles à classer, mais leur répercussion est souvent plus profonde sur l'ensemble de l'agglomération. Ce sont celles qui tendent à l'amélioration

générale de la ville comme cette plantation d'arbres à Calgary, les jardins portatifs de Winnipeg et le mouvement «Assainir et fleurir la région du Saguenay-Lac-Saint-Jean». Cette dernière initiative est le fruit des efforts concertés de plusieurs petits groupes féminins cherchant à améliorer la qualité de la vie dans leur région, en y faisant planter des arbres et des fleurs. Ce fut une réalisation remarquable, si l'on tient compte de l'immensité de ce territoire et des ressources limitées dont disposaient les instigatrices.

L'idée de transformer des parcelles de terrain vague, en bordure des rues, en des endroits plaisants où s'asseoir et attendre l'autobus s'est concrétisée par la création de stations portatives. Des espaces inutilisés dépourvus de valeur urbaine sont devenus, grâce à cette opération d'ailleurs économique, des lieux utiles.

Toutes les villes devraient se faire un devoir de planter des arbres, mais une telle initiative n'est pas chose facile dans les Prairies. Quiconque y vit quelque temps le sait bien. Celle de Calgary est particulièrement digne de mention du fait qu'elle fait partie d'un programme d'ensemble d'amélioration urbaine mis de l'avant par les autorités municipales et un groupement de citoyens.

Il est difficile de porter un jugement sur le mérite absolu de ces réalisations où chacun tente diversement et à différentes échelles de rehausser la qualité des lieux urbains. Les membres du jury ont examiné chaque opération selon des critères qui lui étaient propres, à la lumière de la situation locale et des ressources disponibles dans chaque cas. Ils se sont également souciés du caractère «humanisant» de chacune des initiatives,

des efforts qu'il a fallu déployer pour les mettre à exécution, de la satisfaction que la collectivité en retire. Les circonstances ont voulu que dans certains cas ils aient manqué de renseignements pour apprécier une oeuvre à sa juste valeur. C'est pourquoi ils espèrent que ces participants qui se sont inscrits sans documentation suffisante reviendront à la charge à l'occasion du prochain prix Vincent Massey.

Le but principal de cet événement n'est pas tant de décerner des récompenses ou des plaques commémoratives que d'attirer l'attention sur ce qui peut faire le charme de certaines villes canadiennes et sur les moyens par lesquels on est parvenu, ici et là, à en rehausser la qualité. Les réalisations que vous présente Habitat font ressortir les modes d'action de ceux qui, associations, particuliers ou institutions, ont choisi d'oeuvrer à l'amélioration de nos cités. Puissent de nombreux autres Canadiens prendre exemple sur eux et s'engager, par les voies de l'imitation et de la création, à édifier des villes où il fera bon vivre! *Blanche Lemco van Ginkel*

Quelques commentaires de Jean-Claude Marsan, membre du jury.

Montréal tire une bonne partie de son caractère de la présence de vieilles mais splendides résidences victoriennes. Beaucoup de ces maisons ont malheureusement disparu depuis quelques années et la plupart des autres sont menacées de disparition par l'expansion du centre-ville. Ce projet "Les Jardins Prince Arthur" fait la preuve que ces résidences peuvent être économiquement recyclées d'une façon innovatrice, sans pour autant que le coût de location de ces espaces restaurés ne soit plus élevé que celui en vigueur dans les nouvelles constructions situées dans cette partie de la ville. L'environnement urbain y gagne cependant beaucoup de la préservation de ces exemples d'architecture riche de formes et de textures, et conservant une échelle humaine.

Report of the Jury Vincent Massey Awards for Excellence in the Urban Environment 1975

Les Jardins Prince Arthur stands in the forefront of comparable renovation projects in Canada. Risking dollars and reputations, its owners undertook a venture which now serves as an example of how a part of Montreal's past can be preserved for Canada's future.

Much of the City's character comes from old but splendid Victorian residences. Unfortunately, many of these houses have disappeared in recent years. Many more are being threatened by the expansion of the downtown area.

Les Jardins Prince Arthur is proof that these residences can be economically recycled in a creative way, without having to increase the rental cost of such rehabilitated spaces beyond the rents in effect in new buildings in the same part of the city. The mix of residential and commercial uses in old yet sound buildings, renovated with great care and good design, brought a satisfying solution to divergent needs for core area space.

The urban environment is substantially improved by the preservation of architectural examples which keep the human touch. Their importance lies in the historical significance and simple delight of being able to walk through streets rich in the texture and character of an earlier architectural concern, when the street was still a place for people and not machines.

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C'est à l'angle des rues University et Prince Arthur, dans le centre-ville de Montréal, que s'élève le groupe des cinq demeures victoriennes qu'il est maintenant convenu d'appeler les Jardins Prince Arthur.

Quatre d'entre elles ont été converties en vingt-deux appartements. La cinquième comporte des bureaux.

De délicats travaux de chirurgie architecturale ont conservé aux façades, aux toits, aux escaliers extérieurs, aux portes et aux fenêtres leurs caractéristiques d'époque.

L'intérieur a subi de notables changements. Les installations électriques, la plomberie et le chauffage ont été modifiés, chaque nouvelle habitation devant constituer un logement individuel et autonome. Ont été conservés, cependant, quelques hauts plafonds ornés de moulures, les cheminées et les portes bellement sculptées.

Des mezzanines, des jardins et des balcons sont venus compléter cet ensemble exécuté sous la direction des architectes Desnoyers, Mercure, Leziy, Gagnon et Sheppard.

Located at the corner of University and Prince Arthur in downtown Montreal, Les Jardins Prince Arthur is composed of five stately buildings dating back to the last century.

Four of the buildings have been converted into twenty-two individual apartment units with the remaining building adapted for office accommodation.

Changes in the street facade, mainly roofs, exterior staircases, entrance doors and windows, were kept appropriate to the original architectural style of the buildings while interiors were considerably altered to provide each self-contained apartment with modern electrical, plumbing and heating systems. Wherever possible, features such as the high ceilings with decorative mouldings, fireplaces, panelled interiors, sculptured doors and door frames were kept.

Some new amenities were added such as mezzanines in apartments where ceiling heights permitted, ground floor patios, balconies and a semi-private park intended as a communal area for the use of all residents.

The project was designed by the Montreal architectural firm of Desnoyers, Mercure, Leziy, Gagnon, Sheppard.

Les Jardins Prince Arthur Montréal

Les Jardins Prince Arthur Montreal

Arthur

J.-C. Marsan:

Si, du point de vue du design, cette réalisation n'est pas particulièrement remarquable, par contre elle permet aux citoyens d'apprécier l'un des plus grandioses panoramas d'Amérique. Egalement, elle redonne aux piétons un droit qu'ils ont trop souvent perdu dans nos villes modernes. Dans ce sens, la promenade des Gouverneurs apporte une contribution notable à la qualité de la vie en milieu urbain.

Jury:

Winding along the face of the cliff which separates the Plains of Abraham from Quebec's downtown core, the Promenade is a convenient and breathtaking walk where man's addition makes possible the enjoyment of nature's best.

Even though considerations of design detail suggest this was an opportunity less than fully realized, it is an achievement which works. Tourists and Quebecers alike use it to appreciate one of the most grandiose panoramas in North America. It gives back to pedestrians a right which has been lost in our modern cities.

What is so stimulating is the location and scale of the Promenade along one of the most dynamic city rivers of the world. To walk it is to come alive to one's own physical existence and to ponder a chapter of Canadian history. It was a construction well worth doing. It would be worth improving the details of railings and the shade structure at the top. Whether improved or not, the Promenade's mingling of historic and waterfront perspectives should stimulate our imagination about possibilities in other Canadian cities.

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La promenade des Gouverneurs tire son nom du fait qu'elle passe devant la résidence d'été du gouverneur général. Sa construction fut entreprise par le ministère des Affaires du Nord et des Ressources nationales pour répondre au désir souvent exprimé des Québécois de remplacer l'ancien sentier pavé de bois situé au même endroit et désaffecté depuis bien des années.

Son profil épouse le profil naturel du terrain. Cinq points d'observation forment autant de haltes sur un parcours long de 2,180 pieds.

Un sol rocheux marqué par plusieurs éboulis au siècle dernier, fissuré en maints endroits, dont une faille assez profonde près de la terrasse Dufferin, obligea le maître d'œuvre, l'architecte Paul Rousseau et l'ingénieur Maurice Royer à faire appel aux solutions les plus sûres. L'infrastructure est composée d'une charpente de béton armé continue faite de cadres rigides espacés de 20 pieds centre à centre et supportés chacun par deux colonnes, l'une à l'arrière et l'autre au centre. La moitié de la promenade se trouve en porte-à-faux du côté du fleuve Saint-Laurent. Les colonnes, dont quelques-unes ont 40 pieds de profondeur, sont elles-mêmes ancrées à la formation rocheuse au moyen de tiges d'acier enrobées de béton.

A cause de la proximité de la Citadelle dont les murs étaient déjà ébranlés, affirme-t-on, par les coups de canon, il fut interdit de dynamiter. Tous les travaux furent donc exécutés à la main.

Le hasard a voulu que l'on trouvât en creusant, quelques poignées de louis d'or.

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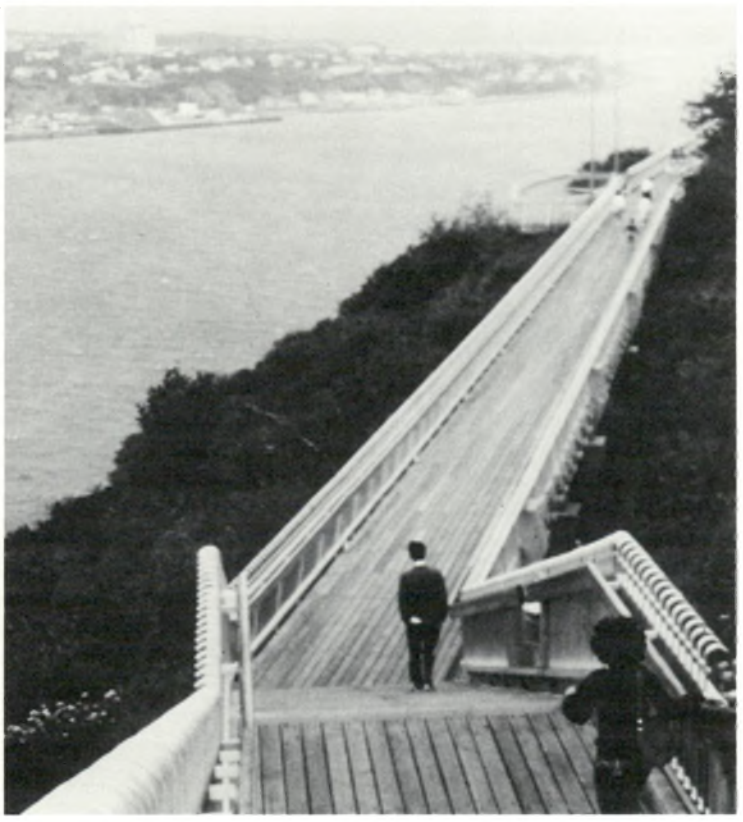

The reconstruction of the Promenade des Gouverneurs in Quebec City was funded by the National Parks Branch of the federal Department of Indian and Northern Affairs.

The 2,180 foot wooden walkway runs between Dufferin Terrace and National Battlefields Park along the north bank of the St. Lawrence River. Like the old decaying wooden footpath that it replaced, the new Promenade, with its five observation points, takes its name from the fact that it passes in front of the summer residence of the Governor General.

The cliffs along the River's banks are rocky, fractured in many places, and there is a deep fault near Dufferin Terrace. To provide a solid foundation for the walkway, the architect, Paul Rousseau and the engineer, Maurice Royer, placed the wooden floors and stairs of the new Promenade on a frame of reinforced concrete supported on columns, some of which are planted 40 feet deep into the rocky cliffs. For added protection, the columns were anchored by means of steel rods covered in concrete.

The Promenade also passes directly in front of the old, weakened walls of the Citadel. This meant that no dynamite could be used for blasting and that the greater part of the work had to be done by hand. Some 200 workers were employed in the building of the Promenade which was officially opened to the public in 1960.

La promenade des Gouverneurs Québec

Promenade des Gouverneurs Quebec City

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Jury:

The Albert Campbell Square is an outstanding example of good planning coupled with an inspired architectural realization. It recreates in the middle of an unstructured suburb the agora and civic nucleus which, through history, has been the essential component of a city. The combined square and structure is an outspoken statement by a municipality which is part of a larger metropolitan whole, in the shadow of whose central city, Toronto, it stands.

It is a statement of community, of a high regard for open, democratic local government processes.

The flow of public space from exterior to interior is both exciting and functional. The institutional space has a reasonable gradation from open to private and should meet human needs as Scarborough's citizens interact with their elected and appointed public servants. The brilliant use of colour, cascading plants, water and art has created a civic centre which is also a refuge for mind and spirit.

The physical manifestation of enclosed and open space is virtually cathedral in character, striking a deep chord of recognition which has been man's historical response to monumental form and space. Yet, at the same time, this is achieved through a completely contemporary manipulation of materials and spacial relationships. As a whole, this civic centre feels like a beautiful pendant connected to a crisp chain of a modern highway system. It seems very much a part of the contemporary urban fabric.

Though the full impact of this product of municipal foresight will not be realized for some years, it provides the focus for the maturing of an urban place. Even now it is increasingly part of the cultural, recreational and public life of Scarborough's citizens.

J.-C. Marsan:

L'échelle de cette place, l'aménagement judicieux et sensible de ses espaces, la qualité des matériaux employés et du design en général, en font une réalisation civique de grande classe. Cette place vise à recréer, au sein de la banlieue amorphe, l'agora et le nucléus civique qui ont toujours, à travers l'histoire, caractérisé la cité. S'il est trop tôt pour juger de la réussite de cette entreprise de longue haleine, ses débuts apparaissent fort prometteurs.

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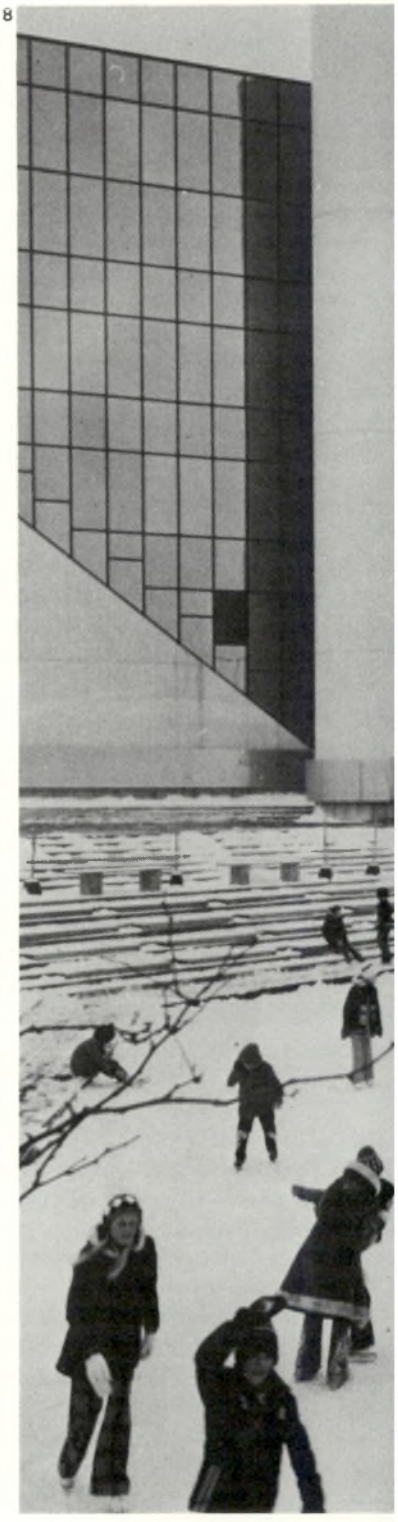

*Albert C

Albert Campbell Square Scarborough

La place Albert Campbell Scarborough

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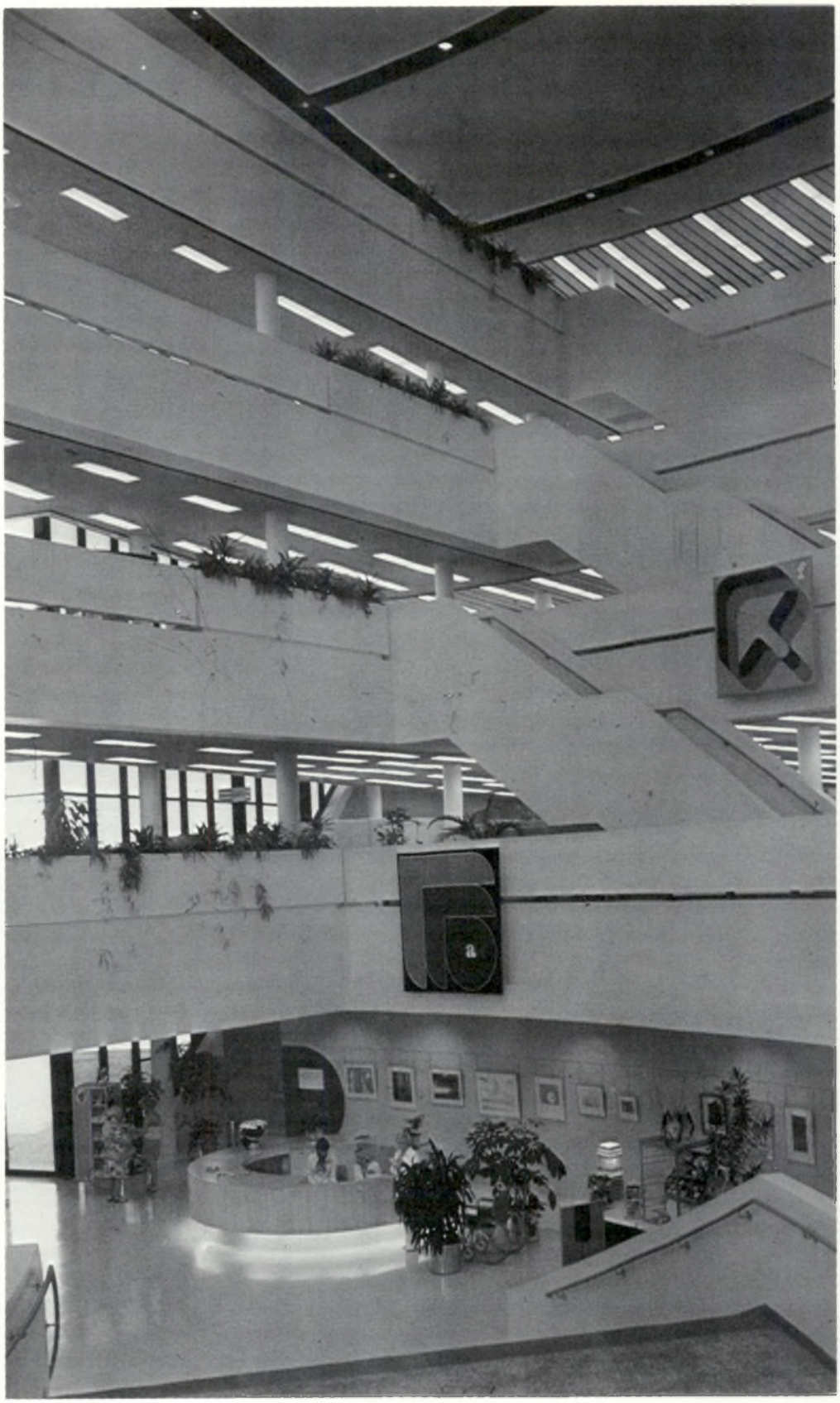

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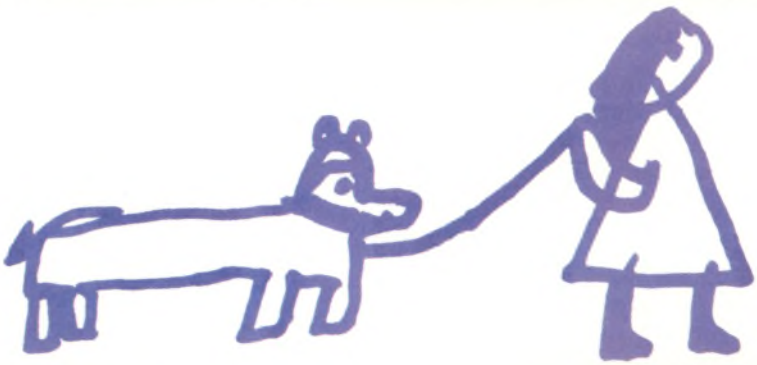

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A waterfall, a 40-foot stainless steel pylon housing a sound and lighting system and a reflective wading pool that transforms into a winter skating rink are a few of the "people-oriented" aspects of the civic square named after Albert M. Campbell, a former Reeve and Mayor of Scarborough, who later became Chairman of Metropolitan Toronto.

The Square consists of a 2.3 acre open area which carries on to a central public space in the Scarborough Civic Centre. The outer square of Wiarton limestone tiles serves as a thoroughfare and pedestrian link between the Civic Centre which houses the municipal government and the Scarborough Town Centre Shopping Complex of more than 130 stores.

Begun in September, 1971 the first phase of the project located in the centre of Scarborough was officially opened by Queen Elizabeth on June 29, 1973, and when completed, the 170-acre development will also include a major hotel, convention centre and office buildings.

Designers of the project were Raymond Moriyama, Architects and Planners.

Ce lieu rappelle la mémoire de celui qui fut successivement échevin et maire de Scarborough puis président du Grand Toronto. On y trouve réunis une chute artificielle, une colonne d'acier de 40 pieds de hauteur abritant un dispositif sonore et lumineux, de même qu'un bassin se transformant l'hiver en patinoire.

Les dalles en belle pierre de Wiarton qui la recouvrent invitent à la promenade. Elle sert aussi de couloir entre un immense centre d'achat qui s'élève à peu de distance, et l'hôtel-de-ville.

Sa construction débuta en 1971. Cependant, ce n'est que le 29 juin 1973 qu'elle fut inaugurée officiellement en présence de la reine Elizabeth.

La place Albert Campbell occupe, avec ses deux acres et un peu plus de superficie, le centre d'une vaste réserve municipale laquelle comprendra d'ici quelques années un grand hôtel, un palais des congrès et des immeubles de bureaux.

Jury:

The founding of a new town amidst the austere landscape and inhospitable climate of Canada's north is a formidable challenge for any who undertake it. In the case of Leaf Rapids, the timely intervention and initiative of the Manitoba Government yielded an excellent result.

The harsh environment gave way to a unique town centre with a full range of facilities and services under one roof where the atmosphere is lively, warm, pleasant and comfortable. It is an excellent internalized urban space bringing together the essential institutional and commercial functions of a small town in one place.

No conflict of use is apparent in the carefully planned traffic flow and visual identity of the centre. The use of wood and plants soften the northern impact. The interior street has been given a form which suggests a much larger centre than actually exists, thus avoiding boredom for its captive users.

From the outside, the low and neutral profile blends well with the landscape. Inside one finds a delightful and harmonious mix of school and hotel, of rink and infirmary, of library and shops.

That such a centre should be completed so early in the life of a new community confirms that special efforts can produce spectacular results. In this case, the impact of the example will reach far beyond Leaf Rapids.

J.-C. Marsan:

De l'extérieur, la silhouette basse et neutre de ce centre communautaire municipal s'intègre harmonieusement au paysage austère de cette région nordique. A l'intérieur, les fonctions apparaissent judicieusement localisées et interreliées. L'aménagement est simple et confortable, et invite à la rencontre. L'échelle est intime, certains dégagements spatiaux fort intéressants, enfin le choix heureux des matériaux apporte texture et chaleur à l'ensemble.

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Town Centre Leaf Rapids Manitoba

Le centre municipal communautaire de Leaf Rapids

In a sub-arctic environment where temperature extremes range from 35°C in summer to −49°C in winter, the Leaf Rapids Town Centre offers the 2,300 citizens of this 20th century mining town everything found on or around a community's Main Street.

Opened during the summer of 1974, the Centre houses federal and municipal offices, the local hospital, a hotel, school, library, post office, shopping centre, restaurants and recreational facilities – all within a 10 or 15 minute walk from any town residence along a network of lighted pathways.

The cost was $8.5 million to build the 210,000 square-foot Centre located in the heart of Leaf Rapids, a new town constructed out of the wilderness some 550 miles north of Winnipeg.

The Centre – a steel frame and joist system on concrete piles – was planned in four quadrants facing onto a crown-shaped mall system where all functions have interior street exposure. The major focus, the town square or meeting place, is located at the intersection of this interior street system.

The Centre was designed to encourage maximum utilization of its facilities by the different facets of the community. Examples are the community recreation complex also serving school needs; the movie theatre serving as a school assembly hall as well as a church facility used by several denominations; the hotel kitchen also serving hospital meals and acting as additional hospital accommodation.

The architect of the Town Centre was Leslie Stechesen.

La création de ce centre-ville abrité représente un exemple d'adaptation de l'homme au climat. Petite localité minière de 2,300 habitants, surgie il y a quelques années des régions boisées qui longent le 60e parallèle, Leaf Rapids est compatissante envers ses citoyens. Ce bâtiment intégré qui les protège des températures extrêmes – 35°C en été et −49°C en hiver – est situé à moins de 15 minutes de marche des habitations. Il renferme quatre pavillons donnant sur une placette recouverte. Le tout forme un périmètre de 210,000 pieds carrés. Il en a coûté $8,500,000 pour le construire.

Soulignons le souci que l'on prend à faire servir chacune de ses composantes à plusieurs usages. Par exemple: l'église se transforme au besoin en salle de cinéma ou de réunion; l'équipement récréatif dessert aussi bien l'école que l'ensemble du public; la cuisine de l'hôtel est utilisée comme cuisine d'appoint à celle de l'hôpital.

C'est à l'architecte Leslie Stechesen que l'on doit la conception de cette œuvre inaugurée en 1974.

Rapids

Jury:

Where most Canadian cities drift aimlessly through development of central areas and neglect natural assets, Regina, in a flash of insight, created an institution which, relatively unencumbered, can and does develop a waterway, a marshland and a large public reserve in the heart of the city. Bringing together in one authority the province, the city and the university to develop collectively their common lands is in itself an achievement. But Wascana Centre underlines the potential for harmonious and coherent development of the urban sector when public ownership of land and adequate resources go hand in hand.

With Wascana Lake as a focus for 2,300 acres of public land, educational, cultural, recreational and government facilities are given a setting whose beauty is steadily enhanced by a high standard of landscaping and park maintenance. That marshland with its teeming bird life can exist virtually in the heart of a city is unusual indeed. Here it is buffered by large land masses, protecting this natural habitat from urban pressures.

The strength of the Wascana Centre Authority inspires some concern lest, as an intergovernmental body, it might risk inadequate accountability or the use of resources needed equally elsewhere. Yet the evidence is that the Centre is used and appreciated by those it was designed to serve.

J.-C. Marsan:

C'est le principe à la base de la création de réserves d'espaces verts qui mérite d'être apprécié. Dans le système économique actuel, c'est encore la propriété publique des terrains qui s'avère la meilleure garantie d'un développement harmonieux et cohérent du domaine urbain. A la condition, évidemment, qu'une philosophie humaniste préside à ce développement et que le processus d'acquisition des terres par l'instance publique tienne compte des personnes et des communautés impliquées. La quantité d'acres d'espaces verts du centre Wascana peut paraître disproportionnée par rapport à l'échelle actuelle de la ville de Regina. Comme la superficie du parc du Mont-Royal, à Montréal, a dû l'être à l'échelle de la ville du dix-neuvième siècle. Mais aujourd'hui? Cette réserve d'espaces verts constitue un investissement rentable pour assurer la qualité de la vie dans la ville à venir.

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Wascana Centre Regina

Le centre Wascana Regina

The heart of Wascana Centre is the artificially-created Wascana Lake with its two largest man-made islands, Willow and Spruce. The lake was created back in 1883 when Wascana Creek, a small winding marshy waterway, was dammed to provide a permanent water supply for the small Regina settlement. The islands were constructed during the Depression years when some 2,000 otherwise-unemployed men dredged the lake by hand and built the islands from the waste material on the lake bed. One of the islands, Spruce, has been retained as a natural habitat.

In total, Wascana Centre has set aside approximately 360 acres of natural marshland (known as Waterfall Park) as a wildlife sanctuary. Warm water from a provincial power plant keeps the marshland relatively free of ice during the winter. This fact, combined with an extensive feeding program, makes Wascana the winter home for thousands of migrating waterfowl, including Canada geese, mallard and pintail ducks.

The Wascana Centre Authority is responsible for the maintenance and development of the Centre. The Authority, composed of five representatives from the province, three from the City of Regina and three from the University of Regina, was created in 1962 with the passage of the Wascana Centre Act in the provincial legislature. Development and maintenance expenses are cost-shared, with the province contributing 55%, the city 30% and the university 15%. Although exterior design and development proposals must be approved by the Authority's Board of Directors and standing advisory committees, each participating body retains title to its lands and buildings within the Centre and each controls its interior design.

Le centre Wascana occupe un large périmètre. Un lac artificiel créé en 1883 par la construction d'un barrage-réservoir sur la rivière Wascana en constitue le noyau.

Au cours de la Dépression, l'érection, au milieu de ce lac, des îles "le Saule" et "l'Epinette" procura du travail à 2,000 chômeurs. L'Epinette sert aujourd'hui de réserve naturelle, comme les 360 acres de terres marécageuses dont elle fait partie et qui forment un immense refuge d'oiseaux climatisé, alimenté régulièrement en eau tempérée par les installations hydrauliques de la province qui se trouvent situées non loin de là. On y nourrit systématiquement la sauvagine dont plusieurs espèces comme la bernache du Canada, le canard mallard et le pilet, y ont élu domicile pendant l'hiver.

Une régie, la Wascana Centre Authority, gère l'entretien et le développement de ce centre. Elle se compose de cinq représentants de la province, de trois représentants de la ville de Regina et d'un nombre égal de personnes de l'Université de Regina, selon des dispositions inscrites dans sa constitution, en 1962. Les dépenses sont réparties comme suit: la province, 55%; la ville, 30%; et l'université, 15%.

Bien qu'elles aient toutes droit de regard sur les décisions relatives à l'aménagement paysager, à l'architecture, et au développement de l'ensemble, chaque institution conserve ses droits de propriété sur le territoire qui lui a été octroyé, sur les immeubles qui lui sont propres et se charge de leur aménagement intérieur.

Centre

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Jury:

What a joy to find a retirement centre filled with the laughter and music of happy voices and busy people. This was no accident. Penticton is a community rich in the experience of programs for the elderly. That the people of this city planned, and raised money towards, a combined facility for housing, care and recreation was a natural application of a spirit which understands the needs of retired people.

The retirement centre is like a town centre. The striking building and extensive human activity make it a natural focus for a place where many westerners choose to retire. Citizens cheerfully give 3,000 volunteer hours per month to the many programs of recreation and hobbies. The recreation centre has a large community membership.

There is no pretentiousness in the furnishings. Nor are there unnecessary frills or formalities. It has the feeling of a comfortable home where needs for both private and common space are satisfied. Numerous patios at ground and second level offer easy access to outdoors and the magnificent views. Craft and recreation space on the main floor with large windows induce participation. Through the alchemy of good design and a love of people, a dynamic success story has emerged.

J.-C. Marsan:

Ce centre pour personnes âgées se distingue par son mode d'opération, lequel fait un large appel au volontariat des populations locales. Dans ce sens, il permet de tisser un réseau de sympathie dans toute la région pour les personnes âgées et d'intégrer ces dernières dans la fabrique sociale. Sur le plan architectural, l'architecte a su tirer tout le potentiel de sa structure: ateliers, salles et autres pièces convenablement situées, éclairées et orientées; présence d'espaces de détente, jardins, patios, balcons, etc...

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The Penticton Retirement Centre had its beginnings in 1967 when St. Saviour's Anglican Church started a drop-in recreational centre for the elderly who lived in the downtown area. The need for such service was apparent as the membership quickly rose to more than 900 people.

Late in 1970, the success of the drop-in centre led to a plan for the expansion of the program and membership. A working committee was formed and from it the Penticton and District Retirement Service was developed. With funding from all levels of government, including Central Mortgage and Housing Corporation, the sod was turned in January 1973 and a year and a half later, the Centre was opened to its first residents.

The $3.2 million Centre, which is open to all elderly citizens of Penticton and district, is located on the corner of Wade and Winnipeg Streets, a three block walk from Penticton's major shopping area, churches and entertainment.

The Centre consists of three major units – a recreation centre, a six-storey low rental apartment complex which can accommodate some 150 residents and a special care unit which provides nursing care to nearly 100 people.

The Centre was designed by Jones, Haave, Delgatty Architects, Vancouver.

Il aura fallu environ huit ans au foyer du vieillard de la paroisse anglicane de Penticton pour devenir l'ensemble qui sert aujourd'hui de maison de retraite à quelque 250 personnes, et de centre récréatif à la population locale.

Le succès fulgurant du foyer original – plus de 900 adhérents quelque temps après son ouverture en 1967 – conduisit à la formation d'un comité d'action duquel est né le Service de retraite de la ville et du district de Penticton, promoteur de la construction des nouveaux bâtiments que l'on peut voir à l'angle des rues Wade et Winnipeg.

Commencés en 1973, les travaux furent terminés un an et demi plus tard. Ils coûtèrent $3,200,000 partagés entre les diverses instances gouvernementales.

Cette maison pour personnes âgées comporte trois pavillons: un centre de loisirs, un immeuble d'appartements subventionnés pouvant accueillir 150 personnes et un bâtiment de soins prolongés de cent lits.

Les plans ont été dessinés par les architectes Jones, Haave et Delgatty de Vancouver.

Retirement Centre Penticton British Columbia

La maison des Retraités de Penticton

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Jury:

Strathcona is a story of misguided government, an historic urban community threatened with extinction, mobilization of the collective human spirit to fight back, a long struggle to make three levels of government hear and understand, the turning of the tide, following through with neighbourhood rehabilitation and finally a realization that you can teach governments or change them and you can save a threatened community.

A residential pocket amidst a sea of encroaching industry and commerce has been shown to be a viable place to call home in a big urban centre. It is difficult for an outsider to appreciate the enormity of effort and commitment that went into the rehabilitation of Strathcona. The physical improvements are only part of what happened. The strengthening of the social fabric and the restoration of pride and dignity combined to make Strathcona a better place in which to live.

Housing conditions have improved greatly. New infill housing harmonizes with older rehabilitated homes. A linear park provides recreational open space and cuts down through traffic.

Strathcona lives as an example of community renewal which did not displace low income, long time residents. It lives as an example where indigenous leadership combined resourcefulness with anger, reasonableness with firmness at the negotiating table. It is a success story of the human spirit whose strength led to important remoulding of institutional thought.

J.-C. Marsan:

La rénovation de Strathcona est sans doute l'un des meilleurs projets impliquant la participation des citoyens à la réanimation sociale et à la rénovation physique de leur quartier. Le résultat est remarquable, tant du point de vue de l'abondance et de la qualité des services que de celui de la qualité des rénovations et des constructions résidentielles. La forte cohésion sociale du groupe ethnique impliqué a sûrement joué un rôle important dans cette réussite.

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Strathcona is an inner city, low income neighbourhood adjacent to Vancouver's Chinatown. Covering some twenty blocks, it is one of the older residential areas of Vancouver with most of the single-family frame dwellings dating from 1900.

In terms of population, Strathcona is not an 'average' Canadian neighbourhood. The majority (65%) of Strathcona's 3,500 residents are of Chinese descent, and many are not fluent in English. As well, many of the area's residents are elderly, with some 50% being 65 years or older.

Following five years of organizing and lobbying by the Strathcona Property Owners and Tenants Association (SPOTA), Strathcona's experimental rehabilitation project was officially launched in January 1972 with funding for a three-year period of up to nearly $5 million from federal, provincial and municipal sources.

While much has been accomplished during the three year project, for the members of SPOTA improvement of their neighbourhood has become an ongoing concern. A new seven unit cooperative was completed in February 1975 and more housing units are planned.

A cause de ses caractéristiques géo-culturelles, Strathcona constitue un village à l'intérieur de Vancouver. Ses quelque vingt îlots adossés au quartier chinois et composés de très modestes maisons unifamiliales construites au début du siècle pour une classe laborieuse, sont habités en grande majorité par une population également d'origine chinoise (65% de ses 3,500 habitants) et âgée (50% des gens ont plus de 65 ans). Certains ne parlent que leur langue maternelle. Ces particularismes n'ont pas empêché cette petite collectivité de passer à l'action devant la lente mais sûre détérioration du quartier. Cinq ans d'action concertée ont obtenu à la Strathcona Property Owners and Tenants Association ou SPOTA (Association des propriétaires et locataires de Strathcona), des subsides de l'ordre de $5,000,000. En janvier 1972, débutaient les travaux d'amélioration. La phase la plus récente a consisté en l'érection d'une coopérative de sept habitations, en 1975.

Strathcona Rehabilitation Project Vancouver

La rénovation de Strathcona Vancouver

hcona

Jury:

DeCosmos Village is a cooperative housing development which combines the cost saving participation of the members with superb grounds, particularly for small children.

While the housing is relatively low cost by comparison to the current Vancouver market, the design of the neighbourhood is warmly attractive and the residents obviously enjoy what they have. This is a cooperative which worked well and still does. Behind it lies the support and cooperation of church, labour, city and CMHC. Internally some units are subsidized, making possible a range of low to middle incomes. The cooperative spirit carries on in the design, care and maintenance of the children's playgrounds. These are integrated into the natural setting in a way which is both creative and respectful of nature as a unique aspect of an urban environment.

The play spaces are typical of the neighborhood design which integrates the automobile unobtrusively, preserves wooded areas, achieves a reasonable density and provides a pattern of connecting walks and curved narrow roadways. The village is an invitation to family living.

J.-C. Marsan:

Le plan d'aménagement de ce développement résidentiel semble bien fonctionner, notamment au niveau de l'intégration du véhicule moteur. Surtout, il se traduit spatialement par un ensemble bien structuré, riche d'espaces communs et privés, d'une grande qualité d'échelle et de sensibilité. Le respect de la nature, le choix de matériaux chaleureux et la création, par les occupants, d'imaginatifs jardins d'aventure pour les enfants, ajoutent une note humaniste à cette petite agglomération.

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De Cosmos Village Cooperative Vancouver

La coopérative du village De Cosmos Vancouver

The 110 homes that make up De Cosmos Village were completed in 1972. Located in the Champlain Heights area of Vancouver, the town houses are of split-level design with two, three and four bedroom units in groupings of various sizes. The average cost of building each unit was $17,300. The entire cooperative occupies about seven acres of land, which is leased from the City for approximately $3,500 annually.

The cooperative was incorporated in 1970 and received funding from a variety of sources including the United Church of Canada, B.C. Federation of Labour, B.C. government and CMHC.

The families who live in De Cosmos Village do not "own" their dwellings in the conventional sense. Each resident owns all the buildings cooperatively with the other residents and has a vote in all the decisions regarding the future of the development.

The cooperative was named after British Columbia's second premier, the controversial and enigmatic William Alexander Smith who sparked by dreams of destiny changed his name to Amor de Cosmos – Lover of the Universe. Born in Nova Scotia in 1825, de Cosmos founded the Victoria Colonist in 1858, was one of the prime movers in bringing B.C. into Confederation and in 1872 became premier of the province.

A brief sketch of de Cosmos distributed by the cooperative describes why they selected his name. "He was a man who strongly believed in personal freedom in an age of authority... Perhaps too radical for his time, but a man of vision and ability; we believe that his importance as a great British Columbian should be remembered."

C'est en 1972 que fut terminée la construction des 110 habitations du village De Cosmos et que ses coopérateurs purent y emménager. Il s'agit d'un ensemble de maisons à paliers comportant de deux à quatre chambres et coûtant chacune $17,300. Les sept acres sur lesquels il s'élève sont loués à cette coopérative par la ville de Vancouver, au prix annuel de $3,500.

Le groupe De Cosmos fut constitué juridiquement en coopérative en 1970 et bénéficia de l'appui financier de l'Eglise unie du Canada, de la Fédération provinciale du Travail, du gouvernement provincial et de la SCHL. Il porte le nom pour le moins original du deuxième premier ministre de la Colombie-Britannique, Amor de Cosmos – Amour de l'Univers – que William Alexander Smith troqua un jour contre son véritable nom.

De Cosmos, né en Nouvelle-Ecosse en 1825, fut l'un des fondateurs du journal le Victoria Colonist, et l'un des principaux instigateurs de l'entrée de la Colombie-Britannique dans la Confédération. Il devint Premier ministre en 1872.

Un bref portrait de cet homme politique nous révèle les raisons qui ont incité les coopérateurs à s'inspirer de lui: "Il croyait fermement à la liberté individuelle en un temps où triomphait l'absolutisme... S'il fut considéré par ses contemporains comme un homme aux idées trop avancées, il reste que sa grande perspicacité et sa compétence méritent que l'on perpétue sa mémoire."

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Jury:

Smith Street is a short street close to the warehouses, rail yards and docks of south end Halifax. The renovations include all the houses on one side of the street for its one block length. While it is a mixture of home ownership and rental units, the new residents have achieved an harmonious external renovation combined with great variety of design expressing individuality inside.

Many obstacles were overcome so that the renovations could proceed. Antiquated bylaws and legal/financial traditions initially stood in the way. Common use of open space at the rear for parking and landscaping was achieved through a system of interlocking rights-of-way.

Smith Street is middle income housing for families and singles, which is most notable for the high standards of renovation. If it could be readily duplicated, the community, as well as the residents, would benefit. The jury felt that it might well be a case of isolated excellence rather than a pathfinder for others in Halifax.

J.-C. Marsan:

La conservation de Smith Street est une initiative intéressante de la part de citoyens de la classe moyenne pour conserver une rangée de résidences d'une bonne qualité architecturale. A cause de l'échelle réduite du projet, l'action individuelle, notamment au niveau de la restoration de chaque logement, semble avoir primé. Cette initiative pourra-t-elle en susciter d'autres dans cette ville où, contrairement à Montréal, par exemple, le potentiel pour ce type d'intervention apparaît réduit?

*Smith

In 1972, twelve Victorian-style row house units on the south side of Smith Street came up for sale and were eventually purchased by a group of private individuals who carried out a complete rehabilitation of the buildings without public funds.

The row houses (built around 1865) were badly deteriorated both inside and out, making restoration impossible. Although decisions regarding exterior changes were made by group consensus, each member rebuilt the interior of his own house to suit his needs.

The rehabilitation began in March 1973 and by the end of 1974, eleven of the twelve houses were occupied. It was decided that all owners would have mutual rights-of-way over other owners' land (except for a private 20 foot strip immediately behind each individual home) and that the communal open space would be used for community recreation and common parking.

The row houses now combine owner-occupied homes, cooperatively owned duplexes plus rental units.

To meet the recreational needs of the new residents, the City of Halifax is restoring a small corner park which will benefit not only Smith Street but other South End residents in the Peninsula area.

9

En 1972, douze maisons en bande d'époque victorienne situées du côté sud de la rue Smith, à Halifax, furent achetées par des particuliers qui décidèrent, d'un commun accord, de les réparer sans avoir recours aux fonds publics.

Leur vétusté (elles dataient de 1865) était telle qu'il fut impossible de procéder à une restauration qui en aurait respecté le style original. Les décisions relatives à la réfection de l'extérieur furent toutefois prises en commun. Quant à l'intérieur, chaque propriétaire fut laissé libre de reconstruire comme il l'entendait.

Les travaux débutèrent en mars 1973. Dès la fin de 1974, onze habitations étaient occupées. Dans l'intérêt général, il fut décidé que chacun aurait droit de passage sur tous les fonds, à l'exception d'une parcelle de 20 pi de long, derrière chacune des maisons, et que le reliquat des propriétés servirait à l'aménagement d'un terrain de jeu et d'un parc de stationnement.

Les occupants se composent de propriétaires, de locataires et de coopérateurs se partageant quelques duplex.

La ville de Halifax n'a pas voulu rester étrangère à l'opération. Elle y aménage présentement un jardin public que pourront fréquenter tous les gens du quartier.

Smith Street Renovations Halifax

La conservation de la rue Smith Halifax

Street

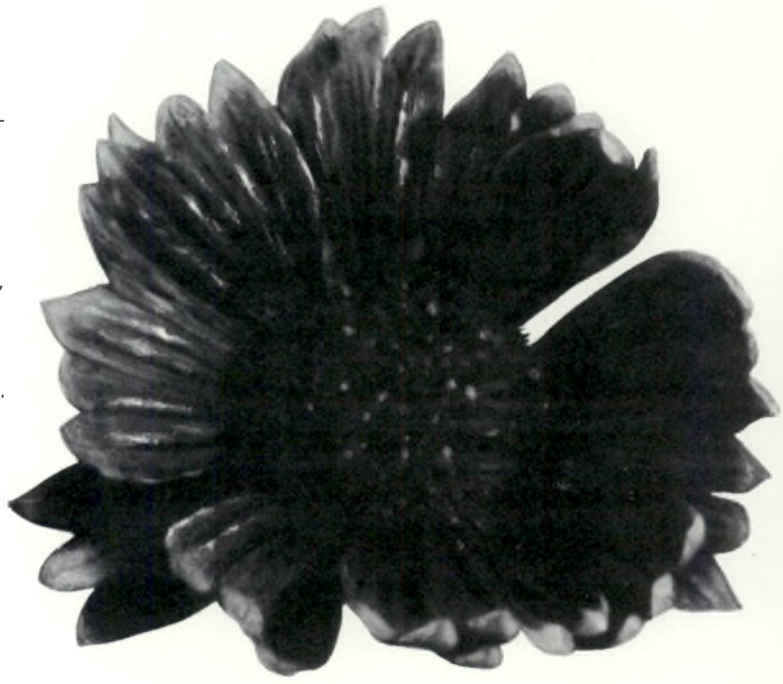
Jury:

When so many people, including 60 organizations, can become involved in the simple but enriching idea of planting flowers and trees over a large region, one can only murmur that not all sensitivity has been lost in the hurried society we live in. It is an achievement primarily of women. They have pressed their values, their concerns for beauty and environment on public and private bodies, on towns, industries and citizens, to the benefit of all.

They have operated with small budgets and achieved much. No doubt their success could be expanded if governments realized how productive support funds can be, when the citizenry is inspired to a cooperative effort to enhance the environment of a vast area outside the territory of the urban Canadian south.

J.-C. Marsan:

L'initiative et le dynamisme des nombreuses associations engagées dans cette action d'assainir et de fleurir une région plus vaste que la Belgique est digne de mention, surtout lorsqu'on considère les maigres budgets avec lesqels ces groupes réussissent à opérer. Cette initiative met en évidence le fait que le premier et le meilleur allié des corps publics dans la lutte pour protéger et améliorer l'environnement est le citoyen lui-même. Il faudrait que les diverses autorités gouvernementales s'en rendent compte de façon à apporter un support financier plus substantiel à ce type d'action communautaire.



*Assainir

Le mouvement Assainir et fleurir la région du Saguenay-Lac-Saint-Jean

Assainir et fleurir la région du Saguenay-Lac-Saint-Jean

Cette opération en est une de longue haleine. Elle a pris naissance au sein de l'Association féminine d'éducation et d'action sociale, en 1972, s'est propagée par l'intermédiaire des 60 cercles que celle-ci compte dans le Saguenay-Lac-Saint-Jean et se poursuit encore aujourd'hui. Par des mécanismes simples consistant à créer dans chaque ville et village un comité d'embellissement composé des autorités municipales et des représentants des organismes locaux, l'A.F.E.A.S. réussit à faire adopter un certain nombre de mesures multiplicatrices d'énergie populaire.

La gaillarde, une fleur aux couleurs éclatantes et représentant par sa vigeur et sa hardiesse, les vertus propres au peuple de ce "royaume", fut choisie comme symbole. Les semaines d'assainissement et d'embellissement proclamées officiellement aux quatre coins du territoire succédèrent aux bals fleuris, aux séances publiques d'information dont le but visait à renseigner la population sur les plans d'urbanisme, les règlements et les services municipaux. On fit circuler des milliers de tracts suggérant un nettoyage progressif du cadre de vie, allant du grand ménage de la cave et du grenier jusqu'à la démolition des hangars délabrés et l'enlèvement des vieilles voitures. Ce fut un devoir pour chacun de faire s'épanouir la fleur symbolique dans les jardins, les commerces et les places publiques.

Cet appel à la beauté, répété inlassablement à la radio et à la télévision, fut en même temps perçu comme une participation à l'essor économique et touristique de la région.

The Saguenay-Lac-Saint-Jean region of Quebec lies in the rugged Laurentian Shield country on the north shore of the St. Lawrence River.

In 1972, l'Association féminine d'éducation et d'action sociale initiated a wide-ranging, voluntary, privately funded regional beautification program. To motivate the people of the region to participate in the project, l'Association encourages municipal authorities and representatives of local organizations in each village and town to form a beautification committee. These local committees hold public meetings and set up information kiosks to let the people know about the activities of the project. They are also responsible for setting aside a week each year for their area's annual clean-up campaign.

Some sixty different associations are now involved in the ongoing ten year plan to maintain and improve the physical environment. Through the efforts of the different groups, hundreds of old cars have been removed from backyards and highways; trees, flowers and waste containers have been placed in downtown areas and city parks, and hundreds of new private gardens have blossomed in front of recently painted and redecorated homes.

The gaillardia—a large showy yellow and red flower known for its brilliant colour and hardiness—was chosen by l'Association as both the symbol of the project and the region.

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J.-C. Marsan:

Cette coopérative tente un effort héroïque pour améliorer les conditions de vie dans un quartier qui a été progressivement vidé de ses forces vives par l'évolution de la métropole. Le principe de donner aux citoyens de revenus modestes, des logements convenables au coût qu'il leur soit possible de défrayer, constitue la pierre d'angle de cette coopérative. Le fait que les promoteurs de cette initiative n'aient pas trouvé de solutions sur le plan économique pour réaliser cet objectif ne doit leur être reproché. Leur action fait ressortir une contradiction fondamentale de notre système: qu'il y ait encore, dans notre pays d'économie avancée, tant de citoyens qui soient privés du droit fondamental d'habiter un bon logement.

Jury:

This is a cooperative rehabilitation project in a low income section of Montreal where an heroic effort has been made to find a housing solution for low income people.

The rehabilitation has been carried out at the minimum level required to make run-down buildings acceptable for family living. The tenants have been participants in the decision-making process. They have achieved a result which is not economic in the sense of covering all costs with rent, but the solution may be an attractive alternative to other uneconomic housing such as new public subsidized units.

The degree of public subsidy which should go into cooperative, rehabilitated, older housing is an issue which was not concluded when the jury visited Pointe St. Charles. In that sense this project may be seen as incomplete. On the other hand, the serious pioneering effort to find a new way to house low income urban Canadians warrants special mention.

*Pointe-St

La coopérative de Pointe-Saint-Charles Montréal

Pointe St. Charles Cooperative Montreal

La coopérative d'habitation de Pointe-Saint-Charles fut créée à la suite de l'achat et de la restauration par Loge-peuple, une société sans but lucratif, d'une centaine de logements voués à la démolition.

Sous la direction de Joseph Baker, alors professeur d'architecture à l'Université McGill, de l'urbaniste Anshel Melamed et de Peter Katadotis, un travailleur social, Loge-peuple obtint un prêt de $1,000,000 de la Société centrale d'hypothèques et de logement pour mettre à exécution une opération considérée, à plusieurs titres, comme expérimentale.

Un groupe de recherche en architecture s'occupa de dresser la liste des bâtiments qui étaient à vendre dans le quartier et qui valaient la peine d'être réparés. Il en coûta approximativement $2,000 par logement pour l'acquisition et $10,000 pour la réfection.

Il avait été entendu, dès les débuts, que les locataires prendraient la relève dès la fin des travaux, ce qui eut lieu en 1974. Depuis, ils gèrent et entretiennent eux-mêmes leurs logis, poursuivant avec ténacité un objectif modeste: maintenir dans son lieu d'origine une importante ethnie irlandaise venue y prendre racine au milieu du 19e siècle.

Pointe St. Charles is a low income, working class neighbourhood south of the Lachine Canal below Montreal's central business district.

In 1970, a non-profit association called Parallel Institute was formed to help the residents of the Pointe improve their living conditions by organizing the tenants into a housing cooperative which would purchase and renovate buildings in the area. The Institute obtained a $1 million loan from CMHC to carry out this experimental cooperative project.

To administer the project, the Institute formed a separate company called "Loge-peuple de Pointe St. Charles Ltée" which would buy, renovate and operate the buildings purchased. Loge-peuple would own the buildings only until such time as the tenants were able to take over the company themselves. The first directors of Loge-peuple were Joseph Baker, an architect with McGill University, Anshel Melamed, a city planner and Peter Katadotis, a community organizer.

The necessary architectural expertise was provided by the Community Design Workshop, a group of McGill architect students operating under the direction of Joseph Baker. This group inspected the properties for sale in the area and prepared renovation plans for the buildings purchased by Loge-peuple.

By March 1974, Loge-peuple had purchased fifteen buildings and renovated some 100 housing units. A LIP grant plus renovation subsidies from the City of Montreal enabled Loge-peuple to employ a group of local tradesmen called "Les Industries des Travailleurs de Pointe St. Charles Ltée" to carry out the renovations.

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Jury:

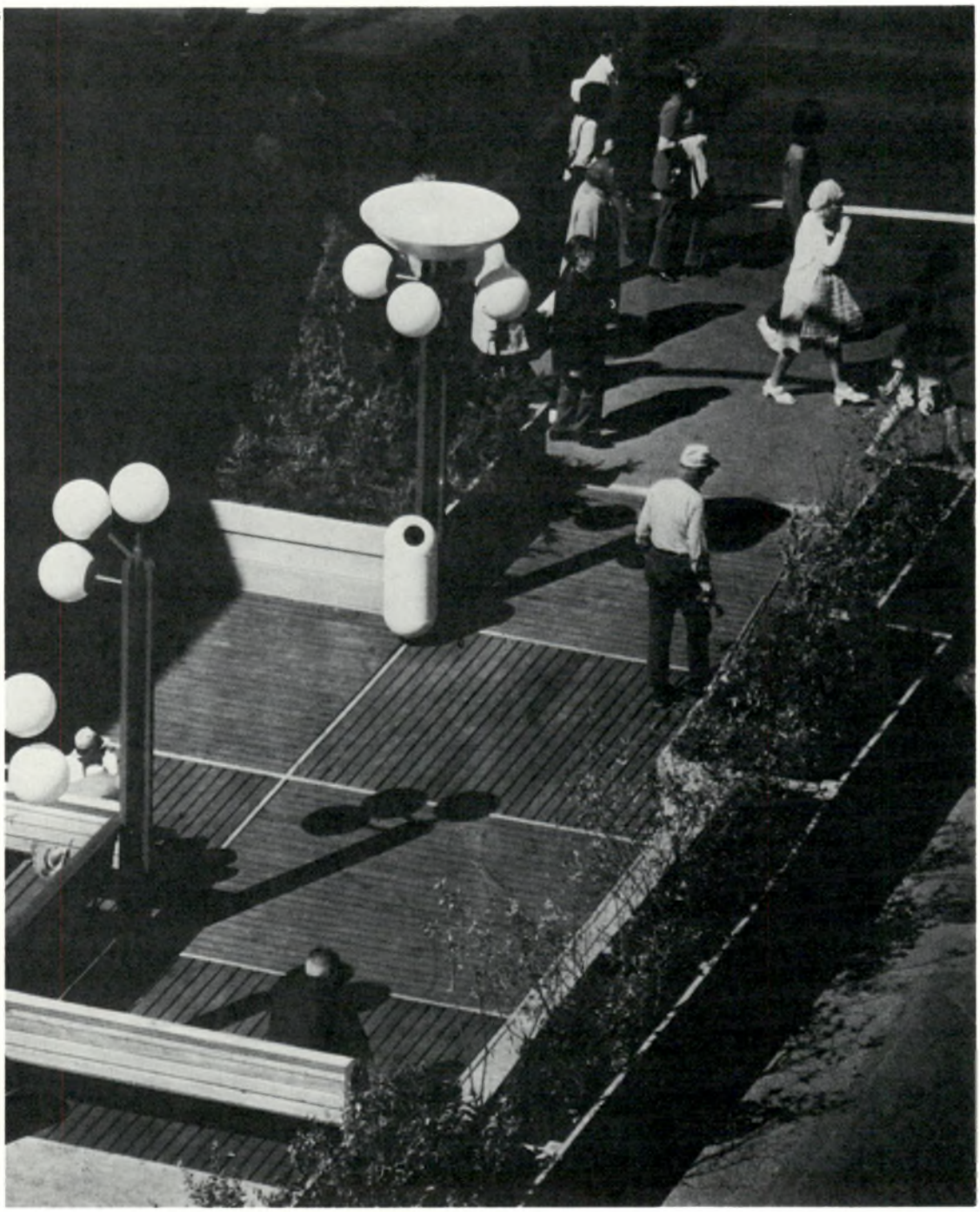
Portable parks for dressing up downtown cores is an excellent idea. It clears up the unkept and abandoned air of vacant lots and offers instead an alcove for rest, play or romance. This clever and appropriate notion has significance for our fractured cities that, in their turmoil of growth and change, never seem to have time to provide for people spaces, places where one can sit and rest mind and body.

The small scale of the parks so far built provides an immediacy and concentration of use that make them safer for casual use at almost any time of day. An absence of vandalism is a noteworthy result. The carnival character of each park communicates a spirit of fun and lightheartedness.

J.-C. Marsan:

Si, sur le plan du design, les unités constituant le Port-a-Park ne possèdent rien de remarquable, l'idée même mérite une mention, et s'avère riche de potentiel. Notamment pour meubler d'une façon intéressante et socialement utile les multiples terrains libres et sous-aménagés qui défigurent le cœur de toutes nos cités, sans exception.

*Port-



Winnipeg's first Port-a-Park was officially opened in December 1971. It occupies a privately-owned lot about 50 by 120 feet at the corner of Graham Avenue and Carleton Street in downtown Winnipeg.

In exchange for advertising their product on the brick wall bounding the south side of the site, Blackwoods Beverages Company agreed to pay the rent for the site plus a portion of the park's capital installation cost.

The Planning Department of Winnipeg designed the wall graphic, paid the cost of building the components and agreed to assume the maintenance responsibilities. For his part, the owner of the site agreed to its continued use as a park, subject to a 90-day notice on either side.

The Port-a-Parks utilize a system of prefabricated components. The benches, for example, have cedar wood seats mounted with carriage bolts to a painted steel frame. This frame is then attached to side columns which in turn support both the vinyl awning canopies and coloured globe light units. The components were designed to be readily assembled and easily dismantled.

The parks are landscaped with trees and flower planters as well as telephone booths and receptacles for mail, newspapers and waste.

Since the installation of the first park, the Metro Government has developed three other parks and more are being planned.

Le premier jardin public portatif de cette ville fut inauguré officiellement en décembre 1971 sous le nom de Port-a-park. Il occupe un fonds privé de 50 pi sur 120, à l'angle de l'avenue Graham et de la rue Carlton.

La compagnie Blackwoods Beverages qui désirait se servir du mur de brique clôturant le côté sud, comme support pour une immense réclame, accepta de payer, outre les droits de location, le coût d'installations transportables qui permettraient d'y créer un jardin public.

Le Service municipal d'urbanisme se chargea du dessin de la réclame, de la construction du mobilier et de l'entretien. L'entente contractuelle intervenue entre Blackwoods Beverages et le propriétaire stipulait que ce bail pouvait être résilié après avis de 90 jours signifié par l'une ou l'autre partie.

Les jardins portatifs sont en fait des pièces de mobilier urbain préfabriquées qui s'emboîtent les unes dans les autres et que l'on agence sur place. Il s'agit principalement de bancs de cèdre surmontés d'auvents, de réverbères auxquels on ajoute des arbres nains, des fleurs, voire même des boîtes téléphoniques, des boîtes à lettres et des corbeilles à papier.

Il existe aujourd'hui trois jardins portatifs à Winnipeg. Un quatrième est sur le point d'être terminé.

Port-a-Park Winnipeg

Les jardins portatifs de Winnipeg

a_Park

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Jury:

Downtown tree planting has become the practice in too few Canadian cities. In some centres, growing trees is not difficult. Bringing trees into Calgary, land of scrub grass, is no small feat. Within the context of climate and past neglect, the massive effort to put things right is commendable.

Joint planning and cost sharing by the City and the Chamber of Commerce are evidence of a cooperative and productive public/private interaction.

J.-C. Marsan:

Alors que dans de nombreuses villes canadiennes, des citoyens luttent farouchement pour protéger les arbres contre l'invasion du développement, il est heureux de constater qu'à Calgary, ville originellement dépourvue d'arbres, un effort est fait pour en planter.

*Calg

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Tree Planting Project Calgary

La plantation d'arbres de Calgary

It was in 1875 that the North West Mounted Police began construction of a fort outpost on the site of what we now know as Calgary.

As one of many projects to mark the City's centennial year, the Calgary Chamber of Commerce undertook to plant some 1,600 trees along the sidewalks and boulevards of downtown Calgary.

The long Calgary winters coupled with the rapid warming and cooling of the prairie Chinooks (known to raise temperatures by as much as 10°C within an hour) made it important to obtain hardy trees. Green ash and chokecherry trees were selected and planted in a 50 block area bounded by 4th Avenue, 9th Avenue, 7th Street S.W. and 4th Street S.E.

To maximize the visual impact of the project, large trees (20 to 25 feet high with 4″ calibre trunks) were chosen and planted both directly in the ground and in planters. The trees were purchased from a Chicago tree farm that specialized in large, hardy tree species.

Financial support for the project came from both public and private sources, with a provincial grant of $500,000 plus a matching sum from the downtown business community and property owners.

En 1875, la Gendarmerie royale du Canada érigeait un avant-poste en un lieu retiré de l'ouest du pays connu aujourd'hui sous le nom de Calgary.

Lors du centenaire de fondation de cette municipalité, la Chambre de commerce locale fit planter 1,600 arbres, en bordure des principales artères du centre-ville.

Il fallait trouver des essences ligneuses assez vigoureuses pour résister aux longs hivers albertains et aux rafales du chinook, ce vent des Rocheuses qui peut faire grimper le mercure de 10°C en moins d'une heure. On choisit le frêne ainsi qu'une variété du cerisier de Virginie, le ''schubert''.

Pour que les rues verdoient davantage, ou du moins plus rapidement, on prit de magnifiques spécimens mesurant de vingt à vingt-cinq pieds de hauteur et on les planta, les uns dans des bacs, les autres à même le sol.

Le gouvernement provincial appuya cette initiative d'une subvention de $500,000. Les commerçants du centre-ville et les propriétaires y ajoutèrent le même montant.

arv

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Jury:

Gastown represents the first phase of the revitalization of Vancouver's historic area. It was brought back to life from a very depressed state without the use of the ground razing techniques of recent memory.

Gastown is texturally interesting and pleasant to experience as a pedestrian. It is an attractive place to shop, eat or just enjoy outdoor musicians and crowds.

Traffic is in conflict with the large volume of pedestrian movement and some criticisms are heard about inadequate social planning for former residents. Yet Gastown was an important beginning for the efforts to save a number of adjoining areas from destruction. It has shown Vancouver and other Canadian cities the potential for downtown rehabilitation.

J.-C. Marsan:

Le projet de Gastown a permis de ramener la vie dans ce quartier déserté de Vancouver. L'aménagement y est agréable et l'atmosphère sympathique. Cependant, Gastown, comme le Vieux-Montréal, est menacé par un développement superficiel, apte peut-être à animer le quartier pour les touristes, mais incapable d'assurer une vie urbaine authentique.

*Gasto

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3

One of the first two completed projects in the renewal of Gastown was Maple Tree Square. Located at the intersection of Water, Alexander, Powell and Carrall Streets, the Square is named for the maple tree which marked the site of Vancouver's first public meeting place. This project, started in the winter of 1971, involved removing asphalt streets and concrete sidewalks and replacing them with wall-to-wall brick paving; installing cast-iron bollards to separate pedestrians from vehicles; adding street lamps modelled on original 1912 city designs; burying service wires, and planting maple trees. A statue of Jack Deighton, affectionately known as 'Gassy Jack' (from whom the area derives its name) stands in the square.

The second Gastown project, Blood & Trounce Alley, was officially opened to the public in November 1973. This project involved removing an old garage to transform a back alley into a pedestrian walkway lined with shops and outdoor cafes. Again, trees were planted and brick paving laid throughout. With the help of a National Housing Act loan, two old hotels adjoining Blood Alley were renovated and leased as low-cost housing to Gastown residents.

Funding for the Gastown projects was obtained from federal and provincial government sources as well as a provincial utility company and local businessmen.

La place Maple Leaf occupe un site historique. C'est ici, à l'ombre d'un érable dont elle a emprunté le nom, qu'eurent lieu les premières assemblées publiques de Vancouver. Il convenait donc qu'elle fut la première l'objet des travaux d'embellissement du vieux quartier de Gastown dont elle fait partie.

On commença, dès 1971, par remplacer l'asphalte des rues et le béton des trottoirs par de la brique. Les espaces piétonniers furent entourés de chaînes pour les séparer de la circulation automobile. Des lampadaires anciens, copiés d'après les dessins de ceux qui ornaient la place en 1912, vinrent lui redonner son cachet d'autrefois. Les fils électriques furent enfouis dans la terre et de nombreux érables y furent plantés. On y érigea la statue de Jack Deighton, surnommé "Gasey Jack", personnage truculent dont la mémoire revit dans le nom même de ce quartier.

La rénovation de Gastown se poursuivit par la transformation de Blood and Trounce Alley, officiellement ouverte au public en novembre 1973. Elle consista principalement à faire disparaître un vieux garage et à transformer une venelle en un passage piéton entouré de boutiques et de cafés. Là aussi des arbres furent plantés et le sol repavé de brique. Deux hôtels anciens adjacents purent être restaurés et convertis en habitations à loyer modique grâce aux subsides fédéraux disponibles pour ce genre d'opération.

Le financement global de la rénovation de Gastown est assuré par la participation conjointe des administrations provinciale et fédérale, par quelques sociétés de services publics et par des hommes d'affaires du quartier.

Gastown Vancouver

Gastown Vancouver

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1, 2
Desnoyers, Mercure, Leziy, Gagnon, Sheppard, Architectes
3, 41, 42, 43
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WORLD SETTLEMENTS: PERSPECTIVES

PANORAMA DE L'URBANISATION MONDIALE

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Volume 19, nos. 3/4, 1976

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Barbara Ward*

". . . to try to grasp everything is to risk grasping nothing. The entirety of the human condition certainly escapes the statistician. It probably escapes the poet. So whatever is written about our habitat must submit to being incomplete."

"Today, with almost four thousand million beings on the planet, the added thousand million has taken only fifteen years. This rate of growth means that in the first decade of the next century, a whole new world, equivalent in numbers to this one, will be piled on top of the present level of population. Further ahead, the predictions become even more fantastic."

"If we take 'urban' as the adjective to qualify settlements of more than 20,000 inhabitants, throughout most of human history at least ninety percent of the people have lived not in cities but in hamlets, villages, or at most in small towns."

"By 1950, there were seventy-five 'million-cities,' fifty-one of them in developed regions, twenty-four in the developing world. Today, the developing nations have pulled ahead. They contain 101 such cities, out of a world total of 191. By 1985, the million-city will have jumped from 11 to 273 in less than a century—and 147 of them will be in the less developed lands."

"To seek analogies for change on this scale, one has the obscure feeling that only the distant billennia of geological time can provide any adequate concept of the scale of upheaval."

"We should hear, if we were listening, the mutter of the approaching storm."

"The great Hebrew prophets—from Isaiah to Karl Marx—have called on man 'to undo the thongs of the yoke, to let the enslaved go free . . . sharing your bread with the hungry and bringing the homeless into your house.' " Isaiah 58:6-7.

"The rights of the downtrodden, the duties of the fortunate, the value and dignity of the poor, the harsh condemnation of irresponsible wealth, these are judgments and energies inherited from Western man's Biblical tradition—inherited even when betrayed—and in our own day this tradition either colors the imagination, troubles the conscience, or at least perturbs the complacency of all mankind."

*Quotations from "The Home of Man" used with the kind permission of the author and her publisher, McClelland and Stewart Limited.

"When we try to establish even the minimum physical conditions of a worthy human existence, we confront the widest possible spectrum of uncertainty. For one thing, there are inescapable differences of climate and culture—Arctic housing tells us nothing about tropical standards, or Mediterranean radiance about the midnight sun. Diet, uses of energy, patterns of worship, work and play partly and rightly reflect a vast and precious variety of cultures and social purposes. But we can perhaps accept an irreducible minimum—another 'inner limit,' this time the limit of physical well-being, which human society transgresses at its peril and which must include food, energy, shelter, and the training and work required to secure them."

"To take these high abstractions down to a more homely level, we can note that in the crucial area of food, the average North American eats some 1900 pounds of grain a year, all but 150 pounds of it in high protein food such as the products of cattle and poultry. So does the Soviet Union, though with a higher proportion of bread. It is perfectly possible that, for largely sedentary peoples, this diet is as dangerously overgenerous as the 400 pounds of grain eaten by the South Asian is manifestly too little."

". . . today the two-thirds of the world's peoples who live in developing countries consume fifteen times less energy, on the average, than do the citizens of developed societies."

"A third of the municipalities of Latin America have neither sewage systems nor piped water. The proportion in the Indian subcontinent and parts of Africa is higher still. The open drain down the main street, the contaminated well at the corner crossing—these can be the ugly symbols of man's habitat in energy-poor societies."

"The degradations continue downward in degrees of squalor, from a family to each room (the figure for eighty percent of the people in Calcutta), to four families to a room, to tarpaper shacks, to shift-sleeping in literally makeshift beds, to no rooms or roofs at all and thousands sleeping on the pavement."

"Various U.N. surveys put the number of houses that need to be built to keep up with growing numbers and repair the worst evils of the past at over forty-seven million units every year."

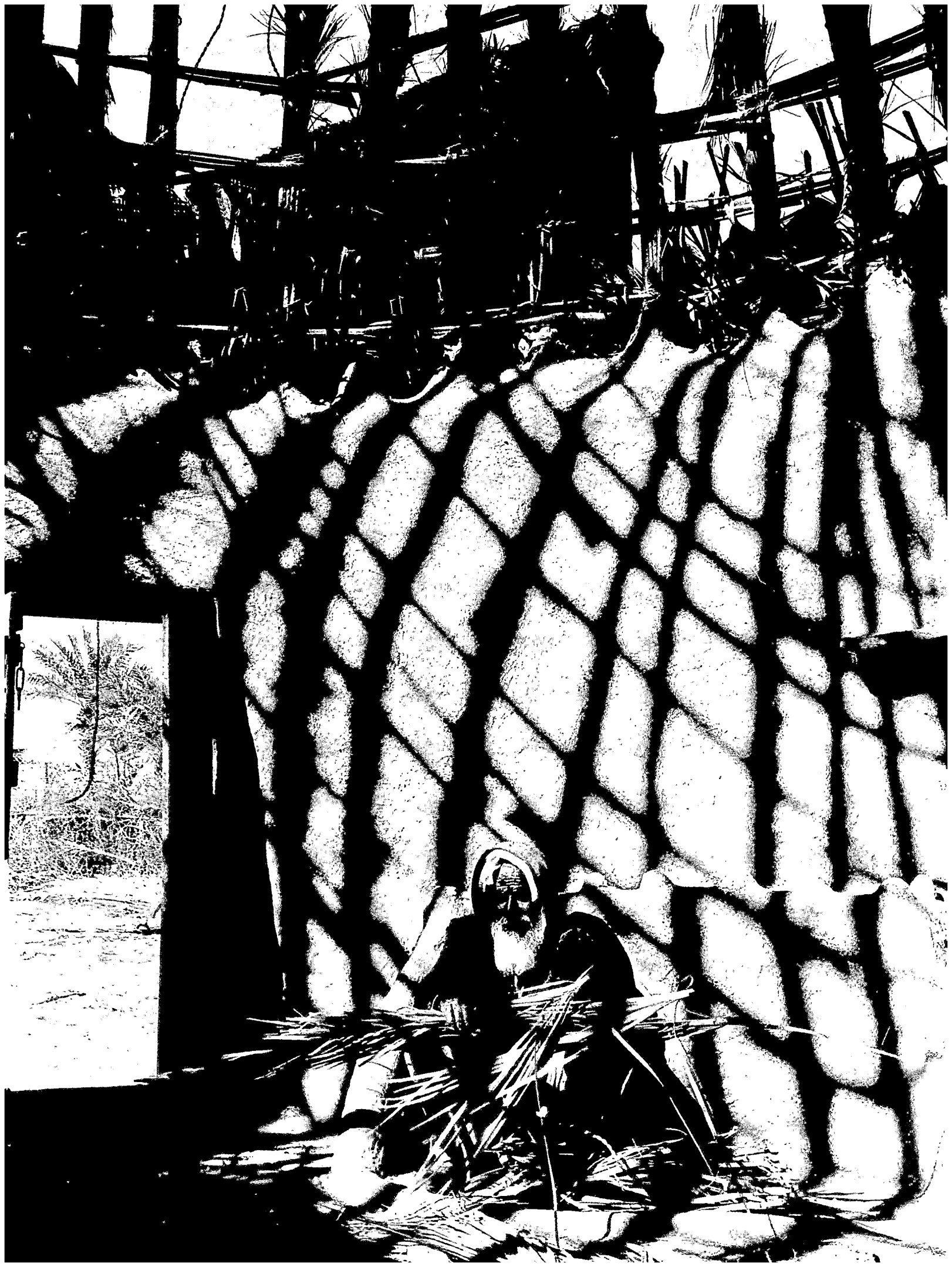
"Mankind is in fact engaged in a kind of race for survival between the inner and outer boundaries of social pressure and physical constraint while the doubling of the world's peoples and emergence of a half-urban world takes place in only four decades."

"But cities must be built not for economics alone—to build up the property market—not for politics alone—to glorify the Prince (in whatever form of government). They must be built for people and for the poorest first."

"And in this new intended order, the limits on material resources and on the environment must, for the first time, be recognized as fundamental challenges and constraints. The settlement by design, the settlement for people, the conserving and enhancing settlement—these are the priorities suggested by the convoluted and interdependent revolutions of our time."

"If it seems difficult, almost by definition, to grasp the full scale and implications of the problems raised by the human habitat, it seems virtually impossible to do so if they are caught in these changing contexts, this whirling kaleidoscope of interlocking and contradictory forces, needs, aspirations, and risks."

"The demographic flood is potentially so damaging precisely because it is a flood; in other words, an unmanaged, unintended, disorganized rush, pellmell, into the new urban order. But what this suggests is not further confusion but the opposite intention—a fully human one—to grasp the meaning of the phenomenon and produce urban settlements not by chance but by some measure of design. The first pointer is thus away from building the city by chance and toward the city built for human purposes." □



To Build So All May Grow

BY JEAN VANIER

I have visited many parts of the world over the last six years, helping found the small communities of l'Arche. These communities are there to create families for those handicapped people who have none or who, for one reason or another, cannot live with their parents. L'Arche welcomes mentally handicapped men and women, those rejected from their homes, locked up in asylums, confined in hospitals or other institutions.

I have seen mentally handicapped people in vastly different situations; in the slum areas of Sao Paulo or Calcutta; in the psychiatric unit of Tegucigalpa, Honduras. I have visited small villages in Kerala, India, and in the Ivory Coast. I have visited the black wounded areas of Cleveland and the poor areas of Mobile, Alabama. I have visited people in large institutions in Canada, and I have shared with lepers of India in their little huts in Bangalore. I have lived for a few days with men in prison.

All this has taught me that environment is important. How can a handicapped person discover his humanity in the depersonalized situation of an institution? How can a man rediscover his positive capacities if he is continually confronted by the mirror of an environment which tells him he is evil or that he is mad?

Reflection upon housing and environment is vital. The colour, the shape, the size of a house or a "living" room can encourage human growth, giving a positive self-image, stimulating and calling forth deep qualities of love and light in the person dwelling therein. On the other hand, an unfit housing environment can accentuate the darkness, the fears and the hates hidden in our being.

The child, conceived in the womb of his mother, spends nine months there. He finds his next environment in the arms of the mother and his cot, then his room and the house with all the family. This environment should help him grow in security and peace enabling him to become a complete human being by eliminating fears and fostering a positive self-image. Man, to grow spiritually, intellectually and emotionally, needs knowledge and light. He needs techniques and science and, above all, an emotional space where he really feels at home, where his heart is at ease, where he can be himself, a truly human person.

A child will sense very quickly whether the house has been built to create a happy home, to stimulate interpersonal relationships and the meetings of people; or whether it was built for the family to appear powerful, more successful than the neighbors, as a prestige kick, a status symbol, a way to lord it over others.

Environment can stimulate in our heart either the desire to give and to share and to be compassionate, or the desire of the ego to dominate, to subjugate others, to possess as a sign of our "greatness."

All of us are a strange mixture of light and darkness, good and evil, love and hate, trust and fear. The powers of evil and darkness in us are those which incite us to seek riches and domination over others. These are the desires to enrich our ego by possession, urging us to prove we are superior to another without seeing others as people. Thus we crush, we hurt, we exploit and we wound those around us, those who are our neighbors, our brothers. Or we are unable to see their wounds and their needs. We close ourselves up in our fears and our need for security. We refuse to share.

The latest World Bank figures show that the mean income of people in developing countries is $116 per capita. In some rich countries, (U.S., Switzerland and Sweden), it is over $6,000. Each year the gap between these figures grows. The economies of richer countries are, necessarily, geared to expansion. For them, it is expand or die. If people do not possess more, year in and year out, they are frustrated and dissatisfied, whereas the economy in poorer countries is much more static. And so the poor daily get poorer and the rich, richer. And frequently the wealthier countries are being enriched by, or use as the basis of their economy, matter and products from poorer countries.

The world is shrinking because of the rapidity of communications and transport and because of a certain unification on a political and economic level. Our window may look out onto the backyard, but many have another window inside their house—the TV screen—which opens up the whole world.

Seventy-five percent of the world's population lives at or below the poverty level while a small elite hide themselves behind the prison bars of their own comfort, too frightened to venture out and touch the reality of the world.

How long can this gap between poor and rich continue to grow without provoking some sort of an explosion, be it the explosion of anger coming from the poor, frustrated and hungry, or the explosion of the consciences of the rich, confronted by world hunger and catastrophies, and finding themselves unable to do anything about it?

Technicians have taught us how to get to the moon and, even more amazingly, to return from it, but we still haven't learnt how to organize the world into a place where all men can have the opportunity to grow in human dignity. We still do not know how to persuade those with possessions to share their belongings and capacities with those in need. The desire to possess quickly sends man spiraling upwards onto a pedestal from where he disdainfully looks down upon those who are not of his so-called calibre and class. He seeks to expand his self-image in his power over people and his feelings of superiority. Those "little" people—the weak, the sick, the depressed, the poor—are not seen as brothers and sisters to be helped and, especially, to be loved, but rather as inferiors to be despised.

◁ *Iran*

Peace in our world can only come if we stop grabbing, competing, struggling, exploiting, seeking to dominate and, instead, start sharing with people, not just on the local level but also internationally. Otherwise, we are all condemned to more and more complex and destructive wars and the creation of more and more expensive and destructive armaments.

Is it possible for our hearts to be opened up to a love of people and especially to a universal love and justice? Or will we allow fear and insecurity to condemn us forever to "national defence," one tightly knit group confronting other tightly knit groups, all hoping their armed force will eventually stabilize the race of armaments?

We all know that the effective and emotional equilibrium of a child depends in great part upon his relationship with his parents during the first years of his life, and upon the live or the tension that exists in the family. If there is hate between the parents, the tension and anguish will deeply wound the little child and push him into insecurity. We know also how family prejudices and fears are quickly inculcated into the little child who imitates father and mother.

Is it possible to construct houses which are not just status symbols, places of luxury, of riches, of comfort, where the individual ego is inflated but rather places of warmth and of love where the human heart can grow in inner security and peace? From there the child, nurtured in the warmth of the family, growing in interior force and trust, can go forth into the world not to prove by his "success" that he is someone, but to share a way of life, a warmth of heart and understanding. He can go forth to share and to serve his brothers by helping them find a way of life conducive to real human growth.

A house cannot be a place of defence or a status symbol, but rather must be a place from which, with outstretched arms and hearts, we are called forth to share with our less fortunate brothers and to create a united and peace-loving world, to build together a new world where concern and compassion are the foundation of all human and technical progress, a new world where all men are considered as brothers, children of the same God.

A house is not a place to hide and find refuge from other people, but a place where sharing begins and from which sharing must overflow. A house is a place of meeting. We are thus called to make of our towns and cities extensions of our homes and hearts, places of human growth where fear diminishes and trust is accentuated. A city can be planned to comfort and support its weaker citizens, the old and the handicapped, and to enable them to find suitable lodging and work. As such, town planning is of vast importance: the marketplace, the church, the places of recreation can help people to meet—or the traffic and the skyscrapers can make of the city a place of fear.

Is this utopia? A wild dream never to be realised, a dream in a world of hate? Hatred will kill us unless each of us begins today to open the windows of home and heart to others; unless we also begin to build a world, through architecture and city planning, where men and women will recognize the beauty in each other and begin to share.

Tailles des villes du Tiers-Monde

• Limites • Possibilités • Problèmes

PAR
PAUL BAIROCH

Les limites du développement urbain et de la taille des villes

Des civilisations antiques à la révolution industrielle, le développement urbain a pris des formes très diverses et a été caractérisé par des progressions et des régressions parfois très importantes. Mais deux limites majeures demeuraient présentes partout et toujours. La population urbaine ne pouvait pas dépasser une certaine proportion de la population totale et les villes ne pouvaient pas dépasser une certaine taille du point de vue démographique. Ces deux limites étant essentiellement la conséquence directe de l'importance relative du surplus agricole.

L'importance relative de la population urbaine était déterminée par celle du surplus agricole; ces deux ratios ne pouvant être, à moyen terme, que des équivalences presque parfaites. En effet, il est impossible, sur le plan pratique, de concevoir que dans un ensemble économique clos, l'importance relative de la population urbaine – c'est-à-dire, en simplifiant, celle de la population ne produisant pas d'aliments – soit sensiblement plus forte que l'importance relative du surplus alimentaire des agriculteurs. Si, par exemple, dans un cadre économique donné les ménages d'agriculteurs ne produisent en moyenne que 10% de plus de nourriture qu'ils n'en consomment, la population urbaine ne pourra certainement pas dépasser les 12 – 15% de la population totale. C'est dire que l'importance relative de la population des villes ne pouvait pas dépasser en pratique les 20 – 25% de la population totale jusqu'à la révolution industrielle. Certes, dans certains cas – et il s'agit alors uniquement de petites nations commerciales du type traditionnel, c'est -à-dire jouant surtout le rôle d'intermédiaire commercial pour une région beaucoup plus vaste – ces limites pouvaient être sensiblement dépassées en raison des ressources exceptionnelles. Mais il s'agit là de sociétés ne représentant qu'une très faible fraction de la population des régions concernées. L'ensemble des Pays-Bas, par exemple, ne représentait que 2 – 3% de la population européenne au XVIe siècle; et ce pourcentage ne tient pas compte de la population des pays hors d'Europe qui étaient la source d'approvisionnement en produits d'échanges; auquel cas on tomberait bien au-dessous du 1%.

Cette même importance relative du surplus agricole, combinée avec les coûts des transports, limitait la taille maximale des villes à quelque 500 000 – 600 000 habitants. Si l'on postule pour un pays ou pour une région une densité de 20 habitants au km² (c'est-à-dire celle de l'Europe sans la Russie au début du XVIIIe siècle) et avec un surplus agricole de 25%, l'aire d'approvisionnement d'une ville d'un million d'habitants représente, sans tenir compte des coûts des transports, une superficie de 200 000 km²; soit cinq – sept fois la superficie de pays tels que la Belgique, la Suisse, le Danemark ou les Pays-Bas. Ou, si l'on préfère, une superficie voisine de celle de la Grande-Bretagne; ou encore d'un hexagone de 280 km de rayon dans lequel il n'y aurait aucun autre centre urbain si petit fût-il.

Les très grandes villes (disons de plus de 500 000 habitants) sont essentiellement une caractéristique de l'urbanisation liée à la période post-révolution industrielle. C'est-à-dire liée aux possibilités nouvelles découlant de la technologie issue de cette révolution. Il s'agit surtout de la technologie agricole qui a accru dans de fortes proportions (3 à 5 fois dans le premier siècle de cette révolution) le surplus alimentaire par actif agricole et de la technologie des transports qui a réduit dans d'énormes proportions (de 10 à 25 fois) le coût réel du transport. Certes, on peut retrouver, soit dans les civilisations occidentales, soit dans celles de l'Asie, quelques exemples très limités de villes ayant atteint, voire dépassé, cette taille avant la révolution industrielle. Mais il s'agit alors uniquement de capitales ou de métropoles de très grands empires. Il s'agit notamment de Rome, Paris, Londres, Constantinople, Pékin et Bagdad (et peut-être encore deux ou trois autres villes) qui, au moment de leur apogée, de plus ou moins longue durée, ont eu une population de l'ordre de 500 000 à 1 000 000 d'habitants et parfois même un peu plus. Or, dès 1910, on peut relever dans la seule Europe (à l'exclusion de la Russie), c'est-à-dire dans un sixième de la population mondiale, quelque vingt-cinq villes de plus de 500 000 habitants et quatre villes de plus d'un million d'habitants. (Les chiffres de population des villes qui seront fournis ici s'appliquent à une définition de la ville assez élargie, à savoir celle qui correspond en général à la notion de zone métropolitaine; c'est-à-dire la ville proprement dite et les régions avoisinantes (banlieue ou non) ayant des rapports directs avec la ville proprement dite. On pourrait qualifier aussi cette définition d'agglomération au sens large de ce terme:) On peut, avec assez de certitude, avancer qu'aucune ville n'a dépassé avant la révolution industrielle une population de 2 millions d'habitants (et probablement même pas de 1,5 million); or, dès 1860, Londres dépasse les 3 millions d'habitants, pour atteindre les 7 millions avant 1910. Et, avant que n'éclate la première guerre mondiale, on compte en Europe cinq villes de plus de 2 millions d'habitants (Berlin, Léningrad, Londres, Paris et Vienne). Et, dans les autres pays développés, on comptait encore deux villes de plus de 2 millions d'habitants (New York et Chicago).

Bien entendu, la poursuite des progrès techniques – et non seulement dans le domaine de l'approvisionnement des villes, mais également dans ce qu'on peut appeler la technologie urbaine (transports urbains, distribution de l'eau, systèmes d'égouts, etc.) – va permettre, dans les pays développés, l'extension du phénomène d'urbanisation et du processus de croissance de la taille des villes. Londres dépasse les 8 millions d'habitants vers 1928. Mais, à ce moment, Londres n'était probablement plus la plus grande ville du monde; sa place lui avait été ravie vers 1925 par New York; celle-ci dépassera les 10 millions vers 1930 et les 15

millions vers 1965. Et, vers 1975, on peut estimer qu'il y a dans les pays développés quelque quatre-vingt-dix villes de plus d'un million d'habitants, dont onze de plus de 5 millions.

Cette expansion du nombre et de la taille des villes dans les régions développées a été évidemment concomitante avec un rapide développement de l'emploi industriel et cela surtout jusqu'aux années 1930-1940. A partir de cette période, la progression des emplois dans les services a été plus rapide que celle des emplois dans les industries.

Le Tiers-Monde, un système déréglé: une explosion urbaine sans surplus agricole et sans industrialisation

Au cours du XIXe siècle, alors que l'Europe et les autres pays développés enregistraient la mutation de la structure urbaine que nous venons de décrire, un processus pratiquement inverse caractérisait une grande partie de ce qu'il est convenu d'appeler aujourd'hui le Tiers-Monde. Avant la colonisation, on peut considérer que, en raison d'un ensemble de facteurs qu'il serait trop long d'exposer ici, mais parmi lesquels il faut citer la plus grande taille moyenne des pays, et les types de production agricole, la structure urbaine du Tiers-Monde était caractérisée par l'existence de très grandes villes. Cela était notamment le cas de l'Asie. Ainsi, vers 1600, on peut estimer que l'Asie, environ trois fois plus peuplée que l'Europe(avec la Russie), avait quelque sept – neuf villes de plus de 300 000 habitants, dont trois – quatre de plus de 500 000 habitants, alors qu'à la même époque, l'Europe n'avait aucune ville de plus de 300 000 habitants. Vers 1800, ces grandes villes étaient probablement moins nombreuses. Et, vers 1900, la situation de ce continent avait peu évolué dans ce domaine, la colonisation ayant entraîné dans cette région – et notamment en Inde et en Chine – un processus de désindustrialisation.

Mais, dès le début de ce siècle (et même plus tôt en Amérique latine, mais la problématique de cette région est très spécifique), on note l'apparition d'un phénomène nouveau qui va s'accélérer à partir de 1920-1930. Il s'agit de l'inflation démographique qui va assez directement entraîner une véritable explosion urbaine, mais une explosion urbaine sans soubassement économique. En effet, comme nous l'avons vu, alors que dans les pays développés l'expansion urbaine du XIXe et du XXe siècle a eu comme base essentielle un accroissement de la productivité agricole et un processus d'industrialisation, l'inflation urbaine du Tiers-Monde peut être caractérisée comme une urbanisation sans surplus agricole et surtout sans industrialisation. Entre les années 1930 et 1975, la productivité agricole n'a pratiquement pas progressé et l'industrialisation – qui avait régressé ou stagné de 1930 à 1940 – n'a pas réalisé des progrès susceptibles d'expliquer l'ampleur de l'urbanisation.

En Europe continentale, le taux d'urbanisation est resté inférieur au pourcentage de population active dans l'industrie manufacturière jusqu'en 1890 environ; c'est-à-dire jusqu'au moment où le pourcentage des actifs engagés dans l'industrie manufacturière dépassait les 18%. Ce n'est qu'à partir de cette période que le taux d'urbanisation dépassa celui de l'industrie manufacturière et, progressivement, l'écart entre ces deux taux s'élargit. Or, dans les pays sous-développés, ce stade a été franchi à un moment où le pourcentage d'actifs dans l'industrie manufacturière était inférieur à 9% (entre 1930 et 1940). Et, en moins de 30 ans, l'écart entre ces deux taux a atteint les 100%; en Europe continentale, cette évolution a pris plus de 80 ans. En 1970, le taux d'urbanisation du Tiers-Monde était celui de l'Europe (sans la Russie) vers 1900; mais l'Europe avait alors une proportion d'actifs occupés dans l'industrie manufacturière plus de deux fois plus forte que celle du Tiers-Monde en 1975.

Le Tiers-Monde: une prolifération de très grandes villes

Cette explosion urbaine s'est traduite par une augmentation extrêmement rapide du nombre et de la taille des villes. La tableau no 1 permet de suivre cette évolution pour l'ensemble de ce qu'il est convenu d'appeler les pays en voie de développement à économie de marché; c'est-à-dire, grosso modo, le Tiers-Monde sans la Chine.

De 1900 à 1970 le nombre de villes de plus de 100 000 habitants a passé de quelque soixante-dix unités à environ six cent cinquante; et la population de ces villes de 17 à 300 millions d'habitants, c'est-à-dire que celle-ci s'est accrue de 4,1% par an et même de 5,5% de 1930 à 1970. A titre de comparaison, notons que, pendant la phase de croissance la plus rapide (de 1850 à 1910) la population des villes de plus de 100 000 habitants en Europe a progressé de 2,6% par an.

Parallèlement à cette augmentation rapide de la population de l'ensemble des villes de plus de 100 000 habitants, on a assisté à une concentration de cette population dans de très grandes villes. Le Tiers-Monde (sans la Chine), qui ne comptait qu'une seule ville de plus d'un million d'habitants en 1900, en comptait quelque cinquante-deux en 1970 et probablement quelque soixante-cinq en 1975. Ceci implique que, en 1970, quelque 41% de la population urbaine (définie comme étant celle qui habite les agglomérations de 20 000 habitants et plus) vivaient dans des villes de plus d'un million d'habitants et 52% dans celles de plus de 500 000 habitants.

Cette évolution a concerné l'ensemble des régions du Tiers-Monde avec cependant des rythmes sensiblement différenciés. En règle générale, durant ce siècle, le développement des grandes villes a été plus rapide dans les régions relativement peu urbanisées que dans celles relativement plus urbanisées. C'est

TABLEAU 1

Répartition par taille des villes (a) de l'ensemble des pays en voie de développement à économie de marché

Taille des villes		
100 000 – 200 000 habitants		= 10 villes
Année	Nombre de villes (unités)	
1900	39	
1930	45	
1950	135	
1970	325	
200 000 – 300 000		= 5 villes
1900	18	
1930	24	
1950	53	
1970	115	
300 000 – 500 000		
1900	4	
1930	15	
1950	26	
1970	92	
500 000 – 1 million		
1900	7	
1930	8	
1950	23	
1970	60	
1 – 2,5 millions		= 1 ville
1900	1	
1930	6	
1950	15	
1970	34	
2,5 – 5 millions		
1950	3	
1970	9	
5 millions et plus		
1950	2	
1970	9	

a) villes selon la définition de zones métropolitaines

b) définie comme étant celle habitant les agglomérations de 20 000 habitants et plus

Sources: D'après Bairoch, P., *Taille optima des villes, emploi et développement économique*, à paraître.

Note: Le faible degré d'arrondissement des chiffres n'implique nullement une marge d'erreur correspondante.

Taille des villes 100 000 – 200 000 habitants		= 1 million d'habitants
Année	Population des villes (en millions)	
1900	5,3	
1930	6,3	
1950	17,8	
1970	44,3	
200 000 – 300 000		
1900	3,9	
1930	5,9	
1950	12,8	
1970	27,3	
300 000 – 500 000		
1900	1,5	
1930	6,1	
1950	9,5	
1970	34,8	
500 000 – 1 million		
1900	5,4	
1930	6,3	
1950	16,2	
1970	39,6	
1 – 2,5 millions		= 2 millions d'habitants
1900	1,2	
1930	9,6	
1950	22,0	
1970	54,3	
2,5 – 5 millions		
1950	8,9	
1970	31,7	
5 millions et plus		
1950	10,4	
1970	65,0	

	Population totale	Population urbaine (b)
1900	635 millions	39 millions
1930	805 millions	61,9 millions
1950	1086 millions	140 millions
1970	1763 millions	369 millions

en Afrique que l'évolution a été la plus rapide; le nombre de villes de plus de 100 000 habitants s'est trouvé multiplié par 25 de 1900 à 1970 (voir le tableau 2). Cette évolution est encore plus rapide pour la seule Afrique Noire, car les cinq villes de 100 000 habitants et plus que comptait l'Afrique vers 1900 étaient toutes localisées dans le Maghreb et en Egypte; et, en 1930 encore, on ne comptait que deux villes de plus de 100 000 habitants en Afrique Noire. Malgré le caractère récent de ce processus d'urbanisation dans cette partie de l'Afrique, cette région comptait déjà, en 1970, quelque quatre-vingt-quatre villes de plus de 100 000 habitants, dont sept villes de plus de 500 000 habitants. Mais toutes les villes de plus d'un million d'habitants se trouvent localisées dans la partie nord de l'Afrique et, par conséquent, sont largement la résultante d'un processus d'urbanisation très ancien auquel s'est adjoint le phénomène classique d'inflation urbaine des régions du Tiers-Monde.

En Amérique latine, l'évolution historique et notamment les migrations européennes du XIXe siècle ont conduit à des niveaux d'urbanisation relativement élevés dès le début de ce siècle. Ce haut niveau d'urbanisation et le caractère spécifique de la distribution par taille des villes de certains pays d'Amérique latine (types de villes primatiales) ont entraîné une très forte concentration de la population urbaine dans les très grandes villes. En 1970, sur un total de 98 millions d'habitants vivant dans les villes de plus de 100 000 habitants, 34 millions étaient concentrés dans les villes de 5 millions et plus. La taille moyenne de ces très grandes villes était de 8,5 millions en 1970 et probablement proche des 10 millions en 1975 (il s'agit de Buenos Aires, Mexico, Rio de Janeiro et São Paulo).

La structure par taille des villes d'Asie était encore marquée au début de ce siècle (et jusqu'au milieu de celui-ci) par la structure urbaine traditionnelle de cette région (voir plus haut). Jusqu'aux années

TABLEAU 2

Répartition par taille des villes (a) et par région des pays en voie de développement à économie de marché

	Nombre de villes (unités)					
	Afrique		**Amérique**		**Asie**	
Taille des villes (habitants)	**1900**	**1970**	**1900**	**1970**	**1900**	**1970**
100 000 - 200 000	3	57	5	86	31	182
200 000 - 300 000	—	29	4	30	14	56
300 000 - 500 000	1	22	2	21	1	49
500 000 - 1 million	1	8	2	21	4	31
1 - 2,5 millions	—	6	—	10	1	18
2,5 - 5 millions	—	—	—	2	—	7
5 millions et plus	—	1	—	4	—	4
Total	5	123	13	174	51	347

	Population des villes (en millions)					
	Afrique		**Amérique**		**Asie**	
Taille des villes (habitants)	**1900**	**1970**	**1900**	**1970**	**1900**	**1970**
100 000 - 200 000	0,49	7,94	0,60	12,05	4,22	24,28
200 000 - 300 000	—	6,95	0,83	7,45	3,07	12,91
300 000 - 500 000	0,35	7,87	0,70	7,85	0,49	19,12
500 000 - 1 million	0,63	5,26	1,76	14,51	3,01	19,84
1 - 2,5 millions	—	8,95	—	16,58	1,22	28,72
2,5 - 5 millions	—	—	—	5,50	—	26,24
5 millions et plus	—	6,00	—	33,95	—	25,05
Total	1,46	42,97	3,90	97,89	12,00	156,16
Population totale	130,00	330,00	65,00	284,00	435,00	1 123,00
Population urbaine (b)	—	51,00	—	114,00	—	204,00

a) villes selon la définition de zones métropolitaines

b) définie comme étant celle qui habite les agglomérations de 20 000 habitants et plus.

Sources: D'après Bairoch, P., *Taille optima des villes, emploi et développement économique*, à paraître.

Note: Le faible degré d'arrondissement des chiffres n'implique nullement une marge d'erreur correspondante.

1930, le développement des villes de plus de 100 000 habitants a été relativement lent; leur nombre passant de 51 à 61 entre 1900 et 1930 et leur population de 12,0 à 18,2 millions d'habitants, soit un taux annuel de croissance de cette population de 1,4% contre 3,2% pour les villes africaines et 3,9% pour les villes d'Amérique latine. Par contre, de 1930 à 1950, la population des villes d'Asie a connu une croissance plus rapide que celle des villes des deux autres continents. Mais, à nouveau, de 1950 à 1970, l'Asie a enregistré une plus faible progression de la population des villes de plus de 100 000 habitants. Et, actuellement, en Asie comme dans les autres continents, la concentration de la population urbaine dans les grandes villes est très élevée.

Cette concentration aura tendance encore à s'accroître dans les prochaines décennies dans l'hypothèse d'une absence de mesures de forte ampleur pour contrarier cette tendance. Or, c'est là que réside un problème extrêmement grave car touchant l'essentiel du mode de vie. Il est plus que probable que, dans de telles villes, la vie urbaine implique des contraintes et des nuisances beaucoup plus graves que dans des villes de taille plus faible. Eliminer, ou en tout cas réduire les nuisances dues aux très grandes villes implique des dépenses très importantes que ne permet pas le niveau de vie de la quasi-totalité des pays du Tiers-Monde. Dans le cas des pays développés, les très grandes villes ne sont apparues qu'à un moment où le développement économique était déjà très avancé. Aussi avons-nous comparé le niveau du produit brut par habitant des pays développés au moment où leurs plus grandes villes avaient atteint, pour la première fois, les 3 millions d'habitants avec ces mêmes stades pour les pays du Tiers-Monde. Dans les pays développés ce stade a été atteint généralement quand le produit brut par habitant (traduit en dollars et prix des Etats-Unis de 1960) était de l'ordre de $1 100. Par contre, dans les pays en voie de développement, ce stade a été atteint vers les $150–$200. Certes, il faut faire intervenir ici la taille beaucoup plus grande de certains pays du Tiers-Monde.

Les nuisances des grandes villes

Dans le cadre de cet article il n'est pas question d'effectuer une analyse tant soit peu approfondie du problème de la taille optima des villes (P. Bairoch, op. cit.) Ici il s'agit tout simplement de relever, d'une façon succinte et très schématique, les aspects négatifs les plus importants qu'impliquent les grandes villes, disons, dans ce cas, les villes de plus de 500 000 habitants.

Dans le domaine de la pollution (aujourd'hui très à l'ordre du jour et à juste titre), il n'y a pas de doute que la taille optima des villes est proche de zéro. Toutefois, il apparaît sans conteste que les nuisances (pollution de l'air et bruit) deviennent très importantes au-delà des 500 000 habitants et encore davantage au-delà du million.

Les problèmes de la congestion et du trafic s'aggravent considérablement, eux aussi, au-dessus du demi-million d'habitants. Et, dans ce contexte, le faible niveau de vie du Tiers-Monde constitue un frein sérieux aux solutions technologiques qui s'avèrent indispensables.

En général, l'accroissement du coût des terrains avec la taille des villes conduit à une situation très défavorable dans le domaine du logement pour les grandes villes. Situation défavorable qui prend toute sa signification dans l'ampleur croissante que prennent les bidonvilles dans le Tiers-Monde.

Les données concernant la criminalité par taille des villes ne sont pas très nombreuses pour le Tiers-Monde. Cependant, il est plus que probable que la situation y est voisine de celle qui existe dans les pays développés. Cela implique une aggravation assez sensible de la criminalité avec la taille des villes. Criminalité qui trouve d'ailleurs une partie de ses raisons d'être dans les niveaux très élevés du chômage qui caractérisent les villes du Tiers-Monde. Chômage qui touche surtout les jeunes.

A tous ces aspects négatifs il faudrait encore ajouter des éléments liés à la climatologie urbaine, laquelle dans les zones tropicales ou semi-tropicales prend des aspects très négatifs dans les grandes villes; ceux liés aux coûts élevés d'infrastructure et d'administration; et d'autres aspects moins importants mais non négligeables. Tous ces aspects négatifs ne sont pratiquement pas compensés par des facteurs positifs ou, en tout cas, par des facteurs positifs jouant sensiblement au-delà du niveau de 500 000–700 000 habitants.

De 1975 à l'an 2000, la population urbaine de l'ensemble du Tiers-Monde (y compris la Chine) passera de moins de 800 millions de personnes à quelque 2 100 millions. C'est-à-dire que, pendant ce quart de siècle, il s'ajoutera aux villes du Tiers-Monde une population de l'ordre de 1,2 milliard d'habitants, soit grosso modo une population qui était celle de toutes les villes du monde entier vers 1970. Or cette population urbaine mondiale résultait d'un processus d'urbanisation plusieurs fois séculaire, pour ne pas dire millénaire. Devant une telle augmentation, il serait plus que souhaitable qu'une attention sérieuse soit portée au problème de la taille des villes où se fixera cet accroissement de population. Et il est extrêmement peu probable que l'évolution technologique de ces prochaines décennies réduise sensiblement l'inconvénient des très grandes villes. Elle risque plutôt d'en réduire les avantages comparatifs. □

Urban Poverty in the Developing World

BY ROBERT S. McNAMARA

A Profile of its Dimensions

An Outline for Action

The Scope of the Problem

To understand urban poverty in the developing world one must first understand what is happening to the cities themselves. They are growing at a rate unprecedented in history. Twenty-five years ago there were 16 cities in the developing countries with populations of one million or more. Twenty-five years from now there will be more than 200.

How has this happened? Fundamentally, of course, it is a function of population growth. But it is more than just that. For though the total population in the developing world is increasing by about 2.5% a year, the urban population is growing at nearly twice that rate. Half the urban growth is due to natural increase, and half is due to migration from the countryside.

What this means is that some 400 million additional people have been absorbed into cities, through birth and migration, in a single generation—something wholly without parallel. In contrast, the developed world urbanized at a leisurely and less pressured pace at a time when its national populations were growing very slowly, at only about half a percent per year.

Thus, at current trends, over the next 25 years the urban areas will have to absorb another 1.1 billion people, almost all of them poor, in addition to their present population of 700 million.

Life for the urban poor today is unspeakably grim. Though they spend up to 80% of their income on food, they typically suffer from serious malnutrition. It is estimated that half the urban population of India is undernourished. Up to 15% of the children who die in Latin American cities, and up to 25% of those who die in African cities, are needless victims of malnutrition.

Now what do these figures imply?

They make it certain that the cities of the developing world are going to find it incredibly difficult to provide employment, and minimally decent living conditions, for the hundreds of millions of new entrants into urban economies which are already severely strained.

An even more ominous implication is what the penalties for failure may be. Historically, violence and civil upheaval are more common in cities than in the countryside. Frustrations that fester among the urban poor are readily exploited by political extremists. If cities do not begin to deal constructively with poverty, poverty may begin to deal destructively with cities. It is not a problem that favors political delay.

The Underlying Causes of Urban Poverty

Employment

To comprehend the pathology of poverty in the cities, one must begin with an analysis of the employment opportunities of the poor.

Employment in the urban areas of the developing world is a function of an economic dualism that is widespread. Two sectors coexist side by side. One is the organized, modern, formal sector, characterized by capital-intensive technology, relatively high wages, large-scale operations, and corporate and governmental organization.

The other is the unorganized, traditional, informal sector—economic units with the reverse characteristics: labor-intensive, small-scale operations, using traditional methods, and providing modest earnings to the individual or family owner.

In the modern sector, wages are usually protected by labor legislation and trade union activity; in the informal sector, there is easier entry, but less job security and lower earnings.

Though jobs in the modern sector may be more desirable, as a practical matter they are often beyond the reach of the poor. They require literacy, experience and a level of training the poor find difficult to acquire; and in a labor-surplus market, employers can afford to insist on exceptional qualifications.

Even more important, the growth of employment in modern manufacturing and distribution lags considerably behind both

From an address to the Board of Governors, World Bank Group, used with kind permission of the author.

◁ *Guatemala*

the growth of its output, and the growth of the urban labor pool: output has increased 5 to 10% per year, but employment rose only 3 to 4%, while the labor pool was growing at a rate of 4 to 5%.

Though it is true that as the formal sector expands it tends to generate some indirect employment in the informal sector, it can also eliminate jobs there on an alarming scale. At the cost of $100,000, for example, a corporation may set up a plastic footwear plant, with only 40 employees, that can displace 5,000 traditional shoemakers and their suppliers.

High population growth rates and massive migration to the cities have swollen the urban labor pool. But the capital-intensive nature of the modern sector has kept openings for additional workers down. In some developing countries, manufacturing techniques have already become so mechanized that an investment of $50,000 to $70,000 is often required to create a single new job.

Given, then, the limited potential of the formal sector in most developing countries to absorb labor, it is not surprising that the informal sector is a critical component in urban employment. It provides, for example, nearly half of all the jobs in Lima, more than half in Bombay and Jakarta; and over two-thirds in Belo Horizonte.

And yet, the fact is that governments tend to view the informal sector with little enthusiasm. They consider it backward, inefficient and a painful reminder of a less sophisticated past.

It is true that economies of scale are important in some activities. But it is not true that all small-scale enterprises are uneconomic. They can frequently operate at acceptable cost levels when costs of labor and capital are measured correctly, and when production operations are broken up into individual processes and products. In the production of many types of food, clothing, and furniture, and in construction, transportation, assembly, packaging, repairing and service activities, small units can compete effectively.

But government prejudice against the informal sector frequently gets translated into public policies which give undue advantages to big firms: unrealistically low exchange rates for capital imports, special tax exemptions, high minimum wages, underpriced public utilities and subsidized interest rates. All of these measures favor the large and capital-intensive firm over the small enterprise, and have the net effect of reducing the employment opportunities of the poor.

Public Services

These discriminations against the poor are compounded by limited access to public services. There are heavy biases in the design, location, pricing and delivery of such services.

Though most cities, for example, have expensive modern hospitals, the poor usually do not have access to them. They are largely reserved for the rich minority, even though the privileged have less incidence of illness than the poor. Nor is it surprising that the poor are so often ill, considering the squalor in which they must live. Frequently they have no public water supply or sewerage services whatever. And they often have to pay up to 20 times more for water supplied by street vendors than do middle and upper-income families for water piped by the city into their homes.

Education

But if the poor are denied equitable access to water, sanitation and health, they fare equally badly with education. Many of their children receive no formal education at all simply because they live beyond a feasible distance to the nearest school. Thus, though half the total population of the capital of one African country lives in the slum areas, all of the schools, with one exception, are located elsewhere in the city. The result is that the primary school enrollment is only 36% in the poor areas, but 90% throughout the rest of the capital.

Children of the urban poor, although often in the majority, very seldom reach secondary school, much less a university, despite the fact that public expenditure per student for secondary and higher education is up to 20 times the expenditure on primary education. This means that education—in theory a powerful force in equalizing opportunity—in fact often reinforces, rather than reduces, existing economic disparities.

In a typical Latin American city, for example, workers with primary education earn 37% more than workers without education, and workers with secondary and higher education earn 40% more than workers with only primary schooling. Denying adequate education to the urban poor, then, is simply synonymous with denying them opportunities for higher incomes.

Public Transport

Public transport is another vital service the poor are often without. Their incomes are so low they can rarely afford it. And even if they could afford it, it often does not exist in the peripheral areas of the city where they generally must live.

While the wealthy drive their cars, and the moderate-income workers ride the bus, the poor walk to work—frequently as much as two hours each way. Such distances are a penalty both to their energy and to their earnings. And as the cities grow larger, so their commuting grows longer. Studies indicate that in a city of a million, the poor's average journey to work is three miles; in a city of five million, seven miles.

In city after city of the developing world, the streets are growing congested with private automobiles, and the city councils are pouring over blueprints for elaborate subways or expressways. But little if any of this heavy investment will ever benefit the poor. It will only drain away resources that might be used to help them become more productive.

Housing

The deprivation suffered by the poor is nowhere more visible than in the matter of

housing. Even the most hardened and unsentimental observer from the developed world is shocked by the squalid slums and ramshackle shantytowns that ring the periphery of every major city. The *favelas*, the *bustees*, the *bidonvilles* have become almost the central symbol of the poverty that pervades two-thirds of the globe. It is the image that is seared into the memory of every visitor.

But there is one thing worse than living in a slum or a squatter settlement—and that is having one's slum or settlement bulldozed away by a government which has no shelter of any sort whatever to offer in its place. When that happens—and it happens often—there remains only the pavement itself, or some rocky hillside or parched plain, where the poor can once again begin to build out of packing crates and signboards and scraps of sheetmetal and cardboard a tiny hovel in which to house their families.

Squatter settlements by definition—and by city ordinance—are illegal. Even the word squatter itself is vaguely obscene, as if somehow being penniless, landless and homeless were deliberate sins against the canons of proper etiquette. But it is not squatters that are obscene. It is the economic circumstances that make squatter settlements necessary that are obscene.

This, then, is the profile of poverty in the cities. It is not the profile of an insignificant minority, nor of a miscellaneous collection of unfortunates, nor of a fringe group of nonconformists—but of 200 million human beings whose aspirations are identical to yours and mine: to lead a productive life, to provide for those they love, and to try to build a better future for their children.

They differ from us in only two respects: in the inhuman burden of their problems; and in the unjust disparity of opportunity they have to solve them. It is development's task to reduce that disparity. Let me, then, suggest at least the broad outlines of a strategy to deal with urban poverty.

A Strategy to Reduce Urban Poverty

Though the dynamics of poverty in the cities differ substantially from those in the countryside, the key to dealing with them both is fundamentally the same. What is required are policies and actions that will assist the poor to increase their productivity. Primarily this calls for measures that will remove barriers to their earning opportunities and improve their access to public services.

The following are essential steps governments should consider in any comprehensive program:

- increase earning opportunities in the informal sector;
- create more jobs in the modern sector;
- provide equitable access to public utilities, transport, education and health services;
- and establish realistic housing policies.

The fundamental consideration underlying such a program is the reassessment of the role of the cities in the development process. Let me begin with that, and then turn to the others in sequence.

The Role of Cities in the Development Process

We need to remind ourselves what the role of cities in development really is.

Cities are, of course, many things, but essentially they are an instrument for providing their inhabitants—all their habitants—with a more productive life. They are not primarily collections of elaborate architecture, or of city planners' theories perpetuated in stone. Even less should they be thought of as sanctuaries of the privileged, who wish to put a decent distance between themselves and the masses of the rural poor.

Urban poverty can be cured nowhere in the world unless cities are thought of as absorptive mechanisms for promoting productive employment for all those who need and seek it. In the past 25 years in the developing countries some 200 to 300 million individuals have benefited at least marginally by migration, and since even at their unacceptably low levels of income they have been more productively employed in the cities than they would have been had they remained in the rural areas, the national economy itself has benefited.

This is not to make a case for wholesale migration from the rural areas. It is only to recognize that poverty will persist in the cities until governments decide to increase their capacity not simply to absorb the poor, but to promote their productivity by providing the employment opportunities, the infrastructure and the services necessary for that purpose.

Now specifically how is this to be done? Our understanding of so complex an issue is limited, but at least it is possible, on the basis of what we do know, to identify policies and actions that could have a significant impact on the problem.

Any realistic strategy must place emphasis on increasing the earning opportunities of the poor in the informal sector.

Increasing Earning Opportunities in the Informal Sector

The employment problem in urban areas is not simply "jobs" in the conventional sense but rather the level of productivity and earnings. There is relatively little open unemployment among the urban poor. Without some kind of a job, they simply cannot eat. But they are often prevented from increasing their earnings by a combination of market forces, institutional arrangements and public policies which confer privileges on the large, well-established firms and which penalize the informal sector.

Governments must take steps to moderate the bias in favor of large-scale, capital-intensive production, and turn their attention more positively to small producers, not only in manufacturing but also in transport, construction, commerce and other service sectors.

The informal sector offers the most immediate opportunities of greater productivity for the urban poor. It already, of course, provides the livelihood for the vast majority, and though its earnings are

considerably less than those in the formal sector, its flexibility and ease of entry are an important asset. What is required is that government policy support it, without attempting to standardize it.

The informal sector's great virtue is its responsiveness to opportunity, its high degree of resourcefulness, and its entrepreneurial originality. The understandable enthusiasm of governments to "modernize" their economies must be restrained in their dealings with the informal sector. The point is not to try to transform it into the formal sector, but to support it without undue insistence on regulating it.

There are a number of ways in which governments can assist the small producer and the self-employed.

They can, for example, assure access to credit facilities on reasonable terms. The informal sector usually has very limited access to government banking and credit services. It must rely largely on the urban moneylender, who, like his village counterpart, is responsive but usurious. What are needed are improved banking policies that will make adequate capital available.

This can be done through rediscounting commercial bank loans to small-scale enterprises by central banks; by government guarantees to cover additional risks in informal-sector loans; and by new specialized institutions designed specifically to finance small enterprises. Like the small farmer, the urban informal-sector businessman is usually starved for credit. He does not need it in large amounts, nor does he need it at unrealistically low interest rates. But he needs it without excessive bureaucratic obstruction, and he needs it without procedural delay.

Further, governments can promote mutually beneficial relationships between the informal and formal sectors by reserving land for small enterprises in the vicinity of industrial developments. One effective technique is to establish industrial estates which will provide space neither exclusively to large nor to small industries, but which will deliberately situate firms of all sizes in close proximity, specifically to encourage economic linkages between them.

Since small enterprises individually have only very limited purchasing and marketing capacity, governments can promote cooperative facilities to lower their costs and increase their efficiency. At the national, regional and municipal levels, government agencies, as well as banks and private firms, can offer technical assistance to the small entrepreneur, analogous to the extension services for small farmers.

Finally, governments can help the informal sector to flourish by the removal of onerous and often outdated licensing and regulatory controls.

Taken together, the removal of biases favoring the modern sector, and the special assistance to the informal sector, can substantially improve the earning opportunities of the urban poor in the informal sector.

Creating More Jobs in the Modern Sector

But the strengthening of the informal sector need not prevent the continued growth of the larger enterprises. On the contrary, special efforts must be made in many countries to turn their manufacturing enterprises away from the relatively small markets associated with import substitution, and toward the much larger opportunities flowing from export promotion. Korea, Taiwan, Mexico and Brazil, which achieved 15 to 20% annual growth in their manufactured exports in the late 1960's and early 1970's, clearly demonstrated the feasibility of bolstering manufacturing employment with this policy.

Further, the gradual reduction, and the ultimate elimination, of capital subsidies to the modern sector, as has been done in Hong Kong and Singapore, can make both production and service activities significantly more labor-intensive. Even in relatively automated modern factories, substantial labor-capital substitution possibilities exist in such activities as materials handling, packaging and intrafactory transport. When producers have to pay realistic prices for capital, they not only explore more labor-intensive solutions for each process and product, but tend to use the plant's capacity more intensively, thus creating more jobs per unit of capital.

The first element, then, in the strategy to increase the productivity of the urban poor is to remove barriers to their earning opportunities. The second is to provide them with essential public services at standards they can afford.

Assuring Access to Public Services

About one-third of the population in most of the cities of the developing world live in slums that are either wholly without or very inadequately served by public water, sewerage, transport, education and housing. These conditions have a seriously detrimental effect on the health, productivity and incomes of the poor.

The urban poor are frequently denied access to public services, not because they don't exist, but because they have been designed or located largely for middle and upper-income city dwellers, and are simply beyond the reach of the less privileged.

The whole question of "standards" of urban services works to the disadvantage of the urban poor for they are often written with middle-class or upper-income orientations, and have little relevance to the situation the poor find themselves in.

Standards are important, but they must be formulated to meet realistic and attainable objectives. If the needs of the poor are to be met within a reasonable time span, public utilities and social services will have to be provided at costs which they can afford to pay.

Water and Sewerage Services

The single most important factor in improving the health environment of the poor is to provide clean water and adequate sewerage. A commonly used standard calls for cities to supply 200 liters of water

per person per day. Many cities in the developing world simply cannot afford to do that. That is understandable. What is not understandable is that instead of lowering the standard to fit their resources, some cities pipe 200 liters per person per day to individual houses in the affluent and middle-class neighborhoods, but leave 60% of the population—the poor on the periphery of the city—without any piped water at all. The result frequently is endemic cholera among the poor, because they must depend on unclean water from other sources.

Often, all that low-income families can afford are standpipes, but this form of water supply, together with technical assistance in improving sanitation facilities, can have an immensely beneficial impact on their health.

Health and Education Services

Essential health and education services for the poor are also seriously deficient in most of the cities of the developing world. Health care, for example, is frequently confined to modern and expensive hospitals, when what is needed are small clinics located in areas of the city where most health problems begin: in the slums and squatter settlements. Indeed the whole orientation of health care should emphasize low-cost preventive medicine rather than high-cost curative care. The poor are often ill—and their children often die—but the causes are almost always diseases that could have been readily prevented by a more sanitary environment and simple preventive measures.

Inexpensive health delivery systems can be designed around community-based health workers who can provide the poor with a broad spectrum of simple and effective services: immunization, health and nutrition education and family-planning advice.

The same principle applies to education. What is required are small, inexpensive and informal basic education units, located in accessible areas, and designed to serve minimum learning needs of both children and adults: literacy and elementary arithmetic, child care, vocational advice and the knowledge necessary for responsible civic participation.

Transportation

The poor must also be within reach of employment possibilities. This means transport facilities which they can afford. Usually the urban transport available is either too expensive, or does not serve the areas in which the poor live. It is clear that most cities would benefit substantially from a radical reallocation of their transport systems away from domination by the private automobile, and in the direction of public transport that can move large numbers of passengers at low unit costs.

What is needed is a healthy pluralism in transport: buses, jitneys, taxis, motor rickshaws, pedicabs, bicycle paths—whatever is cost-effective and appropriate to the distances involved.

Establishing Realistic Housing Policies

City governments often congratulate themselves on their subsidized blocks of low-income housing, and the physical structures are frequently impressive. What is depressing is that the so-called low-income housing is almost always too expensive for the poor. Surveys indicate that up to 70% of the poor cannot afford even the cheapest housing produced by public agencies.

Slums and squatter settlements are the inevitable result. Authorities typically strongly disapprove of them: they are illegal; they are unsightly, and they are unsanitary. But too often cities have failed to find any solution—short of demolition—to deal with them. The fact is that the upgrading of existing squatter settlements can be a low-cost and practical approach to low-income shelter. Upgrading legalizes the settlement, provides secure tenure and supplies minimum infrastructure: water, roads, storm drainage, security lighting and rubbish collection. Education and other community facilities can generally be added.

One of the most interesting features of squatter settlements is that though they are inhabited by the very poor, there is a very strong sense of saving among the residents. Out of their minuscule earnings, they save every cent they can. Their great ambition is to have a better home for their families. But they are prudent men and women: they are unwilling to invest their savings in home improvement until they have tenure. That is why squatter settlements are often so ramshackle. Once upgraded projects provide legal tenure, the poor are not only willing to spend on home improvement, but do so with enthusiasm, and remarkable transformations often take place.

The housing that can be provided by upgrading existing slums and squatter settlements is of course limited. A somewhat more costly, but still practical, alternative is the "sites and services" approach. It can provide the framework for improved housing for vast numbers of the poor, particularly if it is planned with adequate lead time.

The city provides a suitable area of new land, grades and levels it, and furnishes it with essential infrastructure: access roads, drainage, water, sewerage and electricity. The land is divided into small plots and is leased or sold to the poor, who are supplied with simple house plans, and a low-cost loan with which to purchase inexpensive building materials. The actual construction is made the responsibility of the poor, who build their houses themselves.

And as communities are more than just housing, sites and services projects include schools, health clinics, community halls, day-care centers, and some provision for creating jobs: land, for example, set aside for the establishment of an appropriate small-scale industry.

Sites and services projects, then, stimulate self-help, and make it possible for the poor to house themselves in a viable, cohesive community with a minimum of public expenditure.

But though this is a highly desirable approach, it often suffers from two constraints: the understandable economic constraint of the availability of the land, infrastructure and building materials; and the less understandable institutional constraint of regulations governing tenure, building codes and zoning restrictions.

The determination of appropriate standards is critical for the poor family's ability to acquire housing. If, for example, standards relating to land use, floor space, durability of materials, quality of finish and utilities were modified to meet low-income household budgets, it should be possible for some 80% of the population in the cities of the developing world to afford much improved shelter with no subsidy at all.

It is also important that reasonable user charges and taxes should be levied on the middle and upper-income consumers of city services of all kinds—housing, utilities, education, health facilities, transport and others—to generate surpluses which can be used to expand coverage of these services, and give the poor a more equitable opportunity to benefit from them.

These, then, are some of the measures that governments should ponder as they confront the growing pressures of urbanization. For the next decade or two—indeed for as far forward as anyone can realistically plan—the urban problem will be a poverty problem.

The urban poor are not simply a statistical inconvenience to planners, a disturbing reminder of what might be possible if they would somehow just go away, a continually disappointing factor in budget allocations because of their chronic inability to pay taxes. That is not what urban poverty is about.

The urban poor are hundreds of millions of human beings who live in cities, but do not really share the good and productive life of cities. Their deprivations exclude them.

It is within the power of governments to change that. □

Settlement Problems in Europe – Today and Tomorrow

BY ADOLF CIBOROWSKI

We Europeans believe that the history of human settlement development on our continent is the foundation or cornerstone for the whole philosophy and experience of human settlements. It started with the Greek city-states and with the Roman military camps. It continued through to the medieval cities with their standards of design, and then on to the achievements of the special composition of Baroque times up to the evolution of modern town planning techniques developed in both France and Great Britain, based on the new town theories of Ebenezer Howard.

Yet, personally, I believe that the major impact on present urban development and modernization in Europe occurred during the last thirty years as a result of the Second World War.

Europe after the War

Human settlements in Europe after the Second World War were in the following condition. First, there were those countries where the majority of cities were completely or severely destroyed; these included Poland, the European part of the Soviet Union, Germany, some parts of the United Kingdom, the northern part of France and some cities in Italy, Holland and Yugoslavia. In the second group were those countries whose cities were less severely damaged. Thus, in the late 1940's, there developed a division between the countries which had to rebuild or reconstruct their cities, and those whose cities had experienced a regular, continuous process of evolution and development from the beginning of the century.

There was (indeed still is) yet another division between the urbanized and economically developed countries and the largely rural, less developed countries. Simplifying the matter, we could say that the developed countries were those who, in the 1950's, had 2/3 of their population living in urban areas and the remaining 1/3 in rural areas. The second group of countries were less developed and urbanized before the War and, as a result, still faced the task and challenge of very rapid industrialization and urbanization with the accompanying migration from rural to urban areas.

We then have four different components to the European human settlement picture: the destroyed and undestroyed countries, and the urbanized and less urbanized countries. Of course, the overall picture was a little more complicated as there were combinations of all these different factors.

Although any generalization is extremely dangerous, I think I could risk one additional statement about the post-War European human settlement picture, namely that a number of the countries most destroyed were also those most in need of rapid urbanization and development. This was the case in Poland and Yugoslavia and the majority of Eastern European countries. These countries were hit very badly by the War, yet at the same time were less developed before the War in terms of urbanization level compared to Western and Northern European countries.

It is quite clear, therefore, that in each country the initial thrust of settlement development, philosophy and methodology was very different, and the first answers and approaches were thus different too. I would like to caution, therefore, against viewing Europe as one small country. It is easier to compare the town planning problems of Vancouver with those of Montreal or Toronto than to compare the planning problems of two cities in two different European countries, although the distance may be ten times smaller.

Planning Challenges

Looking back on the process of development in the past thirty years, and keeping in mind the four basic dimensions of the situation, I would say that we could enunciate three major and distinct kinds of town planning and urban development challenges in Europe. The first is reconstruction; the second is the expansion of existing cities which should be, but is usually not, combined with the process of urban renewal and rehabilitation. The third is the construction of new towns.

Reconstruction

When talking about reconstruction, I would like to differentiate between two kinds of destruction—man-made and made by nature. I have mentioned those cities destroyed by war; however, in the past 30 years, there has been a second kind of urban destruction, namely by nature, in the form of natural disasters such as earthquakes. This was the case in Skopje, Yugoslavia in 1963, in the cities of Southern Italy some ten years ago and in the cities of Northern Italy just recently. Earthquakes have also occurred in Turkey, and are a constant danger in many other parts of Europe.

The Humanity of Nature

It is curious that in some ways nature is more humane than man when destroying a city. Both forces—man and nature—are selective in destroying a city. Man selects what is the most valuable, what will most easily paralyze the life of the city. Man, therefore, destroys other human beings first and destroys the best parts of the city, such as its modern industry, city centre and transportation network.

Nature is selective too; it first destroys the less valuable parts of the city which have the lowest level of resistance. Nature never destroys as high a percentage of human life as man does. For instance, in Warsaw, destroyed by man, 85% of the city was ruined, and over 80% of the people were killed. In Skopje, destroyed by nature, 65% of the city was destroyed, but roughly less than 1% of the people of Skopje lost their lives, and you will find these proportions in many other cities.

Different Planning Situations

Therefore, the task of planning for reconstruction and the challenges they present for the planner can be very differ-

ent. In the European cities destroyed by war, the first seed capital to rebuild the life of the city consisted of what were, before the war, the worst parts of the city—the suburbs and the slums. And, likely, they were precisely those parts of the city which were most in need of some renewal and rehabilitation intervention, even before the need for reconstruction. This was the case in Warsaw, in Dresden and even Coventry, where the city centre was destroyed. This was also true for Rotterdam and for many other cities.

On the other hand, in the cities destroyed by nature (such as Skopje and some of the Italian settlements) the weakest buildings were demolished, and the most valuable saved. The seed capital consisted, therefore, of the best parts of the city while many of the weakest and the worst parts were destroyed.

From the social point of view, the planner's task is also quite different. In a city destroyed by war, the planner has more time to develop the schemes for the reconstruction because he is working under the lower pressure of a diminished population. In the cities destroyed by nature, where the whole population remains, there are immediate pressures and enormous demands by the population for the restitution of both roofs over their heads and places to work. This pressure is increased still further because low-income groups live in the weakest and thus most devastated parts of the city and are thus the most vulnerable, while those with the most resources and means can more readily start the process of reconstruction by themselves.

A Tragic Chance for Improvement

The destruction of many cities in Europe during the War offered at the same time a tragic, yet unique, opportunity for improvement. But looking back on the last 30 years, we must also say that not all the cities and countries of Europe made the most appropriate use of that opportunity.

The extent to which individual countries capitalized on this tragic happening depended very much on their economic condition and on the socio-political motives that developed after the War. The countries with the more advanced elements of a planned economy, if not on a national level then on a local level, were more successful in their reconstruction and improvement programs. Some other countries, by contrast, had to work within rigid limitations, such as former legal or other situations, and thus their freedom to introduce broader or wider improvements was restricted.

The Limitations of Land Tenure

One of the elements of the city most resistant to destruction or evolution is property or the subdivision of land into properties. Although all the buildings, streets and bridges may be destroyed, the subdivision of city properties remains, along with the loans and mortgages on them. Quite often in Europe all records from pre-War times were destroyed — except for the records of debts on urban properties! And, because property division is the most rigid component of the city, the remaining records in many cases dictated the limits of the possibilities for improvement and reconstruction.

Some countries, therefore, as the very first step toward planning for the reconstruction, undertook to revise both the existing land tenure and the rules and laws related to it. The problems of land tenure were solved in many different ways. Only those cities which undertook the task of revising land tenure, along with its model and structure, were able to introduce totally new schemes for the construction of the new city centres. Coventry, Rotterdam, Warsaw, Stalingrad, Minsk and Dresden were some of these cities. In those cities where there were other arguments or reasons limiting this first necessary step, the reconstruction was more or less the repetition of the pre-War cities.

Expansion, Renewal and Rehabilitation

The second, and at present most common town planning and urban development challenge in Europe, is the expansion, renewal and rehabilitation of existing cities. Again, the scale and the character of this present challenge depends on the degree to which a country is urbanized and developed.

In the countries with more advanced levels of urbanization, this expansion, renewal and rehabilitation process has been rather quiet and undramatic. The planner and the local authorities have time and sufficient possibilities and means to prepare appropriate plans for healthy expansion of the cities. The best examples of this quiet process are to be found in some of the Scandinavian countries. I have in mind, for instance, the expansion of Stockholm, Helsinki and Copenhagen. This process had a much more dramatic face in those countries in the process of urbanization with a rather high level of migration from rural to urban areas and with a strong need to industrialize.

This second point may also be subdivided because after the War in Europe there were two kinds of countries undergoing high-speed urbanization and migration from rural to urban areas. The first group were the Eastern European countries with planned economies, while the second were the countries of Southern Europe with free market economies.

Planned Economy Countries

In Poland, we realized that urbanization in the 20 year period after the War would be rapid and result in a shift from a rural to an urban population (55% rural to roughly 60% urban) with a simultaneous population growth from 26 up to 32 million. We were also aware of the risk that if migration and industrialization were not planned for immediately that, of course, the large existing or the reconstructed cities would undergo the greatest growth. We decided, therefore, to incorporate a number of incentives into the national physical de-

velopment plan, the first version of which was announced in 1946-47. The incentives were designed to direct the migration to the secondary cities so as to prevent excessive growth in the largest existing metropolitan areas. This redirection of population through incentives took place in Warsaw, and in Poland as a whole, in Czechoslovakia and to some degree in Bulgaria, Yugoslavia and other Eastern European countries.

In Poland, for instance, in 1975 the three major metropolitan areas of Warsaw, Lodz and Katowice had the slowest rate of growth. Today, Warsaw has the same population it had in 1939, some 1.3 million inhabitants. At the same time, we have speeded up the development of roughly forty to fifty secondary towns and cities, some of which were rather small before the War. Most of these towns have now reached a population of 100,000 to 300,000 inhabitants which, in the present conditions of my country, seems to be the most appropriate and advantageous.

Free Market Economies
In some other countries, the urbanization process was less successful. Without all the incentives available in a planned economy system, the major flow of new investments and population moved toward the larger existing cities, thus creating an overgrowth. This occurred in cities such as Milan and Rome as well as in some of the biggest Spanish cities.

The Neglected Elements
In the existing cities, the process of expansion should be interrelated with urban renewal and rehabilitation. In the majority of cases, however, the degree of renewal and rehabilitation was not sufficient.

In some countries, such as Poland and other Eastern European countries, there was not much left to be renewed, of course. What was left, though, such as some parts of the city centre of Krakow and Lodz (so-called Polish Manchester), was modernized at a slower rate compared to the expansion process. We were so busy with the development of new industries and the overall economic and social development as well as the need to build new housing that we had neither the time nor the resources to develop broader renewal and rehabilitation programs. This was more or less the case in the majority of European cities. Expansion in Stockholm, for example, was much more advanced than the modernization of the city centre, even though Stockholm had one of the most successful modernization programs.

Thus, for the next few years, modernization will probably be the most important task for European cities. This will be important from the social point of view because, as a result of development in the past 30 years, there are sometimes noticeable disparities in living and environmental conditions between the old city cores and the newly developed residential collars around the cities; Madrid, Paris and Rome are examples.

New Cities
The third kind of town planning challenge in Europe is that of new cities. And once more, the problem of constructing new European cities in the last 30 years has two facets.

British New Towns
First, the most popular and best known is the British program of new towns, concentrated mostly around London, the industrial areas of Scotland and, recently, in other parts of the United Kingdom. The major reason for the British program was to arrest further growth in the existing metropolitan areas and to develop new satellite towns that would offer better environmental conditions, a better redistribution of population and a more equitable distribution of existing industries and productive capacities.

In my opinion, the British program has been very successful, and I am enthusiastic about British new towns in many ways. Although some people point out the shortcomings of these new cities, including the social problems of satellite towns, I do not believe that there can be any solution or situation free of all stresses – there is always some kind of trade-off. We trade one stress for another; and in the new towns of Great Britain and in the new settlements around Stockholm we have traded better housing and general environmental conditions for some temporary social stresses encountered by newcomers to an unknown environment.

Polish New Towns
A second type of new town, designed to act as a new growth pole, has been developed in some of the less urbanized and developed European countries. These new towns were sited and developed because of the location of new manufacturing or other activities near existing natural resources or, in some cases, as in Poland, because of the existing surplus of rural population in other regions of the country.

In Poland we see such surplus populations as one of the country's resources; so, we built new towns in which to locate new manufacturing activities rather than to allow people to migrate unnecessarily to another region and to thus maintain regional disparities. The need to balance the levels of development in different regions was, therefore, one of the important reasons for the creation and development of new towns in those countries undergoing the process of urbanization during the last 30 years.

Our experience indicates that new towns based on existing cities, even though very small, are in fact the most successful and easiest to manage compared to those located in virgin areas.

Different Planning Dimensions

Social Planning
When talking about different groups of cities being developed, I would like to point out some very important characteristics which differentiate the tasks and challenges

for the planner. The first one is of a social character.

For a Reconstructed City
When planning the reconstruction of a destroyed city, the planner is dealing with a well-known population with its traditions, structure and preferences. He must immediately enter into constructive dialogue with the people at the site of the plan. This dialogue is vital because he must convince them that the reconstructed city will not be what they expect; that is, it will not be exactly the same city.

When one enters into such a dialogue, it is quite interesting that the expectations of the population are limited by their past experiences. For instance, on planning for the reconstruction of Skopje, I discovered that each group would express their expectations built on past experiences, and this was shaped in accordance with the living standard of the next higher social group to their own. If a planner wants to improve the city as a whole, however, and he has to change the location of residential areas and working places, then the people are shocked. So, it is very important to explain these changes to them.

From the other side, people have their established traditions; they have their own sense of place. For this reason, when reconstructing a city, very special and careful attention should be paid to the cultural, social and human heritage by reconstructing historical monuments and retaining those elements of the cityscape which are most directly related to the people's sense of self-identification with their city, their culture, their history and sometimes with their nation.

This is the reason why in Warsaw, for instance, we put such enormous emphasis on the reconstruction of historical monuments, when probably from a purely economic point of view there were other priorities.

For a modern town planner, it is impossible to plan only the engineered infrastructure of the city. He is planning a society, and so he must understand that particular social structure.

In my personal experience, a very important component of the work was always the dialogue with the people of the city. All groups and all ages should be consulted. When talking about the future of the city, I also discovered that one of the most interesting age groups to speak with is the youth, the children in the schools. They are interested in what will happen thirty years from now while we are interested only in two or three years into the future.

For an Expanding City
Planning for the expansion of an existing city is in some ways the simplest. First, the town planner is dealing with an established population and society which has been quietly expanding and undergoing an evolution in life-style, living standard and social structure. Thus, the planner starts from the existing situation and extrapolates from it. Also, when planning for expansion, the town planner works under considerably less pressure than planning for a destroyed city. The planner does not have hundreds of thousands of people sitting in the ruins looking over his shoulder waiting for him to do something and demanding that tomorrow he have immediate answers to the problems of where to build new housing and how to build it.

For a New City
The third town planning challenge is that of the new city. Because there is no existing society or structure, the very first questions to answer are what kind of society to have in the new city and then what kind of physical arrangement must be designed to accommodate that society. There is no one to develop a dialogue with, so the planner has the additional responsibility of envisaging the future model and building the new city in such a way that it will correspond with the needs of the newcomers.

We had some very interesting and different experiences in the field of new towns in Europe. In British new towns, for example, the population came mostly from existing metropolitan areas. The majority of newcomers successfully, and very quickly, adapted to their new environment and built new social relationships.

When the new towns were planned and built as new growth poles, a quite different situation emerged. In this second case, the situation was complicated by the fact that the newcomer was also a migrant from a rural to an urban area and was thus not at all prepared or accustomed to urban living. This meant that the overall scheme and strategy for the development of a new city had to contain provisions for accommodating and training the newcomers to help them adapt to their new living conditions and to the different social structures, rules and demands. In some cases, this adaptation was facilitated by the development process.

Building the New City
Construction workers are one of the first requirements when starting a new city and new industry. And since the building industry is one particular field that draws its work force from semi-trained or untrained labour, the newcomer from the rural area is first accommodated as a construction worker. Generally, the worker comes to the city alone and lives in hostels on the building site, and here two processes of development occur simultaneously: training in skilled work in a modern technology and training in living in a modern urban society in a new social environment.

After a few years when the first parts of the city and the industry have developed, these same workers switch from hostel to regular apartment accommodation, from single to family life and from working in building enterprises to working in other industries. This is an extremely interesting and valuable process of social advancement and growth which occurs simultaneous with the physical growth of a new town.

Architectural Planning
When planning the technical infrastructure and the architectural shape of the city, the planner's task is once more quite different.

In the New Towns
Planning a new city is in some ways the easiest as the town planner and architect have the broadest freedom, especially in the terms of design. The planner's freedom is limited only by economics and the quality of his vision.

In the Reconstructed City
Sometimes the reconstruction of a city is in fact the construction of a new city based partially on traditions to accommodate the old population. Thus, when we reconstruct a city, we like to improve it and yet retain those portions which have special emotional worth, such as the city's historical elements. These improvements must go in many directions.

Experience in European cities has shown that improvements tend to cut down the density of development and thus the density of population per hectare. I have noticed that, as a rule, when a city was totally destroyed, by either war or natural disaster, and was reconstructed in a planned way with this improvement element, the city area grew three times for the same size population, thus reducing the general density by approximately a third.

In the Existing City
When expanding an existing city, it is most important to continue the logic of existing road networks and land uses, and not to create a collar around the city which is totally different in character and pattern from the existing city. The expansion of roads, green areas and open spaces must be built together into one system which blends the old and the new.

Setting Minimum Standards
As far as possible, we must avoid creating great disproportions between the old and new housing and housing conditions which can sometimes occur on the same street. I am not suggesting, however, that new housing must be kept at a low standard, but rather that the old must be improved – and at once.

In some countries where social groups are differentiated by income levels, the problem of how to reflect that in the land use patterns and in the pattern and location of residential housing development is very valid. Also, in those countries where there is a trend toward what might be called social justice, some minimum standard for everybody must be formulated. These standards must be expressed not only in terms of pure water and air, but in the qualities of the environment, the densities of housing development and so on.

The Polish Experience
This problem does not exist in some countries because, although there are different income groups, there is no differentiation of housing conditions. In Poland, for instance, we have a housing standard which is in the process of continuous evolution – in accordance with overall economic development and growth – and is primarily based on biological needs, that is, family size. In such a situation, the problem of where to locate low-income and high-income workers does not exist, because there are similar housing facilities for all.

This low and high-income blending has offered us an interesting opportunity to create a social mix in new residential developments. In the same apartment house, we may have a university professor, an electronics worker and a clerk from the city council, all with somewhat different incomes. We have such examples in Poland in the city of Warsaw and in other Eastern European countries.

We are against so-called worker settlements where the same group of people work eight hours in a factory, live in the same settlement and then meet only each other during their leisure time. We have found a unified standard of housing facilitates a social mix by allowing, say, a professor to meet a factory worker on the sports field or in the garden. On the other hand, a housing standard differentiated by income levels leads to social disintegration.

Thirty Years Past — Twenty-Five to Come
We may divide the task of European urban development through the past thirty years and to the end of this century as follows: first, the restitution of lost capacities and potentials. This is, of course, related to the reconstruction. Secondly, there is the task related to growth and development which is expressed, for instance, by new growth poles, new cities and some expansion of existing cities. The third task is the growth of cities due to the growing needs and expectations of the population. As the process of urbanization is more or less stabilized now in Europe, I would say that in the next 25 years this third task will be the major one.

Population Stability
Many countries have 80% of their population living in urban areas – probably a healthy percentage in Europe for the next 20 to 25 years. Even those countries still in the process of development will reach this level very shortly and, in general, Europe will be more or less balanced. This means that Europe no longer has the same urbanization problems of areas such as Latin America, Africa or the Far East. Secondly, population growth is declining, and we expect many European countries will have a zero population growth rate within the next 15 or 20 years.

Thus, the only major reason for further growth in European cities will be increased living standards and growing social expectations which will require expansion of cities and further renewal and rehabilitation of the existing urban cores. This process will be more dramatic in some countries than others.

Some of the Scandinavian countries, for instance, already have 0.8 persons

per room in their residential areas and will need additional housing programs only because of changes and evolutions in family life, such as smaller apartments for smaller families. In Poland, on the other hand, where we have 1.2 to 1.4 persons per room on the average, the main task for the next 20 years will be to reach the level of below one person per room. This means constructing in the next 25 years a "second Poland", as it is put by our political authorities, and to double the amount of housing and facilities, without doubling the population.

Thus, the size of the expansion expressed in numbers will differ from country to country, but the general character of the task is now similar.

Modernization, Renewal and Rehabilitation

Every country has as its main challenge the improvement of living standards and equalization of living conditions between the old and new parts of the cities and between settlements in different regions. In implementing this task, we may once more point out two major groups of challenges: modernization, and renewal and rehabilitation.

In the next years, the task of modernization will be largely directed to industrial parks and manufacturing activities. In the majority of European countries, the industrial and manufacturing sectors will undergo very rapid modernization, and we can use this opportunity to modernize or revise existing industrial land use patterns.

The second major task for the next 20 years will be the modernization of transportation networks. Personally, I expect that the main focus will be on expansion or development of modern mass transit systems. This means less emphasis on private cars and the improvement of private transport with more emphasis on different kinds of modern mass transit systems, such as small electric buses within the central area of the city and underground or overhead rapid transit. We have already noticed signs of this change.

The third modernization task relates to the existing housing stock. Basically, it must involve the following: cutting down the rate of the present densities; introducing some open spaces; throwing away a third of the existing housing stock to create open spaces and new facilities; and modernizing the remainder.

In terms of modernization, housing will be the major problem because housing demand in the majority of European countries ranges from high to very high. The Eastern European countries, for example, still face a very great housing demand.

Industrialized Housing

Undoubtedly, the production of housing must be standardized and industrialized if we are to satisfy both the mass demand and the right of every citizen to equal housing and environmental conditions. There will be no time, place and resources for individual housing design. If, for instance, in Poland we have to double the amount of housing in the next 20 years, then the architectural features of modern residential areas could become monotonous. As we start to use similar technologies and factories to produce building materials in Warsaw and Krakow, and in Poland and Czechoslovakia, and in Eastern and Western Europe, we start to develop a similar cityscape of new housing development all around Europe and probably all around the world. This is one of the basic dangers with the present development.

There is no ready-made answer to this problem at present. The majority of architectural schools in Europe (and around the world) have trained their architects and urban planners to be creators of individual buildings. We are well trained to design administrative buildings, schools, churches, hotels and the like. We are prepared only by our life experience – not by our professional training – to deal with the problems surrounding the architecture of mass production and the landscaping of mass-produced settlements. This is one of our biggest aesthetic challenges.

Unresolved Issues

There are some very special issues surrounding the expansion of European cities in the next 25 years related to this aesthetic problem of mass production. I would say that the most important issue is the whole dialogue about the quality of life. What is the quality of life in human settlements to be and how do you measure it? What is the interaction or interrelationship between the quality of life on the one hand and the quality of the environment, either natural and man-made, on the other?

A credo

I believe that a person must find within his settlement the opportunity to satisfy four kinds of needs.

The first need is of a biological nature, that is, a person must be able to survive in the city and to have the opportunity to raise children in a healthy environment. For this, we need good, adequate size housing with appropriate ventilation and heating. We need fresh unpolluted air and water plus a sufficient amount of green space for recreation.

The second need is economic, that is, the continuous improvement of living standards. We must have the opportunity to improve our living standard through such vehicles as better job opportunities. In addition, the improvement of our living standard does not mean, solely, that next year we have more to eat, but rather we have more theatres to go to and more museums to visit. All these things make up our living standard.

The third need is the social aspect. Every human being has the right to participate in and belong to a defined community and to have the opportunity for social advancement. The shape and organization of the city and the facilities within the city must offer their residents all these opportunities.

The fourth need is the most difficult to define; it is related to intellectual and spiritual needs, such as the beauty of the cityscape and its architecture and the opportunity for cultural life.

The city must be designed in such a way as to offer all these things to its people. Therefore, we must protect, develop or improve those existing qualities in the man-made and natural environment which correspond with these four needs, and we must rehabilitate those lost qualities of the environment that relate to all these needs.

In Europe we have placed enormous importance on the reconstruction, maintenance and protection of historical monuments precisely because these man-made parts of the environment satisfy the important intellectual and spiritual requirements for city life and because they give people a sense of place. We have also placed great emphasis on the development of green and open spaces, because the natural environment satisfies the biological and social needs.

Concluding Remarks

In closing, I would say that it is quite clear the various countries of Europe have different development, renewal and rehabilitation priorities.

Italy, for example, has placed the greatest emphasis on the modernization of existing stock and protection of the man-made qualities of the environment, such as the very interesting schemes for the modernization and development of Bologna and Venice.

The modernization of the existing urban stock is also extremely important in the metropolitan areas of the United Kingdom and probably will be the major challenge in that country for the next couple of years.

In Bulgaria and Yugoslavia, new development interrelated with the protection of the natural environment and landscape will be one of the major tasks. This should also be one of the major tasks in Spain and in parts of Italy, particularly in relation to the development of tourism, and tourist settlements and facilities.

The expansion of existing cities will be the leading task for Poland in the next twenty years.

Let us hope that in the future the task of reconstruction will be due only to natural disasters. These we cannot avoid, but we can start to plan cities to diminish the consequences of disasters. Certainly, this factor must be taken into account in the further planning and development of all cities in Europe and in other parts of the world.

These, then, I see as the European problems of the next twenty-five years. They are fascinating challenges for advanced, highly developed countries, to marry history, technology and humanity. □

Rome ▷

Le patrimoine MONUMENTAL aujourd'hui et demain

PAR
RAYMOND LEMAIRE

Partout dans le monde, on se soucie plus qu'auparavant de la sauvegarde du patrimoine architectural. L'année 1975 a été pour toute l'Europe une période de réflexion sur la valeur de ce patrimoine, d'élaboration de programmes de conservation et de sensibilisation d'une opinion publique insuffisamment informée. Aux Etats-Unis, le 200e anniversaire de l'Indépendance est l'occasion de la mise en valeur du patrimoine qui fut le cadre de cet événement. Sous l'impulsion du pouvoir national ou d'organisations internationales telles que l'UNESCO, la Banque Mondiale ou le Conseil International des Monuments et des Sites, de nombreux autres pays de tous les continents élaborent ou exécutent de vastes programmes de remise en état de villes ou de monuments prestigieux. Faut-il rappeler les sites célèbres de Venise, de Katmandou, d'Abou-Simbel, de Philae ou de Borubudur, où de grandes opérations de sauvetage ont été exécutées ou sont en cours?

Cependant, dans la plupart des pays, le patrimoine architectural est souvent resté le parent pauvre de la politique culturelle. Certes, on assure le maintien des grands monuments reconnus comme l'expression de l'âme de la nation, mais les spécialistes de tous les pays s'accordent pour affirmer que les moyens, tant légaux que financiers dont ils disposent sont notoirement insuffisants. Leur espoir de disposer de ces moyens, indispensables à la sauvegarde, était ténu jusqu'à ces dernières années. Il n'y a, en ce domaine, comme en tant d'autres, pas de grande politique sans le support de la population. Or, l'opinion publique des pays riches, surtout préoccupée par le développement économique et social, ne s'intéressait guère à la sauvegarde du patrimoine – sauf à l'occasion des voyages de vacances – et celle des contrées du Tiers-Monde était trop préoccupée par des problèmes de survie, pour se sentir concernée par la conservation d'un cadre de vie traditionnel, dont la valeur lui paraissait souvent négative parce qu'il était l'image même de leur sous-développement.

Il serait naïf d'affirmer que la situation actuelle est fondamentalement modifiée, mais il serait tout aussi incorrect de ne pas apercevoir les signes annonciateurs d'un changement progressif de l'opinion publique. Si peu de faits nouveaux concernent la sauvegarde des grands monuments traditionnels, par contre une évolution radicale des mentalités caractérise les réactions de la société à l'égard d'un patrimoine auparavant méconnu: les villes et les villages.

Quels faits expliquent l'amorce de cette évolution? La dimension culturelle du patrimoine – celle qu'on lui attribue traditionnellement – et en vertu de laquelle sa sauvegarde s'est organisée au XIXe siècle, ne peut, seule, la justifier. Certes, cette valeur reste l'une des attributions fondamentales du patrimoine et la divulgation de la culture ne peut qu'en augmenter la perception. Cependant, il ressort clairement, tant des écrits que de l'action, qu'elle n'est pas le moteur de la sensibilisation actuelle de l'opinion publique ni l'orientation majeure des besoins de sauvegarde. Ce qui motive l'attitude nouvelle à l'égard du patrimoine se situe à un niveau plus profond, plus viscéralement humain que la culture: celui du cadre de la vie et de la perception du temps. Jamais auparavant, dans son histoire pourtant si longue et si diversifiée, l'humanité n'a provoqué de bouleversement aussi profond et spectaculaire non seulement de sa manière de vivre, mais aussi de son environnement. Les liens visibles avec le passé sont altérés, voire effacés. Le cadre traditionnel de la vie est devenu méconnaissable à celui qui n'a pas vécu son chambardement et, même à celui-là, il est souvent étranger. La présence visuelle de la «mémoire» est menacée, sinon détruite et l'homme se sent soudain perdu dans le cadre de sa vie, forgé au nom de contraintes économiques, techniques ou fonctionnelles qu'il a élaborées certes, et qui correspondent de ce fait à la dimension de son esprit, mais ne s'accordent ni à sa sensibilité, ni à son besoin immanent d'échelle humaine, ni aux exigences de son imagination et de son subconscient. Au surplus, pour la première fois et d'une façon dramatique, une rupture brutale et soudaine apparaît entre le cadre de vie d'hier et celui qui, en tant d'endroits, se construit sous nos yeux.

Auparavant, le tissu de la ville se renouvelait maille par maille, au gré des besoins individuels ou collectifs, les modifications de son «visage» n'étaient guère perceptibles en une vie d'homme. On y trouvait la permanence de l'environnement et l'expression constante des liens avec le passé qui répondent au besoin non seulement psychologique mais, comme l'a démontré René Huyghe, biologique de l'homme. Aujourd'hui les villes se détruisent et se refont par quartier. Des pans de ville traditionnelle s'écroulent sous les coups des démolisseurs et des immeubles géants les remplacent. Rien de commun entre la dimension, la variété, le charme romantique des rues effacées et les aires bétonnées ou le gazon sur lequel s'élèvent des blocs démesurés et monotones où s'entassent hommes et bureaux. L'individu et la communauté se situaient sans peine dans le cadre traditionnel et se l'appropriaient; ils se perdent dans la démesure des grands ensembles et ne peuvent s'identifier sans heurts à un environnement si différent de leurs aspirations naturelles. La valeur irremplaçable de la dimension traditionnelle de l'environnement bâti – fruit d'un dialogue millénaire entre les besoins de l'homme et sa créativité architecturale – non perçue à une époque où son existence n'était pas mise en jeu, est apparue brusquement et dramatiquement au moment où celle-ci est menacée, sinon en partie détruite. Les édifices qui la matérialisent ont acquis, aux yeux de nos contemporains, une signification et une importance qui se situent bien au-delà de leur intérêt artistique ou historique. Au-delà d'oeuvres d'art et de témoignages du passé, ils sont pour eux l'expression d'une aspiration à un cadre de vie vraiment humain, support à la fois de leur besoin d'un abri

◁ *Split, Yugoslavia/Split, Yougoslavie*

personnalisé, c'est-à-dire «possédé» et identifiable, et de liens sociaux, issus du temps, qui les attachent à leurs voisins.

La notion même de monument a subi, au cours des deux dernières décennies, le contrecoup de cette évolution des idées et des sensibilités. De l'édifice exceptionnel, qui seul était reconnu comme monument, le concept s'est étendu «aux œuvres modestes qui ont acquis avec le temps une signification culturelle» (Charte Internationale sur la conservation et la restauration des monuments et des sites, Venise 1964, art. 1). Les destructions effroyables causées par la deuxième guerre mondiale avaient ouvert les yeux sur le patrimoine «modeste», l'architecture dite mineure, dont tout l'intérêt et l'importance apparaissaient au moment où l'on s'en trouva dépouillé ou sur le point de l'être!

Ce sont cependant davantage les applications tardives des principes de la Charte d'Athènes de 1933, préconisant la «ville fonctionnelle», qui vont être à l'origine des traumatismes les plus profonds. Les énormes besoins nouveaux, nés de l'accroissement inoui de la population urbaine en quelques années, ont posé des problèmes nouveaux que l'on a cru pouvoir résoudre efficacement dans l'optique rationaliste de la Charte. Les résultats sont présents dans la plupart des villes du monde construites ou reconstruites depuis un quart de siècle. Ils sont marqués par le défaut d'inspiration humaniste et personnaliste de la Charte elle-même, mais aussi par l'absence d'approche globale des problèmes, par la spéculation foncière effrénée qui, dans un grand nombre de pays, a présidé aux grandes entreprises de rénovation urbaine. Les décisions «autoritaristes», le «choix du Prince», qui caractérisent la plupart des opérations ne laissaient aucune possibilité d'intervention ni de choix aux populations cependant infiniment concernées par un environnement qui était le cadre de leur vie quotidienne. Celles-ci se sont vues expulsées de leur habitat, de leur «coquille» qui, pour n'être souvent ni confortable, ni même conforme aux exigences sanitaires, était cependant le lieu avec lequel elles s'identifiaient, façonné à leurs habitudes et à leur manière de vivre; elles étaient de même arrachées à leur quartier et au groupe social qu'il abritait, ainsi qu'aux relations humaines dont il était le support.

On est devenu conscient du fait que ces villes et ces quartiers anciens constituaient, pour leur valeur d'habitat, pour le «tissu» social qu'ils abritent, une part essentielle du patrimoine que le passé a légué à nos contemporains et dont la sauvegarde importe non plus seulement pour son intérêt historique ou artistique, mais pour ses vertus humaines et sociales: comme antidote contre l'inhumanité de nombreux ensembles nouveaux; comme source d'inspiration d'un urbanisme ou d'une architecture qui demeure à l'échelle de l'homme et accueille celui-ci dans le respect de sa diversité; comme habitat privilégié par l'apport de nombreuses générations qui y ont laissé une part de leur intelligence, de leur imagination et de leur cœur. La notion de «patrimoine architectural» s'est trouvée de ce fait élargie bien au-delà des limites que la seule signification culturelle lui attribuait. A l'origine, part exceptionnelle du legs culturel, le patrimoine devient aujourd'hui un élément du cadre courant de la vie quotidienne. D'objet d'art à conserver ou à restaurer, on le considère davantage comme un édifice qu'il faut intégrer et adapter aux besoins de la vie – sans lui faire perdre la valeur et l'intérêt dont le passé l'a doté car c'est là l'origine même des qualités spécifiques qui justifient son maintien. Et celui-ci n'est valable que pour autant que l'individu et la communauté qui l'habitent ne soient pas les victimes irrémédiables de l'opération. Dès lors, la politique de sauvegarde s'allie à celle de l'habitat dont elle assure une part substantielle. De seul fait culturel qui, dans les objectifs de l'Etat, la plaçait souvent au rang des besoins accessoires, elle se situe dorénavant parmi les fondements mêmes du bien-être des citoyens.

Le cheminement des idées, ci-dessus esquissé, s'est exprimé dans une série de documents trop longue pour qu'on les énumère ici. En 1964, la Charte de Venise reconnaissait une valeur de monument, c'est-à-dire de témoin dont la valeur justifie la sauvegarde, au tissu urbain. Depuis lors, les nombreux colloques organisés en Europe, à l'initiative du Conseil de l'Europe et du Conseil International des Monuments et des Sites (ICOMOS) ont, sous la poussée des événements et de l'éveil de l'opinion publique, élargi cette notion initiale à la dimension des idées actuelles. Récemment, les Résolutions de Bruges, (ICOMOS, mai 1975) et la Déclaration d'Amsterdam (Conseil de l'Europe, octobre 1975) ont réaffirmé les objectifs sociaux et culturels de la sauvegarde. Dans le Nouveau-Monde, des séminaires patronnés par l'Organisation des Etats Américains et l'ICOMOS ont affirmé que «le sauvetage des centres historiques est un acte social en même temps que culturel et qui doit être intégré à la politique du logement» (Résolutions de Saint-Domingue, OEA et ICOMOS 1974). Dès 1968, à Tunis, l'attention était attirée sur la valeur des médinas et sur la nécessité de les assainir et de les conserver au bénéfice de leur population actuelle.

Enfin, l'UNESCO a repris le problème au plan universel dans le projet de recommandation sur la sauvegarde des quartiers, villes et sites historiques et leur intégration dans un environnement moderne, qui a été soumis à l'approbation de la Conférence Générale d'octobre 1976. «Les villes et quartiers historiques, y lit-on, ont une valeur universelle et irremplaçable par le témoignage qu'ils apportent des diverses cultures et époques passées et en tant que modèles d'un habitat profondément humain». Et encore: «A l'époque où le nivellement des techniques et des formes de construction risque d'uniformiser l'habitat dans le monde entier, la préservation des ensembles historiques peut contribuer émi-

nemment au maintien des constantes culturelles et sociales propres aux différentes nations et dans chacune d'elle servir de base à des créations architecturales authentiques.»

Il serait téméraire de résumer en quelques phrases les nombreuses entreprises de sauvegarde des villes et quartiers anciens qui ont été réalisées ou sont en cours d'exécution dans le monde entier. Il peut être intéressant cependant de rappeler quelques fait marquants.

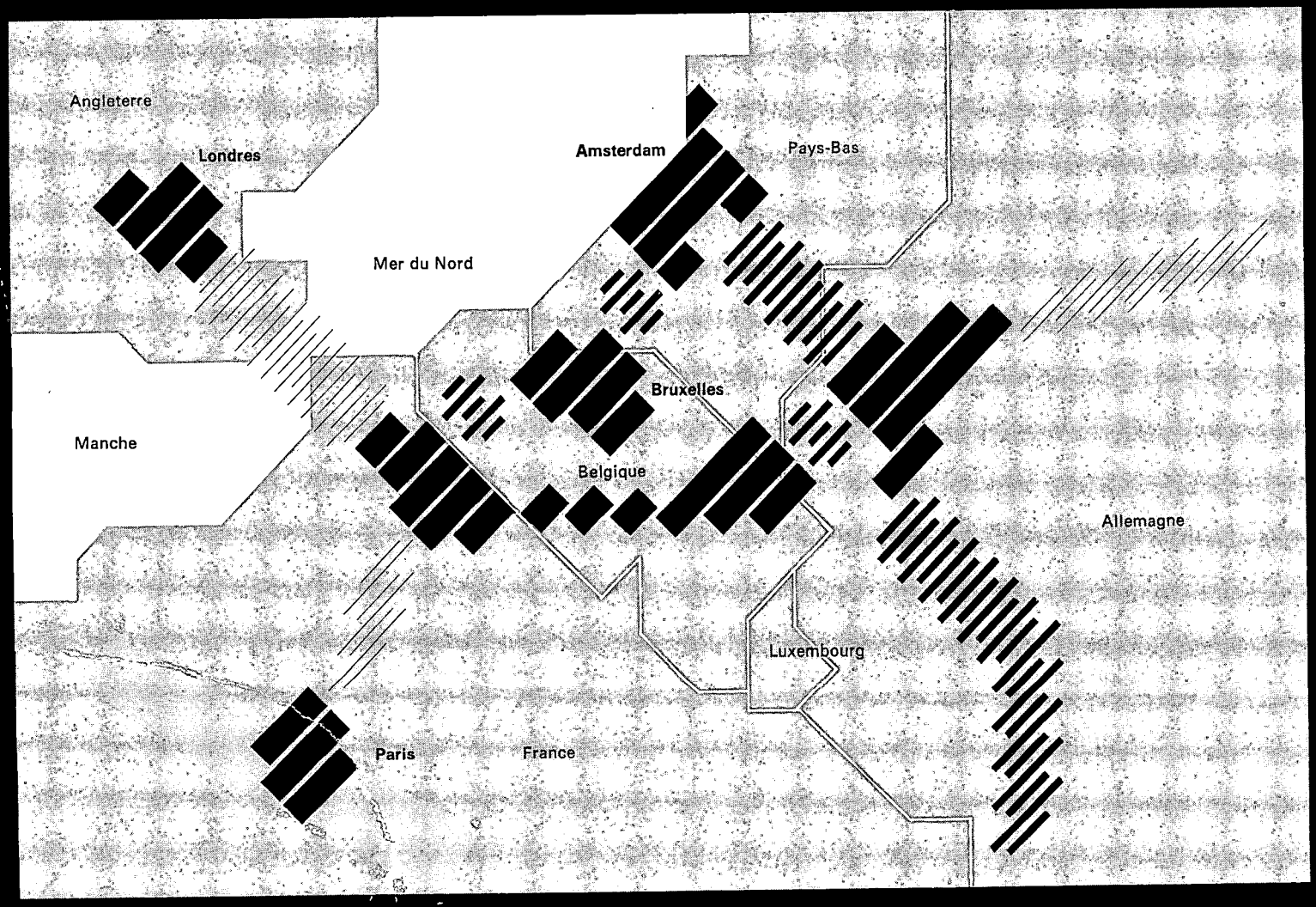
Faut-il rappeler d'abord certaines villes historiques célèbres comme Venise, Nara, Bruges ou Amsterdam qui, étant situées longtemps à l'écart des régions industrielles, ont dû à une éclipse économique passagère au XIXe siècle, la conservation de leur structure, de leurs monuments et de leur tissu historique, ceux-ci ayant déjà révélé leur intérêt exceptionnel avant que les causes de destruction qui abimèrent ou détruisirent la plupart des villes anciennes ne les menacent. La première tentative de sauvegarde systématique d'une ville historique est due sans doute à l'initiative de l'homme d'Etat français, Edouard Herriot qui, dès les années 20, s'efforça de réunir les fonds nécessaires à la restauration de la petite cité médiévale de Pérouges, non loin de Lyon. L'objectif était surtout archéologique et visait à reconstituer un cadre de vie médiéval avec ses us et ses coutumes: un musée vivant du passé évoqué avec force par un site urbain exceptionnellement conservé. La même philosophie anime la célèbre restauration de la ville de Williamsburgh, en Virginie, entreprise en 1926 grâce au mécénat de John D. Rockefeller, et la reconstruction récente de Louisbourg au Canada. Durant la dernière guerre mondiale, les destructions massives anéantirent, parfois de propos délibéré, des villes entières, trésors historiques inestimables de pays qui y retrouvaient une expression essentielle de leur identité. Varsovie, Nuremberg, Hildesheim sont de celles-là. Leur reconstruction entière ou partielle, tentant de ressusciter un passé évanoui, est un acte de piété nationale et l'expression du refus de voir disparaître de son cadre de vie l'évocation permanente de ses racines, le «genius loci».

L'essor du tourisme fut dès la fin des années 50 un facteur puissant, mais souvent plus destructeur que favorable de restauration de petites villes anciennes situées dans des zones particulièrement attractives. Certaines opérations remarquables méritent d'être citées, par exemple: les petites villes de Telč en Moravie, de Sarlat en Périgord, de Dubrovnik en Croatie. Mais que de destructions ou de galvaudages pour quelques réussites!

La grande prise de conscience, celle qui englobe progressivement tout le patrimoine urbain ancien, ne date que des quinze dernières années. La France a montré la voie sous l'impulsion d'André Malraux, ministre de la Culture, qui instaura une grande politique visant «à sauver le passé pour l'avenir». La loi du 4 août 1962 fut le modèle de nombreuses mesures légales édictées dans d'autres pays. La création de «secteurs sauvegardés», couvrant des villes entières, ou de très vastes quartiers tels le célèbre Marais, à Paris, confrontait pour la première fois la préservation du patrimoine avec l'ensemble des problèmes que posent l'urbanisme et l'aménagement du territoire. La dimension économique et sociale et l'indispensable notion d'intégration des villes historiques avec leurs spécificités dans l'ensemble des problèmes de l'équipement et de l'habitat se dégagea progressivement. La sauvegarde se fera dorénavant au sein de plans d'aménagement et de structure qui donnent aux quartiers historiques une fonction vivante, particulière et essentielle dans la solution de l'ensemble des problèmes posés par la ville, l'agglomération, voire la région.

De nombreux pays d'Europe adoptent progressivement une politique qui s'inspire de cette conception. L'Année du patrimoine architectural européen a été à cet égard un stimulant certain. Plus de cinquante opérations-pilotes ont été décidées à l'occasion de cet événement qui toucha une vingtaine de pays. Elles ne sont pas l'amorce d'une politique appelée à se développer largement au cours des prochaines années. Des dizaines, voire plusieurs centaines de villes sont concernées par elle. L'exemple de l'Europe commence à être suivi sur d'autres continents. En Afrique du Nord, où sous l'impulsion de l'UNESCO, les villes de Tunis et de Fez font l'objet d'études ou de travaux de sauvegarde globale, en Amérique où il faut citer entre autres Québec et Philadelphie, en Australie où les habitants de Sidney et de Melbourne se préoccupent de sauver leurs constructions victoriennes, en Asie où parmi d'autres, des efforts sont faits pour sauver le vieux Batavia (Djakarta), en Indonésie, et les trois villes extraordinaires de la vallée de Katmandou, au Népal.

L'évolution de la sauvegarde du patrimoine monumental évoquée ci-dessus, ne concerne qu'une partie de celui-ci, la plus modeste à première vue. Mais c'est incontestablement celle qui prédomine par son étendue et par la mission qu'elle remplit: entourer et loger dignement les hommes. Elle occupa une place essentielle dans les objectifs de la Conférence de Vancouver: un habitat pour tous. Non pas n'importe lequel, mais un habitat qui respecte la nature de l'homme, ses traditions, sa diversité, sa dignité. La présence du passé dans le cadre de la vie est nécessaire à son équilibre. C'est pourquoi, il faut assurer son avenir. □



La mégalopole du nord-ouest de l'Europe

Aires urbaines

Formations axiales

Axes tendanciels

Vers une planification mégalopolitaine?

PAR
HERMAN BAEYENS

L'Institut européen de recherche pour l'aménagement régional et urbain (Eriplan) a effectué une étude pour la Commission de la Communauté économique européenne sur la mégalopole du nord-ouest de l'Europe. L'étude a été prudemment intitulée: *Etude prospective sur la planification physique et l'environnement dans la mégalopole en formation dans le nord-ouest de l'Europe* (un rapport de synthèse du même titre est sorti en mars 1975 et est disponible chez Eriplan, Molenstraat 15, La Haye). Eriplan a, de plus, organisé un séminaire international en juillet 1975 sur les problèmes comparatifs mégalopolitains, avec des collègues japonais, américains et européens, intéressés par leurs propres problèmes mégalopolitains et par des études comparatives sur les mégalopoles. Le rapport de ce séminaire, de même titre, est également disponible chez Eriplan.

Il est de mon intention de situer, avec précision, quelques-unes des tendances de réflexion sur les problèmes mégalopolitains fondées sur ces expériences récentes. L'étude sur la mégalopole du nord-ouest de l'Europe a été une expérience importante, dans la mesure où elle a permis une réflexion de portée supranationale sur les interrelations urbaines à un niveau européen.

La comparaison avec d'autres formations mégalopolitaines existant dans le monde a clarifié les caractéristiques spécifiques de chaque formation mégalopolitaine et a posé la question fondamentale de leur rôle à l'échelle mondiale et de leurs relations avec le monde en voie de développement.

Les étapes du processus mégalopolitain

Le processus urbain et métropolitain à l'échelle mondiale a révélé, au cours des dernières décennies, de nouvelles interdépendances fonctionnelles et spatiales, intimement liées, que nous avons appelées «mégalopole». (Se référer à l'ouvrage précurseur de Jean Gottmann, *Northeastern Seaboard Megalopolis of USA*).

Les facteurs du processus urbain

Selon G. Sjoberg (*The Preindustrial City*, 1961), l'origine et l'évolution de l'urbanisation sont liées aux trois niveaux majeurs d'organisation humaine: sociétés tribales, sociétés civilisées préindustrielles ou féodales, sociétés industrielles. Les bourgs et les villes ne sont apparus qu'à la seconde étape, il y a 5500 ans, mais l'urbanisation à grande échelle comme conséquence de l'industrialisation, n'a débuté qu'il y a 100 ans.

Selon L. Reissman (*The urban processus – Cities in industrial Societies*, 1964) l'urbanisation, résultat de l'industrialisation, est liée partout où elle existe à l'émergence des classes moyennes et à la montée du nationalisme. Les sociétés tertiaires révèlent de nouveaux types d'urbanisation, avec un ensemble complexe de facteurs déterminant des structures physiques et sociologiques nouvelles.

Les facteurs du processus métropolitain

En 1800, il n'y avait pas de villes d'un million d'habitants. En 1950, il y en avait plus de 100 réparties à travers le monde. La formation métropolitaine est clairement le résultat de la révolution industrielle et du développement nouveau du tertiaire bien que, dès le moyen-âge, l'aire à dominante rurale de l'actuelle mégalopole du nord-ouest de l'Europe concentrât déjà des villes-ports prospères, qui ne donnèrent naissance à des aires métropolitaines qu'après 1800.

A partir de cette date, elles se transformèrent en pôles de croissance, en raison des effets économiques multiplicateurs d'investissements multisectoriels, publics aussi bien que privés. Le rôle de la bourgeoisie et des entrepreneurs est clair, car ces investissements furent provoqués par des possibilités localisées dans les villes où les gens qui s'y trouvèrent impliqués étaient formés. Mais le rôle du secteur public est également apparent: les nations les plus centralisées tendent à avoir des types urbains plus décentralisés. Il serait intéressant de comparer les facteurs et les causes spécifiques de la formation métropolitaine, dans des aires métropolitaines sélectionnées (Rotterdam sous l'influence du port, Eindhoven, comme produit de Philips, Lille comme aire industrielle du XVIIIe siècle, Bruxelles comme capitale, etc.).

Le processus de la formation mégalopolitaine

Les trois formations mégalopolitaines les plus évidentes dans le monde sont à l'heure actuelle: la façade maritime mégalopolitaine du nord-est des Etats-Unis, la mégalopole japonaise et la mégalopole du nord-ouest de l'Europe. Selon la définition du professeur Jean Gottmann, dans son introduction sur la mégalopole du nord-ouest de l'Europe, une mégalopole est «la concentration d'aires métropolitaines étroitement contiguës sur une partie relativement limitée et petite d'un continent, et qui conduit au phénomène mégalopolitain lorsqu'elle atteint de très grandes dimensions, rassemblant plus de 25 millions de personnes» (*Problèmes comparatifs mégalopolitains*, Eriplan, La Haye, 1975). Il distingue ainsi trois formations mégalopolitaines en Europe, une en Angleterre, une autre dans l'extrémité nord-ouest du continent (Amsterdam, Calais, Ruhr) et une troisième le long de la Méditerranée, s'étendant de Marseille vers l'Est jusqu'à Bologne et vers le Sud par la côte jusqu'à Pise. Cette distinction est semblable à celle que fait J. G. Papaioannou («Future Urbanization patterns in Europe» dans *The Mastery of urban growth*, Mens en Ruimte, Bruxelles, 1971) et qui se base sur les études ayant trait à la ville de l'avenir, menées au Centre Ekistics d'Athènes. Il distingue:

a) la mégalopole britannique qui s'étend de Londres aux Midlands via Birmingham et plus loin vers le Nord-Est jusqu'à Newcastle-upon-Tyne

b) un groupe de cinq mégalopoles intimement liées, dans le centre et le nord-ouest de l'Europe. L'axe central de ce système est fourni par la mégalopole rhénane (Randstad Holland – Ruhr – Francfort – Stuttgart)

c) la troisième formation mégalopolitaine plus petite est celle qui relie Milan à Turin.

Un grand nombre de facteurs déterminants du processus mégalopolitain ont été discutés à notre séminaire sur une comparaison mégalopolitaine: ainsi les facteurs historiques, les caractéristiques géographiques, le réseau de transport et d'infrastructures, les forces et la concurrence économiques (par exemple entre les ports principaux du nord-ouest de l'Europe), le type de gouvernement avec ses facteurs politiques et sociologiques, les préférences touchant à l'environnement, les valeurs changeantes qui ont des répercussions sur la position géographique, etc.

La poursuite d'une recherche systématique sur les forces sous-jacentes du développement mégalopolitain est une base essentielle pour toute forme d'orientation ou de maîtrise de ce phénomène. Dans un programme de recherche mégalopolitaine comparative, il serait très important d'analyser le rôle des différents facteurs dans des régimes gouvernementaux et des contextes continentaux différents.

Dans les trois cas examinés, le phénomène mégalopolitain semble être fondamentalement le résultat de forces économiques convergeant dans une région favorisée sur le plan de la géographie et des infrastructures.

Les développements portuaires semblent jouer un rôle important dans les trois cas. Chaque type de formation mégalopolitaine a ses propres facteurs déterminants, tels que l'industrie automobile aux Etats-Unis, le rôle des ports de la Mer du Nord (Londres, Anvers, Rotterdam, Hambourg) dans le nord-ouest de l'Europe, les conditions géographiques et le cadre politique et institutionnel centralisé au Japon.

Le cadre social et institutionnel est différent dans chacun des trois cas: une structure nationale centralisée au Japon, un régime fédéral aux Etats-Unis et un système décentralisé dans des pays différents à langues différentes, dans le cas du nord-ouest de l'Europe où sont situés six capitales de pays membres de la Communauté européenne.

Apparemment, l'émergence de formations mégalopolitaines est influencée par une combinaison de conditions économico-géographiques et socio-politiques.

L'étude sur la mégalopole européenne

Quelques-unes des idées principales qui ressortent de l'étude sur la mégalopole du nord-ouest de l'Europe, quoique celle-ci n'ait qu'un caractère exploratoire, peuvent inspirer les politiques et les planifications mégalopolitaines du reste du globe.

La mégalopole du nord-ouest de l'Europe

La question: «Existe-t-il une mégalopole dans le nord-ouest de l'Europe?» n'a pas tellement d'importance. Le plus important est de savoir quels sont les problèmes liés à l'existence d'une zone hautement urbanisée dans cette région et comment les résoudre.

Les phénomènes dont tout le monde reconnaît l'existence sont les suivants:

- il existe des aires métropolitaines dans différents pays du nord-ouest de l'Europe
- ces aires métropolitaines situées dans ces pays fortement urbanisés se rapprochent
- il se manifeste au moins des tendances mégalopolitaines ou d'urbanisation connexes, surtout le long des axes qui relient les zones métropolitaines entre elles.

Le phénomène d'urbanisation dans le nord-ouest de l'Europe appelé mégalopole porte sur des zones métropolitaines, des zones de suburbanisation et d'exurbanisation, ainsi que sur des formations axiales entre elles. Les zones les plus reliées et intégrées sont:

- le Randstad Holland
- la partie centrale de la Belgique (Anvers-Bruxelles-Gand et le sillon industriel wallon)
- la «Métropole du Nord» en France
- le «Ruhr Gebiet» et les zones urbaines reliées comme Cologne-Bonn et le triangle Liège-Aix-la-Chapelle-Maastricht.

Ces zones forment la partie centrale dudit phénomène. Ce ne sont pas toutes de vraies métropoles qui se sont développées d'une manière monoconcentrique, mais elles constituent plutôt un conglomérat de centres de taille différente. Deux grandes métropoles, Londres et Paris, peuvent être considérées comme satellites, autour de ce phénomène de conglomération, bien que surtout Londres fasse déjà partie d'une zone d'urbanisation allant de Londres au nord-est de l'Angleterre.

Toute cette zone mégalopolitaine s'étend sur le territoire de cinq pays: Pays-Bas, Belgique, France, Allemagne et Angleterre. Ces zones hautement urbanisées et urbanisantes sont en train de former une entité géographique et/ou fonctionnelle. La mégalopole du nord-ouest de l'Europe pourrait être considérée dans l'avenir comme un niveau intermédiaire entre le niveau national et le niveau supranational de la Communauté européenne.

Les problèmes spécifiques résultant du phénomène d'urbanisation contiguë et concentrante dans le nord-ouest de l'Europe se posent à deux niveaux:

Les problèmes internes inhérents à la conglomération sont surtout caractérisés par a) la consommation des espaces ouverts engendrée par la dispersion de l'habitat avec des gaspillages de l'infrastructure et des services publics, b) la détérioration de la qualité de l'environnement aggravée par cette dispersion accidentelle. Le phénomène de la concentration des nuisances dans les centres-ville se déplace en direction des zones nouvelles d'urbanisation.

Les problèmes externes ont trait principalement aux déséquilibres créés au niveau européen par une concentration plus forte. Le déséquilibre dans le processus d'urbanisation est l'expression de distorsions économiques. Ce n'est pas seulement le secteur privé qui a une préférence prononcée pour une multiplication des investissements dans le nord-ouest de l'Europe. Cette zone contient six capitales nationales des pays de la Communauté européenne, dont Bruxelles qui connaît l'influence de l'administration européenne. Apparemment, les fonctions administratives de la Communauté économique européenne, et particulièrement le libre marché, vont favoriser également la concentration des activités dans le nord-ouest de l'Europe, si on ne suit pas une politique européenne délibérée de décentralisation.

Les problèmes énoncés ne sont que des exemples pour montrer la nécessité d'une politique vis-à-vis de ce phénomène spécifique au nord-ouest de l'Europe.

Quels sont les défauts et les difficultés des approches strictement nationales visant à remédier à la croissance urbaine?

Le succès des politiques nationales de maîtrise du phénomène urbain n'a été que partiel, à cause de trois facteurs principaux:

- Les politiques sectorielles ont, dans beaucoup de cas, contrarié les politiques urbaines (difficulté de coordination horizontale).
- Les politiques des différents niveaux d'administration et de décision sont, dans beaucoup de cas, contradictoires et conflictuelles. Les ambiguïtés sont apparentes surtout dans les pays où se posent des problèmes de forte concentration ayant comme objectif national la décentralisation, tandis que les politiques urbaines traditionnelles, au niveau métropolitain, favorisent la concentration.
- Les mesures et instruments aux effets multiples ne sont pas suffisamment évalués. Une telle évaluation multinationale serait extrêmement importante si l'on veut augmenter l'efficacité de la planification dans les différents pays et préparer un système de mesures dans une optique communautaire.

Même si la planification et les politiques nationales étaient suffisamment efficaces, la question se poserait de savoir si elles sont *suffisantes pour la maîtrise du phénomène mégalopolitain.* C'est cette question cruciale qui servira de motif à d'éventuelles politiques européennes de contrôle. Car il faut respecter le principe de la délégation à un niveau inférieur, quand il n'y a pas motif à un niveau plus élevé.

Pourtant, dans le cas du nord-ouest de l'Europe, il semble qu'il y ait des arguments décisifs en faveur d'une approche supranationale.

- Le phénomène d'urbanisation diffuse dans le cadre du nord-ouest de l'Europe nécessite au moins une coordination des conceptions et des futurs choix de développement.
- Les objectifs nationaux n'étant pas coordonnés sont parfois contradictoires entre pays voisins.
- Les mesures ne sont pas synchronisées; elles sont de nature différente, même si elles ne sont pas toujours contradictoires.
- Les problèmes externes et l'équilibre régional, sur le plan européen, nécessitent aussi une approche supranationale qui ne peut pas suivre les frontières nationales parce que la France, l'Angleterre et l'Allemagne n'ont qu'une partie de leur territoire située dans la région mégalopolitaine, alors que ces pays comprennent aussi, à l'extérieur de celle-ci, des zones qui peuvent être considérées comme sous-développées par rapport à l'Europe.
- L'équilibre écologique, en particulier, nécessite une approche plus large qui englobe tout le phénomène urbain contigu dans son cadre naturel et dont les éléments biologiques ne sont pas déterminés par les frontières nationales.

De ces arguments évidents, il résulte qu'il y a nécessité, à moyen terme, d'arriver à une politique communautaire de maîtrise du développement mégalopolitain.

Les conditions pour atteindre cet objectif sont les suivantes:

1. Formulation des objectifs vis-à-vis du développement mégalopolitain du nord-ouest de l'Europe

Les objectifs du développement urbain et de la politique écologique doivent être intégrés dans une conception cohérente et globale du développement mégalopolitain du nord-ouest de l'Europe. Les premières lignes directrices possibles d'une stratégie écospatiale relative au nord-ouest de l'Europe ont été élaborées dans l'étude précédemment mentionnée au début de cet article. Les aspects du développement urbain et les aspects écologiques y ont été particulièrement élaborés, tandis que les problèmes de l'équilibre régional en Europe ont seulement été posés.

2. Elaboration d'un système de mesures et d'instruments au niveau supranational ou européen

Pour rééquilibrer le développement dans le cadre de l'Europe, pour aménager le développement mégalopolitain et pour protéger et améliorer l'environnement, des mesures et des instruments appropriés seront nécessaires.

Mesures et instruments de l'urbanisme et de l'aménagement physique

Une étude comparative s'impose pour évaluer l'efficacité de l'utilisation des plans d'urbanisme et d'aménagement du territoire, des permis de construire, etc., dans les différents pays et dans des situations différentes. Il est clair, et ceci est d'autant plus vrai pour la région mégalopolitaine, que l'efficacité des systèmes de maîtrise de l'utilisation du sol est très différente d'un pays à l'autre.

Mesures et instruments de la politique régionale
Une comparaison et une évaluation de différents types de mesures utilisées dans le domaine de la politique régionale seraient de grande importance pour la préparation de mesures appropriées au niveau européen. Il serait important de faire une étude comparative et une appréciation des mesures positives (comme les subventions, les allégements fiscaux, les prêts bonifiés, les primes de décentralisation, etc.) et des mesures négatives pour freiner le développement métropolitain et/ou mégalopolitain (comme le permis d'établissement, la taxe ou les redevances sur les nouveaux emplacements, etc.).

Mesures et instruments de la politique de l'environnement
Des études comparatives sur les normes, mesures et sanctions contre différentes formes de pollution, les moyens et les instruments pour protéger et améliorer l'environnement seraient de grande importance pour le système de mesures en préparation au niveau européen.

3. Nécessité d'un niveau supérieur d'étude, de planification, d'administration et de décision
Une conception cohérente de développement et d'aménagement au niveau européen, avec un ensemble d'instruments de mise en œuvre, nécessite aussi un niveau supérieur d'étude, de planification intégrative, d'administration et de décision.

Une coordination horizontale des politiques sectorielles est nécessaire pour contrôler et guider le développement mégalopolitain dans ses différents aspects. Toute politique sectorielle avec des implications écospatiales devrait être coordonnée. Cela comprend, entre autres, l'économie régionale, les investissements publics et l'infrastructure, le logement et le secteur socio-culturel, la politique de l'environnement, le tourisme, la politique agricole, etc.

Une coordination verticale des niveaux de planification et de décision est également nécessaire
La coordination entre le niveau local, régional, national et international à l'échelon européen, laisse la question ouverte concernant le niveau approprié pour la zone mégalopolitaine.
Différentes solutions sont possibles:
- Une approche bi- ou multilatérale entre pays concernés.
- La création d'un niveau intermédiaire de la mégalopole, comme les niveaux intermédiaires créés, par exemple, pour les zones métropolitaines dans certains pays.
- Une politique communautaire ou au niveau européen, vis-à-vis de la région mégalopolitaine.

Les approches bi- ou multilatérales ont prouvé que, sans un niveau de décision approprié, tous les efforts d'études et de planification sont en grande partie inutiles. De plus, la création d'un niveau de décision intermédiaire sans un niveau de décison supranational de la communauté soulève de nombreuses difficultés. Donc, la solution la plus réaliste est certainement l'introduction d'une politique communautaire vis-à-vis du phénomène mégalopolitain dans le cadre d'une politique plus large.

L'importance des *études* sur le phénomène mégalopolitain dans ses divers aspects, de l'*information* concernant ces problèmes inter- et supranationaux et des possibilités de *participation* pour les résoudre doit être soulignée. Le succès d'une planification et d'une politique écospatiale repose sur une conscience commune et élargie.

Développement mégalopolitain et monde en voie de développement

Le développement mégalopolitain excessif est-il une des raisons des disparités croissantes à l'échelle mondiale entre régions en voie de développement et régions développées? Et de ce point de vue, faudrait-il également maîtriser le développement et le décentraliser vers d'autres continents?

Un programme d'étude du développement mégalopolitain devrait, de préférence, inclure des études de cas concernant les pays en voie de développement, par exemple en Chine et au Brésil. Ces deux pays, dont les perspectives politiques et idéologiques et les formes de gouvernement diffèrent ont été mentionnés comme des exemples dans le Tiers-Monde de pays présentant quelques symptômes mégalopolitains.

Cette étude pourrait également contribuer à élucider la question de savoir dans quelle mesure un régime économique et politique différent serait à même d'éviter des concentrations urbaines et mégalopolitaines excessives.

L'idée de pôle de croissance a été utilisée comme concept pour expliquer la croissance autosoutenue des aires urbaines. Bien qu'elle ait été également utilisée dans les pays en voie de développement comme instrument de développement social et régional, on peut se demander si cette idée n'est pas liée d'une façon spécifique aux sociétés capitalistes. Puisque l'idée de pôle de croissance a suscité des réactions critiques dans les pays en voie de développement, il faut se rendre compte que le développement mégalopolitain du point de vue du Tiers-Monde pourrait susciter de nombreuses réactions et critiques.

Dans le contexte européen, la notion de mégalopole a également des résonances très négatives pour les régions marginales et périphériques et cela vaudrait certainement aussi pour les pays en voie de développement. Les régions mégalopolitaines à l'échelle du monde tout entier, sont reconnues comme produit de régimes économiques et sociaux capitalistes à grande échelle.

Est-ce sensé de suivre un raisonnement semblable à celui qu'on applique à l'Europe et de plaider

en faveur d'une décentralisation à grande échelle des possibilités d'emploi économique et urbain à travers le monde entier?

On peut se demander de même s'il faut modifier fondamentalement la stratégie du développement économique. L'idée de base concernant l'aide mégalopolitaine du nord-ouest de l'Europe était celle d'un développement sans croissance, afin d'étendre celle-ci vers des centres métropolitains et des centres de croissance intermédiaires dans d'autres régions de l'Europe. N'est-ce pas à l'échelle mondiale qu'il faudrait concevoir une telle stratégie de décentralisation des régions développées et principalement mégalopolitaines dans le monde, vers des zones de croissance potentielles dans le monde en voie de développement?

Il faudrait en outre examiner minutieusement le type de développement des pays en voie de développement, de façon à ce qu'on puisse faire l'économie des problèmes de disparités régionales et sociales observés dans les trois cas de formations mégalopolitaines. Ce type de stratégie de développement a deux dimensions:

1) *Une dimension socio-économique*, au sens où le développement social et la maximisation des possibilités d'emploi dans les pays en voie de développement devraient être favorisés de façon à augmenter les revenus de la population. La conclusion principale, par exemple, du livre *Regional Development in South and North East Asia* de L. Lefeber et M. Datha-Chandhuri, faisait ressortir que

> «le développement économique dans les zones surpeuplées de l'Asie devra reposer sur une transformation rurale d'envergure qui, à son tour, ne s'accomplira pas sans des améliorations considérables dans la distribution des revenus en faveur des chômeurs et des travailleurs sous-employés, conclusion qui va à contre-courant des théories classiques du développement économique».

Dans le même sens, V. Grossmann, dans un article paru en 1974, dans *Regional Development and Planning*, plaide pour une stratégie interrégionale du développement des pays en voie de développement, avec des objectifs régionaux explicites d'égalité et d'emploi. Ces pays ont privilégié des politiques d'industrialisation vigoureuses, visant à un substitut d'importation, qui sont susceptibles d'aggraver les inégalités régionales, si bien qu'il faudrait concevoir des stratégies tenant davantage compte des aspects sociaux.

2) *Une dimension spatiale*, parce que dans les pays en voie de développement comme dans les pays développés, se sont manifestés récemment un intérêt et une motivation croissante en faveur des centres de croissance petits ou moyens, avec un taux d'emploi, d'équipement et de services suffisant à leur population propre et à leur arrière-pays rural. De telles stratégies spatiales sont fondées sur les déséconomies d'échelle et la dégradation de l'environnement qui sont le lot des grandes agglomérations et des formations mégalopolitaines, et en même temps sur les stratégies de développement qui mettent l'accent sur les avantages sociaux et humains d'entités plus petites.

Le phénomène de sururbanisation est caractéristique des pays développés comme des pays en voie de développement, bien que les causes soient fondamentalement différentes.

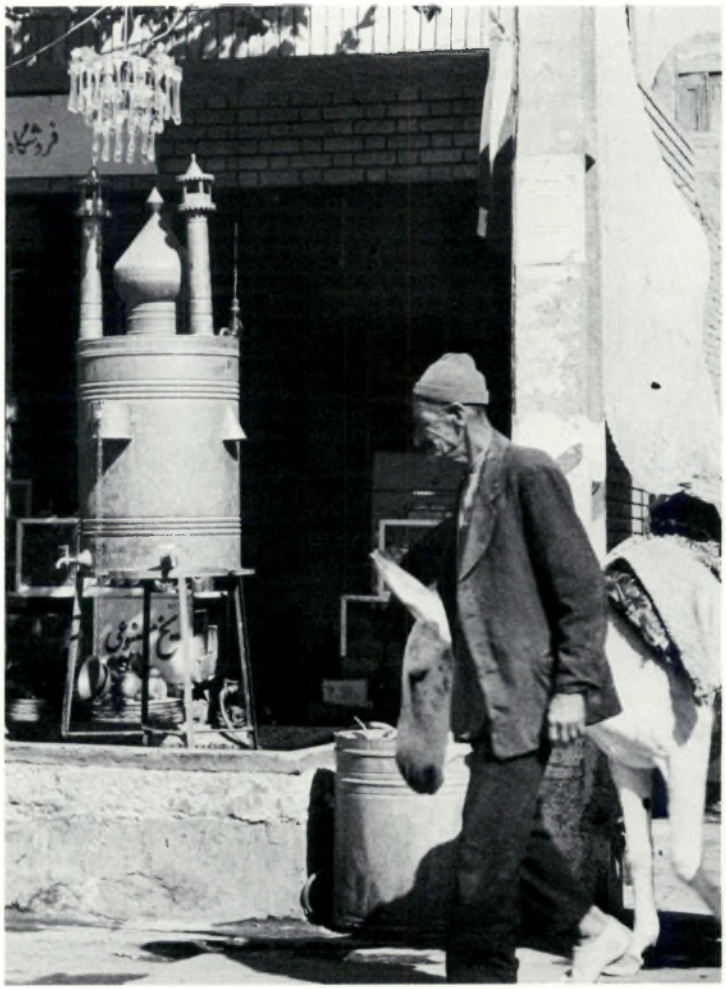
Dans les pays développés, il est basé sur des investissements multisectoriels dans des zones favorisées géographiquement où les effets économiques multiplicateurs ont donné naissance aux formations mégalopolitaines. Dans les pays en voie de développement, il est basé sur les espoirs que fonde la population à l'égard des régions urbaines et mégalopolitaines, bien que les possibilités réelles d'emploi soient faibles. En dépit de cette différence, une étude de leurs contrastes peut servir d'exemple et inspirer des politiques adéquates pour chaque cas. Bien que les causes premières soient différentes, les tendances vont toutes dans le sens de la décentralisation et de l'encouragement donné aux centres de croissance ruraux et intermédiaires.

Cependant, puisque l'organisation spatiale est l'expression de l'organisation de la société même, des interventions adéquates ne peuvent avoir d'effet que par la permanente reconsidération de l'organisation de la société et par l'orientation de celle-ci, inspirées par des objectifs d'égalité et d'épanouissement pour tous les peuples, de quelque nation ou continent qu'ils soient. □

"The single most important factor
in improving the health environment of the poor
is to provide clean water . . ."
Robert S. McNamara

"Le facteur déterminant,
lorsqu'il s'agit d'améliorer les conditions
sanitaires des défavorisés,
est de leur fournir de l'eau pure . . ."
Robert S. McNamara

Memphis, Egypt /Memphis, Egypte



Kashan, Iran /Kachan, Iran

BY ANDREW N. LIGALE

Housing Problems in Urban AFRICA

There is a considerable lag between technological progress made in the fields of science and engineering and those made in housing. Man has sent astronauts to the moon, but has not been very successful in devising housing cheap enough for the ordinary urban dweller. The situation is even worse in the developing countries of Africa where technological advancement is on a much lower level than in the developed countries. In Africa, the problem has been compounded by an uncontrolled rural to urban migration, especially following World War II, and an economic underdevelopment which has been unable to absorb the impact of this migration phenomenon.

In most of the developing countries of Africa the problems of housing in the urban areas are similar. They differ only in intensity depending on the degree of urbanization and the level of economic development. The ideas given in this paper, however, are based on experiences in Kenya.

The Dimensions of the Problem

Population Drift Toward Urban Areas

It is a well-known fact that Africa is the least urbanized continent and has, in the past, had less urban problems in comparison to other continents. During the last two decades, however, population drift from rural to urban areas has gained momentum. In 1950, a United Nations population projection indicated that only 14 per cent of Africa's population was living in urban areas. This has increased to nearly 25 per cent at the present time, and it is projected to reach nearly 40 per cent by the turn of the century.

A wide inequitable distribution of income between the urban and rural areas is the chief cause for this population drift. The rural dweller, whether unskilled school leaver or a subsistence farmer, is normally attracted toward urban areas with the false or real hope of better employment prospects and a higher income. The bulk of these urban migrants are untrained and have, therefore, a low level of income. The immediate result of this urban migration of rural families is a strain on the social services, especially housing, in the receiving urban centres, and most of the local authorities are unable to provide cheap houses to accommodate such migrants.

Urban/Rural Population in Africa for the Years 1950-2000 (in millions)*

	Urban	Rural	Total	Per cent urban
1950	30	187	217	14
1960	48	221	269	18
1970	77	268	345	22
1980	125	332	457	27
1990	203	413	616	33
2000	320	498	818	39

*Source: U.N. Urban and Rural Population, 1950-2000. Pages 14-17 ESA/P/WP.33/RW.1; September 22nd, 1970.

The newly-arrived migrant will normally first look for accommodation with a relative or a friend. Should this fail, he will move into slum housing in the already crowded squatter section of the town. If both these options fail, it is not unusual to find a migrant family providing a makeshift shelter for itself in any suitable open space within the centre, thus swelling the number of squatters already existing in the town. Overnight houses of low sanitary standard spring up in unused spaces in the peri-urban areas, and attempts by town authorities to pull down such unsanitary housing are thwarted by new ones springing up elsewhere. In certain urban centres, the population of the squatters sometimes reaches a proportion that they become a political force to be reckoned with.

Low Income

The average income per person in most of the African countries is very low, barely over $110 a year. At this level of income, a family cannot afford any reasonable standard of housing, and squatting becomes the only way through which a low-income family can get a house which fits its pocketbook.

In Kenya more than 83 per cent of urban workers earn less than $150 a month. This means that the bulk of urban workers cannot afford any type of housing renting or costing more than $30 per month. Only those able to secure subsidized housing could expect to live in a house of reasonable standard. For those who cannot, the only choice is accommodation in crowded quarters or within slum areas. It is not uncommon to find room occupancy in some urban areas exceeding five persons per room.

Cost of Construction

In most of the African countries, not less than 60 per cent of building materials used in any one housing project are imported. This factor contributes greatly to the high cost of building urban houses. The need to do more research into the use of local materials as a substitute for the expensive imported components need not be overemphasized here as it would lower the cost of construction greatly.

Housing Standards

The building codes used by many urban authorities in Africa have been directly copied from those of the colonizing European countries. Most of these codes are not sensitive to the housing needs in African countries as they are characterized by a high standard of material required for every urban house. This high standard makes provision of housing a rather costly task which, in turn, restricts the number of houses that can be put up by the government, urban authorities or individuals.

Some African countries are beginning to sense the need to relax these codes and have recognized that a lower standard of building material is an important component of the site and service concept. In Kenya, for example, local authorities have adopted bylaws which permit building of houses in certain parts of urban areas using materials of lower standards, such as houses built of traditional mud and wattle.

Lack of Housing Funds
Urban housing is just one of the many national priorities which compete for funding from limited sources. It may be argued that by giving priority to projects which aim at improving the income of the rank and file in a particular country that housing problems would automatically be solved. This argument cannot be valid because even with reasonable wages, the bulk of workers (especially in the urban areas) will still have incomes too low to allow them to purchase adequate housing on the open market.

There are only a few private housing firms in Africa willing to venture into low-cost housing development. The few existing private financial institutions usually concentrate on mortgage housing only, while banks which lend money for residential development often charge high rates and only lend to individuals with good credit in a particular bank. An average urban dweller with meagre savings cannot, therefore, hope to own a home through loans from financial institutions such as banks. Even institutions like labour unions and workers' savings and credit societies have been reluctant to initiate housing projects for their members because the concept seems alien to their normal functions.

The tide of urban migration is so great that individual town authorities are unable to build sufficient housing from their diminishing and meagre financial resources. Some well-developed local authorities, like Nairobi City Council, sometimes raise finances for housing through an issue of municipal stocks or will negotiate for loans from developed countries. But the major source of funding for low-cost housing comes from the central government through its own resources or loans from overseas.

There is a need to encourage private firms in Africa to participate more vigorously in low-cost housing projects through some form of guarantee by the central government as is done in some developed countries. Otherwise, the gap between housing need and demand in African urban areas will never be narrowed.

Lack of Research and Manpower
A society cannot evolve sufficiently if the role of research in any field is minimized. There is a tendency for some developing countries to regard research as a luxury only to be given attention and funding when there is a surplus of funds.

In many countries of Africa, there are abundant local materials which could be used for construction of cheaper housing; but, they remain unused because of lack of research into the ways of processing them for building use. Instead, many countries choose the easy way out and yield to the temptation of importing foreign materials under the pretence that they are better.

There is an urgent need to set up building research laboratories in different countries of Africa where indigenous building materials can be tested and developed to replace their imported counterparts. This activity would also stimulate the growth of local building industries and thereby reduce the cost of construction considerably.

In countries where such research centres exist, the lack of local manpower qualified to carry out the research is often common. In fact, the lack of skilled manpower is experienced in all sections of the building industry, and implementation of some housing schemes are delayed because of this factor. The need to train skilled manpower at every level is urgent. There is a critical need to overhaul the educational system in nearly every African country to move from mere academic orientation to a more technically based system. The building industry will stagnate in any country which does not fulfill this basic requirement.

Scarcity of Public Land
One of the major factors contributing to the high price of housing is land cost. The lands surrounding most of the urban areas of Africa are the targets of speculation and hence are very expensive. The practice of national governments or local authorities of acquiring land on a piecemeal basis for specific developments has not helped in bringing land cost down. The practice has, in fact, encouraged land speculation to grow in intensity causing asking prices to constantly spiral up.

The resulting high cost of land has left many local authorities with no sufficient land at their disposal for the expansion of housing programmes. While some countries have prepared five-year programmes for housing development, such programmes are not usually matched by similar action in urban land acquisition. Without sufficient public land, implementation of any housing programme becomes very difficult. There is a need to prepare comprehensive land acquisition programmes for every urban centre and also to make available sufficient funds to implement the programmes. This would enable the artificially high cost of urban land to find its true market value and thus lower the cost of urban housing.

Serious consideration should also be given to the expansion of services in areas programmed for urban expansion. There are many cities and towns in Africa where there is sufficient public land for urban housing expansion but, owing to the absence of basic services such as water, sewerage, electricity and roads within the public land, expansion of urban housing is completely curtailed.

Kenya's Response

Create the Machinery
Central governments of various countries will continue to play a leading role in finding solutions to urban housing problems through their policies, planning strategies and programmes. Many African countries have recognized this by setting up ministries of housing and other financial

institutions whose functions are to finance and develop houses for workers.

In Kenya, the need to set up a body for housing development was recognized as early as 1943 when the Legislative Council passed a Housing Ordinance which created the Central Housing Board. The function of the Board was to administer a housing fund allocated by the Council. It could make grants and loans to local authorities to erect approved housing schemes, and it could also provide loans to individuals to build their own houses.

The Board was replaced by the National Housing Corporation in 1966. In addition to granting loans to local authorities and individuals, the Corporation was authorized to build and invest in housing directly. Since its formation, it has played a leading role in housing activities in Kenya under the supervision of the Ministry of Housing which normally provides funds and policy for its building activities.

The Housing Finance Company of Kenya was also formed later with the help of the Commonwealth Development Corporation. Its basic function is to provide mortgage financing to individuals, local authorities and other housing institutions or firms. It finances medium to high-cost housing. There are other private mortgage institutions which mainly concentrate on medium and high-cost housing schemes.

Assessment of urban housing needs is carried out by the Ministry of Housing, and it is upon the Ministry's assessment that the National Housing Corporation centres its activities. It is encouraging to note that the Corporation's major housing activities are concentrated in low-cost housing, because this is where the greatest need exists. More than 80 per cent of the financial allocation by the National Housing Corporation in the next three years is earmarked for low-cost housing. The bulk of this allocation will be used to advance loans for land and materials to plot owners, site and service schemes and rental units in the urban centres of Kenya.

Redirect Migration

Problems of urban housing cannot be tackled in isolation from other urban problems. As noted earlier, one of the major contributing factors to urban housing problems is the intensified migration of people from rural areas to the major towns of Africa. The migrants tend to gravitate toward primary cities and toward one or two other important towns. The resultant strains on the social services of the receiving towns need not be overemphasized.

In Kenya, most of the migrants from rural areas tend to gravitate mainly toward Nairobi, the capital city, Mombasa, the chief port, and to a lesser extent toward the towns of Nakuru, Kisumu and Thika where most of the industrial and other economic activities are centred.

It is the policy of the Kenyan government to encourage a limited amount of decentralization of industries toward designated principal towns in order to lessen the volume of migration to Nairobi and Mombasa. A schedule of growth centres has also been prepared covering all districts of the Republic, and public and private investment will be directed into these centres in order to provide an equitable distribution of services, amenities and economic opportunities in the rural areas. In addition to decentralization to towns, the 1974-78 housing programme also makes provision for activity in many of the larger centres included in the schedule. This is one of the strategies adopted by the government to stimulate development in the rural areas.

Develop the Expertise

It has been mentioned earlier that the lack of skilled manpower is one of the constraints in the provision of urban housing. Kenya is trying to tackle this problem from the grass-roots level. Village polytechnics are being established all over the country to train primary school leavers in many skills relevant to housing and other industries. Vocational centres are also being established in some towns for medium-level skills, and several technical high schools and two polytechnic colleges exist for training medium-level manpower. A technical teacher training college has also been started with the help of Canada to provide teachers for these technical schools and vocational training centres. The positive effect of these efforts on the housing industry will only be felt later.

The challenge that the problems of urban housing pose to planners, administrators, researchers, financiers and builders is great but not insurmountable. What is needed are concerted efforts by all to generate solutions. Town dwelling is one aspect of human settlement that will remain with us. Our goal should be to provide the average urban dweller with a house that is both comfortable and within his income. □

BY R. GOPALASWAMY*

Human Settlements in ASIA

Beginning in Stockholm and culminating in Vancouver, the international community, meeting in world conferences, has taken the first total view of the needs of man, both as an individual and a social being. They will have looked at the means of preserving this earth, this one and only home of man, and locating him in settlements which are in symbiotic relationship with nature and which uphold the dignity of man and improve the quality of his life.

The result has been a call for well-orchestrated action by the sovereign nations of the world. Their problems will vary in facets and magnitude and thus will require solutions tailored to meet the requirements of each situation. Yet, with cooperative endeavour and will, nations can learn from one another's experience and improve the quality of life for man as a whole.

The Asian Profile

The Asian region which contains 55 per cent (2.2 billion) of the world's population and 73 per cent of the population of the less developed world, naturally, poses a real challenge and provides new opportunities for the development of man and his habitat.

Asia presents a mosaic of human settlements. In terms of area, population and polity of nations, in forms of human settlements, in the variety of peoples and their cultures, Asia presents a unique blend of various forms of human habitat.

Asia lives in villages, and its rural settlements house the poor masses. The dispersal and intense relationship with nature in these settlements contribute to their sustenance and enrichment in the quality of life. There must be a silent revolution whereby the huge number of rural settlements in this region are improved and modernised.

An attempt is made in this paper to generalize the problems of human settlements in the countries of the region (excepting Japan), to draw largely upon the experience of India with its different and varied solutions and to indicate possible lines for future pursuit.

Population Growth

Population growth rates vary from 1.7 per cent per annum in China and Republic of Korea to 3.7 per cent in Malaysia. Population distribution shows an equally varied picture: urban population ranges from 4.3 per cent in Nepal to 41 per cent in the Republic of Korea, and within each country, it reveals a skewed distribution, with the larger cities growing faster than the smaller ones. This imbalance in distribution of population is also present among the regions of each country.

The World Population Plan of Action called upon each country to have a national population policy consistent with its resources. Several countries of the region have already adopted family planning programmes aimed at reducing the population growth rate.

Indian experience in family planning reveals that, apart from motivational factors, some positive measures for reducing population growth rate are called for. In April, 1976, the country adopted a National Population Policy aimed at reducing the population growth rate to 1.4 per cent by 1984. This is sought to be achieved by a scheme of incentives and disincentives, fixing the responsibility on the state governments, local institutions and organizations and individual families to adopt a small family norm as a goal. The state governments are also given freedom to adopt compulsory measures for one-time birth control methods, like vasectomy or sterilization, depending upon the local situation.

A determined beginning has thus been made toward achieving 'zero' population growth during the beginning of the next century. An estimate mentions that under favourable conditions, even with two children per family as the norm, the population would touch about 1.4 billion before attaining 'zero' growth. The National Population Policy, therefore, requires faithful implementation, evaluation and review in the years to come. Political will and commitment by the nations of the region to adopt serious measures to reduce the growth rates in the next 25 years are called for to sustain better living conditions for the high levels of population that will be reached in the first half of the next century.

Population Distribution

Population generally aggregates in already densely populated regions and cities, leading to ecological imbalance, environmental degradation and economic and social problems. Yet, such deterioration is not unavoidable. Science and technology have provided the means for harnessing nature, for reclamation of land, provision of irrigation facilities and prevention of floods, for identification of new resources for exploitation, for low energy consumption in settlements, and generally for increasing the production and productivity of each individual. The Dandakaranya Project, the Rajasthan Canal scheme, the new administrative and industrial towns and other settlement schemes in India prove the feasibility of canalizing population and making people assets in national development.

In India, nearly 300 to 400 million people will require settlement in suitable locations in the next 25 years, and a large share of this will be in rural settlements. This will also be the pattern in other countries of the subcontinent and those of Southeast Asia.

Where and how the additional population of this order will be settled in the next 25 years should be a matter of serious national concern. The Philippines have set up a Human Settlements Commission charged with such a task. Many other countries have some strands of policies of sectoral development impinging on settlements, but they remain to be woven into a fabric for channelizing population into a network of settlements.

*The views expressed by the author are not necessarily those of the Indian Ministry of Works and Housing.

Rural Development

Asian masses largely depend on agriculture for their living and are underemployed due to pressure on land and the lack of intensive agriculture and agro-industries in the rural areas. Migration results from inadequate rural opportunities and inequities in terms of social consumption. This leads, on the one hand, to rural debilitation and on the other to congestion and overcrowding in major cities resulting in semi-urban pockets within these cities which have subhuman conditions and which segregate the migrants, presenting an affront to human dignity.

The solution lies in resource development in rural areas. The community development programme in India attempted to involve popular participation at local levels to improve certain standards of rural life; but, without a main thrust in regard to improvement of rural incomes through modernization of agriculture, the movement toward rural uplift could not succeed. It is only during the last ten years or so that agricultural development in India has revealed how modernization of agriculture (with inputs of the latest advances in science and utilization of appropriate technology in agricultural production techniques) would be feasible without alienating the population from their age-old occupation and habitat. In fact, the "green" revolution has proved to be the means of stabilizing and strengthening the rural population and giving them the vitality needed to make them full and effective participants in national development.

The experience in Punjab and Haryana States in India indicates how the rise in agricultural incomes can lead to an improvement in the quality of life for the rural masses, a change in their outlook and a realization of their aspirations. Land reforms, strengthening of credit facilities, application of appropriate technology and a network of agro-based rural industries are the basic tools of self-supporting agriculture and consequently self-generating rural development. Recycling of waste, creation of social forests, utilization of biogas plants and of solar energy and tapping of other renewable sources of energy make self-sufficient rural communities possible at less cost. The integrated rural development strategy contained in India's March 1976 Budget documents outlines a package of measures intended to achieve this objective.

The rural settlements in Asia give the masses a harmonious relationship with nature and its beauty, and the basis for integrated social development imbibing the heritage and culture of the society. Yet, beliefs and customs that inhibit future growth need to be removed by mass education. Community organizations in China are reported to have successfully achieved this goal. Newspapers, radio and television can help in this process; however, political will, social movements and village leadership require orientation to achieve this objective.

Urban Development

Granted that Asian development depends on the strengthening and improvement of rural settlements, one cannot neglect the irreversible process of urbanization in many countries of the region. The causes of migration are well-known, although they vary in emphasis and degree from country to country.

About 25 to 40 per cent of the urban population lives in human settlements which defy any concept of human dignity. Such settlements bring within the urban area the rural poor who are the neglected, but important, components of the urban system. While economically they get involved in the urban dynamics, they are isolated, with no rights in the city. Slums and squatter settlements are viewed by the urban elites as eyesores, yet the settlers therein are required by the elites for cheap labour and for the growth of the city. Thus, in the urban areas, there is a sharp contrast between rich and poor. Traditions and customs become diluted, and the urban poor have no chance of integration into the new urban values. The resulting social tension leads to urban chaos and disorder.

The city size ranges from the smallest town administered by a township committee to the largest size of a megalopolis like Calcutta or Bangkok administered by multiple agencies requiring a metropolitan government, as it were, to plan, coordinate, supervise and fund their workings. Administration of Asian cities with large populations of rural migrants with incomes below the poverty line requires appropriate settlement planning for locating the migrants in suitable areas and enmeshing them with the developing urban system. The economic and social costs could be reduced if urbanization is channelized by strengthening small and medium towns and cities. Establishment of "growth poles" with different levels of services to the surrounding region is part of the network of settlements.

Urban Land Control

Land legislations to control concentration of valuable land in the hands of a few and to prevent speculation in such areas become necessary. A major policy measure in this regard in India is the recently enacted Urban Land (Ceiling and Regulation) Act. This Act, a part of the Prime Minister's new economic programme, not only imposes a ceiling on vacant land held by individuals, families, companies and incorporated associations of individuals, but also contains suitable control mechanisms for regulating transfers of urban property in order to prevent speculation and the construction of luxury dwelling units. These measures are to be supported by a mix of other policy measures, mainly fiscal in character, to dissuade holding of vacant land within the ceiling limit without any use, and also tap unearned incomes accruing out of development of land or conversion of land use. Thus, the physical resource of land has been brought under social control.

The success of authorities in Singapore and Hong Kong in providing shelter to

the poor in the cities indicates the possibilities for similar ventures by other metropolitan and city authorities. But, limitations exist in many countries of the region because there is no control of migration into the cities. Sometimes the very act of providing facilities to the poor attracts more to that area. But, neglect cannot avert this inflow and hence the need for planned efforts designed to provide a healthy environment to locate the poor in urban areas.

Social Planning

The slum improvement and sites and services programmes, especially for the poor, undertaken in Pakistan, India, Indonesia and the Philippines, indicate how man can be located in an environment which will integrate him into the urban community without loss of individual happiness and identity. Elitist approaches to physical planning can be replaced by social planning concepts. If planned with open spaces, minimum community facilities and with an eye for environmental quality of settlements, Asian cities can be devoid of multistoreyed high energy consuming towers of human pigeonholes, but could still be garden cities vibrating with life and cohesion. Housing need not be measured in terms of square feet of covered built accommodation made of brick and mortar conceived of as durable materials. Rather, housing has to be envisaged as a total concept of shelter (whatever the type and use of material in the construction), including physical and social services, and above all, seen as a place of living for social activity with human dignity. In regard to physical construction of housing, there is no doubt scope for adapting and improving local technology and materials so that the masses can be motivated to do self-help housing in planned areas.

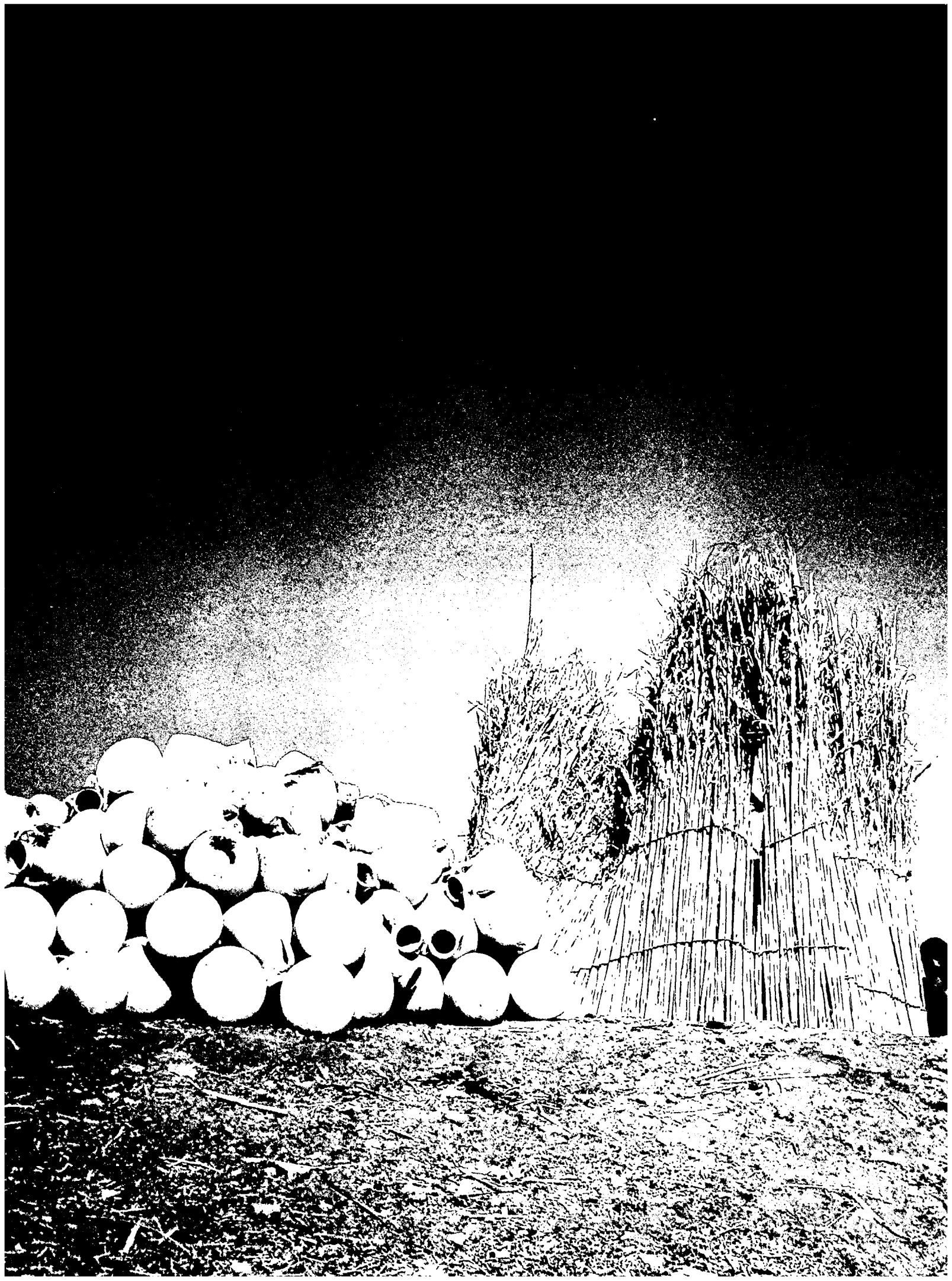
Uniquely Asian Solutions

Asia is poor and cannot imitate the richer nations. It must not set standards which it cannot attain in the near future. Asia can improve itself only step by step. With population growth even at a reduced rate, Asia has to run in the path of economic development merely to stand still. Asia cannot, therefore, afford to fritter away its resources. Manpower has to be utilised to the fullest advantage replacing mechanical power. This requires organization of society and demands political will and leadership.

The problems of some of the governments in this region are so overwhelming that advice, however well-intentioned, from others about policies, standards and models of development has to be ignored. The fact is that the peoples of this region became free to decide their development only recently, and they started with a handicap—the worldwide phenomenon of the dynamics of population growth. This is the crucial reason why industrialization and urbanization which became the vehicle of development in the industrialized countries in the last hundred years cannot be the solution to the problems of the Asian region.

The Asian countries can ill afford to settle communities at tremendous costs. Rather, more and more of the diverse communities must be settled in surroundings which are low-cost, yet aesthetically pleasing and productive. Nature is their precious bounty. They will have to depend on it and exploit it without harming the ecosystem. It is this design for living that the strategy of human settlements in Asia will have to emphasize.

Asian rural habitat must continue to be the sheet anchor of transformation and improvement in the quality of life. The Prime Minister's new economic programme in India gives a major thrust to achieve this change. Yet the problems of urbanization in Asian cities cannot be ignored as they house, in terms of population, a large section of rural poor migrants needing attention. Innovative approaches are needed to strengthen the rural-urban continuum and thus enhance the richness and variety of settlements, making them mutually dependent and beneficial. □



Urbanisation délirante de l'agriculture

— en pays dits sous-développés et développés

PAR
RENÉ DUMONT

Des débuts encore modérés

La grande vague d'urbanisation s'accélère au XIXe siècle, en Europe et ensuite aux Amériques, du Nord et du Sud. En Europe et en Amérique du Nord, elle correspond assez bien au développement de l'industrie et des services; de sorte que ces nouveaux urbains, venus des campagnes proches ou lointaines (émigrants du Nouveau Monde) trouvent généralement un emploi; le chômage courant, lors des dépressions économiques cycliques, n'était pas un phénomène permanent. Le pouvoir d'achat largement accru des villes européennes permettait d'écouler plus de produits alimentaires; même s'ils venaient parfois de loin, comme en Angleterre. Et ce développement urbain s'accompagnait de progrès agricoles rapides, permettant de ravitailler plus largement une population urbaine croissante, avec un nombre d'agriculteurs qui allaient en diminuant. Certes, bien des logements étaient insalubres, le confort fort peu répandu. Et les paysans débarquant en ville y trouvaient d'abord des situations très modestes, vu leur insuffisance d'instruction, leur manque de formation professionnelle.

Bien des villes restaient en partie rurales, et d'abord la plupart des agglomérations modestes. Les autres étaient souvent entourées d'une ceinture verte de cultures maraîchères, fournissant à peu de distance la majorité des légumes et des fruits; et même du lait et ses dérivés, denrées périssables, difficiles à transporter loin avec les moyens de l'époque. En Europe centrale et méridionale, de la Hongrie à l'Italie du Sud, certaines villes notables, ayant parfois plusieurs dizaines de milliers d'habitants, comptaient en ville même des milliers de petites exploitations agricoles, cultivant des champs – cette fois souvent des céréales – parfois fort éloignés: je pense à Kecskemet en Hongrie, et aux «villes rurales» de Calabre et des Pouilles.

Toutes les villes abritaient des services directement liés à l'agriculture, fabriquant et réparant les harnais et colliers, les chariots et charrettes, les divers outils à main ou à traction animale du cultivateur. Celui-ci venait vendre en ville les produits de sa ferme, livrait les grains à son meunier, ou à son propriétaire s'il louait ses terres. Il apportait au marché les oeufs et les volailles, le beurre et les fromages, les légumes et les fruits, directement de la ferme, sans intermédiaire. Il faisait parfois du troc avec son épicier, payant avec ses oeufs ses modestes achats de sel, d'huile ou de pétrole, encore à la fin du XIXe siècle. Il livrait enfin le foin et l'avoine des chevaux assurant les transports urbains, et la nourriture des vaches gardées dans l'intérieur des villes, pour leur fournir du lait frais. Comme les légumes, les vignobles, jusqu'au XVIIIe siècle, se rapprochaient de Paris, même en climats moins favorables à la vigne ou ne s'écartaient pas trop des ports d'exportation, comme Bordeaux, ou des transports économiques par eau, comme l'Auxerrois.

Les villes tentaculaires des pays riches

Le développement des chemins de fer, puis des transports routiers rapides, et enfin aériens, a bouleversé la géographie des aliments périssables qui peuvent désormais, avec la réfrigération, venir de loin dans de bonnes conditions. Nous mangeons en plein hiver des haricots verts cueillis en Haute-Volta; mais les commerçants et transporteurs reçoivent la plus grosse part du prix de vente. Les villes tentaculaires de la seconde moitié du XXe siècle s'étendent abusivement sur les plaines environnantes, généralement les plus riches. Le Japon perd chaque année, du fait des villes et de leurs prolongements (aéroports, autoroutes, parkings, rail, loisir et sports...), près de 1% de son territoire agricole. A ce rythme, il n'aura plus de terres à cultiver dans un peu plus d'un siècle! Et déjà sa terrifiante «conurbation», qui défie le bon sens, de Tokyo à Kobé, connaît une pollution atmosphérique parfois difficile à supporter. Et les campagnes japonaises n'ont plus guère d'oiseaux.

La France, que l'on présente souvent comme une terre d'équilibre et de raison, perd annuellement 0,5% de ses terres agricoles, et souvent les meilleures. Il nous faut donc repenser des villes plus accueillantes, donc d'abord plus modestes. En placer le plus possible sur les collines et basses montagnes moins fertiles, souvent abandonnées par l'agriculture, comme les terrasses de culture des Cévennes ou les «restangues» de Haute-Provence. Orientées de préférence au midi, on en ferait des «villes solaires», économes en énergies non renouvelables. Faciles à ravitailler par les campagnes moins éloignées, elles nécessiteront aussi, vu leur taille plus réduite, bien moins de transports intérieurs.

Les géographes du Québec et d'Ottawa ont étudié de près leur plus grande agglomération, celle de Montréal, qui s'étend de plus en plus sur les riches plaines du sud, de climat moins froid, et surtout où il est facile, plus économique de construire. Vision à bien court terme, qui ne tient nul compte des besoins des générations à venir, non représentées politiquement, malheureusement. Car si l'on étudie les possibilités d'intensification agricole du Québec, surtout par le maïs (blé d'Inde) et les légumes, on voit que la plus grande partie du terroir favorable à cette haute intensification est précisément cette plaine sud de Montréal jusqu'à la frontière des Etats-Unis. Outre un meilleur climat, on y trouve souvent des terres très fertiles. Sur les pentes sud des collines approchant les Laurentides, on trouverait des sites de villes secondaires beaucoup plus agréables, encore entourées de forêts, dont la productivité agricole est fort inférieure, presque nulle. Et bien des terrains où l'on espère bâtir sont achetés par des spéculateurs, escomptant de fortes plus-values. En attendant, ils restent en friche, et sont ainsi perdus pour l'agriculture, parfois des dizaines d'années avant d'être utilisés par la ville.

Mais la vraie solution réside dans un ralentissement, sinon *un arrêt de cette urbanisation catastro-*

phique. Ceci comporte deux éléments de base. Les pays riches, gaspilleurs des ressources rares et non renouvelables de notre «petite planète», devraient vite ralentir – c'est fait – puis arrêter leur croissance démographique. Et ralentir – là ce n'est pas fait – leur exode rural, leur concentration urbaine. En décentralisant dans les villes petites et moyennes, sinon dans leurs villages, la plus large partie possible de leurs *industries,* dont beaucoup restent économiques à plus petite échelle. Et en y renvoyant aussi une large partie des services. L'utilisation de l'énergie solaire dont les centrales, bien plus modestes que les nucléaires, pourraient être rentables dans une dizaine d'années si on y consacrait autant de recherches qu'au nucléaire, faciliterait une telle décentralisation.

La ville géante, les gratte-ciel de 400 mètres de haut, gaspillent inconsidérément nos ressources rares d'énergie et de métaux, et nous font des villes invivables, de Los Angeles à Tokyo. Il est grand temps de s'arrêter et de chercher des villes moyennes tout en développant les transports collectifs, dans et autour de la ville, aux dépens de voitures individuelles qui sont en train de faire capoter notre civilisation.

Les campagnes répulsives en pays pauvres

Toute différente se trouve la situation de la grande majorité des pays sous-développés. Les campagnes s'y trouvent généralement en situation très difficile; l'agriculture n'y progresse guère, sauf d'heureuses exceptions (Taïwan, Malaisie, Côte d'Ivoire, partie du Mexique). Il ne s'y réalise pas souvent de «révolution agricole», de progrès rapide, comparable à celui de l'Angleterre au XVIIIe siècle, où elle a précédé et partiellement financé et soutenu la révolution industrielle. Le paysan d'Afrique sahélienne n'adopte que trop lentement la traction animale de ses petits et faibles boeufs. Les cultures d'importation, arachide et coton, y contribuent, en réduisant les jachères, à démolir les sols.

En Asie méridionale, où dominent la propriété privée de la terre et le surpeuplement rural, la proportion de paysans sans terre, ou ne disposant que de surfaces tout à fait insuffisantes pour les nourrir et les employer correctement, est déjà élevée et ne cesse d'augmenter. Le petit paysan, même s'il possède assez de terres, reste trop exploité par son propriétaire (rente foncière égale à la moitié de la récolte brute), par le commerçant, l'usurier, sinon même le fonctionnaire corrompu.

S'il va en ville, ce paysan se rend compte qu'une *minorité privilégiée* peut y jouir de tous les conforts: commerçants et fonctionnaires, industriels ou politiciens, professions libérales, etc., vivent à l'occidentale, la civilisation de l'auto privée, si coûteuse en pays pauvres. En prélevant, pour ce faire, des impôts excessifs sur les paysans, notamment par les taxes de sorties sur les produits agricoles d'exportation. Ce qui empêche le cultivateur d'accumuler les plus-values indispensables à la modernisation de son agriculture, et l'Etat de développer l'industrie. La ville envoie certes aux paysans l'école, un message de caractère urbain. Et les paysans y envoient leurs fils, dans l'espoir qu'ils pourront un jour pénétrer, eux aussi, au sein de la minorité privilégiée.

Privée par la répulsion des campagnes et l'attrait des villes de ses meilleurs éléments, l'agriculture stagne. Occidentalisés, les riches des villes, à l'imitation des «experts» blancs, font venir des pays développés une forte proportion de leurs aliments, privant des débouchés correspondants leurs paysans, ceci surtout en Afrique tropicale; et le riche Gabon délaisse totalement son agriculture. La population croissant plus vite que les aliments, les pays du Tiers-Monde, appelés aussi pays du «capitalisme périphérique», importent chaque année plus de céréales et autres aliments. Comme la plupart d'entre eux, dépourvus de ressources minérales, ne peuvent les payer, les voici qui s'endettent et se placent en position de dépendance économique, donc politique vis-à-vis des grands exportateurs de grains, ceux d'Amérique du Nord.

Les fils de paysans instruits, s'ils restaient à la campagne, pourraient organiser les coopératives et les syndicats en une sorte de *contre-pouvoir paysan,* pour lutter contre les abus des minorités urbaines qui les exploitent. Cependant, beaucoup préfèrent partir en ville, y tenter leur chance. Mais tous n'y accèdent pas à la richesse, loin de là. L'industrie ne se développe pas au rythme d'arrivée de cette main-d'oeuvre d'origine rurale. Le matériel trop moderne qu'elle utilise le plus souvent exige trop de capitaux et de main-d'oeuvre très qualifiée – denrées fort rares dans ces pays – et pas assez de travail moins qualifié – qui est, lui, fort surabondant. Alors voici les grandes villes des pays pauvres composées *de deux mondes bien distincts* et parfois éloignés l'un de l'autre, comme à Lusaka: les résidences entourées de beaux jardins, hérités de la colonisation anglaise et les «villes» africaines des travailleurs noirs. L'apartheid est certes plus prononcé et légalisé en Afrique du Sud et en Rhodésie, mais il existe de fait à peu près partout, des médinas de Dakar aux «slums» de Calcutta, des barrios de Caracas à ceux de Lima et aux favellas de Rio.

Les Français les nomment bidonvilles, de Casablanca à Tunis. Là dominent le chômage et le sous-emploi, la prostitution, la mendicité, même la délinquance juvénile; et toujours la sous-alimentation plus ou moins prononcée. Certes beaucoup trouvent de petits métiers, quoique les taxis refoulent les rickshaws, les cyclopousses... Un secteur tertiaire trop gonflé n'est pas directement productif, ne constitue pas le signe d'un développement économique réel. Les différentiations sociales deviennent terribles, tant entre pays riches et pauvres, qu'à l'intérieur même de ces derniers.

Le monde va manquer de phosphates, redoutable menace pour l'avenir de notre agriculture, dès la fin du siècle prochain, nous disent certains experts. Au lieu d'envoyer au fond des mers (où les phosphates

seront difficilement récupérables), par le tout-à-l'égout se déversant en rivières, tous les déchets organiques des villes, et d'abord les excréments humains qui sont riches en phosphates et en humus, il faudrait les recycler. La majorité des villes chinoises procèdent au ramassage matinal et quotidien des excréments et urines. La ville nouvelle devra trouver, elle aussi, divers moyens de les ramener aux champs. Des paysans chinois, s'ils étaient présents, iraient d'eux-mêmes déblayer les montagnes d'ordures des rues de Calcutta, vu leur valeur fertilisante. Les vidanges se vendent en Chine relativement cher: on sait les apprécier à leur juste valeur!

Freiner l'urbanisation

De nombreux motifs incitent à retenir au village ceux qui risquent surtout de devenir chômeurs en ville. Il faudrait leur trouver du travail aux champs, d'abord en intensifiant l'agriculture, pour réduire le déficit alimentaire. Dans toute l'Asie méridionale, les travaux d'aménagement foncier et d'abord de maîtrise de l'eau (irrigation, drainage, protection contre les inondations...) suffiraient à occuper quelques années durant au moins, la totalité des chômeurs et sous-employés des villages. Je l'ai prouvé au Bangladesh et à Sri Lanka (Ceylan). La maîtrise de l'eau, en généralisant la double ou la triple culture par an, augmenterait l'emploi avec la production alimentaire, en attendant qu'on bloque la terrifiante explosion démographique d'Asie du Sud.

Il faut ensuite, comme en Chine et en Indochine, renvoyer au village des millions de chômeurs ou même de «jeunes instruits» de la ville, pour qu'ils y organisent la production agricole et y développent un artisanat. Celui-ci pourrait ensuite se moderniser progressivement, à mesure qu'il saurait fabriquer, donc réparer l'équipement, en petite, puis moyenne industrie. Ceci est spécialement valable pour tous les biens de consommation, de l'alimentation aux textiles, où les technologies intermédiaires sont généralement mieux adaptées à la situation économique réelle.

Pour accroître les débouchés de l'agriculture autochtone, il faudrait d'abord interdire ou taxer très fort les produits alimentaires importés qu'il est possible de produire sur place, comme les conserves de légumes et de fruits, les boissons, alcoolisées ou non. Le coca-cola est le type de production le plus nocif au développement: on pourrait produire sur place des jus de fruits moins coûteux, surtout compte tenu de leur valeur alimentaire très supérieure, de leur valeur hygiénique indiscutable.

Que la ville n'exploite plus la campagne!

En Amérique du Sud, bien des grands propriétaires absentéistes vivent encore largement, en ville, de leurs rentes foncières d'origine rurale, sans généralement contribuer au progrès agricole. Au Togo, les offices nationaux d'exportation des produits agricoles prélevaient, ces dernières années, 60% du produit des ventes à l'étranger des trois grandes cultures d'exportation (café, cacao, coton), n'en reversant que 40% aux producteurs! Ceux-ci ne peuvent donc modifier leurs systèmes de culture pour pouvoir répondre à des besoins accrus sans ruiner les sols et notamment associer l'agriculture à l'élevage.

Le drame le plus effroyable se prépare en Asie méridionale, où le second rapport au Club de Rome nous annonce, dans les cinquante prochaines années, des centaines de millions de morts de faim, des enfants et adolescents, de 0 à 15 ans, si nous ne savons y maîtriser l'explosion démographique et y propulser plus rapidement le développement agricole. Tant que persistent le métayage, l'usure, la spéculation sur les grains, la corruption sous toutes ses formes, le pauvre paysan reste exploité par les privilégiés urbains associés aux petits potentats des villages, eux-mêmes liés aux éléments exploiteurs de la ville.

Le problème de la faim dans le monde se trouve ainsi étroitement lié aux relations villes-campagnes, à la domination abusive des *minorités privilégiées urbaines* (tant dans les pays capitalistes que dans la plupart de ceux qui se disent socialistes) sur les producteurs agricoles, les vrais prolétaires des temps modernes, les paysans des pays tropicaux. Essayons de dégager, non des solutions – bien des données des problèmes évoqués nous sont insuffisamment connues – mais quelques perspectives pour des villes de demain qui permettraient, nous l'espérons, de meilleures garanties de survie de l'humanité.

- Des villes plus modestes, moins surpeuplées, enfin capables d'économiser les ressources rares, non renouvelables, surtout pour l'énergie et les métaux, et de respecter la nature autour d'elles.
- Faisant plus appel au recyclage et aux ressources renouvelables, surtout d'origine végétale (bois, alcools, algues) ou venant du soleil (énergie) et des océans.
- Laissant à l'agriculture la grande majorité des terres fertiles, se localisant de préférence sur les sols plus médiocres, plus minces, plus en pente.
- Réalisant une meilleure répartition des pouvoirs entre la ville et la campagne, pour que les décisions essentielles émanent de pouvoirs plus également répartis.
- Favorisant donc un enseignement rural qui permette de moderniser écologiquement l'agriculture et retienne les jeunes à la campagne, en leur y assurant un volume d'emploi convenable, tant agricole qu'artisanal, industriel ou de services.
- Donc accordant les crédits nécessaires à l'intensification agricole, au contrôle de l'eau et des sols par la lutte contre les érosions et le reboisement des terres non utilisées par l'agriculture proprement dite.
- Répartissant judicieusement les industries nouvelles et les services entre les villes, les bourgs et les villages, de façon à freiner les concentrations urbaines *excessives*, dont on reconnaît enfin les multiples dangers.

• Donc assurant une organisation des paysans leur permettant de peser efficacement sur toutes les grandes décisions engageant l'avenir de l'humanité...

Beaucoup de ces propositions pourraient apparaître *utopiques*, dans les conditions actuelles, surtout pour tous ceux qui ne se rendent pas compte de l'ampleur et de la proximité des dangers que nous courons. Jusqu'ici ce sont bien les réalistes qui commandent le monde. Or nous savons maintenant, avec certitude, que la prolongation des orientations actuelles nous mène à une catastrophe finale que le Club de Rome situe au siècle prochain.

Il nous faut donc rechercher d'autres solutions, parmi lesquelles *le freinage puis l'arrêt de l'explosion démographique et de l'hyperconcentration urbaine* nous paraissent mériter la priorité. Ce qui implique une série de décisions économiques, donc politiques. Il y faut joindre, sur le même plan, *l'économie et le recyclage* de toutes les ressources rares non renouvelables de la planète, et la lutte contre les différentes formes de pollution. Ce qui implique la réduction des consommations somptuaires et des gaspillages, l'arrêt de la folie des armements. Donc la recherche d'une société moins nombreuse, respectueuse de son environnement, des autres espèces (animales et végétales), avec qui nous partageons les ressources de cette petite planète, réduisant enfin les inégalités sociales, entre pays et à l'intérieur des diverses nations, permettant à chacun de participer aux grandes décisions qui engagent l'avenir. *Les inégalités villes-campagnes, la domination abusive des minorités privilégiées urbaines* représentent les plus gros dangers. Elles freinent la recherche des solutions d'avenir, qui s'avère très difficile. Nous sera-t-il permis d'espérer qu'ils seront plus nombreux ceux qui, conscients des périls, rechercheront un meilleur accord avec la Nature, dans des voies qui s'orienteraient autour de ce qu'on pourra peut-être un jour appeler un *socialisme écologique*, capable de rétablir un accord entre des campagnes protégées et des *villes totalement renouvelées.* □

Haiti/Haïti ▷

EM 15

BY GLORIA KNIGHT

Urban Settlements in The Caribbean and Central America

The Habitat Conference held in Vancouver in June represented the culmination of four years of discussions at an international level on the subject of settlements. For the first time ever, the collective wisdom of national and international experts was mobilized to concentrate on the conceptual approaches to definition, implementation and evaluation of settlements as comprehensive units.

The Conference, unfortunately, was unable to arrive at a consensus on all matters discussed. Nevertheless, it has provided detailed guidelines which might well be regarded by all countries as a set of conventions which they can use in planning and implementing the improvement of existing settlements and the construction of new and better ones for their people. These conventions are wide ranging, and some countries have already implemented many of the proposals listed. They are of particular value to the developing world which faces the twin crises of massive urbanization and a relative scarcity of human and financial resources. Central America and the Caribbean are part of this developing world.

A Physical Portrait

Central America is a narrow bridge of land which links the two continents of North and South America. Although it is over 500 miles wide at its broadest point, Central America is relatively narrow compared with the two large land masses it joins. It consists of Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama, which are all independent states, and Belize which is still a colony of the United Kingdom. This land area totals 523,117 square kilometres, and the population estimate at 1975 was 19,117,000.

The Caribbean shares access with Central America to the Caribbean Sea. This area is bounded on the west by Central America and on the north and east by a line of islands running in a great curve from Cuba in the north to Trinidad in the southeast. The political status of each island surveyed is set out below:

Antigua	Associated State of the United Kingdom
Barbados	Independent
Cuba	Independent
Dominica	Associated State of the United Kingdom
Dominican Republic	Independent
Grenada	Independent
Guadeloupe	Department of France
Haiti	Independent
Jamaica	Independent
Martinique	Department of France
Montserrat	Colony of the United Kingdom
Netherlands Antilles	Colonies of Holland, except for Surinam which is independent
Puerto Rico	Dependency of the U.S.
St. Kitts, Nevis, Anguilla	Associated State of the United Kingdom
St. Lucia	Associated State of the United Kingdom
St. Vincent	Associated State of the United Kingdom
Trinidad, Tobago	Independent

The largest of these islands is Cuba with 114,524 square kilometres, while the smallest, included in this survey, is Montserrat with 98 square kilometres. Among the seventeen island territories surveyed for purposes of this article, the land area totals 224,225 square kilometres, while the population estimate at 1975 was 26,819,000.

The rate of population growth in the Caribbean and Central America area varies from 0.6% (Barbados) to 3.4% (Dominican Republic and Honduras), and the density from six persons per square kilometre (Belize) to 568 persons per square kilometre (Barbados). The average density is 71 persons per square kilometre.

It is proposed to concentrate on some of the critical problems to be faced in creating humane and functional settlements in the area surveyed by discussing four topics:

- urbanization and its implications;
- identification and allocation of resources;
- policy formation, and
- need for a suitable technology.

Urbanization

Central America and the Caribbean, like Latin America, show two main demographic trends. One is a continuing rapid rate of population growth. The other is an even greater rate of urban growth. Table 1, listing all the territories surveyed, indicates the estimates for the urban population between 1950 and 2000 while Table 2 summarizes the relationship between the urban and the total population for the same period.

It will be seen that urban growth is now taking place and will continue to take place at an increasingly faster rate than total population growth. This rapid growth has often resulted in, among other things, unemployment, social friction, crime and violence, poor housing and lowered standards of education and health.

Perhaps the most startlingly obvious effect of this rapid urbanization has been the growth of squatter settlements, called by various names throughout the developing world—*favelas, bidonvilles, calampas, bustees*, shantytowns. But, as Barbara Ward says "The name changes. The desolation is the same."

Central America and the Caribbean are no exception to this phenomenon. Generally speaking, the population of both areas is young, and this is reflected in their squatter settlements where there tend to be a high ratio of young people. Average urbanization growth rates for the various countries are about 3% per annum. In these squatter settlements the rate sometimes increases to as much as 12%. It appears, therefore, that a considerable proportion of urban growth is taking place in squatter settlements.

Then there is also the corollary of urbanization resulting in stagnation of rural areas. Many countries have felt that rural-

TABLE 1

Urban Population Estimates and Projections Median Variant and Annual Rate of Growth

	Total Population (in Thousands)						Annual Rate of Growth (Percentage)						
Country	1950	Rate	1960	Rate	1970	Rate	1975	Rate	1980	Rate	1990	Rate	2000
Antigua	N/A		N/A		N/A		N/A		N/A		N/A		N/A
Barbados	84	a	94	a	104	1.3	111	1.4	119	1.7	141	1.7	167
Belize	37	a	49	a	67	a	80	a	95	a	129	2.2	160
Costa Rica	284	4.0	422	4.5	659	3.8	795	3.8	962	3.8	1,400	3.5	1,986
Cuba	2,866	2.3	3,593	3.4	5,056	2.9	5,839	2.9	6,764	2.8	8,942	2.5	11,426
Dominica	N/A		N/A		N/A		N/A		N/A		N/A		N/A
Dominican Republic	539	5.6	940	6.1	1,726	5.3	2,253	5.2	2,919	4.9	4,766	4.4	7,419
El Salvador	701	3.2	963	3.4	1,359	3.8	1,647	4.0	2,016	4.2	3,072	4.1	4,643
Grenada	N/A		N/A		N/A		N/A		N/A		N/A		N/A
Guadeloupe	49	a	101	3.7	146	3.7	176	3.3	208	2.9	277	2.1	343
Guatemala	893	3.5	1,263	3.4	1,773	3.9	2,154	4.0	2,635	4.1	3,977	4.1	5,973
Haiti	376	3.7	546	3.7	792	3.5	945	3.8	1,141	3.9	1,680	3.5	2,389
Honduras	340	2.4	430	4.6	683	4.4	851	4.5	1,064	4.6	1,689	4.8	2,722
Jamaica	311	4.3	480	4.6	760	3.7	915	3.3	1,077	2.8	1,427	2.1	1,768
Martinique	62	a	114	5.2	191	3.5	227	3.1	265	2.4	336	1.6	393
Montserrat	N/A		N/A		N/A		N/A		N/A		N/A		N/A
Netherlands Antilles	80	a	132	3.3	184	2.6	210	2.7	240	2.5	309	1.8	370
Panama	297	4.3	449	4.7	715	4.1	878	4.1	1,075	3.9	1,576	3.4	2,209
Puerto Rico	900	1.6	1,053	4.6	1,675	2.5	1,897	2.3	2,130	2.0	2,600	1.5	3,006
St. Kitts, Nevis, Anguilla	N/A		N/A		N/A		N/A		N/A		N/A		N/A
St. Lucia	N/A		N/A		N/A		N/A		N/A		N/A		N/A
St. Vincent	N/A		N/A		N/A		N/A		N/A		N/A		N/A
Trinidad and Tobago	145	2.4	185	2.2	230	1.9	253	2.0	280	2.3	353	2.5	455
	7,964		10,814		16,120		19,231		22,990		32,674		45,429

a) Rates of growth are not shown where population estimate at beginning of period is less than 100,000.

Source: Global Review of Human Settlements Statistical Annex pp. 29-33

urban migration must be halted and have initiated policies toward this end. Yet it is generally accepted that such policies do not succeed. In the World Bank Sector Paper on Urbanization, it was noted that despite unusual cases such as Taiwan "attempts to restrain migration by deliberate policies of restricting the growth of urban services, appear to have been unsuccessful." Indeed, the World Housing Survey 1974 points out that: "As far as it is possible to evaluate success, it appears that countries that wished to control urbanization did not succeed in preventing either the growth or the deterioration of the conditions of their urban centres."

In Central America and the Caribbean, there appears to be little choice. Cities are growing larger and will continue to do so. Table 3 makes this clear.

It is therefore necessary for countries to realize that urbanization is a dynamic process and one which needs to be integrated into the national development process. A number of countries, notably Colombia, are proceeding along these lines.

It is clear, however, that most countries of Central America and the Caribbean consider themselves to be lacking in the financial and skilled human resources to cope with the expanding slum and squatter settlements in their urban areas. Yet the very fact of the existence of these settlements indicates that some resources are available.

For instance, land is available. It may not be zoned for this use, and there may be problems of tenure, but in all cases, except perhaps Barbados, densities are low enough to indicate that land can be made available.

Secondly, certain skills are available. These skills are evident in the ways in which the squatters themselves move, build and organize their settlements. Skills become a problem when the minimum standards acceptable to the planning officials are beyond the resources not only of the people involved but also of the country itself.

For this reason, one of the most significant breakthroughs in settlement development over the past several years is the planning and implementation of the sites and services projects promoted by the World Bank in which a government's expenditure is limited to the provision of services and the people themselves utilize their skills in constructing their shelter.

Recent studies have shown that the energy available in squatter settlements can be mobilized for planning and implementing savings programmes, construction of community facilities and other amenities. There are examples of schools and clinics being built with a minimum of government assistance. These settlements in this way become a training ground for the construction industry and can assist in eventually raising the overall level of productive work in the city.

In Central America and the Caribbean, the level of underdevelopment makes it possible that—if based on the resources available in the area and the acceptance of standards suitable to the existing resources—rapid urbanization can result in reasonably well organized settlements in which people can live a healthy and productive life. This cannot be dealt with effectively in a vacuum. The concept of integrated development aimed primarily at establishing reasonable levels of living for the mass of the population is a necessity. In most countries of the area, such integrated planning and development procedures are not being used. Indeed, at the moment, spatial planning tends to be regarded as a residual factor. This is unfortunate. A development process based on planned use of resources with land as a key resource is critical to the planning and implementation of integrated social and economic development.

Looked at in this way, urbanization can result in increased employment, increased use of local building materials and the development over time of an inexpensive local building technology, making the likelihood of more houses for poor families possible.

TABLE 2

	1950	1960	1970	1975	1980	1990	2000
Total	24,717,000	30,914,000	39,072,000	43,948,000	49,621,000	63,259,000	79,332,000
Urban	7,964,000	10,814,000	16,120,000	19,231,000	22,990,000	32,674,000	45,429,000
	32%	35%	41%	44%	46%	52%	57%

TABLE 3

	Caribbean Islands		Central America	
	Estimated % of Population		Estimated % of Population	
Size of Cities	1975	2000	1975	2000
5,000,000 plus	—	—	24.3	30.3
2,000,000 - 4,999,999	17.3	27.3	—	5.7
1,000,000 - 1,999,999	—	14.5	7.8	9.8
500,000 - 999,999	23.2	4.5	6.6	10.2
200,000 - 499,999	5.6	10.6	12.5	6.8
100,000 - 99,999	10.4	6.9	6.8	6.9
Rest	43.2	35.9	41.7	29.9

Source: Global Review of Human Settlements Statistical Annex — page 65

Identification and Allocation of Resources

Resources for settlements can be categorized as physical, human and financial. In terms of physical resources, land and materials for building are of great importance. Throughout Central America and the Caribbean, the demand for urban land is growing. Generally, as in Latin America, land ownership is for the most part based on individual rights to land which, with the process of rapid urbanization, has resulted in land speculation and an inordinate increase in the value of urban land. The main exception is Cuba where the National Urban Land Reform Law has resulted in a radical change of ownership patterns, utilizing need as the criteria rather than historical ownership.

Throughout the area, governments have adopted a number of techniques to control use of land. In Puerto Rico and Jamaica, tax benefits are offered to persons who locate industrial enterprises in specific areas. It is becoming more and more accepted, however, that it is necessary to own land to ensure the required development. Examples have been set by the National Housing Bank in Brazil, the Corporation for Urban Development in Chile (CORMU) and the Urban Development Corporation in Jamaica, where comprehensive urban development programmes have been implemented on land acquired by the state for that purpose.

The truth of the matter, however, is that there is no lack of land for urban pur-

poses or for housing the urban poor. The problem lies in the misuse and/or inequitable distribution of land. There are several ways, depending on the political system, which can be used to modify this inequitable distribution, and countries in the region would be well advised to ensure that careful solutions to this problem are worked out. Jamaica has recently amended its Land Acquisition Law to give the government the right to compulsorily lease, as well as acquire, land for public purposes. In regard to compensation, this will be determined by the assessed value on the tax roll and not by the market value as was previously the case.

In the World Housing Survey 1974 issued by the United Nations in 1976, it is noted that "the insufficiency of locally produced building materials is still typical for most less developed countries and the importation of building materials at times represents 50% of the value of building materials used in a country. Therefore, the national production of building materials based on locally available raw materials is essential."

This is perfectly true for the majority of countries in the area. One of the basic problems here is lack of research. Another is the establishment of standards based on those metropolitan countries which in themselves require importation of raw materials. There is need for area-based building research organizations which can list experiments being made in the various areas and which can also test the quality and standardize the production of the resulting components.

Human resources are generally interpreted as the availability of skilled persons. There is indeed a shortage of skilled persons in the field of construction in the area under survey. But, it is also true that the existing unskilled or semi-skilled workers are not being satisfactorily used.

In Jamaica, in a housing project constructed in Kingston, it has been found that an additional room to a house can be provided much more cheaply by the house-owner than by the developer. In the first place, the developer's overheads are not chargeable. Secondly, the skills of the house-owner and his family and/or friends are offered at a cheaper rate. These two factors outweigh the saving made by the developer in terms of bulk purchase of materials. It appears that the house-owner benefits from undertaking his own construction where the more complicated elements of plumbing and electricity which require very scarce skills are not required.

Squatter colonies offer many examples of construction skills that are not fully utilized. Any settlement in the area will have examples of permanent well-built housing as well as paper and cardboard shacks, provided it has been in existence for several years.

Flanker in Montego Bay, Jamaica is an example of this. In six years, the author watched housing in this settlement change, in some instances from cardboard to wood, to concrete—complete with electricity and facilities for piped water. Ways must be found (and experimental projects in Guyana and the Dominican Republic indicate that this is possible) to mobilize these skills to improve our poorest settlements.

The need for the channelling of financial resources into settlements is one which the developing world has emphasized in international fora. And indeed, it merits this emphasis in a world where millions of dollars are spent on destructive weapons while in some countries children are dying from starvation and lack of water. Nevertheless, the developing world must itself look at its own priorities in this regard.

In Central America and the Caribbean, many countries have established institutions or participate in institutions which assist in the financing of housing for low-income families. In this way, governments have initiated action to channel more and more funds into housing for that sector of the population that needs it most. Examples are the Caribbean Development Bank[1] which, as at July, 1976, had loan commitments for housing mortgages amounting to over $11 million, about 11% of its total loans. There is also the Central American Bank for Economic Integration[2] which now operates a home loan department. Guatemala, El Salvador, Costa Rica, the Dominican Republic, Cuba, Jamaica and Barbados all have national institutions geared to promoting and facilitating home-ownership.

What remains to be done is for countries to follow up their asserted priority rating for settlements by ensuring that a higher proportion of developmental expenditure reaches the most disadvantaged groups. Decisions about infrastructure works must be taken on the basis of need and productivity. If a choice exists between telephones for relatively sparsely populated middle and high-income suburban development, and access roads and street lighting for a slum or squatter area, the expenditure should be made where the need is greater.

Policy

It is difficult to assess the total expenditure on settlements made in each country. This is because the development model used by most countries is based on sectoral planning and development.

If we take the basic aspects of settlements to be water, food, shelter and health facilities, we find that action in each of these fields is pursued as a separate exercise. Thus, settlements as a comprehensive unit have no place in the development planning process as it is presently practised. Further, all these items are seen as part of the service sector and not as part of the productive sector. This has resulted in a lack of emphasis on settlements which is only now beginning to be realized. Thus, steps are being taken in some countries to initiate new towns or special development areas where a comprehensive plan of

[1]Members of the Caribbean Development Bank are all the English speaking territories of the Caribbean.
[2]Members are Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua.

development can be formulated and implemented.

Out of this has arisen the realization that most countries do not have an urbanization policy. Urban areas must not just grow; they must be planned around employment opportunities, with facilities and amenities based on the resources available. All countries cannot afford a minimum standard of a 500 square foot house made from concrete and steel for each family. Many of them could afford planned communities with water and electricity, walkways (not necessarily roads for motor vehicles throughout), schools and clinics. People could then, on the basis of reasonable tenure, build and improve their shelter over time.

It is better to give a bare minimum to the maximum of the population than to give a unit acceptable by developed world standards to a minimum of the population. Housing policies should make this their main aim.

Technology

Most developed countries spend between 1% and 3% of their Gross National Product on research, including research and development. At the start of the first development decade, developing countries agreed that an investment of 1% of Gross National Product was an acceptable level for research, including research and development.

None of the countries surveyed have attained this figure. The last survey done reveals that in Jamaica the figure was .76% in 1973. Because of the competition for scarce resources, developing countries find it difficult in the short term to assign funds for research. But the increasing rate of urbanization makes it necessary in the medium and long term to initiate and direct research into the area of settlements.

The question of building materials is only one of many fields. We need to know more about the sociology of settlements. We need to find out how to identify and utilize the energies that go into voluntary settlements. We need to look at the possibilities of energy for settlements using available resources such as the sun and the wind. We need to research the possibilities of using the light of the sun and the coolness of the wind to maximum advantage, thus reducing the dependence on metropolitan technological advances such as air conditioning. A breakthrough in this can benefit the poor as well as the rich and can go a long way towards making a small house in a dense development more comfortable. It is in areas such as this that international agencies can assist, for countries such as those of Central America and the Caribbean cannot individually mobilize the skills and resources necessary to undertake the wide range of research projects needed.

Humane and functional settlements can be created in Central America and the Caribbean; but, this requires a clear understanding of the urgency of the matter, of the need for comprehensive long-term planning, and of the will to take decisions and implement them for the good of the many instead of the aggrandizement of the few.□

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Solving Urban Problems: Lessons from Latin America

BY A. A. LAQUIAN

A Profile of the Problems

The twenty countries of Latin America are lands of contrasts. On the hills surrounding the modern city of Caracas, capital of oil-rich Venezuela, towering apartments compete for the view with tens of thousands of ramshackle squatter huts known as *ranchos.* The luxury hotels of fun-loving Rio de Janeiro, Brazil, push the *favelas* higher up the hills, where water and other services are rarely available. And, yet a few blocks from Bogota's gold museum (that glittering reminder of Colombia's ancient civilization) are some of the worst slum areas called *tugurios* where—with luck—a family of eight may have a daily income of 30 pesos, barely a dollar.

Whether called *ranchos, favelas, tugurios, barriadas, calampas or vilas de miserias,* the slum and squatter settlements that plague every large city in Latin America best symbolize the region's main urban problem. These communities of the urban poor which often make up illegal cities within cities were originally formed by rural-urban migrants who traded rural misery for desperate urban hopes.

New studies show, however, that more and more, squatters and slum dwellers tend to be city-born. In the progressive 1960's many optimists thought that squatting was a transitional phenomenon, that the migrants would be absorbed by the city and become wage earning citizens. But, as the number of squatters grew with the years, city authorities realized that unless they carried out massive reforms, the squatters and slums would not go away.

While slum and squatter areas are the most visible problems in Latin America, they cannot approximate the magnitude of the financial, political and administrative burdens that most cities are saddled with. At its core, the urban problem is due to too many people crowded together in increasingly limited space. Mexico City is already eight million and still continues to grow at more than four per cent per year. The three metropolitan areas of Rio de Janeiro, Sao Paulo and Belo Horizonte—Brazil's golden triangle of growth—are still growing, despite the fact that the beautiful sunsets over Copacabana's beaches are more likely to be filtered by industrial smog rather than clouds. The Rio de la Plata, that shimmering river that connects Buenos Aires with the city of Rosario, is dead from industrial wastes.

Even smaller Latin American countries are suffering from too rapid rates of urbanization. More than 70 per cent of Uruguay's population lives in the city of Montevideo. And, during the holiday season, when millions of tourists from Argentina, Brazil and Paraguay flock to the city, the water and electricity services in Montevideo and Punta del Este are strained to their limits.

Despite the many problems that confront Latin American cities, however, there are a number of innovative reforms and government actions which offer some hope for the future. These policies and programs are the more remarkable in light of the economic and political conditions that conspire to make life difficult. Generally, progressive policies and programs may be divided into those that make possible: (a) minimal housing with a large self-help component; (b) growth centres in frontier or lagging areas and (c) rural reform that encourages people to remain in the countryside even as urban reforms are being carried out. Many Latin American countries have adopted national development strategies that combine most of these measures. And, at the recent United Nations Habitat conference held in Vancouver, practically all the countries of Latin America had documents and films showing innovative programs that promise to solve urban problems at both the national and local levels.

Self-Help and Popular Action

If slum and squatter settlements constitute Latin America's primary urban problem, studies have also shown that they provide their own best solution. It is now widely accepted that the cities of the Third World will largely have to be "self-built" and that most of them have no chance of ever attaining the level and quality of urban services now enjoyed by the cities of North America, Europe and other technologically advanced regions. The fastest growing types of projects supported by the World Bank these days are "sites and services" schemes, and, increasingly, they are shifting to "squatter upgrading" and "self-help" approaches rather than opening up serviced lands in new urban areas.

The acceptability of self-help principles in providing urban housing and services in developing countries may be traced to the pioneering studies of slum and squatter communities in Latin America. The studies of John F. C. Turner and William Mangin, conducted in the *barriadas* of Lima, revealed a tremendous capacity on the part of the urban poor to call on their own individual and group resources to solve their own problems.

A squatter invasion, it was shown, had all the intricacies of a military operation, and the squatters and slum dwellers repeatedly carried out such actions despite police and military harassments. The studies also revealed that given security of tenure, a squatter tended to consolidate his gains and improved his house, whereas people provided with public housing did not seem to value what the government had given them.

The Peruvian government, realizing the potential for growth inherent in the capacity of the people to organize and solve their own problems, launched a massive urban reform program to make shelter available to the majority of the people. In Lima, these days, it is not polite to call the slum and squatter communities *barriadas.* They are called *pueblos jovenes* or "young towns" and reflect the government's hope that through self-help and popular action,

they will become mature urban communities in the future.

One of the most important lessons to be learned from the literature on slums and squatters in Latin America is that a house should not be seen as an object or a product to be built for a consumer, and since a person's house reflects his socio-economic condition in life, its construction should be seen as a process. As poor migrants start their life in squatter communities, they make do with whatever materials they can get for housing. As their lives improve, however, they consolidate and improve their shelters.

Public housing policy, therefore, should unlock these resources on the part of people needing housing. Instead of providing them with finished houses, as the Venezuelan government tried to do with their superblocks (which the people eventually vandalized and rejected), the government should provide the minimum infrastructure (water, roads, sanitation) which the people would then build upon to form their own settlements.

Sites and Services Schemes

The sites and services schemes now popular in Latin American and other developing countries are based on this philosophy of self-help and popular action. External loans and government resources are usually devoted to providing basic services that the people find too expensive or too large to provide themselves. Even in the construction of roads, the digging of drainage canals and the laying of sewers and water pipes, the people are employed, either with full pay or as a labour contribution for the so-called "sweat equity" built into the project budget. Some projects, such as those in El Salvador and Nicaragua, give the people a head start by the provision of "core housing" which may range from just two walls, a roof and a toilet, to an almost finished house. Additions and improvements, however, are the responsibility of the homeowners, to be made when the family has the means to pay for them.

Experience with sites and services projects in Latin America has shown that people can organize to make possible the attainment of shelter. Community organizations, based on traditional cooperative activities, are readily established when the need to improve the lives of poor people is felt. Housing agencies that recognize the willingness of the people to work toward the attainment of their own housing are proving to be the most successful in many Latin American countries. They have come to realize that housing is too important an aspiration of people to be treated merely as a service to be provided. Instead, it should be achieved by people through self-help and popular action.

Growth Centres

The problem of primacy or the domination of a country's urban hierarchy by one large city is common in Latin America. In most countries, therefore, there are attempts to create secondary cities and towns that will act as counter-magnets to people migrating to cities. One of the earliest efforts to create a city from the jungle was Brasilia, the architecturally magnificent capital of Brazil. Although Brasilia has had its problems, the city has rapidly developed into one of the country's important urban centres.

One of the best documented efforts to create a growth pole was Ciudad Guayana on the banks of the Caroni River in northeastern Venezuela. Unlike Brasilia, Ciudad Guayana was planned as an industrial city, using job opportunities as the main attraction to migrants. Cheap power, public investments, good transport and adequate urban services were combined to make Ciudad Guayana a viable growth pole.

The planners of Ciudad Guayana were not always right. For example, while they planned to separate housing from the industrial zones, the people followed their own logic of wanting to be close to their jobs and, as a result, uncontrolled settlements grew rapidly around the factories. The investments needed for the new city were massive and probably out of the reach of countries that do not have Venezuela's oil wealth. Nevertheless, the lessons from Ciudad Guayana are instructive from both the comprehensive planning approach and the willingness displayed by the planners and authorities of the city to adjust to changing times.

With the proven success of Brasilia and Ciudad Guayana, many Latin American countries are embarking on growth pole schemes. One of the most impressive and demanding projects is the construction of a series of dams on the Parana River on the borders of Paraguay, Argentina and Brazil.

The Itaipu dam, alone, is expected to result in a city of 300,000 when it is fully operational. This new city will straddle the boundaries of two countries and require a new concept in international management. Already, Paraguayans have migrated by the tens of thousands to the Argentinian side while Argentinians and Brazilians are now settling in Paraguay. When the dam starts supplying electricity to these countries and the factories hum with activity, the urban settlement patterns of the three countries, especially Paraguay (where the capital city of Asuncion is already rapidly growing along the newly constructed road linking the city with Itaipu), will be changed radically.

The growth pole approach is gaining support, even in a country like Colombia which is blessed with a geographic and ethnic diversity that has resulted in large and progressive urban centres that successfully compete with Bogota, the capital. Until a couple of years ago, Colombia's development strategy was to encourage a rapid move to the cities. Under the influence of a Canadian economist, Laughlin Currie, who was instrumental in the adoption of a plan that would create

"cities within cities," Colombia embarked on an investment program that encouraged urban industrial expansion and massive expenditures for urban housing. These investments were seen as the "motors" that would generate rapid economic and social development.

Unhappily, the threat of inflation, coupled with dropping prices for Colombia's exports, spelled trouble for the development plans. Under a new government, Colombia has now switched priorities and cooled the pro-urban strategy. Investments in agriculture have gained prominence and housing starts are down. Still, growth centres are being set up in lagging areas of the country. The area around Boyaca, for example, is being developed as a growth centre. There are also plans to rapidly develop a number of settlements in the Colombian *llanos*, the vast fertile plains in the eastern part of the country, that promise to be a new Latin American breadbasket.

Although growth centre and growth pole approaches have been implemented in a number of Latin American countries, there is still a lot to be desired in their planning and implementation. For one, the growth centres in the past have been set up for political and symbolic rather than sound economic reasons. The plans for the centres have also been overly ambitious and expensive and, as a result, have strained the nations' resources. Too much reliance has been placed on heavy industries that require great amounts of power; and the models used have been straight out of the industrialized West, where capital, technical skills and technology are abundant.

In the future, a number of Latin American countries are planning to make important reforms in their growth centre plans. Already, the plans for Ciudad Lazaro Cardenas in Mexico are more realistic and modest, compared to Brasilia or Ciudad Guayana. More labour-intensive industries, manufacturing based on agriculture and products requiring use of local materials are being stressed in Ciudad Lazaro Cardenas. Most important of all, quick and dramatic results are not expected, and progress is planned in a phased, orderly manner over a longer span of time.

Agrarian and Urban Reform

As a result of their colonial histories, the predominantly agricultural countries of Latin America have had serious agrarian problems. Local elites control the richest lands and run them in feudal fiefdoms called *latifundios*, even as the poor *campesinos* or peasants try to eke out a living from pitifully small farms reduced by inheritance laws and the rapacity of local moneylenders. The desperate plight of the farmers, in turn, is the root cause of the region's urban problems. With nothing to lose but his bondage to the soil, the peasant moves to the city in the hope that even in the slum and squatter settlements, life will be better.

The Mexican Revolution, of course, was the classic attempt to change a country's agrarian situation. While the agrarian reform program in Mexico is often cited as an example of a revolutionary change, there are many who believe that the revolution fell short of its promises. If the rural-urban migration in Mexico is used as an indicator of that country's land reform program, then it must be accepted that the revolution is not keeping them "down on the farm". The population of Mexico City swells daily with migrants from the countryside, and the situation is no better in other cities throughout Mexico.

The Cuban Revolution is often cited as a sharp contrast to the Mexican situation. Because of the sweeping changes brought about by the government of Premier Fidel Castro, the pattern of land tenure in both rural and urban areas has been drastically changed. The success of the Cuban Revolution, in fact, has caused some Latin Americans to feel that only a complete change will succeed in solving a country's agrarian problems. There are many, however, who feel that the price of the Cuban Revolution in blood and suffering is something they are not willing to pay.

The latest massive attempt to change a country's agrarian structure is happening in Peru. Although the Peruvian program is carried out by reform-minded militarists, it is effectively breaking up the large haciendas and redistributing more manageable parcels to farmers. The people are also being organized into cooperatives and other associations to tap their skills and resources in solving common problems. While it is too early to tell if the agrarian reform program in Peru will succeed as well as the Cuban case, some positive effects are already being observed. The migration of people to coastal cities has shown signs of abating, and the life of people in the *pueblos jovenes* of Lima, Arequipa and other cities has markedly improved.

The joining of agrarian and urban reform in a number of countries in Latin America reveals one of the most important lessons in coping with urban problems—that the solution to such problems lies in a total approach requiring all the resources and talents of a country's population rather than city dwellers alone. What is often needed to solve the problems of the cities is a national development strategy.

Cities are not isolated settlements, as in the ancient days when they could be contained within massive walls. Nowadays, the problems of the cities can be solved on the farms, in small towns, and in the slum and squatter areas that so trouble them. All such efforts are required if cities are to survive and continue to contribute their energies to the countries they are so much a part of.

Cuba: The Total Approach

The most successful attempt to solve housing and urban development problems

in Latin America through a total human settlements strategy may be found in Cuba.

The Cuban approach has three basic ingredients: keep them down on the farm; channel them to intermediate towns and cities; and solve the problems that already exist in large cities. So far, the strategy seems to work. Havana, the capital, has kept its proportion of about a fifth of the country's population since 1959. Other cities, however, notably Piñar del Rio in the west and Santiago de Cuba in the east, have been growing rapidly so that the country's population spread has become more balanced.

Down on the Farm

The rural development program is spearheaded by a massive rural concentration effort which has aggregated formerly dispersed farmers into more than 200 towns. In the town of Jibacoa, for example, people are housed in four-storey row houses that form an integrated community centred around the school, community centre and the main source of employment, a dairy farm. Each farmer is given a free apartment unit with running water, electricity, gas, a refrigerator and even a television set. Thus by bringing city amenities to the farm, the Cuban government is keeping the people there.

It is interesting that agrarian reform has been achieved by confiscating the land from the elite (many of whom left the country) but the land has not been redistributed to the farmers as private property. Instead, a disciplined mobilization effort based on the Communist Party, committees for the defence of the revolution, women's associations and youth groups inculcates a sense of communal ownership. By concentrating on productive cash crops (sugar, cattle, citrus fruits) instead of subsistence crops, the agricultural effort is succeeding, and the farmers seem to be happy to work and live in the rural areas.

When Havana fell to Castro's rebels in 1959, many of the peasant soldiers wanted to remain in the capital city. In no time at all, however, programs were launched to get them back to the countryside. Revolutionary exhortations were made about the need to regain the country's sugar production capacity. The young, especially, went to the rural areas in great numbers, as seen in the resettlement of the Isle of Pines, which is now a thriving agricultural region exporting citrus fruits. Strict controls were also imposed on housing, food rations, jobs, transport and other necessities in the capital. A national registry system carefully noted the skills of the citizenry and other requirements of the urban settlements and only those who could fill this need were allowed to stay in the city.

Away from Havana

At the same time that moving to Havana was being discouraged, a campaign for moving to other cities and towns was launched, and this encouragement of growth to other cities continues today. In the Party Congress last year, the Cuban Constitution was revised to reorganize the whole country's administrative machinery. In early 1976, a massive reorganization of the governmental and party structures increased the number of provinces and ministries and decentralized other branches of government. Even the university structure was revamped. In the past, anyone wishing to get a college degree had to go to Havana. With the new reforms, three new universities located in other cities were set up. Since education and jobs are the main magnets to migrants, the reorganization of the government agencies and the educational system cannot help but alter the country's settlement pattern.

Self-Help Housing

In Havana itself, new housing is being constructed, even as the old housing stock abandoned by Cubans who emigrated to Miami and elsewhere is being improved. Construction uses prefabrication and other advanced techniques. However, self-help is used extensively through the mechanism of the micro-brigade. Each brigade is made up of around 34 persons representing various skills needed for construction, such as masons, carpenters, electricians, etc. The members are trained and assigned a quota of houses to build, and in most instances, they construct the houses that they will live in themselves. Thus, not only initial construction but long-term maintenance is assured because all the skills necessary for upkeep are represented among the tenants in the community.

With the apparent success of the Cuban revolution, there is considerable interest in the approaches that have been used. The programs of rural resettlement, investments in towns and smaller cities and the construction techniques used by the micro-brigades are most interesting. The question most often asked, however, is whether these techniques will succeed without the wholesale political and economic changes brought about by the revolution. Not too many Latin American countries are willing to find out the answer to that question.□

BY HANS BLUMENFELD

Settlement Problems in NORTH AMERICA

The Spirit of our Rural Past

The United States and Canada developed during the first two centuries of white settlement as predominantly rural societies.

In the early years of the 19th century, the level of living for the mass of the population probably was higher than on other continents. Yet, the percentage of the population living in cities was lower than it was in Europe, Latin America or East Asia, and the size of the largest cities was much smaller. Following these early years, however, urbanization proceeded very rapidly, and at present more than three out of four North Americans live in urban or metropolitan areas.

The bulk of the rural population lived not in compact villages or hamlets, but in scattered settlements. And, although only a minority of the present rural population consists of farmers, the isolated and independent farmstead set the pattern. For the European peasant, escaping from feudal fetters, North America was "the Land of the Free" because the land was free. The immigrant was free to do on and with his land whatever he pleased—to improve or destroy it, to buy and sell and mortgage it. This "fee simple" form of landed property has been enshrined in North American ideology as a "natural" right, as the basis of human freedom and dignity.

Just as the spirit of the pioneer farm has largely dominated the spirit of urban development, so has the form of rural land division generally determined the urban street pattern which, with few exceptions, was established as an undifferentiated grid. The public contribution to city building was limited almost exclusively to the maintenance of the street system and its gradual improvement by engineering services. What happened beyond the street line was for the owner to decide.

When railroads developed, every city wanted them to come as close to its center as possible; tracks and yards ruthlessly disrupted the street system and occupied the waterfronts. The railroads attracted commercial and industrial enterprises which, in turn, attracted people. The city developed as a money mining camp, with the mining camp mentality concentrated on immediate gain with a ruthless disregard for ultimate consequences. As such, as a place for making a living, the North American city has been, and still is, highly attractive. But as a place for living, the city—with its increased noise and pollution—has become increasingly unattractive.

The railroads, however, were seen by some early reformers, such as Robert Gurley in Boston in 1840, as the instrument which would give all urban dwellers access to land for a house and garden of their own. In fact, railroad companies commissioned landscape architects, such as Frederick Law Olmsted, to design suburbs around their stations. They were designed as places for living. Replacing the grid with curved streets, they attempted to create a "natural" healthy and pleasant environment for their inhabitants. The detached single-family house surrounded by lawns and trees on a quiet residential street, which they provided, has set the standard of aspiration for the typical North American family and for most government actions.

The railroad suburb was generally accessible only to the upper-income groups, but subsequent developments in transportation and communication (electric traction, the bicycle, and the telephone, followed by automobiles, trucks, and buses) enabled an increasing percentage of the population to satisfy their desire for more space in the form of the suburban single-family house. Industrial, commercial and recreational land uses, accompanying or following the outward spread, also absorbed more extensive areas. The total amount of land absorbed by each urban dweller for all urban purposes is now at least five times as great as it was around 1850.

Thus, the North American city has been transformed into a new, much vaster and looser form of settlement, containing "rural" as well as "urban" elements, which the census recognizes as a "metropolitan area." Like the city which preceded it, the metropolitan area is defined as a common labour and common housing market.

The Incongruence of our Urban Present

The political/administrative structure has not been adjusted to this new reality, and still largely perpetuates the forms inherited from our rural past. For Canada, where sovereignty is vested in the Crown, provincial legislation has established various forms of metropolitan government, though their effectiveness is circumscribed by the limited extent of their territory as well as of their powers. In the United States, the constitutional right to "local autonomy" has largely frustrated attempts to establish metropolitan governments. This is ironic, because the autonomy does not extend to financial matters. Consequently, municipalities are totally dependent on tied grants from higher levels of government and have lost the power to determine their own priorities.

In both the United States and Canada, the main source of revenue available to municipalities is the real property tax. Thus, while their obligations are proportional to people, their revenues are proportional to property. This has driven them to use their regulatory powers, in particular zoning, to prevent housing for low-income families. Zoning has been the main North American response to the problems created by the impact of the landowner's right to develop his property as he pleases on the value of the properties of his neighbours. It has been and is a measure of property protection more than one of planning. The provision of public works, the other major contribution of public authorities to the shaping of settlements, has largely followed private development rather than leading it. In the main, North American cities have been designed by the invisible hand of the market.

This design is not devoid of logic. The regular decrease of density from the

center to the periphery, the preponderance of residences for adults in the inner and for children in the outer areas, concentration at the center of establishments dependent on the entire area and/or on each other, and of manufacturing and warehousing along major transportation corridors are functional and rational. However, market factors, reinforced by restrictive policies of suburban municipalities, have led to increasing segregation. In the United States, where class distinctions are expressed and reinforced in terms of race, this has led to an abandonment of the central cities by middle and upper-income groups, with consequent deterioration of their financial situation. In the 1950's and 1960's, the central cities attempted to counteract this by "urban redevelopment," financed by the federal government, which enabled them to tear down low-income housing and replace it by housing for people of substantial purchasing power. The inevitable resistance of those displaced by this policy, as well as the simultaneous construction of radial freeways, has been a major factor in the social disintegration of the United States.

In Canada, there has been no exodus of the upper-income groups from the central city. To the contrary, the center is becoming the preserve of the wealthy; working-class housing is disappearing not only from displacement by multistorey apartment houses, but even more from rehabilitation to luxury standards. The net result has been the same on both sides of the border: a shrinking of the housing supply available to low and moderate-income groups, with the dream of owning a single-family house farther from reality than it was 20 years ago.

The Crisis of Price

More than ever there is talk of the "housing crisis." This crisis has existed ever since the Industrial Revolution; and the main reaction of governments has been the establishment and enforcement of rising standards of housing quality. Census data indicate that the overwhelming majority of urban dwellings in North America actually do conform to fairly high standards in terms of structure, equipment and occupancy, although not necessarily in terms of environment. These data show an average of 1.5 rooms per person (about 1.2 without kitchens). As well, the average number of gross square feet per person appears to be no less than 350, more than five times the average found in most developing countries. The North American housing problem seems to be predominantly one neither of equality nor of quantity, but of cost, that is, price or rent.

One of the elements of housing costs which has risen very steeply in recent years is the cost of land available for urban development. With an increase in the number and wealth of the members of a given community, their effective demand for land is bound to increase its price. To the extent that the resultant "rationing by price" allocates land in response to different demands and counteracts wasteful use, it is desirable. However, it can be and is being claimed that the increment in land value, being created not by its owners, but by the growth of the community, should be appropriated by the latter by means such as a site value tax.

Such a change in appropriation would, by itself, not change the cost to the user. As a result of restrictive public policies, the cost of residential lots in many urban areas, such as Toronto, has risen far above the level determined by community growth to an oligopolistic level. The declared purpose of these policies is to prevent the scattering of development which involves high financial, social and environmental costs. It may well be that the only way out of the dilemma of accepting either scatteration or oligopolistic land prices is public ownership of the bulk of potential urban development land. Such ownership could allocate rationally suitable areas of land to be developed for various urban purposes, and other areas to be preserved for non-urban uses, such as agriculture or recreation. These concerns, popularly expressed in the negative form of "preventing land speculation," are leading to increasing interest in public ownership of land.

One of the concerns frequently expressed is absorption of agricultural land by metropolitan growth. While waste certainly should be avoided, the concern appears to be excessive, considering that land occupied by all urban uses equals, at most, three per cent of all agricultural land in North America. It should also be noted that five million people living in a metropolitan area absorb far less land than do the same number living in a thousand villages of 5,000 population.

The Legacy of the Car

A far better reason against excessive urban land absorption is the cost involved in overcoming the resultant distances, in particular the excessive movement of motor vehicles. Even if those aspects presently causing alarm—energy consumption and air pollution—should someday be overcome by technology, the accident toll would remain. Year after year, motor vehicles kill 50,000 and hurt over half a million human beings in North America.

In the first quarter of this century, persons in large North American cities traveled largely by collective transportation which used highly efficient electric traction, while individual transportation relied exclusively on inefficient human or animal muscle. Once individual movement was also supplied with a mechanical motor, it became greatly superior to transit in terms of door-to-door travel time. The only way to at least partly compensate for this disadvantage in time is to provide transit with a right-of-way free from the congestion which impedes automobile movement, that is, rapid transit. However, the capital cost of such facilities is so high that they can be justified only by the high volumes which can be attracted to a limited number of lines in the largest cities. In general, the wide dispersal not only of residences, but also of places of work and other destinations (in part a result

of the motor vehicles) makes it extremely difficult for transit to compete with the private car. Even partial success can be achieved only by long-term systematic coordination of the means of land use control—compact shape, higher densities and balanced mix of functions—with preference for transit in terms of financing and of the right to the use of street space.

As the evil consequences of the long-standing exclusive reliance on the private automobile have been realized, public opinion has, in the manner characteristic of societies manipulated by mass media, elected the freeway as its scapegoat. This too is ironic considering that the freeway is the most effective means to radically reduce (per vehicle mile) the number of accidents and also substantially reduce energy consumption and pollution. In fact, the anti-freeway crusade can be understood only as part of the sudden reversal of the attitude toward growth.

Slowing the Growth

With a high rate of growth of both population and of real income per head and with increasing concentration of both population and wealth in metropolitan areas, their expansion has been exceedingly rapid during the century from 1860 to 1960. In the last 15 years all three of these trends have slowed down; indeed, the latest data supplied by the United States Census indicate a net migration loss in the largest metropolitan areas. Nevertheless, while the rate of expansion will be much lower than in the past, the absolute amount will remain substantial.

As noted earlier, North American cities developed as places to "make a living." From this point of view, bigger was always better. Growth meant more customers for the businessman, more jobs for the worker, more buyers or renters for the owner of real estate. Public opinion and public policy were dominated by a "growth ethic."

In recent years, however, the pendulum has swung to the other extreme. Now small is beautiful; "progress" and "development" have become dirty words. The role of a person as a participant in the economy has become less important to him than his role as a resident, interested in his settlement as a "place for living." In this role, he is interested in protecting his environment against more people who will spoil it with more concrete, more cars, noise and pollution. In the suburbs this concern neatly dovetails with the traditional fiscal concerns, surrounding them with the halo of preservation of the environment.

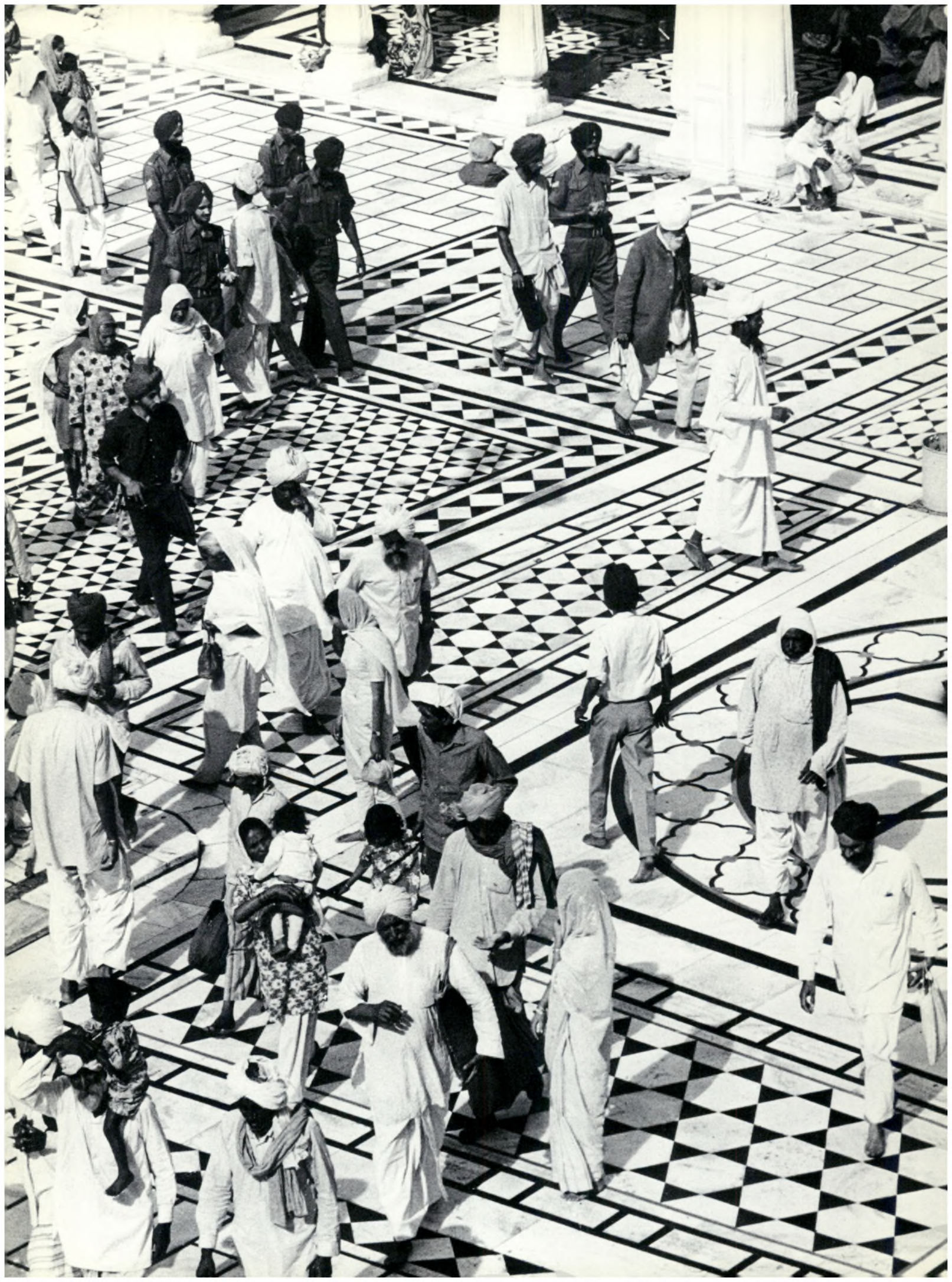
While this anti-growth ethic has become predominant in many metropolitan areas, most small settlements continue to clamor loudly for more growth in order to provide employment for their young people. Given this constellation, it is inevitable that politicians advocate decentralization and that governments promote it. In some cases, success is achieved at the "positive" end of accelerating small settlement growth. However, large settlements can be prevented from attracting more people only by making them less attractive as places for making a living (for example, by higher unemployment) and/or as places for living (for example, by poor housing and more pollution). It is not likely that their residents will vote for such policies.

The Social Dilemma

The growing concern of middle and upper-income neighbourhoods for the preservation of their environmental amenities has merged with the struggle of low-income residents against displacement by public and private redevelopment to produce a vigorous movement for direct citizen participation in urban government, based on informal local groups. This movement has mobilized much creative energy and detailed local knowledge for improving the environment, but its demands frequently conflict with the aspirations of people who want to and probably will live in that locality in the future as well as of those living in other localities.

The popular demands raised by citizen participation have made it evident that the problems of human settlements are social rather than physical. Unemployment, poverty, unsatisfactory housing, alienation of the worker from both the process and the product of his work, poor physical and mental health, crime and delinquency certainly are problems in the city, but not of the city. They are not correlated either with the size or the form of the human settlement. Instead, they are products of the basic structure of North American society.

If our guests at the Habitat Conference can learn anything from the North American experience, it is that the single-minded pursuit of higher monetary income, regardless of the kind of goods and services reflected in money and their distribution, is insufficient to create satisfactory human settlements. □



Centre-ville et vie collective

PAR JEAN REMY

Notre analyse essaie de comprendre les changements qui surviennent dans les rapports de l'homme avec l'espace qui l'entoure, à partir des centres-ville où un emploi tertiaire et donc des bâtiments à son usage se développent et où cet emploi n'est pas destiné d'abord à desservir les populations y vivant ou les utilisant.

I. Univers individualiste et déclin du centre-ville

1) Activités tertiaires nouvelles et remodelage du centre-ville

Les centres-ville subissent depuis quelque temps déjà d'importants remodelages du fait des exigences spatiales des fonctions tertiaires qu'on y trouve et dont la capacité financière permet d'accroître la rentabilité des investissements immobiliers. Ces fonctions disposent donc du pouvoir d'imposer leurs choix et d'un quasi-droit de préemption qui force de déplacer habitants et activités qui auraient souhaité rester sur place mais qui sont privés de la possibilité d'exprimer leurs préférences. Au contraire, les activités nouvelles s'imposent d'autant mieux qu'elles se réservent des zones où le loyer est bas. En outre, la substitution peut s'expliquer au nom du bien commun et même de l'exploitation maximum des infrastructures existantes ou à créer. Ainsi, à Bruxelles, un quartier populaire comme les Marolles, situé entre des lieux importants d'investissements urbains, telles la Grand Place, la place de Brouckère, la Porte de Namur, la gare du Midi, est occupé par des habitants qui n'utilisent pas ces équipements, et on se trouve donc devant une localisation à accessibilité privilégiée et sous-utilisée. Néanmoins, dans ce cas, étant donné la forte conscience collective et les appuis extérieurs liés à la valeur symbolique du quartier, les mouvements revendicatifs ont pu stopper les grignotements, ce qui a laissé apparaître l'importance du conflit entre des exigences différentes.

2) Désertion du centre-ville et individualisme des classes moyennes

Les centres-ville, surtout en Amérique du Nord, ont été désertés par une partie des classes moyennes, d'abord par les classes moyennes supérieures, imitées ensuite par les autres. Cette préférence est basée sur un modèle culturel régissant l'organisation des préférences et des besoins et valorisant l'individualisme et la consommation isolée. Avec l'objectif d'accéder à plus de bien-être individuel, ces populations ont perdu des raisons de vivre en milieu aggloméré. La ville n'étant plus signifiante, elle est devenue pauvre en supports de vie collective si on la compare aux investissements que consentaient des sociétés économiquement moins fortes, telles celles du moyen-âge et de la Renaissance. Cette pauvreté a d'ailleurs été soutenue par nos utopies architecturales et urbanistiques, lesquelles ont transformé nos villes en machines à résoudre une somme de besoins individuels supposant néanmoins certains équipements collectifs. D'où l'éclatement du centre-ville comme lieu important de vie collective. La notion de centre elle-même se galvaude. Ne parlera-t-on pas de centres d'achat, de centres d'éducation...? Même en Amérique du Nord, la langue anglaise ne connait pas la notion de centre. Elle est remplacée par *downtown–uptown.* Tous ces endroits sont à mono-fonction prédominante sinon exclusive et sont dissociés du lieu de résidence.

Cette image culturelle, élaborée par ailleurs dans des utopies urbanistiques, risque d'atomiser la vie sociale. Elle a probablement été appuyée et renforcée par la stratégie des corporations industrielles. Peut-on rappeler la tactique des entreprises automobiles aux Etats-Unis, rachetant dans les années trente les sociétés de tramway et les remplaçant par des autobus? Ce contrôle des transports urbains n'a pas favorisé le développement de ceux-ci. La publicité, au contraire, a stimulé la promotion individuelle à travers la voiture.

3) Résidences dispersées—gaspillage d'espaces

La consommation d'espaces résidentiels amène à chercher des localisations de plus en plus éloignées, d'autant que la taille des agglomérations elles-mêmes s'accroît. Cette propension à consommer des espaces périphériques a des effets différents selon que l'on se situe ou non en rareté. Le gaspillage des terrains pose bien des problèmes en Europe où il faudrait intégrer davantage la rareté dans toute la dynamique sociale. Ceci vaut pour une série d'habitudes et de technologies importées des Etats-Unis, promouvant le gaspillage en supposant l'abondance des matières premières et de l'énergie. L'avenir, spécialement l'avenir de l'Europe, implique le développement d'une technologie propre et de modes de vie axés sur l'économie. Car l'énergie ainsi que les matières premières dont pourra se servir l'Europe risquent d'être plus rares et plus coûteuses qu'ailleurs.

4) Revenus modestes et isolement périphérique

Dans la mesure où des gens aux revenus plus modestes seraient inspirés par le même modèle, les effets d'isolement et de séparation ont toute chance d'être multipliés. Surtout dès qu'il y a rareté des terrains, la rente foncière vient opérer des sélections et le logement social périphérique risque d'être érigé dans des zones défavorisées. Les grands ensembles résidentiels français, notamment dans la région parisienne, en sont un bon exemple. La recherche de sites de prix moins élevés aboutit à un éloignement des zones de travail, à des endroits souvent peu accessibles par les transports en commun et où la rentabilité minimum du capital engage à la "densification" du logement, sans qu'on puisse prévoir de financer des équipements collectifs non rentables. Tout ceci fut à l'origine de mouvements revendicatifs divers qui sont loin d'avoir produit tous leurs effets et qui n'ont pas encore atteint en France l'ampleur et l'impact sur les rapports sociaux que l'on connaît en Italie.

The Punjab, India/Pendjab, Inde

5) Transformation urbaine et droit à la ville
Depuis une dizaine d'années, un malaise se manifeste dans diverses catégories d'habitants face à la transformation du cadre social. Il en résulte des revendications qui cherchent à équilibrer le jeu des forces en présence et à remettre en question les images idéales qui nous servent de guides. Tout ce mouvement est sous-tendu par une mise en doute, sinon par du pessimisme, vis-à-vis du progrès lié à la technologie. N'y a-t-il pas une connivence de fait entre ces mouvements urbains et les mouvements pour la défense de l'environnement?

Ces mouvements urbains, en Europe notamment, peuvent s'exprimer autour du droit à la ville, se substituant à une simple exigence du droit au logement, comme droit à un bien individuellement appropriable. Ce droit à la ville est peut-être développé en Europe dans des populations ayant une tradition valorisant la vie urbaine. Qu'on se rappelle le vieux parti antiurbain régissant les intellectuels aux Etats-Unis.

Le droit à la ville suppose que soient valorisés des espaces collectifs de rencontre, fussent-ils une bras serie avec, en contrepartie, la mise en question d'une lecture puritaine de l'espace social. Cette dernière connote positivement le logement comme un espace maîtrisé par une famille ainsi que les espaces marqués par un pouvoir organisateur: l'école, l'hôpital, etc., tandis que les espaces intermédiaires, telle la rue, sont connotés négativement et vus comme socialement vides. Que l'on pense à la manière dont est perçu l'épanouissement affectif de l'enfant où les espaces intermédiaires entre la maison et l'école sont souvent oubliés, alors que c'était bien souvent dans ces espaces que se nouaient diverses relations des enfants et des jeunes avec des adultes qui n'étaient ni leurs parents ni leurs éducateurs mais jouaient pourtant un rôle très important dans la formation des liens affectifs. Mais cela supposait des supports de vie collective et certaines communautés d'appartenance où des adultes acceptaient spontanément cette prise en charge informelle. Le rétrécissement de l'espace affectif de l'enfant, qui se réduit souvent au couple et aux relations parentales, a bien des conséquences, notamment sur la nécessité de la réussite de la relation parentale. Ce monopole sans possibilité de compensation est d'autant plus accentué que l'école a accusé de son côté une dimension instrumentale ne favorisant pas une identification forte des jeunes, notamment, à des groupes de classe de composition stable (cf. au Québec, le problème des écoles polyvalentes).

L'absence d'identification affective à travers des espaces collectifs déséquilibre la vie sociale à bien d'autres égards et pose, notamment, un grave problème d'insécurité. Cette insécurité de la rue et des espaces collectifs est souvent notée aux Etats-Unis, non seulement dans les centres-ville, mais dans certains quartiers résidentiels où il est parfois dangereux de faire une longue pérégrination pédestre et prudent de circuler avec les portières de la voiture bien fermées. L'individualisation supposant que chacun résolve ses problèmes diminue la volonté de prise en charge des lieux publics. D'où, à la limite, on peut se faire égorger dans la rue sans réaction de solidarité. Il n'en était pas ainsi dans les milieux urbains connotant positivement les espaces collectifs et où, jusqu'y compris au centre-ville, il y avait une prise en charge collective et informelle par les «propriétaires naturels». Ainsi, au contraire de ce qui a été maintes fois affirmé, la ville doit disposer d'une multiplicité de contrôles informels qui produisent une sécurité collective au sein de l'anonymat. Certaines combinaisons spatiales, si elles sont absentes, risquent de handicaper cette prise en charge.

Les revendications nouvelles face à la ville doivent pouvoir se concrétiser en transposant des formes spatiales appropriées. C'est toutefois une erreur fréquente chez les architectes et les urbanistes que d'établir un lien automatique et quasi mécanique entre une nouvelle structure spatiale et une nouvelle forme de vie sociale. Cette conception a d'ailleurs été favorisée par certains sociologues et notamment par toute une tendance de l'Ecole de Chicago qui a marqué la sociologie urbaine jusqu'à ces dernières années.

6) Droit à la ville et « écologie humaine »
Le droit à la ville peut s'expliquer par l'élaboration d'une science de l'homme et de son milieu où la distribution des catégories de populations et des activités, ainsi que leur mode de regroupement, apparaissent importants pour la dynamique sociale; à condition de mettre ces formes spatiales en interrelation avec des modèles culturels et les structures sociales. Cette science suppose l'élaboration d'un système complexe où une même structure spatiale va être considérée dans des effets différents d'après le modèle culturel de référence. En outre, les effets seront parfois opposés d'après le milieu social d'appartenance. Ainsi, la valorisation de la seconde résidence dans le contexte actuel peut provoquer un isolement des familles dans la classe moyenne tandis que, dans les classes supérieures, elle peut servir à une stratégie de pouvoir en multipliant des lieux de contact à faible visibilité sociale. Donner quelques jalons pour élaborer cette écologie humaine fut notre propos dans l'ouvrage *La ville et l'urbanisation.* L'écologie humaine doit, par ce biais, dégager les facteurs spatiaux stimulant la capacité innovatrice. N'était-ce pas une des fonctions des centres-ville dont il faut redécouvrir les modalités d'opération, par exemple en dégageant l'importance des contacts informels se combinant à des communications à distance? Cette redécouverte n'est-elle pas à l'origine du développement des milieux d'affaires et de leur réappropriation des centres-ville, souvent au détriment des milieux supports d'une incubation et d'une innovation culturelles? La ville avec sa combinatoire spatiale apparaît alors comme un lieu privilégié de production de connaissances. La disparition des centres-ville risque de casser ces incubateurs, au moins pour certaines fonctions sociales.

L'écologie humaine devient alors, pour les intervenants de la politique urbaine, un instrument fort utile d'analyse et d'évaluation des effets économiques et sociaux des mesures proposées tout en accroissant leur capacité d'imaginer des solutions de rechange.

7) Ecologie humaine et mouvements collectifs
Ceci est particulièrement vrai si l'on se place du point de vue des comités de résidents ou d'autres groupes d'action urbaine voulant réagir, notamment à travers l'opinion publique. Dans ces domaines de consommation collective, il est résulté un déséquilibre entre la production et l'utilisation. La production est devenue de plus en plus le fait d'oligopoles, tandis que les populations concernées sont restées en position atomistique, pour garder la terminologie de la théorie des marchés en économie classique, c'est-à-dire n'intervenant qu'à travers une somme de réactions individuelles. Ce déséquilibre est encore accru lorsque le pouvoir politique doit coordonner par des mesures d'urbanisme et d'aménagement du territoire. A ce moment, les acteurs en oligopoles pourront négocier et renégocier, tandis que les autres sont placés presque dans un rapport d'imposition face au plan proposé.

Dans tout ce domaine, des relais d'expression collective vont probablement s'organiser à la manière dont les relations professionnelles ont été transformées par les générations précédentes avec le développement de formes d'associations diverses et, notamment, des syndicats. Cette évolution est d'autant plus importante dans les domaines extra-professionnels que l'on se trouve confronté à des exigences nouvelles relativement à la vie collective et issues bien souvent des contradictions des solutions actuellement préconisées.

Si les dix prochaines années ne peuvent être imaginées comme une prolongation, avec mise en ordre progressive de l'espace, des modèles des dix années précédentes, ce sera probablement en grande partie à ces mouvements collectifs que nous le devrons.

II. Dynamique spatiale et centre-ville

Dans la perspective des centres-ville, les problèmes vont apparaître de façon plus explicite. Néanmoins, les questions relatives aux espaces collectifs sont transposables au plan de la vie de quartier.

1) Capacité d'isolement et communication
Dans le contexte actuel, la capacité d'isolement dans des espaces privés est à bien des égards une condition apte à favoriser la communication, dans la mesure où une famille ou un groupe de base accepte de s'ouvrir sur l'extérieur, s'impliquant de façon affective tout en conservant le droit à un style de vie propre.

Cet isolement est condition d'autonomie et d'ouverture et implique, au niveau du logement, un espace suffisant et une isolation acoustique et visuelle. N'a-t-on pas constaté qu'à égalité de décibels, le «bruit des autres» passant à travers les cloisons d'un logement produit un stress bien supérieur au bruit de la rue? Il en va de même d'un contrôle visuel de l'extérieur, jusqu'y compris la capacité d'observer les allées et venues des visiteurs dans le logement. Cette capacité de jouer un rôle d'isoloir où chacun a son domaine propre sans se sentir agressé par les autres diminue les mécanismes de défense réciproque et crée une propension à communiquer.

2) Supports collectifs en extension directe ou non du logement
Le support externe du logement doit, en outre, favoriser la communication. Mais celle-ci ne doit pas exister exclusivement dans une extension spatiale directe du logement. L'importance des supports collectifs en extension directe ou indirecte du logement va dépendre des milieux sociaux.

Dans les quartiers populaires, notamment dans des villes belges comme Liège, la rue et la placette autour des logements sont considérées comme une extension de ceux-ci où l'ensemble de l'unité de voisinage se sent en territoire propre, au point que la personne de passage se sent considérée comme une étrangère ayant violé le territoire d'autrui. Ce réflexe de propriété collective, plus ou moins fort, est de nature à créer une sécurité collective et à doter le groupe d'un espace d'échanges et de production collective. Les habitants de ces quartiers évaluent négativement la résidence dans un immeuble à appartements multiples où manque cette zone d'appropriation commune et qui, de ce fait, leur apparaît comme un espace de promiscuité, c'est-à-dire de mélanges incontrôlés. La réaction est d'autant plus forte que ces habitants voient souvent les espaces extérieurs comme des espaces inconnus, étrangers et donc hostiles.

Pour la plupart des groupes sociaux, la recherche d'espaces collectifs nouveaux suppose l'accès à une notion plus complexe de distance/proximité vis-à-vis d'autrui. La zone spatialement proche du logement n'est qu'une possibilité parmi d'autres, sans devoir être nécessairement une zone prioritaire où se forme un milieu d'échanges intenses. Pour ce faire, il faut à nouveau réagir contre une lecture puritaine où sont supposés insignifiants les espaces intermédiaires entre le logement comme espace privé et les espaces maîtrisés par un pouvoir organisateur: usine, école, etc. Ces espaces intermédiaires sont réduits à des espaces de liaison pour le transport ou à des espaces verts pour la vue et la santé, mais quelle différence et quelle distance entre une voie de communication et une rue, entre un espace vert et un jardin public!

3) Valoriser la gamme intermédiaire
Toute cette gamme intermédiaire entre les pôles privés et publics, entre la relation intime et la relation strictement fonctionnelle, permet d'entrer dans un régime

complexe de distance/proximité. C'est le domaine des espaces semi-privés ou semi-publics selon que le contrôle dépend ou non des personnes retenues à l'endroit, de façon stable, par leur métier ou par leur résidence.

Une des fonctions du centre urbain consiste justement à diversifier les rencontres spontanées favorables à l'innovation sociale et aux prises de décision. Par là se créent des connexions multiples dans des circonstances où on ne sait qui est porteur de l'information décisive ni même quelle est cette information. N'en est-il pas ainsi du milieu des affaires pour qui les cocktails prennent autant d'importance que la réunion du conseil d'administration du matin.

Selon des modalités concrètes différentes, les mêmes processus de rencontre sont valables pour les activités culturelles et toute activité où la population doit sortir d'un simple rapport de clientèle.

La multiplication de toute la gamme intermédiaire nous incite à réagir contre certaines utopies urbanistiques actuelles où l'on rêve d'un univers sans cloison. Ainsi les expériences hollandaises d'«agora couverte», tel le Karregat à Eindhoven où devraient se mélanger, sans cloison, école, marché, espace de jeux pour le troisième âge, ou encore le fameux bâtiment du bureau du Centraal Beheer à Appeldorn près d'Amsterdam où l'option architecturale n'est ni celle des bureaux cloisonnés ou de bureaux paysagés mais, au contraire, permet à des équipes de travail de s'approprier des espaces collectifs à la manière d'espaces privés. Quelle que soit l'ingéniosité de la conception architecturale, ces réalisations risquent de nous présenter simplement la contre-image de la situation actuelle, opposant à un univers cloisonné un univers décloisonné. La compénétration spatiale, la visibilité réciproque permettent de dépasser l'écartèlement de la vie sociale actuelle produisant un «homme en miettes» parachevant le fameux «travail en miettes» dénoncé depuis longtemps.

Cette projection architecturale est certes révélatrice d'une inspiration nouvelle en rupture; mais elle est probablement simplement l'image inverse qui ne deviendra pas image projective. Au contraire, on va vraisemblablement, au niveau des concrétisations de ces aspirations nouvelles, vers une valorisation des espaces collectifs à travers une multiplication des gammes intermédiaires.

4) Image projective et analyse des centres-ville traditionnels

L'observation des centres-ville traditionnels qui sont encore animés est riche d'enseignement. Préalable indispensable à toute recherche et à toute action, cette observation n'a certes pas pour objectif de construire les villes du futur ou d'aménager les villes existantes sur des modèles copiés du passé. Elle a pour intérêt capital d'aider à découvrir des mécanismes psychosociaux et économicosociaux que l'on ne peut négliger sans conséquences graves pour l'avenir.

5) Les ambiances urbaines – scénarios de vie sociale

Nous avons essayé d'élaborer une telle transposition dans le cadre d'une consultation relative à Louvain-la-Neuve en Belgique. L'Université de Louvain francophone devant quitter la ville flamande de Louvain pour s'installer en territoire wallon, a choisi de jumeler ce déménagement de 15 000 étudiants avec le développement d'une ville nouvelle qui devrait compter 50 000 habitants, située à une trentaine de kilomètres du centre de Bruxelles. La conception d'ensemble devait imbriquer ville et université. L'intervention demandée arrivait après la conception de ce plan d'ensemble et même après la mise au point du plan-masse du centre-ville. La conception supposait l'entremêlement des fonctions, le rejet de bâtiments isolés implantés sur un fond de verdure qui, en multipliant les espaces ouverts, dilue le sentiment du coude-à-coude. Notre option cherchait, au contraire, à réhabiliter la rue, les placettes de types divers sur lesquelles débouchaient des espaces semi-publics, extensions de celles-ci. Un grand investissement imaginatif devait donc être fait pour la conception de ces espaces, indépendamment des bâtiments vus en eux-mêmes.

A partir de ces contraintes, il s'agissait de faire quelques suggestions sur le mode de distribution des activités qui augmenteraient la chance de créer un centre urbain animé.

Pour transposer une observation de divers centres urbains traditionnels, nous sommes partis de la notion d'ambiance. L'ambiance était pour nous un effet de milieu qui est produit par un public diversifié circulant dans un espace réduit à un moment donné du temps. Ceci nous a conduits d'emblée à diversifier des ambiances d'après les moments: ambiance-midi et ambiance-soir, ambiance-matinée et ambiance-après-midi. L'alternance de temps forts et de temps faibles, l'ambiance-vendredi soir ou dimanche matin. Après quelques essais, nous avons été amenés à définir en termes simples le concept d'ambiance:

1.	un support temps, c'est-à-dire un moment privilégié d'expression
2.	un support espace, c'est-à-dire un lieu spécifique d'expression
3.	une gamme plus ou moins étendue d'activités distinctes mais productrices l'une pour l'autre d'économie externe
4.	une certaine densité de population rassemblée sans contrainte, sans formalisation et sans nécessairement un but bien défini
5.	une connotation affective positive ou négative

Une fois le parti adopté, il restait à l'expliciter par la technique des scénarios de vie sociale où nous avons essayé d'imaginer des séquences spatiales et temporelles adaptées au cas de Louvain-la-Neuve. Nous l'avons fait à partir des éléments suivants:

1. analyse des points contraints d'utilisation
2. les circuits possibles
3. les points d'appel
4. les points d'accrochage
5. la convergence des initiatives

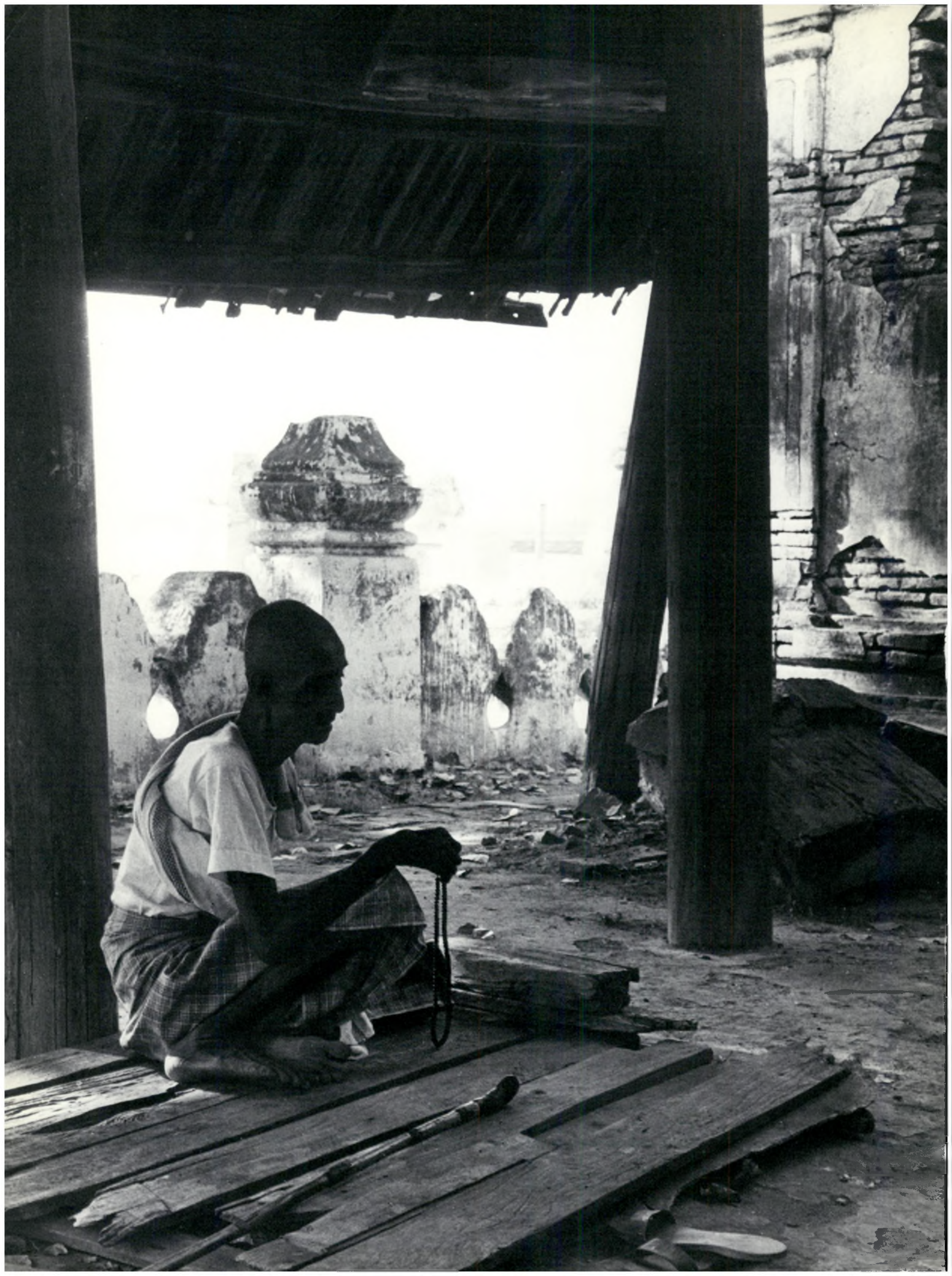
A partir de ces lieux probables des ambiances, il était possible d'imaginer des distributions spatiales des activités qui les stimuleraient. Chaque ambiance supposant un sous-système spatial, ceux-ci se superposaient en certains points qui pourraient devenir des lieux d'animation constante et, de ce fait, seraient perçus comme des coeurs de vie sociale où toujours quelque chose se passe.

Sans vouloir écrire l'histoire à l'avance et tout en admettant que le centre-ville suppose des appropriations souples, cette méthode diminue les zones d'incertitude et diversifie, tout en les concrétisant, les espaces intermédiaires favorisant les relations intimes et les relations fonctionnelles.

Tout ceci suppose que le centre-ville, y compris sa conception architecturale, soit le lieu par excellence où se sentent chez soi, c'est-à-dire en territoire propre, sans s'agresser réciproquement, des populations résidant et travaillant sur place, des populations travaillant sans résider et des populations visiteuses résidant et travaillant ailleurs, y compris des populations appartenant à des groupes sociaux et culturels divers. Les mécanismes psychosociaux que nous avons essayé d'élaborer ont une incidence sur l'économique et, réciproquement, certaines contraintes économiques doivent être abordées de front, sans quoi on risque de se heurter à un obstacle fondamental. Les ambiances supposent, notamment, l'imbrication de cheminements, d'où développement d'équipements dérivés qui ne sont rentables qu'à cause de la diversité des clientèles ainsi rassemblées. Cela suppose un entremêlement d'équipements et de clientèles qui s'entraînent réciproquement sans avoir nécessairement la même capacité de payer ou de consentir des loyers élevés. C'est souvent le cas pour un certain nombre d'activités de type culturel qui sont fréquemment au départ quelque peu marginales, alors qu'elles peuvent être de grands inducteurs d'animation et donc produire des économies externes pour d'autres activités. Ce problème est généralement résolu dans les vieux centres-ville qui regroupent des bâtiments d'âges différents et peuvent dès lors proposer des loyers diversifiés. Au contraire, les constructions nouvelles et même les rénovations d'habitats anciens risquent de provoquer une hausse générale des loyers et une homogénéisation dommageable de ceux-ci.

L'avenir de la ville comme support de vie collective et comme participation à des innovations collectives autres que les organisations de défense et les comités d'action, suppose une mise en question d'un urbanisme qui à la fois atomise la vie sociale et multiplie des relations de clientèle où l'offre et la demande sont dissociées. Une orientation toute nouvelle commence à se dessiner et se cherche à travers des utopies urbanistiques nouvelles. Une meilleure connaissance des mécanismes psychosociaux et économicosociaux peut aider à élaborer des solutions de rechange.

Si la création collective doit dépasser la participation à des comités et à des organisations, cela ne veut nullement dire qu'ils ne sont pas indispensables, notamment pour transformer les rapports par trop déséquilibrés entre les utilisateurs et les producteurs. Mais ces groupes devront pouvoir s'aider d'une meilleure connaissance de l'écologie humaine, de manière à élaborer des réactions plus systématiques. □



BY D. J. REYNOLDS

The Urbanization of DEVELOPING NATIONS

Prospects and Problems up to the Century's End

It is difficult to consider the urban problems of a single nation let alone the problems of a wide range of developed and developing nations whose per capita incomes can range from over $25,000 to less than $100 annually.

However, by simplifying the problems down to questions of population growth, degrees of urbanization and incomes, it is possible to have a brief, preliminary, distant look at the prospects and problems in terms of housing, transportation and planning. The solutions, which are elusive in urban affairs, are another issue and will be largely determined in any case by the nations and societies concerned.

Dividing up the Globe

To place the nations in world context, the rough division must be between the developed/urbanized/motorized nations on the one hand, and the developing/urbanizing/motorizing nations on the other.

The developed world may be divided into:

- North America (primarily the United States and Canada) with present populations of 235 million (six percent of world population accounting for about 32 percent of world income);
- Western Europe with a present population of 340 million (nine percent of world population with 28 percent of world income), and
- Eastern Europe and the Soviet Union with about 300 million (eight percent of world population with 20 percent of world income).

Adding in Japan and Australasia, the developed nations can be said to account for about 25 percent (one billion) of world population, yet 80 percent of the world's measurable income. Two-thirds of their populations are urbanized and industrialized, or suburbanized and post-industrialized, as suburbs and services have gained increasing importance.

The developing nations may be divided into:

- Asia with a present population of 2,100 million (dominated by China with 800 million and India with 600 million);
- Africa with 400 million, and
- South America (adding Mexico and the Caribbean) with present populations of about 350 million.

They account for about 75 percent (three billion) of world population with only about 20 percent of the world's measurable income. The unmeasurable and potential value of their own labour for subsistence and self-sufficiency are, however, of great importance. Only 28 percent of their populations are urbanized.

World Birthrates

With its birthrates tending to fall below replacement, the developed world is only expected to increase its population by about 20 percent by end-century, with all this increase (plus some rural/urban shift) going to urbanized areas, thus increasing their degree of urbanization to about 80 percent. The developing world, on the other hand, is expected to increase its population by about 66 percent to five billion by the end of the century, with the increase of two billion being mainly oriented to urban areas. This will increase the degree of urbanization in the developing world to about 42 percent, and more than double their urban populations by an annual average rate of about four percent by the turn of the century.

Against this background, the urban pressures and problems of the developing nations must also be classified and analyzed in more detail in the world context of recessions, inflations and monetary, energy and food problems, along with the demands for a new economic order which will try to redistribute income from developed to developing nations.

Developing Nations and their Urban Growths

In considering and classifying the various types of urban growth in developing countries, it must be realized that households (based on the large or extended family rather than on the small disintegrating nuclear family) are substantially larger than in the developed world. Thus, while per capita incomes are generally substantially lower than in developed countries, urban incomes in developing countries tend to be substantially above national averages. Incomes per urban household, therefore, are much greater than per capita incomes imply, and with smaller physical wants and higher densities (both inside and outside the dwellings) the physical limitations for a given urban population size are substantially less than in developed countries.

Also, major urban solutions for this period cannot be sought in falling birthrates since the household is probably the most relevant unit for most urban matters and its numbers will be little affected by birthrates up to the end of the century. In any case, falling birthrates will possibly occur with increasing urbanization.

A further preliminary point is that incomes and services in developing countries are usually more unevenly distributed than in the developed world, resulting in wide disparities to Western eyes. These disparities will possibly be reduced by increasing urbanization in the long run, as has occurred in the developed world.

Through the Looking-Glass

I. Higher-Income Urbanized Countries

These nations, typified by the more successful countries of Central and South America (Mexico, Brazil and Argentina), are already more than 50 percent urbanized, and have urban household incomes roughly averaging $3,000 per annum which approximates fairly closely the developed world. It is expected that almost all their population increase will occur in urban areas and that they will urbanize to about the 80 percent level by the end of the century with an annual rate of increase in households of about four percent.

These countries are industrializing rapidly with increasing urban household

◁ *Burma/Birmanie*

incomes. If the increase in urban household incomes reaches the four percent level, it would tend to push net household formations toward the top of the income range and thus enable urban household growth to achieve fairly good private standards. Circumstantial evidence seems to indicate that this occurred in the urbanization processes in Canada and, no doubt, other countries.

Some realistic improvement in existing "illegal settlements" should then offer prospects of a reasonable adjustment to housing problems in these countries, although some of the magnitudes may be alarming, such as the possible growth of Mexico City to 20 million by the end of the century.

The transportation problems of these exploding cities arise from present congestion, future growth and the prospects of an additional explosive growth in vehicle ownership and use from the present low levels per capita. To some extent, the conversion to motor vehicles from slower forms of transport should increase urban speeds and highway capacities, as has occurred in the older developed nations and cities, such as London. However, the possibilities of an explosive growth in automobile ownership and use (with the explosive and costly congestion and highway and energy problems to match) imply the desirability of a restraint in automobile usage and a switch to transit in the form of rail or bus on special busways. The higher population densities of these types of cities suggest a strong case for rail, but capital costs and lower labour costs might favour the low-cost bus, provided they can be maintained.

II. Medium-Income Urbanized Countries

These are nations with medium household incomes of about $1,500 per annum in urban areas, slightly less than 50 percent urbanized, and exemplified by the semi-industrialized nations of North Africa and Asia, such as Egypt, Algeria and Korea. These nations are industrializing rapidly with increasing urban incomes and are expected to more than double their urban populations and households by the century's end (to a 70 percent urbanization level) at growth rates of about five percent per annum.

However, unless they attain a high growth rate in urban incomes of about five percent per annum, their housing problems are likely to be more difficult than for the higher income nations. Transportation problems, as well, are also likely to be relatively more difficult. For these reasons, it is again important that housing, servicing and transportation standards should be held down to realistic levels, both for new and for upgraded settlements.

III. Lower-Income Rural Countries with Small Urban Populations

These countries are predominantly rural and are expected to remain so up to the end of the century. However, they are urbanizing rapidly with growth rates of five percent per annum or more. They are typified by the more populous countries of Africa, for example Nigeria, Sudan and Kenya, and have urban household incomes around the $1,000 level.

Here again, the urbanization process will be correspondingly more difficult, and again it will be important that realistic housing, transport and other standards be set for both new and upgraded development.

IV. Low-Income Rural Countries with Large Urban Populations

This category is typified by the Indian subcontinent, China and Indonesia, with combined populations approaching two billion, and it is clear that by far the largest and most difficult urbanization problems lie here. It is thus important to analyze the nature of the urbanization process in this category.

Unlike the other developing nations which are urbanizing in response to industrialization and increasing urban incomes, the population shift in these countries is characterized by heavy population pressures on rural areas and thus on agricultural land, with population overflow living in poverty in the urban areas.

Thus, the solutions to this type of urbanization may lie in the rural areas and villages (for example, through land tenure) as well as in urban areas, although from this distance it is impossible to suggest any obvious solutions or directions. These will depend on the nations concerned as well as the relevant international aid and expertise.

Since there seems little doubt of China's ability to solve its own problems, in its own way, with its own resources and to its own satisfaction, this urbanization situation in world terms is mainly confined to the Indian subcontinent and Indonesia. Although these countries will remain predominantly rural up to the century's end, their urban growth rates will still be at the four percent level. Thus, special attention must be directed to coping with the urbanization in these countries.

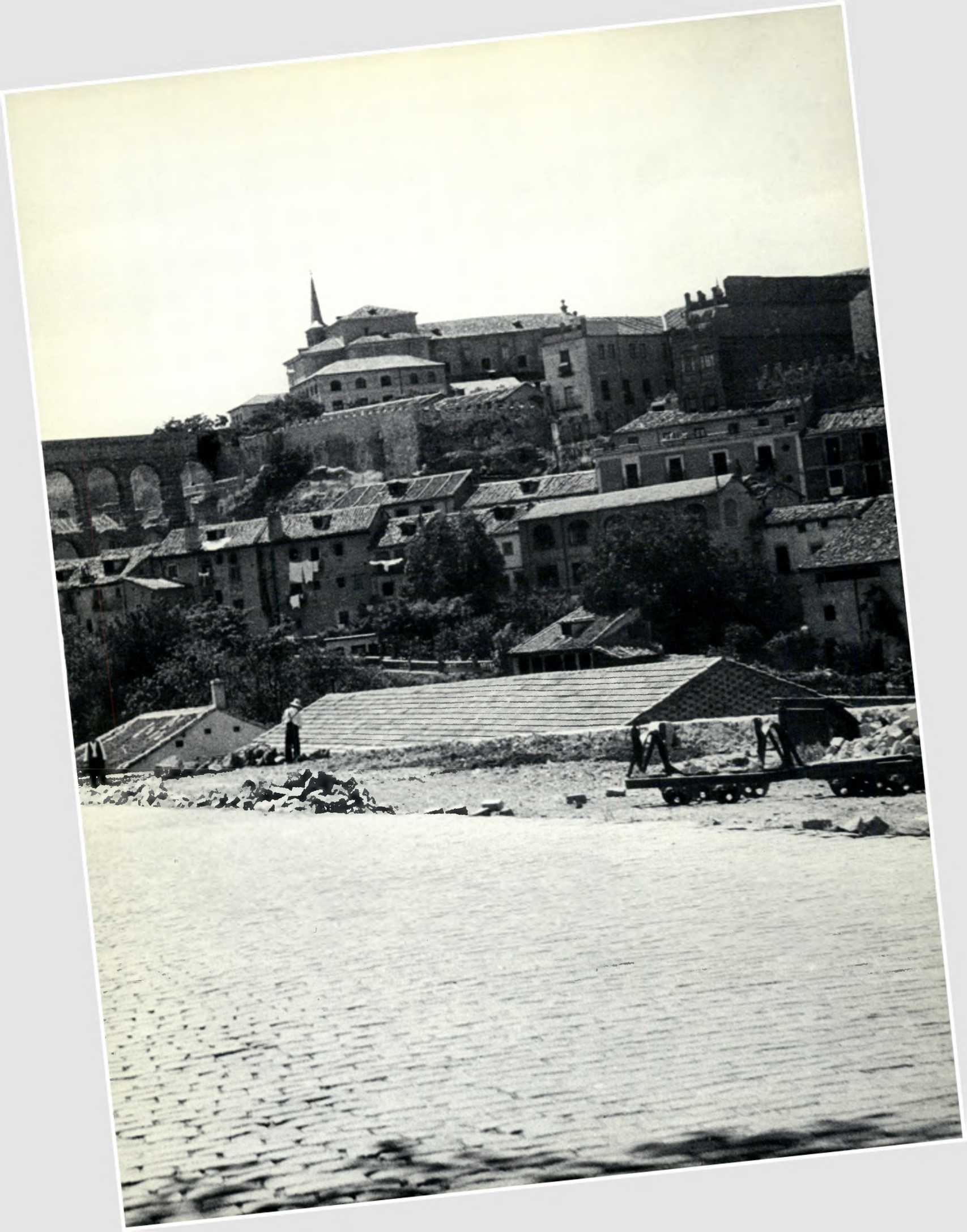
Some Final Statements

Placing the urbanization of the developing world in context, it is possible to see that the developed world will be of declining importance and relevance in terms of its populations, incomes, standards, values and attitudes, although important as a source of aid, relevant experience and expertise.

This latter point is particularly true. The developed countries seem to have urbanized in much the same way as many of the developing countries are now, that is, by a process of differential growth in urban incomes, differential urban household growth in response, together with increasing productivity in rural areas. As well, the growth in urban households (in Canada at least) has been almost as rapid as that expected and experienced in the developing nations. The growth, however, in the developed world has generally occurred at lower population levels and densities.

Thus, although there are no easy or obvious solutions to urban problems anywhere, for much of the developing world the prospects of coping with urbanization (to the nations' relevant standards) seem to be reasonable—with the possible exception of the Indian subcontinent and Indonesia. This is particularly true as cities and their peoples can adjust on many margins, and the dire predictions of urban disaster have hardly been fulfilled as yet.

Special efforts and attention must obviously be given to these urbanization problems, with emphasis on planning for growth in households and housing—both of which oddly seem to have been neglected in general urban planning. Emphasis should likewise be placed on encouraging transit use, restraining automobile ownership and use, and utilizing the special strengths of developing countries such as their labour supply, skills and stronger social and family structures. In addition, aid should be concentrated on essential materials, equipment and expertise which, as yet, cannot be locally produced. □



Reflections on the UN Conference on Human Settlements Vancouver, 1976

BY PETER NICHOLSON

A Personal Assessment

If one believes the Canadian news media, the Habitat Conference was a multi-million dollar exercise in irrelevance. Said MacLean's magazine in a June 14 headline—"Habitat: living up to all non-expectations." The accompanying text was more balanced, but for the great majority of Canadians whose attention span must be allocated among thousands of competing messages, a fleeting headline is the only image of Habitat that will stick. Indeed, until the Conference opened on May 31 with Prime Minister Trudeau's widely-quoted speech, Habitat was known to most Canadians either as a futuristic apartment building in Montreal or as some Conference in Vancouver that the City Fathers didn't want, apparently because the P.L.O. was coming.

Media Reaction

It was inevitable that Habitat would be panned by the Western media. Unaccountably, not a single newspaper in France, Italy or West Germany was represented in the press core, nor did the two largest U.S. television networks of CBS and NBC cover the Conference. And except for thorough and balanced reporting in the Vancouver papers, there was little prominent coverage in the Canadian press. A mid-Conference edition of the Toronto daily newspaper, The Globe and Mail, for example, contained only a Habitat sidelight on nuclear power tucked away in the business section. Having committed such meagre resources to Conference coverage, the press in the industrialized world could hardly have been expected to render a favourable judgement—their minds were made up before things got underway.

Of course, not every assessment was negative. The respected environmental correspondent, Jon Tinker, in a lead editorial in New Scientist magazine (June 17, 1976) concluded that "Vancouver was no failure." Tinker wrote that "Habitat's achievements will prove of more lasting significance than the West's defeat over Israel, which dominated the press coverage of the Conference."

Tinker enumerated four important successes: first, the recognition that "it is the responsibility of Governments to prepare spatial strategy plans... to guide socio-economic development." The time is not long past when the notion of national planning was anathema to Western nations which were quick to associate it with the bureaucratic excesses of Communist states. At Habitat, national spatial planning could almost pass for "motherhood."

Second, the Conference adopted clauses urging that "the use and tenure of land should be subject to public control" and the blunt assertion that "the increase in value of land as a result of public decision and investment should be recaptured for the benefit of society as a whole."

Third was a set of resolutions supporting public participation and self-help. The latter was clearly recognized by Third World countries as the only feasible way of using a labour surplus to overcome an unavoidable insufficiency of capital in the construction sector.

Fourth in Tinker's list of significant achievements was Habitat's endorsement of the target for clean water in urban and rural areas by 1990. As Tinker concluded: "To the half of mankind without easy access to a tap guaranteed not to pass on dysentery, this is a 15-year target worth aiming for."

Unfortunately, there are too few who will be exposed to the thoughtful and informed analysis that reporters like Jon Tinker have provided. Far from being UN apologists or utopians, these analysts offer the most realistic appraisals of events such as Habitat. They did not approach the Conference with "no expectations" as MacLean's apparently did, nor did they come with exaggerated expectations as, unfortunately, much of the UN and Canadian Habitat propaganda was only too willing to engender.

An Evolution of Thought

Those used to covering the day-to-day work of the UN and its specialized agencies look beyond the bizarre diplomatic nit-picking to see an evolution of concept and attitude that is remarkable for its pace and universality. On the natural environment, on population, on food resources, on the status of women, and now on the built environment, the world has come near to speaking with one voice.

It will be objected that this voice is not saying anything worthwhile and that the process of consensus building results only in pompous platitude. The experience of the Canadian delegation in Vancouver demonstrates that such cynicism is misplaced.

The Debate on Resolution D.3

This is remarkably illustrated by the Conference debate over Resolution D.3 on land speculation which in the original formulation of the UN Secretariat stated that:

> "The plus value resulting from change in use of land or from public investment must be recaptured by the community."

An innocuous resolution said some, noting that Canada already has a great deal of legislation to confiscate profits whether from land sales or otherwise. They point to a capital gains tax, corporate taxes and even a speculation tax in Ontario. But the more politically astute—including Alberta Housing Minister William Yurko—recognized in the wording a subtle but significant advance on contemporary Canadian practice.

The Canadian Real Estate Association was also quick to enter the debate, issuing a statement at Habitat Forum (the non-governmental conference at Jericho Beach), which said in part—"The Association believes in private ownership of land and believes that the private sector can do a more efficient job of land development than the public sector" and that "government intervention should be limited to what is needed to make the market work better."

Resolution D.3 was a very real philosophical divide. There was no difficulty whatsoever discerning the ideological stripe of anyone who addressed it. In the Canadian delegation, the argument superficially turned on ambiguous phrases such as "plus value" and "change in the use of land." The "clarifying" amendment proposed to the Committee by Mr. Yurko was more revealing. Speaking for Canada he suggested D.3 should read:

> "An equitable portion of that plus value resulting from change in use of land caused by public investment or decision should be captured by the community."

The final clause beginning "resulting from change" was, in fact, a useful clarification and indeed a strengthening of the original text in that "public decision" was added to "investment" as a recognized source of unearned value. But virtually every other delegation, including the U.S., perceived the phrase "An equitable portion of (that) plus value" as an unacceptable weakening of the original intent which had implied that 100% of the plus value should be subject to public recapture.

Canada was embarrassed, finding itself isolated even from the United States on the right wing of a socio-economic policy issue. (In fairness, had the Conference been in Seattle rather than Vancouver, the domestic political shoe would have been on the other foot and no doubt the Canadian and American positions would have been reversed.)

In the meantime, a drafting group of the Land Committee was preparing a compromise resolution which Rube Goldberg would have been proud to claim. It read:

> "A major portion of the unearned increment resulting from the rise in urban and suburban land values resulting from change in use of land, from public investment, or due to the general growth of the community must be subject to recapture by appropriate public bodies (the community), unless the situation calls for more radical measures such as new patterns of ownership, the general acquisition of land by public bodies or other similar measures."

As always, the choice of words is revealing. Canada's "equitable" has been elevated to "major"; the ambiguous and unfamiliar "plus value" is now plainly established as an "unearned increment"; but "land" has unaccountably been restricted to "urban and suburban" only. (What about farmland on the urban fringe?) And another important notion has crept in. The resolution now encompasses unearned value "due to the general growth of the community."

This formulation was still not satisfactory to the majority of delegations. Even a "major" portion was thought to be too little to recover from a profit that by definition was unearned.

By now, the Canadian delegation had regrouped, determined to atone for its earlier embarrassment. With Minister Yurko taking a backseat, Senator Ray Perrault spelled out a new Canadian amendment to D.3 which was to become the adopted text. It read:

> "The unearned increment resulting from the rise in land values resulting from change in use of land, from public investment or decision, or due to the general growth of the community must be subject to appropriate recapture by public bodies (the community), unless the situation calls for other additional measures such as new patterns of ownership, the general acquisition of land by public bodies."

This resolution is undoubtedly stronger and clearer than its predecessors but still one must read carefully. The phrase "recapture by appropriate public bodies" has been subtly inverted to read "appropriate recapture by public bodies." To those, who under political pressure reluctantly abandoned "an equitable portion," the notion of "appropriate recapture" reintroduces sufficient ambiguity to argue a status quo position at home.

Only the Polish delegate caught this on the floor, but the Committee Chairman, a Venezuelan, presumably missed the Pole's objection in translation and the Canadian amendment was gavelled through.

It would be misleading to claim that the debate on D.3 was typical of the discussion on every agenda item. Indeed, few resolutions were philosophical watersheds capable of inspiring a substantive debate from which genuinely new positions could emerge. But there were a few others, less widely reported, and from Canada's viewpoint, less favourably concluded that were.

Throughout the Conference, the Canadian delegation was instructed to stress the rights of women and of indigenous people. Though some references in support of these groups were added by the Conference, there remained appropriate places where they were ignored. Only a careful study of the full Conference transcript could reveal the often subtle reasons for these omissions.

The Water Issue

Another widely touted Canadian initiative at Habitat was the 1990 water target. Most significantly, this was not eagerly seized by many Third World delegations. The final text urged only that:

> "Safe water supply and hygienic waste disposal should receive priority with a view to achieving measurable qualitative and quantitative targets serving all the population by a certain date; targets should be established by all nations and should be considered by the forthcoming United Nations Conference on Water."

In a supplement to the principal statement of the recommendation, it was added that—"In *most* countries urgent action is necessary to adopt programmes with *realistic* standards for quality and quantity to provide water for urban and rural areas by 1990, *if possible;*" (italics added).

The weasel words are highly significant and not at all accidental. They severely limit the moral and political strength of the resolution because they clearly encode a widespread unwillingness by governments to place the necessary financial priority on clean water projects.

Our aid partners know that Canadian assistance is distributed in response to the recipient government's requests (and thus priorities) and that Canada—as a matter of explicit policy—is not going to earmark a special fund for water projects only. The aid partner knows full well that money diverted to clean water will not, for example, be available for urban industrial development. Choices must be made, and the tragic reading from Habitat, Jon Tinker's optimism notwithstanding, is that Third World politicians are still not ready to trade factories for drinking water.

Deciphering the Code

The foregoing analysis of merely two resolutions may seem an unusual and even eccentric way to review Habitat and its achievements. Admittedly, it is grossly incomplete. But the objective has been to provide some insight into the nature of UN debate, which to the outsider and often to the insider as well, appears to be banal, trivial and as a rule excruciatingly boring.

To discover its logic and indeed the profound message, one must hang on every word and take clues from the nuances conveyed by adjectives and verbs. What one sees on paper is a code which represents the distilled essence of the political philosophies of over 130 nations, speaking six languages. It is a dynamic code. To cipher its true significance one must study its evolution from conference to conference and from General Assembly to General Assembly. It then becomes clear why delegates occasionally rise, quite literally, to replace "and" by "comma." Without such meticulous care, the code would cease to be effective and a diplomatic Babel would ensue.

Was It Worth It?

A legitimate question remains. In the face of one estimate that Habitat cost over $40 million if every nation's expenses were toted (Canada alone contributed at least $15 million) it is fair to ask—was it worth it? Unfortunately, on this question one can only have opinions.

The potential benefits are largely incalculable in that they can rarely be traced directly to Habitat itself. Who, for example, could say that the new water taps in 1990 will have depended for their existence on Habitat Resolution C.12? Or what monetary value could be placed on the social consequences of a land speculation tax enacted in country "X" in 1978 as a result of the political acceptability conferred by Resolution D.3?

A sense of perspective emerges, however, when we compare the total resources invested by the world in the Habitat Conference with the cost of a single large office building. They are roughly equal. Or consider that in 1973 Canadians spent $2,338 million on alcoholic beverages, $966 million on beer alone. In the devalued currency of 1976, the world investment in Habitat was matched by Canadian beer drinkers over a long weekend.

Opportunities Missed

So if Habitat is to be criticized, it should be in terms of opportunities missed, not resources squandered. And opportunities were missed.

There can be no doubt that as a "consciousness-raising" event Habitat demonstrably fell short in the developed world and not least in Canada. The simplistic and sensationalist press treatment is only partly to blame and indeed reflects a difficulty inherent to the notion of human settlement. Too much is encompassed and when it is further insisted that the most crucial aspect is the interrelatedness of every facet, the mind simply boggles.

Nor can there be any doubt that Habitat shamefully neglected the 70% of the Third World population that is not yet urbanized and whose growth still outstrips in absolute numbers the annual increases in the cities.

Hundreds of millions of destitute rural poor are at the very root of the urban crisis. To attack this root malaise would seem to require a radical redistribution of national investment from its current concentration in the urban "modern" sector of most Third World economies to the rural agricultural sector. This transcendent issue was never raised. Significantly, and sadly, the one country that has been able to retain a rural-urban equilibrium was not in Vancouver. China's unexplained absence was one of Habitat's greatest failures.

So the Habitat assessment is mixed and its worth forever a matter of individual judgement. Yet for those Canadians who need and demand more tangible evidence of follow-up activity, they can look to Canada's own clean water targets promulgated by Urban Affairs Minister Barney Danson immediately after the Conference; or to the Energy and Human Settlements Seminar that Canada will host in 1977.

The record of Habitat gives ample direction. Whether the world chooses to follow is a matter of will. □

Afterthoughts on the Habitat Conference

BY ADOLF CIBOROWSKI

I was both optimistic about and shocked by the UN Habitat Conference. The achievements of the preparatory process were very encouraging. Simply to convince the world governments that the issues surrounding human settlements were sufficiently important to meet and talk together, even with all the difficulties they have in such an exercise, was a major achievement. This is especially so when you realize that only ten years ago not many governments believed human settlement issues to be a concern. The building of housing was regarded as a market business. He who had money owned a house; the poor went without. The planned distribution of population and the explosion of urban areas was not considered. These attitudes have changed through the preparatory process. The recognition that this is important business, however, does not mean that tomorrow there will be a miracle and all the cities of the world will start to improve. What it does mean though is that a social consciousness, a public awareness and the political commitment have started to build.

I was shocked by the Habitat Conference as well.

This conference had a new element—the audio-visual component. I must confess I was at first somewhat doubtful about this audio-visual element which could have created simply the biggest film festival in human history. During the preparatory process, we expected that the films would be useful as a source of information on new solutions to settlement problems. A few of the films met this expectation, but what really happened was something quite different and quite dramatic.

We are now quite overwhelmed with statistical data to the point where we have lost our sensitivity. When we read that 80% of a country's population is starving or 70% of its population live in shacks, it no longer means anything; it is too abstract. What does a billion people really mean? Nobody has seen one billion people at once.

At the plenary sessions and at the committees, however, we saw what were called capsules—short excerpts from each country's audio-visual presentation. Everyone of these capsules, whether they were weak, dull or technically poor, made the viewer realize that the problems surrounding human settlements were much more than statistics. We were confronted at that conference with a living, dramatic picture of the world. Even the solutions and achievements presented indicated how poor our achievements are, how tragic sometimes are the solutions and how sorry is the picture of the world. A hungry child, a basic house, these things were no longer merely statistics. Although I have travelled around the world, and have spoken and fought for the elimination of these problems, I was still shocked. The impact of this one injection of visual information was unbelievable. In the capsules we had the first dramatic visual commercial about the grave and difficult situation around the world, and I believe that they will have a subconscious impact on our future attitudes toward the problems of human settlements. □

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Janka Survilla

habitat

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Halifax Historic Properties:

Recycling the Past to Enhance the Future

by Lyndon Watkins

They were obvious candidates for the bulldozer. The collection of rat-infested, derelict, 19th century buildings on Halifax's central waterfront were almost all that was left of the blight that had to be cleared from the city's inner core before the Nova Scotia capital could truly become part of North America's high-rise society.

That was in the spring of 1968, the year after Expo. The mood was "progressive;" the keenly felt desire was for something that would give Maritimers a sense of belonging to the dazzling, optimistic society exemplified in the building boom of Toronto and Montreal.

Urban renewal had been slow to take hold in Nova Scotia. But it was happening. After almost ten years, Halifax had finally succeeded in interesting someone to undertake the development of 17 acres of prime downtown land, up the hill from the harbour.

This was to be Scotia Square, the biggest retail and commercial centre "east of Montreal." With an assortment of other office towers which were then pushing their way up from the slate bedrock of the Halifax peninsula, it was to transform the city skyline. The ten-storey dome of the main post office would never again hold a commanding place in a view of Halifax from the Dartmouth ferry or from atop Citadel Hill.

In less than ten years, Halifax would change more than it had in all the time since the motley collection of settlers and soldiers had landed there with Lord Edward Cornwallis back in 1749.

There was popular support for what was happening and genuine pride among Nova Scotians that their city was no longer a backwater. The next thing that seemed to be needed was a decent inner-city highway so that people could drive into the centre more quickly and out again to their homes in the expanding suburbs.

Harbour Drive was conceived to meet that need. A cloverleaf overpass was built near Scotia Square to connect the first section of this planned four-lane highway. Physically, the only thing preventing its extension were those forlorn and abandoned old warehouses and sail lofts down at the water's edge. Some had already been demolished, and City Council had decided the rest must go.

Redeemed by Fortune

Louis Collins, chairman of the Halifax Landmarks Commission, a society dedicated to the preservation of everything worthwhile from Halifax's past, found out by accident that the buildings were scheduled for demolition. And, with others, he organized a rescue campaign.

"It resulted in a kind of concerted citizen reaction unlike anything else in the modern history of the city," Collins said recently. That reaction, and the events stemming from it, spun the course of development in Halifax on its heel and will undoubtedly influence the shape and style of the city for generations to come.

Despite their sad and neglected appearance, Collins had long been an admirer of the old waterfront buildings. And he knew they weren't as derelict as they seemed. Only four years earlier, when the central wharf buildings nearby were removed, the foreman in charge had told him how stubbornly the massive timbers had resisted the wreckers' efforts. After a heavy truck and wire cable attachment had failed to fell them, the demolition men were forced to cut the buildings down with chain saws.

Collins saw to it that those timbers were stored. No matter how bleak the moment, he always believed better days lay ahead, and Halifax would eventually want to preserve and restore its past.

In his campaign to save what remained of the old waterfront, Collins found an ally in Mayor Allan O'Brien, a thoughtful, sensitive man whose perception of Halifax (and what it could be) has had an impact on successive municipal administrations since that time.

Collins and O'Brien had been school friends. This, and the rapport it gave them, was one of a series of fortunate coincidences that played an important part in what has since become Historic Properties, one of the most successful restoration projects in North America.

In 1968, with so much of old Halifax already having been torn down for redevelopment, Collins felt that the city was in grave danger of becoming "rootless," a community without the stabilizing perspective of visible links with its past and dehumanized by the ever-increasing scale of contemporary architecture.

Other people shared his concern. But, there was also the danger of fossilization. Some of the most valuable land on the peninsula couldn't be left to stagnate, to lie unused forever.

The campaign for retaining two acres of waterfront buildings was based on restoring and returning them to active daily commercial and institutional use. "We didn't want to create a museum," Collins said.

So Colourful a Past

The thought of using these decaying structures again might have seemed an impossibility then; yet, they had once been the commercial heart of the most important military base in British North America.

A hundred and seventy five years ago the wharfs and warehouses were piled high with molasses, teas, spices, silks and puncheons of rich black rum. For generations they were the visible expression of Nova Scotia's mercantile strength, its trading interface with far off lands in Europe, the Caribbean and the Pacific.

The enormous wealth this trade generated for men like Enos Collins continues to have a residual effect today. With Samuel Cunard, the steamship pioneer, Collins was one of a group of prominent Halifax merchants who established the Halifax Banking Co. in 1825. The simple inscription "BANK" cut in stone over the entrance to their premises on the waterfront is a reminder today of someone who was reputed to be the richest man on the continent.

As well as being a merchant, Enos Collins was a privateer, a kind of legalized pirate. During the Napoleonic wars, his fleet of armed merchant plunderers engaged enemy ships off the American coast and into the Caribbean, bringing home the booty to be judged a prize of war by the Vice Admiralty Court. Much of the loot was stored in what became known as the Privateers' Warehouse. This handsome structure of bluevein granite is now the oldest of the surviving waterfront structures. Today, it houses three pubs and restaurants.

Rallying Support

The prospect of losing this impressive link with so colourful a past was almost unthinkable for Louis Collins; but, both within City Council and in Ottawa support for Harbour Drive was still stronger than any desire for waterfront restoration.

In May 1968, Collins and the Mayor went to Ottawa in a last ditch effort to get federal backing for the project. Collins did most of the talking. The meeting ended with a commitment from the federal Department of Indian and Northern Affairs to equally share in the cost of exterior renovation with a suitable developer. The first crucial step had been taken.

Even then, however, there wasn't overwhelming support within Council, particularly among its staff. A fifteen-year development policy was, in effect, being reversed. It was left to the Landmarks Commission to draw up the restoration development proposal. When a call for tenders went out, two groups answered – one from California, the other a Halifax contractor and building supply merchant, John Fiske.

Fiske got the job, and his involvement was another in the series of lucky accidents that seemed to guide the fate of the project. Originally, his only interest was in getting work for his construction company, Stephens and Fiske Ltd. He put in a development proposal only after no one else locally seemed interested, and as he recalled later, "I was stunned when I realized what I had let myself in for."

From the outset, Fiske's prime motivation was to make money; the site had little other appeal to him. Now that the restoration is being acclaimed for its historic and aesthetic integrity, Fiske might be forgiven for saying he saw more in Historic Properties than a return on investment. But, with incredible frankness he admitted recently that, had he believed he could have made more from demolishing the buildings and putting up a high-rise, he would have done so.

Since then, however, Fiske, like so many others, has been seduced by the overpowering appeal of the bricks and mortar of the buildings he restored, the solidness of their beams and the dedicated craftsmanship that went into creating and restoring the waterfront complex.

More Land and Buildings

Four years ago, when the work was starting, there wasn't time to romanticize. The urgent need was to find some way to convince backers of the financial viability of the project. First, Fiske decided he had to put the two acre site in context with its surroundings. Mouldering as it may have been, it was only a couple of hundred paces from the very core of the redeveloped business centre. Surely, he felt this was an asset no banker could ignore.

Two acres, though, was obviously too small. He needed to annex more land, and by another lucky coincidence, another area of 19th century buildings lay to the west of the waterfront site, between it and Scotia Square.

These buildings were of a somewhat later period, more sophisticated and ornate but architecturally equally appealing. There was competition for them from other developers. But having first got two, he eventually acquired 22 properties, comprising two blocks between the east side of Granville Street and the west side of Water Street.

The original two acres, leased from Central Mortgage and Housing Corporation and the City for 30 years at $1 a year, had grown into six, four of them freehold. Granville Street was unquestionably the prize, as it is considered the last intact, architecturally distinguished, 19th century streetscape in North America. Its handsome four-storey Italianate buildings date from the late 1800's. The street of silversmiths, furriers, stationers, china merchants and haberdashers was rebuilt after a disastrous fire in 1859.

The Quest for Money

Surprising as it now seems, Fiske still encountered a great deal of difficulty raising money for the project. "We hunted everywhere, from Halifax to California." Managers of local lending institutions were too familiar with the rundown waterfront area to believe it would ever be capable of profitable restoration. Further afield, there were too many strings attached to what was offered.

But once again fate played a part in resolving Fiske's dilemma. While in Toronto he met Roy Dalzell of Scotia Covenants Ltd. Almost without hesitation

Dalzell decided "Yes, we can help you." All he needed was to see an aerial photograph showing just how strategically Historic Properties was located to the mainstream of the city's commercial life.

Morguard Trust Co., an affiliate company and an approved lender, arranged the $4.7 million mortgage Historic Properties needed. The money came from five pension funds. The rate was nine and five eighths per cent, about ½ a percentage point above the prevailing prime of 10 percent with a term of 30 years.

Toronto lenders proved more receptive to the Halifax restoration idea because of their experience with Yorkville and the Gastown projects. While Fiske paid slightly over the odds for his money at the time, the rate by present standards was extremely advantageous.

This is helping the company remain competitive in what is, and what will increasingly become, a "buyer's market" for rental accommodation in the city's central core.

The financing turned out to have reciprocal benefit for Morguard. As a result of its participation, it became one of the tenants of Historic Properties, opening its first Maritime office there and placing more than $16 million in mortgages before completing its first year of business.

The Unaccommodating Tenants

As important as money was to the restoration, Fiske also needed to get the kind of anchor tenant that would ensure its long-term viability. In many respects, Historic Properties is a shopping centre. But, from the outset Fiske realized he couldn't expect, nor did he want, to get the kind of anchor store usually attracted to a conventional retail centre. A large grocery or department outlet would be totally alien to the concept he had of attracting small, high-quality merchandisers as well as office rentals.

Finding a suitable alternative, however, was far from easy. In the initial stages getting any rental interest was extremely difficult. Fiske admits to having days of despondency. He had 50,000 sq. ft. of ground floor retail space to offer; but months after the work had got well underway, there was hardly a taker.

"People couldn't conceptualize what this dilapidated area would look like after it was restored," leasing manager John Renouf said. Everyone wanted to wait until it was finished.

Breaking the Logjam

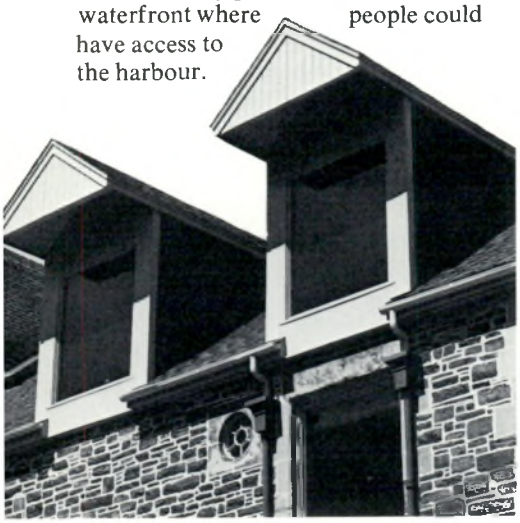
Three major commitments broke the logjam. The province, which to that point had not directly participated, decided that the upper floors of the Granville Street block would make an ideal new home for the Nova Scotia College of Art and

THE WATERFRONT

Aesthetically, the two sections of the Historic Properties Development are markedly different. The Waterfront buildings reflect the need for practicality in an age not long removed from the pioneer time when Halifax was founded. Granville Street demonstrates the degree of sophistication which occurred in the society and its architecture in the succeeding half century.

Design. It is now the largest single tenant, occupying 116,000 sq. ft. at $3.97 a sq. ft. for 30 years. Some interior walls were removed to allow both vertical and horizontal access through the row of adjoining brick and stucco buildings.

As the man responsible for much of the restoration design work, David Forsyth, then with the project's architectural firm of Duffus, Romans, Kundzins and Rounsefell, had no difficulty conceptualizing what the Privateers' Warehouse would look like after restoration. He could also see that the warehouse could also be a valuable business asset as it was the only place along the entire waterfront where people could have access to the harbour.



With two associates, he undertook to rent and outfit the 400,000 sq. ft. building. The bars and restaurants there now have been a nightly sell-out success almost since the day they opened. The atmosphere is genuine "old world." It didn't have to be contrived; it was already there in the form of natural stone, deep-set windows and wood which began its life long before the first settlers came to Nova Scotia.

The third important rental was that undertaken by the Department of Indian and Northern Affairs. The whole regional office moved in, including Parks Canada which acted as historical watchdog and willing consultant during the entire renovation.

After these commitments, the rest came relatively easily, particularly after the retail stores opened for the first time last summer and thousands of tourists began to flock in.

Most of the rental space is now taken and doing reasonably well, and the project is beginning to show a return for its investors and backers. Historic Properties is a rare example of how urban renewal can be profitable as well as aesthetically pleasing and socially beneficial.

The Waterfront

The Waterfront buildings are mostly simple rectangles, wooden or stone in construction, with hand-hewn beams and high-pitched wooden shingled roofs. The shingles have been left natural, as have the exteriors of some of the buildings. The rest of the exteriors are painted.

Simplicity is the mark not only of the exterior, but also the interior of these buildings. There was no need to recreate the "old world" atmosphere so coveted by interior designers seeking to find a restful atmosphere for dining and wining. It was already there, authentic and without need for further adornment.

Budgetary considerations dictated the use of poured concrete for most of the surface between the buildings which are grouped together in an harmonious cluster. The tedium of so much concrete is relieved by the use of a limited amount of recycled brick. But far from detracting from the appearance of the buildings, the surface area seems to allow the buildings an opportunity to make a stronger and more meaningful point. As a result, the buildings shine out from rather than blend in with, their surroundings.

Street furniture is sparse but adequate. There is the inevitable set of stocks, some horse carts and the like, but either through design or accident, the developers haven't let the decoration become a cliché. An appeal by Historic Properties for antique lighting fixtures received only modest response. Therefore, most of the exterior lighting is modern. Simple, unadorned fixtures were used, again letting the buildings make their own statement.

Its Weakness
Its main fault, perhaps, is that it doesn't have any residential component. Because of its small size, this was never a very realistic possibility. Even the hotel that was planned for the waterfront section has had to be indefinitely postponed.

Money, of course, was the main reason for the omissions. Neither housing nor an hotel could be provided at marketable rates, and in the case of the hotel, a serious oversupply of rooms at present doubly insured that no one would become involved. Some hopes are being cherished to include housing in a much larger plan to develop the Halifax waterfront; but, economics may also prevail against them.

Its Financial Benefits
From a taxation standpoint, the impact of Historic Properties has already been significant. Before the restoration, Fiske estimates the city was getting about $18,000 a year from the area. This year, Historic Properties expects to pay taxes of about $385,000. Included in this are taxes paid on the premises occupied by the Art College, a gratifying reversal of the tax-exempt status of educational institutions housed in their own premises.

Both CHMC and the City are also likely to get a "dividend" this year under terms of the land lease agreement which provides for a six per cent payment of gross revenues in excess of $480,000.

This happy financial situation reflects both higher than anticipated rental income and a healthy occupancy level. Originally, the company expected to get an average of $5 a sq. ft. in rentals at this time. This year's figure will be more like $7.

About the only one not doing quite as well as expected is Historic Properties Ltd. itself. Fiske says the original projection was for a 15 per cent return on investment. Unfortunately, because of higher than anticipated operating costs and the need for some additional equipment like air conditioning, the return will probably be around nine per cent.

But, he is satisfed nevertheless. "We consider this a reasonable return," but as he said this in his characteristically quiet, measured way, a crinkle came to the corner of his eyes, as if he were also a little wistful of what a high-rise office block might now be bringing in. It could only have been a passing notion, however, for Fiske is as enamoured by what he has helped to create as the workmen who executed it or the visitors who come to see it.

GRANVILLE STREET

For business reasons, Fiske gave up his large personal office at the waterfront site when a good rental offer came along; but, he hates to be away from the centre, despite the fact that he is currently housed in a shoebox cubbyhole there, without a window. Fellow developer and one-time rival for the Granville Street buildings, Charles MacCulloch, was the man who rented his former office, something Fiske regards as the ultimate compliment from a rival entrepreneur.

Today, the Historic Properties project represents an investment of $8 million. Of this, $4.8 million came from mortgage financing, nearly $1 million from the Indian Affairs exterior restoration grant, $1 million in bank loans and about $500,000 in investor equity. Shareholder equity has since risen to about $3 million.

Cost of the renovation turned out to be comparable or somewhat less than that of new construction on the same site. The total averaged between $37 and $38 a sq. ft., ranging from a high of $42 for the waterfront buildings to a low of $35 for the Granville Street block.

Vitality Regained

While it will be some time before the two sections synthesize into an identifiable whole, Historic Properties is already the base for a remarkable reassertion of the traditional values of city living that Louis Collins felt were so in danger eight years ago.

It is possible now to stroll down to the waterfront on a fine summer day to see the schooner Bluenose II tied up at its jetty or taking tourists for a sail in the harbour. And at nighttime, the area that was once the prowling preserve of rats and alley cats is now abubble with the sounds of people having a good time.

Preservation is also infectious. Durham Leashold Ltd., which six months ago began work on a $50 million commercial complex close by, is to use the facades of other 19th century Granville Street buildings for the exterior of its planned four-storey 40,000 sq. ft. shopping mews. When the work is completed, the crisp lines of the street created by William Thomas and Sons of Toronto to replace those buildings lost in the 1859 fire will once more be returned to their old glory.

Pedestrian malls are to be made out of some streets, and walkers will be able to enjoy the sights of both new and old buildings from the comfort of enclosed

Granville Street

At present, the attraction of Granville Street is still more potential than fact. It is still less than half way towards restoration, and many of the shop fronts on the west side of the street are boarded up while demolition takes place behind them.

Even on the east side, the properties owned by Fiske and his associates are only partially restored. But, anyone with half an eye for architectural character can see that not even the ravages of time and neglect have robbed Granville Street of its splendour.

The impact is both individual and collective. Each of the interconnected buildings makes its own point, some strong, some subtle, but none strident or vulgar. Collectively, they express only one sentiment — elegance.

All of the properties on the eastern side will be preserved intact. Only the façade of the west side will remain, which is a pity because behind the dirty windows and broken plywood coverings are the remains of what were once rooms of extraordinary beauty.

Now that the wreckers have removed the dropped ceilings and wallboard panelling put up by "improvers" of the recent past, it's possible to see why Granville Street was considered almost "too Grand" for Halifax in the late 19th century.

One shop has an oval interior. Its ceiling is high, with a cornice of nine rows of beautifully moulded plaster. Properly restored it would be stunning. By the time you read this, it will be only a memory. Fortunately, some of the street's fine plasterwork will survive in the Fiske properties.

One's eye easily eliminates the unsightly signs and blemishes that still have to be cleared away, leaving the overall impression of honey coloured sandstone, strawberry red brick and strong black wrought iron.

A few of the buildings are of stucco or concrete finish. All have elegant detail in sandstone or brick relief. And, with one modern exception, there isn't an ugly window on the entire street. The exception comes from the use of glass brick to fill in what was once a novel window archway.

While at first glance the façades seem reasonably similar, there are surprises, particularly the onion-shaped arches above the windows of what is now a travel service. Next to it is a finely proportioned house of Georgian character, sporting a series of Grecian urns on its roof line.

Soot from the coal fire days of long ago accents the stone work in a way reminiscent of the squares and terraces of London before the big building cleanup.

Perhaps the prettiest building on the street is one of soft red brick. It is the narrowest, being only about 20 feet across, and its charm comes both from its early strawberry colour and the triple row of little rounded windows across its front.

Granville Street is a sheer delight.

walkways that are planned to interconnect each main section from the soon-to-be-built Metro Centre sports complex to the waterfront.

Almost imperceptibly, at least for those that live here, Halifax is being turned into a visually exciting, yet very comfortable place. For Edmund Morris, the present mayor, its "livability," however, is its greatest attraction. People are still in reasonable scale to their surroundings.

The population at present is less than 150,000 and will only grow to about 184,000 during the next decade, although there will probably be a much greater expansion in the size of the surrounding metro area.

Some city planners are worried what this growth will mean to traffic density, particularly as Harbour Drive now seems, politically, to be a dead duck. Street realignment north of the renovation area is planned; but, this is considered more as an aid to establishing building boundaries than speeding a return of the bulldozers.

For a while, at least, Enos Collins can rest assured that no four-lane traffic route will slice through his warehouse. Louis Collins insists, however, that "these community assets will only live as long as the community remains loyal to them.

"Local support must be a continuing feature of these and similar developments elsewhere in Canada. Projects like this are a wonderful way for people to be reawakened to their heritage, for them to look down the tube of history and see the things that are worth preserving and not to mind paying for them. Perhaps this may be a model for other parts of the world."

A Model for Others

Carlos Luna-Pena, an architect and city planner from El Salvador, Central America, thinks it is. He visited Historic Properties recently as part of a group of experts in Canada to attend the United Nations Habitat Conference on Human Settlement in Vancouver. His own city of San Salvador, he said, shares many problems with Halifax. In its desire to develop, it has been urged to follow the high-rise route; but, he said his visit to Halifax has convinced him there are alternatives, or at least the compromise option of utilizing both old and new to retain the basic character of a city.

Nearer to home, such centres as Charlottetown and St. John's may copy the Halifax example, and there is also interest from Edmundston.

A Delightful Ambience

Halifax had the advantage of starting out with some remarkably fine assets. Despite their deteriorated condition, most of the buildings that could be saved were remarkably good examples of their time. And when the tawdriness was stripped away, the setting they were in was fine.

Halifax has a kind of northern San Francisco feeling about it with the same kind of hilly streets rolling down to the waterfront. When the sun is reflecting off the harbour or the fog is rolling in from Chebucto Head, the quality of light is the same. And the similarity with the West Coast port is enhanced, for the imaginative, by the distant moan of a foghorn or a blast from the horn of a departing freighter.

The refurbished Waterfront buildings put a finishing touch to the illusion. They are either natural stone or shingled wood. Most of the exterior of the wooden buildings is new, and some of the buildings themselves are entirely new; but, the most infinite care was taken to ensure authenticity. For instance, only two colours were used on those buildings that were painted – red ochre or bottle green. They seemed a little bright at first; but, already they have begun to mellow and will soon settle into shades that were traditionally used on such structures.

The interior of both the Waterfront and the Granville Street buildings is warm, elegant and inviting, but not overdressed. Modern building materials were used where appropriate. Otherwise, the stone, red brick and sturdy wooden beams have been left to speak for themselves.

They have brought a whole new dimension to office life. Indian and Northern Affairs staff work in a cathedral-like setting. Heat absorbed by the angled roof of their offices has proven something of a problem, but that is being corrected by the installation of air conditioning.

Some of the architectural embellishments have been worn away from the Granville Street buildings by the ravages of the Maritime climate. Much of their original glory has been restored, however, as has the kind of carriage trade commerce which flourished in Queen Victoria's day. Stores sell everything from new and antique furniture to potted plants and Canadian books. The place is mercifully devoid of plastic and neon and a joy to stroll around.

Some buildings have been joined to create a covered mall and a promenade. The most attractive aspect of the place is the feeling of discovery and surprise one gets from turning a corner and finding a set of slender, cast-iron Corinthian pillars or the original adze marks on a particularly stout beam. The pillars, by the way, are original and were probably imported from New England as were many of the shop fronts of the Granville Street buildings.

For the $950,000 it put in, Indian and Northern Affairs, of which Parks Canada is a part, had a complete say on the exterior restoration of the Waterfront section, and they gave valuable advice on other aspects of the project. Their involvement extended even down to determining the pitch of a roof, the size and shape of the windows and the colours chosen for the exteriors.

Windows were, and still are, something of a contentious issue. A minor battle developed between Fiske and some of the Parks Canada people over what size windows should be used in one of the new Waterfront buildings. As it was to house a new seafood restaurant, Fiske argued that it was important that the diners be able to see the harbour from across their Dover sole. To be authentic, however, the windows had to be small; nineteenth century warehousemen didn't waste money on an unnecessary expanse of glass.

A tussle resulted which ultimately ended when someone was sent down from Ottawa to arbitrate. The compromise was medium-sized windows which satisfied all.

Some purists still have reservations, however, about some other windows in the complex. What were originally a series of loading bays in the Collins Bank building have been enclosed as windows. The smoked glass used reflects sunlight and gives the building a strange fish-eye appearance. The problem could be solved, Forsyth says, by setting back the glass a foot or so. Fiske promises to look into it.

It is this kind of dedication that has helped produce a superb piece of restoration. The whole area shines now like a newly-minted penny. It's so good that many visitors believe the Historic Properties have always looked that way.

"Isn't it wonderful how well they've looked after their old buildings," a little grey haired lady said to a friend as she walked through the complex last summer.

All David Forsyth who overheard her could do was smile. But he appreciated the tribute. □

HOLLIS STREET

Le Centre national d'art et de culture Georges-Pompidou

par René Viau

La transformation du quartier des Halles, centre historique de Paris, se résume à quelques images. D'abord, le trou béant qu'on s'affaire à combler; c'est l'emplacement laissé libre par la démolition des pavillons de Baltard. Déjà, certains éléments atteignent le niveau du sol; on y voit un labyrinthe de béton, le toit de ce qui sera la plaque tournante du réseau ferroviaire métropolitain. En surface, un gigantesque projet de parc, vaste tapis vert qui recouvrira le tout et, plus loin, de l'autre côté du boulevard Sébastopol, le Centre national d'art et de culture Georges-Pompidou, immense mécano géant dont l'inauguration officielle a eu lieu le 31 janvier 1977.

En 1969, le président Georges Pompidou décidait de créer, au cœur de Paris, un centre d'art contemporain regroupant des activités multiples offertes à un vaste public. A la même époque, à la veille de l'évacuation des Halles vers Rungis, le quartier était dans l'incertitude quant à son avenir. C'est à deux pas de là, à mi-chemin entre ce quartier et le Marais, sur le lieu – dit plateau Beaubourg, qu'on décida d'ériger ce centre culturel nouveau genre, issu de la conjonction en un même endroit du livre, (une bibliothèque devra y être aménagée), des arts plastiques, de l'architecture, de la musique, du cinéma et de la création industrielle.

A l'origine de l'idée du Centre Pompidou, se trouve une réflexion sur le rôle du musée, et plus particulièrement sur sa fonction d'information. Le musée doit s'ouvrir à la vie quotidienne, remplir une fonction de recherche, favoriser la création. Les activités culturelles qui y seront présentées doivent être décloisonnées et rejoindre le grand public. Cette réflexion se doublait d'une intention de redonner à Paris son rôle international dans la création artistique contemporaine. Cet ambitieux programme posait cependant un problème architectural.

Pour réaliser le Centre, un concours international fut lancé. Au préalable, le ministère français des Affaires culturelles avait pris soin de préciser la nature des activités qui s'y dérouleraient, les liaisons qui devraient exister entre elles et avec l'extérieur, ainsi que leur place dans le bâtiment. Des consultations furent entreprises avec les futurs utilisateurs pour permettre l'ébauche d'un programme de base.

Les responsables de la future bibliothèque, du Musée national d'art moderne auxquels se joignirent ceux du Centre de

création industrielle et l'équipe de Pierre Boulez de l'I.R.C.A.M (Institut de recherche et de coordination acoustique-musique) définirent leurs besoins d'espace propre ainsi que les espaces communs.

Outre les contraintes que la vocation particulière du Centre imposait: importance des activités d'accueil et d'information, hétérogénéité des utilisateurs et des activités, problèmes multiples suscités par la sécurité et la circulation, dimension importante du bâtiment – 100 000 mètres carrés prévus sur un espace de 20 000 mètres carrés – le programme, dont l'élaboration faisait appel aux méthodes modernes de préfiguration, comportait d'autres aspirations. On souhaitait une construction polyvalente, flexible, une architecture moderne et fonctionnelle plutôt que symbolique.

Le site du plateau Beaubourg fut choisi, semble-t-il, parce que c'était le seul espace disponible dans l'immédiat au cœur de Paris. Constitué par un quadrilatère bordé au nord par la rue Saint-Martin, à l'est par la rue du Renard, le plateau Beaubourg était une sorte de terrain vague servant au stationnement. Sur l'emplacement de ce quadrilatère s'élevaient autrefois des immeubles insalubres démolis entre 1930 et 1940.

En juillet 1971, un jury international examine 681 projets venus du monde entier. La participation canadienne, assurée, notamment, par trois agences est remarquée: Moshe Safdie – Searle, Wilbee, Rowland – Erickson, Massey. Le jury fixe son choix pour ce concours d'idées sur la proposition de deux architectes: Renzo Piano, italien, et Richard Rogers, anglais, assistés du bureau d'études « Ove Arup and Partners ». Cette décision est motivée par les raisons suivantes: qualité architecturale et technique de l'ensemble, conformité des surfaces avec celles du programme, accès et circulation soignés, flexibilité d'utilisation des espaces. Les modalités d'insertion au quartier sont particulièrement appréciées du jury. Pour faciliter la « greffe », Piano et Rogers ont conçu un réaménagement du quartier autour du futur centre. De plus, ce bâtiment n'utilise que la moitié du plateau Beaubourg, l'autre moitié étant occupée par une grande place, légèrement en pente par rapport au niveau de la rue et qui sert à différentes manifestations de plein air. Après des études complémentaires poussées, certaines modifications sont prescrites au projet initial. Ainsi, à cause des exigences de la protection contre l'incendie, le principe de la transparence est sacrifié sur la façade est dont le mur comporte des coupe-feu. Les services de contrôle de la sécurité imposent des normes sévères. La charpente métallique est recouverte d'un produit isolant, lui-même revêtu de feuilles d'acier qui assurent une résistance au feu d'au moins deux heures. Un système de gicleurs d'urgence est prévu à partir des plafonds. Des escaliers de secours extérieurs au bâtiment sont érigés en plusieurs points de chacune des façades.

Pour faciliter l'insertion au quartier, la hauteur passe de 60 mètres à 45 mètres. Initialement, la place devait se prolonger entièrement sous le bâtiment grâce à la construction sur pilotis. Cette solution fut abandonnée et le rez-de-chaussée est aujourd'hui couvert, en majeure partie, de vitres transparentes.

La construction débuta en avril 1972. Après quatre années de travaux au cours desquels les Parisiens n'en finirent plus de s'étonner, le Centre Pompidou est maintenant ouvert. Il reçoit visiteurs et touristes, ébahis par cette architecture de science-fiction qui soulève les passions. On assiste à des débats historiques où ceux qui s'opposent aujourd'hui au style de Beaubourg sont comparés aux détracteurs, et ils étaient nombreux en 1887, de la Tour Eiffel.

Caractérisé par une structure métallique libérant totalement de vastes plateaux internes aménageables, le Centre fait appel à une technologie dont le caractère novateur s'impose. Claude Mollard, dans son livre « L'enjeu du Centre Georges-Pompidou », brosse un tableau nécessairement simplifié de la technique employée. Le bâtiment repose sur une solution technique isostatique. L'ossature se présente comme l'empilement de cinq ponts suspendus, constitués chacun d'une grande poutre de 50 mètres de portée.

Chaque poutre est équilibrée par des balanciers supportés par des poteaux et retenus par des tirants. Balanciers, poteaux et tirants sont extérieurs aux façades du bâtiment.

Constituée d'éléments légers, la structure dispose de qualités dynamiques mais présenterait toutefois le défaut d'être relativement fragile; la rupture de l'un des éléments-supports rompt l'équilibre et peut entraîner l'effondrement du bâtiment. Des dispositions furent prises pour que, dans cette hypothèse, l'ensemble porteur de la poutre reste stable. Chaque balancier est calé et ne peut pas basculer autour de l'axe du poteau. Cette correction rend la structure hyperstatique en cas d'incendie. Le squelette du bâtiment est formé de poutres de 50 mètres de long et de 3 mètres de profondeur dégageant des étages de 7 mètres de hauteur et comporte, à chaque 12 mètres, une poutre située à 4 mètres au-dessus du plancher. Les surfaces sont libres de tout plateau intermédiaire. La charpente métallique est érigée suivant le principe de l'acier moulé. L'acier incandescent est coulé dans de très grands moules et la pièce est alors modelée dans la masse. Cette technique coûteuse permet une très grande qualité de finition. La charpente est ensuite enveloppée de verre transparent.

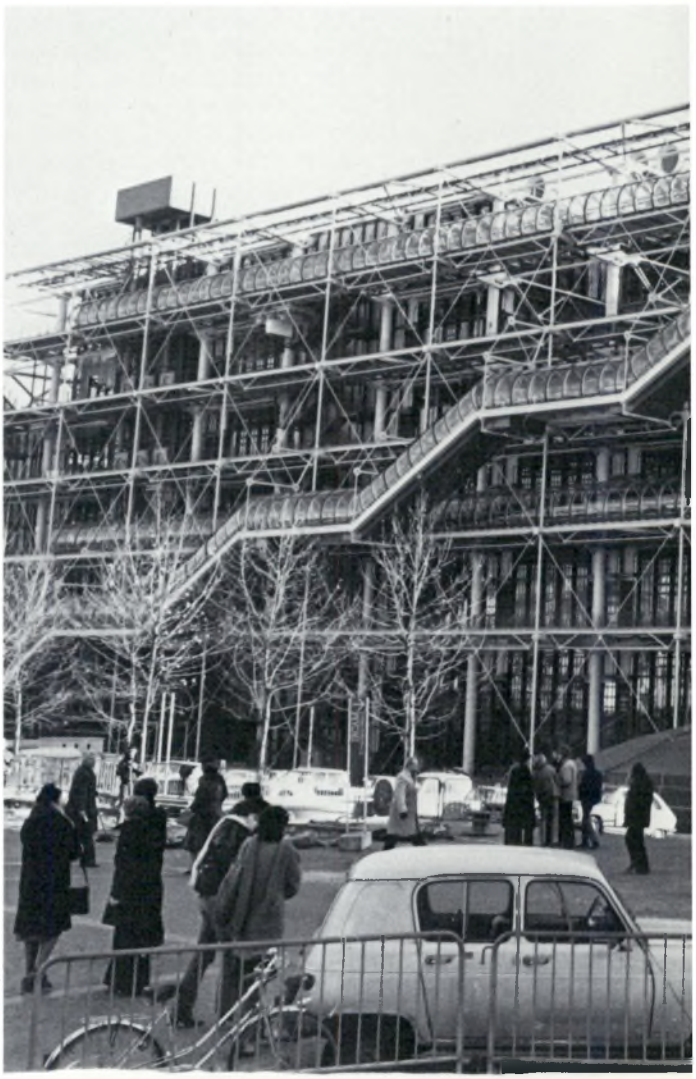
Autre originalité: les contraintes techniques. Toute la mécanique: gaines de climatisation, monte-charge, chauffage, installation électrique, est localisée à l'extérieur de la façade est, celle de la rue du Renard, dans un parti pris de dégager l'espace central. Des couleurs vives identifient les différents organes qui assurent la « vie » au bâtiment. Façade ouest, à l'intérieur de bulles de plexiglas, sortes de passerelles suspendues au flanc du « bateau », on accède en serpentant aux six étages du Centre. Des escaliers zigzaguent de haut en bas. Des galeries et des terrasses complètent l'ensemble où tout Paris s'offre à la vue du visiteur. L'ouverture sur la ville est favorisée par la grande place publique où se tiendront diverses activités: reconstitution d'un atelier d'artiste, aménagement de la structure gonflable dite « le polytope de Xénakis ». Pour la rendre vivante de cris et de rires, la place, surnommée la « piazza » par ses concepteurs, comportera un mini-parc où, sous un chapiteau, des activités enfantines diverses favorisant la création et la récréation, auront lieu sous la direction d'animateurs.

L'intérieur du bâtiment est équipé en divers points de poutres de service, dispositifs auxquels peuvent être suspendus des éléments architecturaux de toutes sortes: plates-formes comportant des appareils audio-visuels, doubles plafonds amovibles et autres « objets » fonctionnels. Un système de gestion centralisé et automatisé veille au bon fonctionnement du réseau technique. Gardiennage et surveillance font largement appel au contrôle audio-visuel. La signalisation et les circulations sont particulièrement étudiées. La climatisation de l'air, indispensable à la conservation des œuvres d'art et rendue nécessaire par l'éclairage artificiel sur une très grande surface et dans une architecture de verre et d'acier, assure à l'intérieur une température égale.

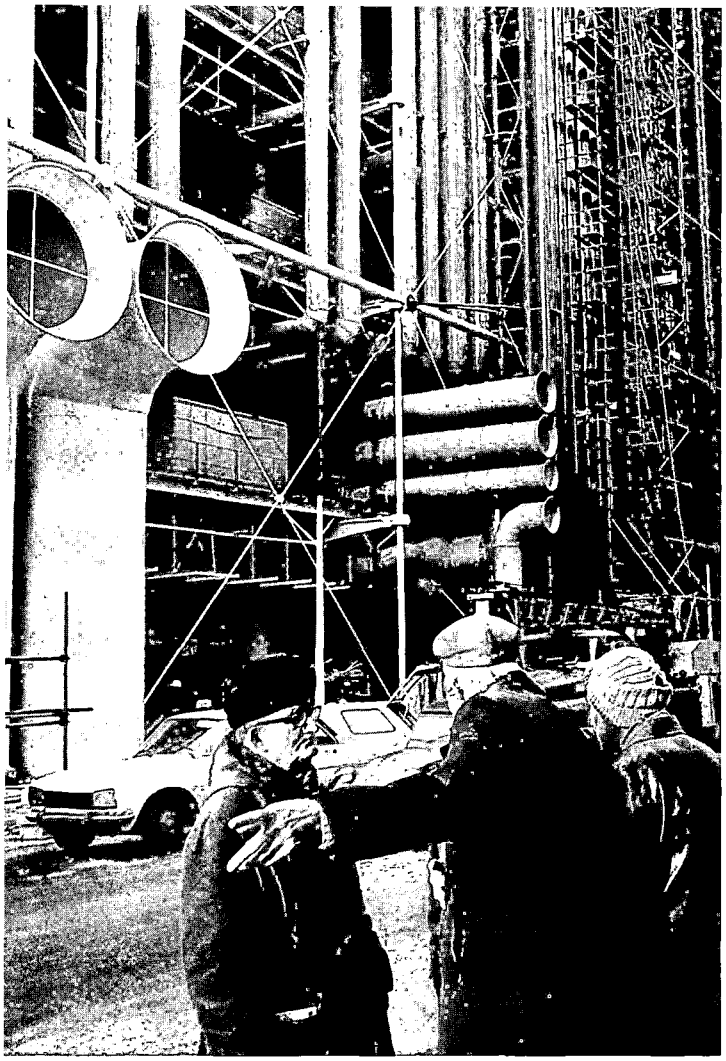
Russell Proulx

Vues intérieures et extérieures du Centre Georges-Pompidou

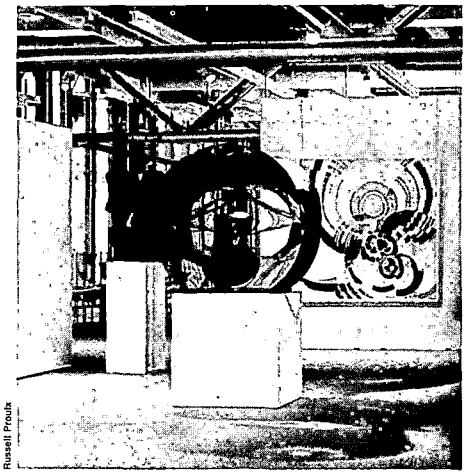
Agence France-Presse



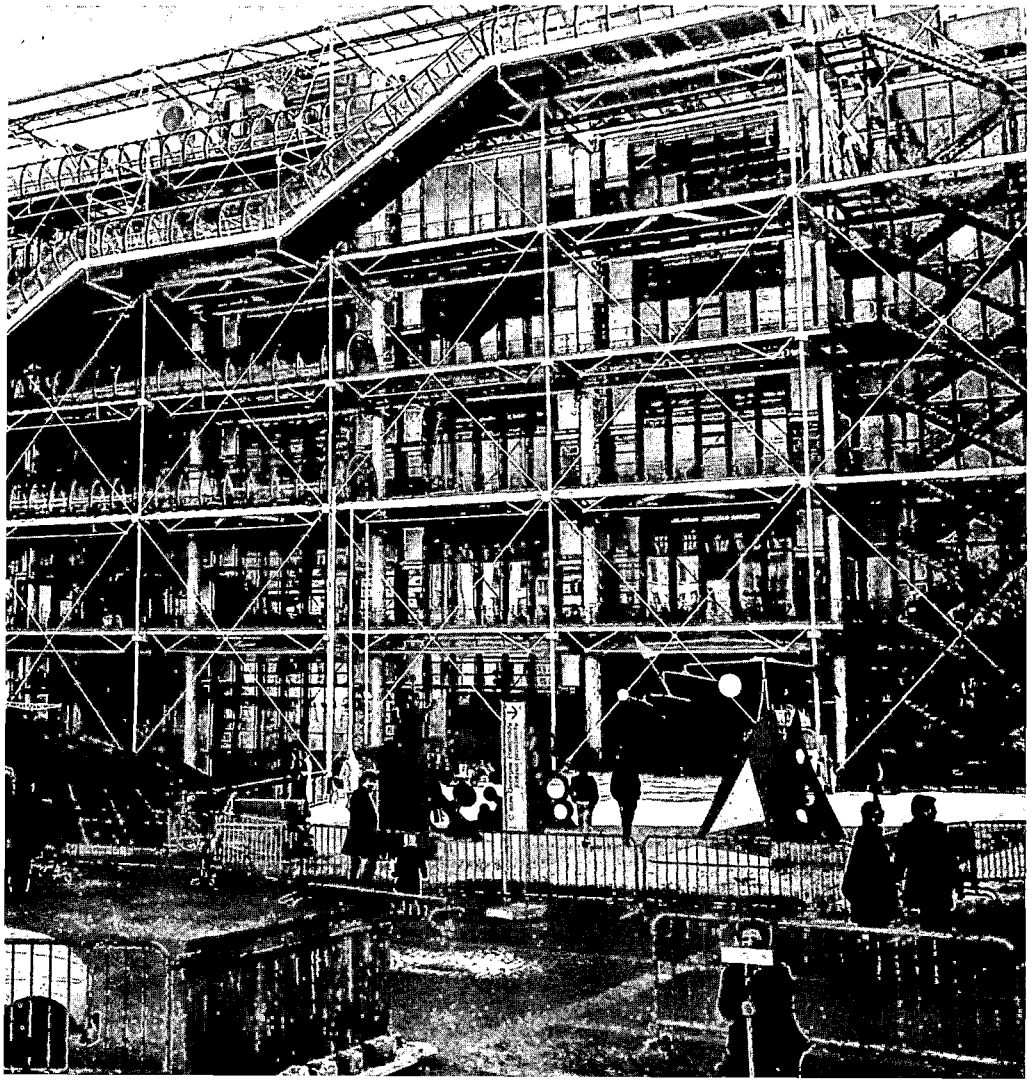
Russell Proulx



Russell Proulx



Russell Proulx



Par l'importance visuelle accordée à la mécanique du bâtiment, et le parti pris de ne rien camoufler, le Centre Georges-Pompidou apparaît comme une grande machine, une apothéose du fonctionnalisme. L'écheveau d'acier qu'est l'ossature confirme cette impression. A cause de l'extériorisation de la charpente, certains esprits enthousiastes n'ont pas hésité à comparer l'architecture du Centre à celle d'une cathédrale gothique. Nombreux sont les passants qui font remarquer que cette construction originale et définitive donne au bâtiment l'aspect d'un chantier dont les ouvriers n'auraient pas encore retiré les échafaudages. Dans le quartier, on surnomme le Centre, « la Raffinerie ». Des architectes, des urbanistes, sans dénoncer l'option en tant que telle, ont déploré le côté monolithique, brutal de l'œuvre, trop grosse, disent-ils, et surdimensionnée par rapport au quartier.

Le projet essuya de nombreuses autres critiques. La vocation même du Centre Pompidou fut contestée. A l'aube de sa construction, après le départ des négociants, une animation culturelle

intense vit le jour sous l'immense chapiteau des Halles de Baltard. Le démantèlement de ce chef-d'œuvre souleva l'indignation générale, laquelle se reporta sur Beaubourg, qualifié d'entreprise de récupération et de dilapidation des fonds publics. Pourquoi les pouvoirs publics ne favoriseraient-ils pas l'utilisation des Halles pour l'animation culturelle d'une façon permanente plutôt que de construire ce « Concorde de la culture » ? L'incertitude quant à la vocation à donner à l'emplacement attisa cette polémique.

Nous savons maintenant que le Conseil de Paris a décidé d'aménager le terrain des Halles, au-dessus de la future plaque tournante du métro régional, en un grand jardin de surface, le tout devant être complété en 1981. Quoi qu'il en soit, si certaines inquiétudes se sont dissipées, l'usage qu'on en fera pourra seul justifier la mission du Centre national d'art et de culture Georges-Pompidou et le coût élevé de sa construction: environ $450 millions.

Quatre principaux « départements » forment le Centre, lequel peut accueillir environ 10 000 personnes par jour, plus de 4 500 simultanément!

La Bibliothèque publique d'information offrira plus d'un million de volumes dans tous les domaines de la connaissance.

Le Centre de création industrielle, un département très actif, s'intéresse à la création et à l'évolution du cadre de vie. Il regroupe les disciplines du design, de l'urbanisme, de la communication visuelle et de l'architecture.

Le Musée national d'art moderne présente l'art du XXe siècle jusqu'à sa période actuelle.

L'Institut de recherche et de coordination acoustique-musique sera un véritable laboratoire de recherche acoustique et scientifique sur les phénomènes musicaux.

Outre ces activités permanentes, des manifestations diverses, des expositions temporaires consacrées aux thèmes les plus significatifs de la vie et des arts du XXe siècle, occupent les espaces communs. Une cinémathèque, des locaux destinés à la vidéographie, à l'audio-visuel, des salles de réunion et de conférence, des lieux de détente, des salles d'exposition pour chacun des départements, une cafétéria et des terrasses où l'on peut flâner, prendre un verre et contempler les toits de la ville, complètent l'ensemble.

Il manquait à Paris une bibliothèque moderne, ouverte à tous. Le livre occupe dans l'aile gauche du bâtiment, les premier, deuxième et troisième niveaux, sur un peu plus des deux tiers de leur longueur. Ces étages sont reliés entre eux par un escalier mobile intérieur. Une salle de lecture, sorte de librairie où rien n'est vendu, située au niveau de la place, offre périodiques, revues et quotidiens tout en jouant un rôle d'incitation. La Bibliothèque publique d'information fait aussi un large appel à l'audio-visuel et à l'informatique. Le public trouve à sa disposition des casques pour l'écoute des disques et des cabines équipées de magnétophones pour l'étude des langues. Accueilli, orienté, le lecteur se sert lui-même sur les rayonnages. Les surfaces éclairées par la lumière naturelle sont réservées à la lecture-détente. Les rayonnages plus denses sont situés rue du Renard, contre la paroi de la façade est. La bibliothèque comporte 1 300 places et s'étend sur une surface de plus de 15 000 mètres carrés.

Le Centre de création industrielle (C.C.I.) propose un regard plutôt critique sur notre cadre de vie. Tout ce qui concerne le quotidien l'intéresse. Il fait un peu figure d'enfant terrible du Centre Pompidou. Parmi les expositions qu'il organise, citons pêle-mêle: Qui décide en ville? Le jeu et le jouet, La ville et l'enfant, L'histoire d'une voiture – généalogie, vie et mort d'un produit. D'autres thèmes seront abordés: le design pour handicapés, le mobilier scolaire, l'archéologie de la ville. Le C.C.I. présente une chronique de la vie quotidienne qu'il espère contribuer à améliorer. Outre ces expositions thématiques, il dispose pour son rayonnement, d'une riche documentation accessible à tous d'éditions et d'études variées. Une banque d'information fonctionnant par ordinateur y répertorie tous les produits disponibles sur le marché français. Cette banque est destinée à conseiller le consommateur sur le produit qui lui convient le mieux.

Les locaux du C.C.I. sont disposés en deux endroits dans l'immeuble. Bureaux, activités d'étude et de documentation sont rassemblés au premier étage. Au niveau de la rue du Renard, la galerie d'actualité fonctionnant comme un organe de presse, met les techniques d'exposition et d'animation au service des découvertes les plus récentes dans les domaines privilégiés par le C.C.I. Dans cette galerie, un espace est consacré en permanence à l'urbanisme parisien, à l'aménagement du territoire et aux grands projets municipaux et régionaux. Dans le prolongement de la galerie d'actualité se trouve la galerie rétrospective. Elle retrace l'histoire de la création industrielle du triple point de vue de la production de formes, de l'innovation technologique et des réalités socio-économiques.

Le Musée national d'art moderne occupe le quatrième étage et le tiers des deuxième et troisième étages. Y sont réunies les œuvres majeures du XXe siècle. Pour faciliter l'accrochage, un système de cloisons amovibles, un éclairage soigné, de faux plafonds à mi-hauteur structurent l'espace en unités de dimensions variables. Cette mobilité permet de créer, en fonction des présentations linéaires ou thématiques, des parcours différents adaptés au besoin. Les toiles ne figurant pas sur les cimaises sont visibles sur demande. Grâce à un système perfectionné d'entreposage au plafond, l'amateur peut lui-même faire descendre l'œuvre qu'il veut contempler. Au rez-de-chaussée, dans la partie sud du bâtiment ouverte sur la rue Saint-Merri, la galerie expérimentale exposera l'art d'avant-garde. L'action du Musée national d'art moderne est complétée par la production et la conservation d'une abondante documentation imprimée et audio-visuelle. Ce département occupe une superficie totale de 16 550 mètres carrés.

L'Institut de recherche et de coordination acoustique-musique a été conçu comme le rassemblement en un même lieu d'un ensemble de moyens nécessaires à la recherche et à la création musicales. A cause de ses caractéristiques propres, il ne pouvait être logé à l'intérieur du « grand Beaubourg ». Il lui fallait un lieu offrant de hautes performances acoustiques ainsi qu'une isolation sonore irréprochable. En tenant compte de ces contraintes, les architectes ont conçu un bâtiment souterrain contigu au grand bâtiment, permettant de dégager le beau chevet gothique de l'église Saint-Merri ainsi que les abords de la place Beaubourg.

Cette option rendait indispensable la démolition et la reconstruction, à quelques pas de là, de l'école Saint-Merri. D'une surface de 300 mètres carrés, l'immeuble souterrain regroupera des studios et des laboratoires acoustiquement isolés ainsi qu'une aire de projection. Destiné à la fois à l'expérimentation scientifique et à la communication avec le public, cet espace à géométrie variable pourra accueillir 400 personnes. Il sera équipé d'un plafond et de murs revêtus de panneaux prismatiques mobiles dont les différentes faces correspondront à des acoustiques différentes. L'accès se situe le long d'un corridor descendant par paliers successifs de la rue au bas de l'aire de projection située au pied du chevet de Saint-Merri.

L'I.R.C.A.M. sera pratiquement invisible, le toit du complexe servant d'espace piétonnier. Recouverte de verre, une partie du toit laissera pénétrer la lumière naturelle à l'intérieur.

Impact sur le quartier

Le plan d'aménagement du quartier conçu par les architectes lauréats prévoyait la transformation, en espace vert, du plateau de la Reynie situé sur la voie d'accès au Centre, ainsi que celle du plateau Saint-Merri, au-dessus de l'I.R.C.A.M. Ces plateaux sont reliés entre eux et à la place Beaubourg par un vaste réseau piétonnier englobant le quartier immédiat. Pour permettre aux piétons de reconquérir cette parcelle de l'espace urbain sans rencontrer une seule voiture, les ouvriers procèdent présentement à l'enlèvement des trottoirs et au pavage des rues: dalles de granit, pavement mosaïque et asphalte. Plus de 21 500 mètres carrés seront rendus ainsi aux promeneurs dans un périmètre délimité par la rue Beaubourg, la rue de Rivoli, le boulevard de Sébastopol et la rue Rambuteau.

L'événement architectural qu'est le Centre Pompidou a provoqué une série de modifications majeures dans l'environnement immédiat. Le quartier autour de l'église Saint-Merri, le long de la rue Quincampoix et au nord, vers les îlots Saint-Martin, vivait traditionnellement d'artisanat. La bonneterie y était installée depuis le moyen âge. L'activité économique était entretenue par la présence des Halles. Entrepôts, boutiques, échoppes d'artisans côtoyaient des hôtels délabrés, dont certains étaient mal famés. Bien que pittoresques, ces rues avouaient leur âge et se montraient en un piteux état. Le démantèlement des Halles entraîna la libération d'une multitude de fonds de commerce, la démolition et l'expropriation de plusieurs immeubles, et le départ de leurs habitants. A la suite de l'animation culturelle spontanée des Halles, ces fonds de commerce connurent des vocations nouvelles. Encouragés par la création du Centre Pompidou, ils s'orientèrent vers des activités à caractère plus ou moins culturel: magasins d'antiquités, brocantes, galeries d'art, restaurants, librairies, boutiques de mode, cafés-théâtres poussent depuis comme des champignons. On commence à restaurer certains vieux immeubles et les promoteurs recherchent les amateurs de vieilles pierres et de vieilles poutres. La spéculation bat son plein. Le prix du mètre carré a décuplé en dix ans. Une nouvelle couche sociale disposant de revenus élevés s'installe ici, chassant les classes populaires. Attirées par le « noyau » Beaubourg, les galeries d'art quittent la rive gauche, confirmant dans la hiérarchie du standing parisien, le caractère de pointe du quartier. Le IVe Arrondissement disposant d'équipements nouveaux: un complexe culturel prestigieux, un futur jardin là où s'élevaient les Halles, subit une forte demande. C'est le quartier qui « monte ».

D'importantes opérations d'urbanisme sont entreprises par les pouvoirs publics et l'industrie privée. Afin de maintenir une unité architecturale sur les côtés bordant la place Beaubourg, il fallait restaurer au mieux les immeubles du XVIIIe siècle le long de la rue Saint-Martin. Pour contrer la destruction du caractère populaire du quartier, les pouvoirs publics se sont engagés à construire en juxtaposition aux façades restaurées un immeuble H.L.M. dont l'architecture s'harmonise avec l'ensemble. Dans cet immeuble, priorité est donnée au relogement des gens du quartier.

Au nord, dans un vaste quadrilatère délimité par les rues du Grenier Saint-Lazare, Beaubourg, Rambuteau et Saint-Martin, la S.E.M.A.H. (Société d'économie mixte et d'aménagement des Halles) confiait à un promoteur privé, la Cogedim, la rénovation de cet îlot. Les études nécessaires au réaménagement du secteur furent entreprises par ses architectes avec le concours des groupements qui furent à l'origine de la volonté de rénovation. A la suite d'un accord juridique, la Cogedim s'engageait à tenir compte des orientations dégagées par ces associations. Pour respecter les souhaits de la population, des mesures furent prises, assurant le relogement sur place des habitants ainsi que la réinstallation des commerçants, limitant au minimum les solutions de transit. Le projet qui sortira de terre d'ici 1980 comporte plus du tiers de la surface totale consacrée en H.L.M. Les promoteurs insistent sur la qualité de vie qui se dégagera de l'ensemble. On y fera du neuf avec du vieux, gardant la plupart des façades Louis-Philippe, rue Saint-Martin. Les concepteurs y intègreront une architecture résolument moderne retrouvant, à bien des égards, gabarits et rythme des façades de l'architecture traditionnelle des lieux. Les aménagistes du quartier de l'Horloge, nom donné au nouvel ensemble, ont opté pour un tissu urbain où les fonctions sont diversifiées. L'emplacement des négoces respectera l'agencement traditionnel de la rue parisienne.

Malgré les quelques efforts entrepris pour enrayer l'exode de la population ouvrière et commerçante vers les banlieues, il y a tout lieu de croire que l'insertion du Centre national d'art et de culture Georges-Pompidou, qualifié par Anne Rey, dans le Monde, de « discours du pouvoir sur la ville », accélérera dans cette « zone grise » en pleine regénération, le processus d'occupation du centre de Paris par les classes favorisées. D'autre part, l'expérience unique de Beaubourg amorce le débat sur l'opportunité et la viabilité du concept des grandes surfaces culturelles. □

What You See is Only Half the Picture

by Lea B. Hansen

Nowadays few of us build our own homes. We live in mass-produced, prefabricated houses and apartments which seem to appear overnight from the labour of a handful of construction workers. How wrong appearances can be!

Actually, the manpower involved extends far beyond the carpenters, bricklayers and painters you see working on the construction site. In fact, these on-site workers account for less than half the man-hours needed to construct a home. For when one considers the labour required off the site to manufacture, to sell and transport the construction materials and to produce or extract the raw materials required for the manufacturing process, the total number of hours needed to construct a home more than doubles.

Ont. Min. Tourism

As the overwhelming majority of Canadian houses are of wood-frame construction, it is not surprising that the carpenter contributes more man-hours than any worker – skilled or unskilled – to the on-site building of a house. For the single-detached, semi-detached and row house, the carpenter inputs 296, 242 and 193 man-hours respectively. In terms of percentages of total labour, this works out to 28% for single and semi-detached units, and 26% for row housing.

To be more precise, a study conducted by this author for the Program and Market Requirements Division of CMHC (entitled "Labour Requirements for the Residential Construction Industry") revealed that for an average home in Canada .49 man-years or approximately 830 man-hours are required at the site and .55 man-years or 1,125 man-hours are required in the related building construction industries.

In total, then, it takes nearly 2,000 man-hours of labour to build the average Canadian home.

A Word About the Study

"Labour Requirements for the Residential Construction Industry" is based on two main sources: the Material Input Survey conducted by CMHC for the Forestry Economics Research Institute in 1969; and a cost survey conducted by CMHC for Statistics Canada in 1971, which priced quantities of materials used in the residential construction process and established on-site labour costs. The data presented are of four types of dwelling units: single-detached, semi-detached and duplex, row housing and apartment units. The data are an average of the estimates from the five regions – Atlantic, Quebec, Ontario, Prairies and British Columbia.

Although the data used relate to 1969 in terms of quantities and 1971 in terms of costs, it is reasonable to apply the results of the survey to any year after 1969, given

the assumption that significant technological changes in the residential construction industry have not taken place over a span of approximately six years.

Technically Speaking

Before I talk about more of the findings of this study, it's important to first define a few terms. For example, when talking about residential house construction, the manpower requirements can be divided into two broad categories: on-site construction work, and work related to, but separate from, actual building construction.

Direct or on-site labour includes craftsmen and construction workers employed by general contractors and subcontractors, as well as workers employed in any assembly process carried out in the contractor's workshop. It does not, however, include labour required to develop serviced land, to carry out servicing, landscaping, or site development of a dwelling unit or residential project, or to supervise work on the construction site.

Labour that is indirectly associated with residential construction is classified into four industry or service-related groups:

- off-site construction: labour required to administer, supervise and plan the residential building construction, including on-site supervisory staff and any designers, architects or other professionals employed by a construction firm;
- manufacturing: labour required to produce fabricated building materials at the final stage of production;
- trade and transportation: labour involved in retail and wholesale trade related to building materials, and labour required to transport construction materials from the manufacturer (at the final stage of production) to the contractor's shop or the building site, and
- primary and semi-finished goods: labour required to produce raw materials and other products used by manufacturers, up to but not including the final stage of production.

Findings

Table 1 illustrates two of the study's findings. First, it shows that the different types of dwelling units require a wide range of man-years to complete.

For example, to build a three bedroom, single-detached unit of 1,240 square feet, approximately .62 man-years are required on the site of construction and .65 man-years in related industries. For a three-bedroom row house of 1,090 square feet, on the other hand, the comparable figures are .43 and .51 man-years respectively.

Table 1 also indicates another of the study's findings: that for all dwelling types, the two main sectors where employment is generated as a result of residential construction are on-site construction and manufacturing. What follows will describe some of the more interesting aspects of these two sectors.

On-Site Labour

In recent years there has been an increase in the proportion of unskilled labour employed on-site relative to skilled construction workers. To a very large extent, this trend results from the greater use of prefabricated materials in residential construction and a corresponding reduction in time spent on-site by skilled labour.

The proportion of unskilled labour required for a single-detached unit is greater than that for a row house, representing about one-quarter and one-fifth of all on-site workers respectively. This difference is explained primarily by the fact that the building of basements and external walls constitutes a larger percentage of the total construction cost for a single-detached dwelling than for a unit in a row housing project, and this part of the construction process involves a relatively high proportion of unskilled labour.

In decreasing order of importance, the predominant skilled labour trades for all dwelling types (excluding apartments)

Table 1

Man-Years of Employment Generated by Residential Construction, by Source of Employment and Dwelling Type, Canada, Average 1969-1974

Source of Employment	Single Detached	Semi-detached and Duplex	Row Housing	Apartment*	Average – All** Dwelling Types
(1) On-Site Construction	0.622	0.502	0.434	0.361	0.490
(2) Off-Site Construction	0.138	0.138	0.138	0.047	0.099
(3) Manufacturing	0.252	0.215	0.186	0.248	0.243
(4) Trade & Transportation	0.154	0.128	0.108	0.094	0.124
(5) Primary and Semi-Finished Goods	0.101	0.085	0.074	0.061	0.081
Total On-Site	0.622	0.502	0.434	0.361	0.490
Total Related Industries	0.645	0.566	0.506	0.450	0.547
Total	1.267	1.068	0.940	0.811	1.037

*Estimates are based on United States data, adjusted for differences in area between Canadian and U.S. apartment units.

**A weighted average with the weights for each year being the percentage distribution of starts by type in Canada.

The major cost component of residential construction is the price of building materials. Based on 1971 statistics, it has been estimated that building materials account for 41% of the cost of constructing a single-detached house.

CMHC/E. Taylor

are: carpenter, painter, bricklayer, plumber and electrician. These skilled trades together represent approximately 55% of all on-site labour.

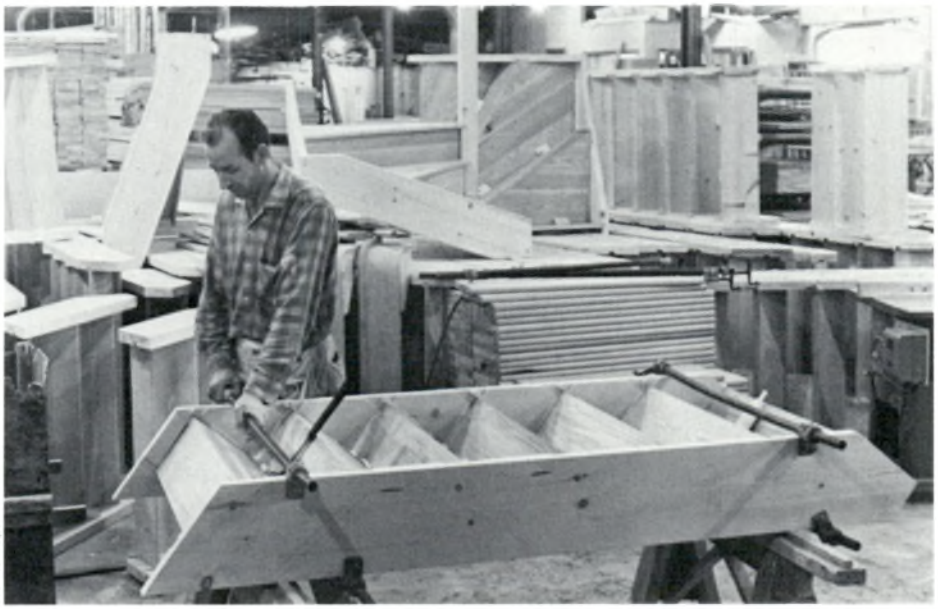
A single-detached unit requires proportionately more man-hours for carpentry relative to a row house, while semi-detached/duplex and row house units use a greater proportion of painters, plumbers and electricians. The large proportion of carpenters and masonry bricklayers employed for all units reflects the predominant use of wood and facebrick for the structure and exterior wall finish.

CMHC/E. Taylor

The unskilled labourer ranks second in terms of the total percentage of on-site man-hours. For a single-detached house, the unskilled labourer contributes 25% or 260 man-hours, while for the semi-detached and row house the figures come to 21% (180) and 19% (142) respectively. The difference in the amount of unskilled labour required for the various housing types is primarily due to the construction of basements and external walls – the more freestanding the unit, the greater the need for these components, and most of this construction activity is carried out by unskilled labourers.

The increasing use of prefabricated materials in residential construction continues to have an important impact on what types of jobs are generated:

- **prefabrication has led to an increase in the proportion of unskilled labour employed on-site and a corresponding decline in the proportion of skilled workers.**
- **on the average, the manufacturing sector generates the second largest amount (approximately .243 man-years) of employment per housing unit. With more prefabrication, this figure can be expected to increase.**
- **the trade and transportation sector now generates approximately .124 man-years of employment per average dwelling unit. This figure should increase as more and more prefabricated and preassembled materials are shipped to building sites, especially if construction activity increases in areas remote from manufacturing industries.**



NFB Photothèque

CMHC/E. Taylor

Changes in construction technology over the past 15 to 20 years have altered the distribution of labour among the construction trades. For example, in a 1955 CMHC study of manpower and material, plasterers accounted for some 7% of the total cost of on-site labour. During the 1960s, plastered walls were gradually replaced by wallboard, so that by 1969 plasterers accounted for less than 1% of the total cost. In their place, drywall applicators and finishers now contribute approximately 8% of on-site man-hours for all units.

The Manufacturing Component

The major cost component of residential construction is the cost of building materials. On average, approximately one-fifth of a man-year or 450 man-hours are generated in the production of materials for the construction of one dwelling unit. The largest proportion of labour – about 40% – is employed in the wood and wood products industries.

To produce materials for a single-detached unit, approximately 518 man-hours are required. About 223 man-hours (43% of the total) are accounted for by four industries (in decreasing order of importance):

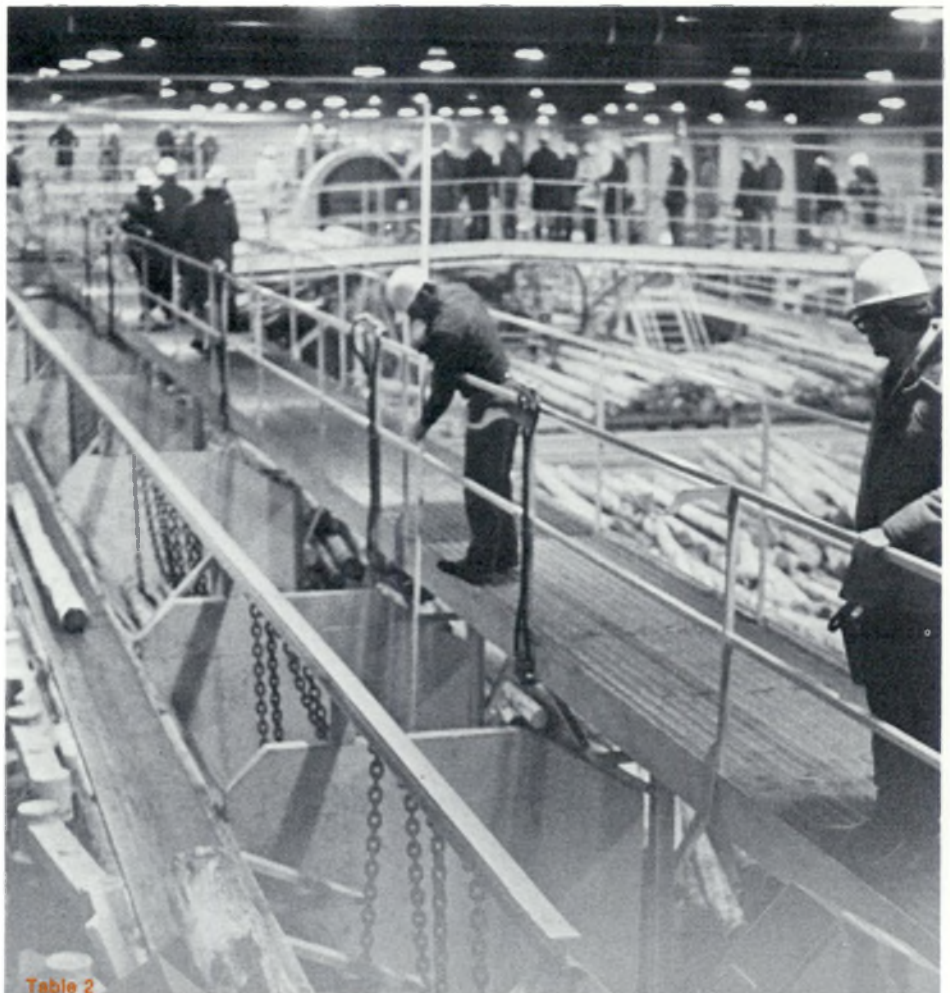
- sash, door and other millwork;
- saw, planing, and shingle mills;
- veneer and plywood manufacturing;
- miscellaneous wood manufacturers.

Other industries that individually support 4% or more of the man-hours estimated for a single-detached unit are, in descending order of importance: manufacturers of concrete products; miscellaneous non-metal; clay products; miscellaneous metal; and miscellaneous electrical products. Of these industries, concrete product manufacturers are the most important for single-detached units and miscellaneous non-metal manufacturers, which produce insulating materials, are the most important for semi-detached/duplex and row housing units.

These five industries, together with manufacturers of wood and wood products, account for approximately three-quarters of all man-hours required for the fabrication of residential construction materials.

The similarity of the percentage distributions for the three types of dwellings indicates a generally consistent pattern in use of materials. Minor differences are evident in the greater proportionate

Wood and wood-based industries account for some 43% of the total employment generated in the manufacturing sector. Because of its greater exterior wall space, a single-detached unit uses proportionately more wood and wood products than the other three dwelling types.



use of clay products (including clay, ceramic and linoleum tile) and iron and steel (for bridging, beams and pipes) for row housing units relative to single-detached dwellings.

It is estimated that less than .02 man-years per unit are generated by the manufacturing of residential construction equipment for all types of dwelling units. Relative to the importance of equipment for other construction activities, such as road construction, the impact of residential construction on equipment manufacturing is considered to be minimal.

Table 2

Estimated Man-Years of Employment Generated by Residential Construction Expenditures, 1969-1974*

Year	Weighted Average	% Change
1969	210,205	
1970	191,671	– 9.6
1971	239,962	+25.2
1972	242,445	+ 1.0
1973	283,030	+16.7
1974	240,781	–14.9

*As estimated by this study.

Table 3

Percentage Distribution of Housing Starts by Dwelling Type, Canada, 1969-1974

Year	Single-Detached %	Semi-detached and duplex %	Row housing %	Apartment and other %
1969	37.3	4.9	5.1	52.7
1970	37.1	5.7	9.0	48.2
1971	42.9	5.9	5.7	45.5
1972	46.2	5.5	6.8	41.5
1973	49.0	4.9	6.4	39.6
1974	55.0	5.0	6.7	33.3

Source: Central Mortgage and Housing Corporation, *Canadian Housing Statistics*, 1974, Table 9, p. 9.

Ont. Lumber Mfrs. Assoc./Consol. Papers Inc.

At present, manufacturing industries are second in importance to on-site construction as a source of employment related to residential construction.

With continuing changes in construction technology, and particularly greater use of prefabricated materials, there will probably be a shift in the present distribution of labour requirements toward an increase in manufacturing employment and a decrease in the use of skilled labour on the construction site.

Jobs from Housing

The manpower estimates on a per unit basis can also be used to produce estimates of the total employment generated in any given year by the total number of new dwelling starts. This is accomplished by multiplying the total housing starts of any year by a weighted average (weighted by the percentage distribution of housing starts by type) of the estimated man-years per unit. When doing so, it is assumed that the characteristics of the dwelling units built after 1969 are similar to those built in 1969.

Table 2 shows that between 1969 and 1974 the greatest employment effect, in terms of number of full-time jobs generated directly and indirectly, occurred in 1973, clearly coinciding with the peak year in housing starts for the six-year period under study.

Also, when analyzing the employment effect of residential construction expenditures, it is crucial to differentiate between housing types, since employment in the industry is dependent on both the level and the composition of housing starts.

For example, Table 3 shows that since 1969, the number of apartment units as a proportion of total starts has declined and the proportion of single-detached units has risen. In 1969, the percentage of single-detached and apartment units was 37.3% and 52.7% of total starts respectively; in 1974, 55% of all new starts were single-detached units and 33.3% were apartment units.

This change in the distribution of starts is reflected in the employment estimates. For example, the increase in employment is heightened and the decrease is dampened in those years when a larger proportion of units built were single-detached. Between 1972 and 1973, the percentage increase in new residential starts was 15.6%, while the estimated percentage change in employment generated was 16.7%; between 1973 and 1974, housing starts fell by 17.3%, but the estimated decline in employment was only 14.9%.

So, next time you look at a new housing development, remember that the jobs generated by its construction go far beyond the workers you see on the site. For every ten on-site workers, there are at least an equal number employed in the production, sale and transportation of the building materials.

It is this multiplier effect which in 1973 produced an estimated 282,000 man-years of employment in the residential construction industry. It is this same multiplier effect which, if the federal target of 1 million starts is achieved and the composition of housing starts is similar to the distribution in 1975, should over the next four years generate approximately one million man-years of employment. □

Habitat individuel colle

Réflexions autour d'un dualisme ambigu

par Jean Labasse

W. Cadrow/SCHL

Il n'est guère de jour en Europe où quelque homme politique ou journaliste ne célèbre les vertus bienfaisantes de l'habitat individuel en maison unifamiliale en les opposant au caractère rébarbatif de l'habitat collectif dans les « casernes » des grands ensembles. Partant de l'observation des faits et non de l'idéalisation des modèles, le géographe ne laisse pas d'être bientôt frappé par l'ambiguïté d'un débat qui mêle des jugements de valeur à une typologie sommaire et associe couramment des préoccupations contradictoires. Ainsi les défenseurs de l'appartement obéissent-ils à des considérations d'ordre essentiellement économique (coût des infrastructures, rareté du sol, etc.) alors que les sectateurs de l'individuel mettent l'accent sur sa fonction sociale. Et ne parlons pas de l'homme politique de tradition conservatrice pour lequel le grand ensemble s'identifie au vote à gauche, sans même s'attacher à la qualité fluctuante de ses équipements, et qui met ses espoirs dans la cité pavillonnaire, si monotone qu'elle soit.

ou habitat ctif

Que la maison, élément d'un ensemble, « doive être considérée, d'après Amos Rapoport, comme une partie d'un système social et spatial tout entier qui englobe également le mode de vie, l'agglomération et même le paysage », voilà qui ne souffre guère discussion. Sans doute faut-il aller au-delà, remonter à travers les systèmes jusqu'aux soubassements spirituels des comportements populaires. Nul n'ignore que la ville pavillonnaire plonge ses racines dans la mentalité puritaine, individualiste et favorable à la détente procurée par l'entretien du jardinet; certaines pages d'Howard sont révélatrices en la matière. Il me semble aussi net qu'à l'inverse, le monde latin et catholique, privilégie l'habitat collectif et la civilisation du forum, avec sa communion oisive ou festive. Encore faut-il être prudent en avançant de la sorte. D'une part, Le Corbusier nous a appris que la cité-jardin pouvait être verticale et pas seulement horizontale, comme on le pense habituellement; d'autre part, les différentes cultures, anglo-saxonnes et latines notamment, s'opposent peut-être davantage par l'utilisation qu'elles font des agglomérations que par leur conception de l'habitat. Si nets que soient en outre quelques traits d'ensemble, des exceptions n'en sont pas moins fréquentes: en dépit de son ascendance, « le francophone du Nouveau-Brunswick, remarque J. C. Bernex dans une récente thèse présentée à Lyon en 1975, refuse la forte concentration propre au milieu urbain ». A une tout autre échelle, les pays scandinaves, nations protestantes s'il en est, donnent la préférence au collectif: l'individuel ne représente que 13% du parc de logements à Färsta, 15% à Vällingby, 20% à Tapiola. Quelle part revient au climat dans une telle inclination? Et quelle autre à la grande qualité des transports en commun dont les stations sont généralement plus accessibles depuis le collectif que depuis l'individuel?

Quoi qu'il en soit, la Grande-Bretagne et la France, les deux sources du peuplement d'origine du Canada, se placent presque aux deux extrêmes de l'éventail des situations. celle-là avec 76% d'individuel et celle-ci avec 28.5%, il y a moins de dix ans (Espagne: 6.1% !). On trouve, dans la gamme intermédiaire, aussi bien les Etats-Unis (66%), la République fédérale d'Allemagne (47.2%) et des démocraties populaires (Bulgarie 62.7%). A l'intérieur de chaque pays, les préférences ainsi manifestées, pour illlustratives qu'elles soient, ne sont des constantes ni dans l'espace ni dans le temps. Dans l'espace? En Suède, le pourcentage d'individuel, qui dépasse 90% dans les zones rurales, oscille autour du quart dans les villes moyennes et de 10% dans les trois métropoles de Stockholm, Göteborg et Malmö; en France, il varie de plus de 80% dans les communes rurales à guère plus de 20% dans l'agglomération parisienne.

Rien d'étonnant à cela, dira-t-on. Il est en effet connu que la proportion d'individuel fluctue avec la taille de l'agglomération et que la concentration s'accompagne d'un ralentissement de ce type de construction. Les écarts par ensembles régionaux sont donc plus expressifs de la réalité culturelle: en 1968, le Nord français si lié aux pays de la Mer du Nord, comportait 72% de maisons individuelles alors que les régions Rhône-Alpes et Provence, dépositaires privilégiés de la tradition romaine et latine, n'en comptaient respectivement que 26.8 et 26.5%.

Les préférences en matière d'habitat ne sont pas stables dans le temps. Longtemps, la Grande-Bretagne est restée obstinément fidèle à l'idéal du logement

pavillonnaire entouré d'un jardinet; la charge foncière qui en résultait a stimulé, au départ des métropoles, un processus de refoulement à longue distance des lotissements destinés à la clientèle modeste. Depuis quelques années, le désir d'alléger le poids des migrations alternantes et celui de rompre à l'occasion avec la monotonie des alignements de petites maisons expliquent un pourcentage croissant de collectifs bas (quatre ou cinq niveaux) dans les villes nouvelles anglaises ainsi que dans la périphérie de Londres. La tendance est identique en Hollande, à Amsterdam et dans le Randstad, avec cette particularité que le collectif haut (égal ou supérieur à cinq étages), qui atteignait à peine 10% des logements neufs il y a une douzaine d'années dans une banlieue nouvelle telle que Slotermeer, en représentait quelque temps après 15% à Nieuweridam-Noord puis 20% à Osdorp. Non que le goût de l'habitation individuelle et la foi en ses vertus se soient dissipés ici ou là, mais ils ont peut-être perdu un peu du caractère absolu qu'ils semblent conserver aux Etats-Unis où, comme le note encore Rapoport, elle représente pour l'Américain un idéal esthétique et non pas fonctionnel, un symbole comportant une maison isolée – non une série de maisons – et ne correspondant pas à un besoin réel. Je ne sais si les habitants de Vienne interrogés il y a vingt ans (Landscape, tome VII, 1957-58, p. 2) seraient toujours aussi nombreux (61% à l'époque) à vouloir habiter un appartement au centre de la ville, mais j'observe que la France, à son tour, marque depuis peu une évolution qui augmente la proportion de l'individuel, lequel jouirait de la faveur de la majorité de la population. Jouirait et non pas jouit; le conditionnel est en effet de rigueur, les conditions dans lesquelles sont menées les enquêtes de préférence étant loin d'apporter les garanties de sérieux souhaitables. Car la maison individuelle sans mitoyenneté, sise au centre d'un vaste terrain boisé, dont rêvent beaucoup de Français, n'est financièrement accessible qu'à 5% de la population! Cela sans même considérer le coût des équipements et celui d'une desserte obligatoire en voiture privée.

C'est assez dire la part d'illusions et de mythe que recèlent les choix du public en matière d'habitat. Jointif et aligné, généralement plus proche du coron minier que du pavillon forestier, l'individuel qu'offre l'Europe occidentale à ses classes moyennes et populaires n'a souvent que peu de rapports avec celui des panneaux publicitaires; de son côté, le collectif n'est pas nécessairement voué à la démesure et à l'effet de masse du grand ensemble. Les transitions sont au demeurant multiples qui conduisent d'un archétype à l'autre: les nombreuses formules de groupement, du « jumelé » de style britannique (semi-detached houses) à diverses dispositions en quinconces ou en chevrons, procurent des densités à l'hectare et suscitent des équipements parfaitement comparables à ceux qu'engendrerait l'implantation de grands immeubles. Et comment classer cet « habitat intermédiaire » que j'observais récemment en France avec intérêt, dans un quartier nouveau de la périphérie de Lille. Il s'agit du quartier du « Pont de bois », dans la ville nouvelle de Villeneuve-d'Asq, où 1077 logements sont à ce jour réalisés, apparemment à la satisfaction générale, en habitat intermédiaire. Il est en tout cas fort justement nommé, puisqu'il est fait de l'association, dans un seul bloc et sur deux niveaux, de deux ou trois logements à accès et escalier individuels mais avec des prestations communes (galerie intérieure, chauffage, etc.). Effrayé par le prix que la société serait obligée de payer pour la généralisation du modèle pavillonnaire, l'urbaniste polonais Waclaw Ostrowski conclut sagement dans son ouvrage intitulé « L'urbanisme contemporain », qu'« il vaut la peine de s'interroger sur la possibilité de rendre les immeubles à plusieurs étages aussi ou même plus attrayants que les maisons basses, au moins pour une importante partie de la population des grandes villes ». Même si l'on assimile l'habitat à un genre de vie défini et homogène – ce qui est d'ailleurs discutable – la flexibilité de la demande est dans bien des situations sans doute moins restreinte qu'on ne le dit communément, pourvu que l'offre ne soit pas caricaturale: près de 90% des habitants de Tokyo vivent dans la demeure traditionnelle à ossature de bois, posée sur le sol et sans fondations véritables; pourtant, note un géographe particulièrement informé, M. Pezeu-Massabuau, le passage à l'appartement dans de grands immeubles s'opère de façon croissante et sans heurts, peut-être parce que cette demeure traditionnelle y prédispose dans la mesure où elle ignore l'étage et l'escalier intérieur.

La prudence est également de mise pour qui s'attache à découvrir la signification sociale de l'individuel et du collectif. Car il ne s'agit pas d'une herméneutique. Le thème de l'intimité du foyer tourne certainement à l'avantage de l'individuel mais ne doit pas être abusivement amplifié. Le sociologue Raymond Ledrut dans *L'espace social de la ville* montre, à partir d'enquêtes rigoureuses, que le grand ensemble n'exerce pas d'influence décisive sur la nature des rapports de voisinage; il n'exercerait pas la pression sociale intense qu'on lui attribue parfois au détriment de ceux qui aimeraient vivre de façon autonome. Le temps sous l'aspect de l'accoutumance à un quartier quelconque, l'inégale netteté de la ségrégation par profession et revenu, l'origine géographique des résidents visant les difficultés d'adaptation des campagnards fraîchement promus citadins, auraient, sur la vie de relations, des conséquences beaucoup plus accentuées que le type d'habitat.

En sens inverse, on dit parfois de l'habitat pavillonnaire que, s'il atténue les tensions sociales, il conduit à un particularisme excessif, à la destruction de la sociabilité. Ainsi en irait-il parce qu'il favorise un style de vie dans lequel les aspirations des citadins sont appelées à se cristalliser au sein de l'espace restreint délimité par le jardin. Or cela dépend beaucoup sans doute de la population concernée. Le procès semble relativement aisé à instruire dans les pays latins; mais les arguments qui le fondent perdent l'essentiel de leur valeur dans le cas des

Etats-Unis, où la cohésion des individus dans la société repose avant tout sur la vitalité des agglomérations et le consensus réalisé autour du mode de vie américain. Il y a plus encore: la confusion est fréquente entre l'effet et la cause. C'est moins en lui-même qu'à travers la dispersion des hommes et l'éloignement des centres qu'il suscite, que l'habitat pavillonnaire répandu sur de vastes surfaces revêt éventuellement un caractère négatif au regard de la vie sociale. Inclus au sein d'une unité de voisinage de caractère mixte ou réparti sur le pourtour d'une petite ville au noyau vivant, il n'offre plus les mêmes inconvénients.

En définitive, ce n'est pas en termes de psychosociologie qu'il faut pour l'avenir comparer les deux types de construction, sinon de façon accessoire, mais bien par rapport à une conjoncture spatiale déterminée (Jean Labasse, *L'organisation de l'espace; éléments de géographie volontaire*, pages 381 et suivantes) embrassant le site, l'étendue de l'agglomération, les densités souhaitables, les systèmes de circulation et de voirie. Certes, il ne s'agit pas de sacrifier les goûts d'une population à une quelconque rationalité technique ou géographique. Mais ces goûts se traduisent entre les mains de l'urbaniste par un dosage déterminé d'individuel et de collectif, chacun se voyant affecter les terrains qui lui conviennent le mieux. Ce dosage est d'autant plus commode à pratiquer que les genres confrontés tendent naturellement à se rapprocher. Nombre de petits immeubles de gabarit restreint offrent aujourd'hui des conditions de vie proches de celles qui ont cours en habitat individuel (maisons en terrasses, « collines d'habitation », pour ne pas reparler de l'habitat intermédiaire). De son côté le pavillon traditionnel évolue, la suppression des clôtures permettant d'aménager un ensemble de parcelles comme un vaste parc; et j'ai déjà mentionné certaines dispositions nouvelles grâce auxquelles il s'adapte à des densités plus élevées.

Lors même que les décisions politiques de niveau national ou local sont d'apparence tranchées, les réalisations le sont fréquemment moins. Le plan directeur adopté aux Pays-Bas en 1966 contient une option sans équivoque en faveur de l'individuel. Mais le récent quartier de Babberspolder à Vlaardingen est un exemple excellent d'association des deux styles: des rangées de maisons basses unifamiliales s'intercalent entre de grands immeubles aux vues lointaines soigneusement dégagées, cependant que des étangs entourent l'ensemble de gracieux zigzags. La France est réputée édifier ses unités de voisinage en blocs massifs de béton; mais la ZUP (zone à urbaniser par priorité) de Bourgogne, à Tourcoing, juxtapose bâtiments élevés et bâtiments bas selon une proportion (en nombre de logements) de 60% en collectif et de 40% en individuel; la densité moyenne qui en résulte (43 logements à l'hectare) paraît tout à fait appropriée à une région d'urbanisation dense.

Ainsi des compromis empiriques et réalistes viennent-ils périodiquement tempérer les outrances des théoriciens, d'autant plus argumentées que leur objet est détaché de son contexte. Si la construction d'une maison est bien un phénomène culturel, si la conception de cette maison dépasse effectivement le cadre d'un concept purement matériel et utilitaire, il ne s'ensuit pas que le logement soit le tout de l'habitat au sens plein. Les modèles de quartiers qui jouent du commerce, de l'école ou de l'édifice public pour communiquer un mouvement à l'unité résidentielle, qu'elle soit traitée en horizontal ou en vertical, le soulignent assez. De même est-ce le domaine bâti global, et non pas le seul logement, qui est en cause quand l'on s'attache à la traduction sur le sol des modes de relations entre les hommes; aux deux extrêmes, l'habitat désisolé de type finno-scandien ou soviétique et l'habitat isolant de type arabe mettent en jeu l'agencement global de la ville. Car c'est bien de cela en définitive qu'il s'agit; par la maison, par l'équipement, par la rue, par le mobilier urbain, amener l'homme à aimer cette ville et à y trouver une réponse à ses aspirations. □

Toronto

"City of Homes"

First of a two-part article

by Eddie Starr

In examining residential development in Toronto prior to World War II, one is faced with many contradictions. Toronto was a city of great wealth, and this wealth was reflected in many of its elegant and beautiful homes. Yet, Toronto was also the city of the poor, who lived in slums, dilapidated shacks and crumbling cottages where overcrowding and unsanitary conditions were common.

Toronto prior to World War II was labelled by many as a "City of Homes."[1] It was that – and much more. As it developed from those first pioneer days along the shore of Lake Ontario, Toronto became a city of communities and neighbourhoods. Some were unplanned, resulting from people seeking their own special residential place. Others were the result of planned subdivisions by private developers and landowners. Still other communities developed distinctive character due to particular economic conditions.

What follows is a description of a number of Toronto's distinctive neighbourhoods and communities prior to World War II. These represent a cross section of residential environments in the city, and indicate the differing conditions that existed. The descriptions also provide a brief glimpse at the evolution and change which occurred in housing in Toronto prior to World War II.

The Ward

One of the earliest identifiable communities in Toronto was the area called simply "The Ward." In the early 19th century, Dr. James Macauley subdivided a portion of his landholdings from College Street to Queen Street between Yonge and University. On this land he developed "Macauley Town" – a community of small homes for the workingman.

In the mid-19th century, Macauley Town was designated by City Council as St. John's Ward, later to become known simply as The Ward. Because of its high concentration of small inexpensive homes, The Ward attracted a large portion of Toronto's new immigrants. Some came from Italy and Ireland to escape hunger; the majority were East European Jews fleeing from pogroms and persecution.

Rae Corelli describes the character of The Ward:

"By 1911, there were more than 10,000 people – 70% of them Jews – jammed into The Ward's 147 acres. Chestnut, Elizabeth, Elm, Edward and a dozen other streets were an incredible tangle of small, dark shops and restaurants and missions, pinched little houses fashioned of brick, stucco, wood and galvanized iron – nearly 1,400 of them (compared with about 50 today [1964]). Solemn, black-stockinged children played in lanes and alleys strewn with abandoned wagons, broken wheels, discarded bedsteads and crates.... Jews from Hungary and Italians from Palermo moved into the tiny cottage houses of Chestnut Street where, on summer weekend afternoons, they affably greeted one another in mutually unintelligible tongues. Now and again, they shyly exchanged gifts – a bottle of dark red wine for a steaming hot loaf of chala.

Russian Jews and more Italians lived side by side on Centre Avenue where proximity to the Harrison public baths was a major selling point in a neighbourhood in which three-quarters of the houses lacked indoor plumbing."[2]

Public Archives of Ontario

This photograph, taken by The Globe Journalist, M. O. Hammond, in the summer of 1905, shows the crowded, lively immigrant life of The Ward. The housing was of poor quality; most dwellings were without indoor plumbing.

The Ward came into the forefront of public concern when the Bureau of Municipal Research did a detailed study of its housing problems in 1918. Despite the concerns raised, little improvement was evident by World War II. Only subsequent conversion to a business district "solved" the housing problem of The Ward.

Forest Hill

In striking contrast to The Ward was a community founded in the early 19th century atop the ridge north of present-day Davenport Road. The area was first settled by farmers who cleared the land, built small frame houses and grew crops to support themselves and their families.

In time, it became an attractive place for a country home where the wealthy City of Toronto resident could spend a summer of leisure and recreation. One such person was John Wickson. In the 1860's, he built a summer home on Eglinton Avenue east of Bathurst Street. He named his estate "Forest Hill."[3]

As the City of Toronto grew, wealthy families seeking permanent suburban residence began settling in Forest Hill. By 1909 it had a population of 500 upper-class residents, and the area became known as Spadina Heights. The construction of Casa Loma between 1911 and 1914 focused further attention on Spadina Heights. The City had already annexed several outlying areas, and it was felt that Spadina Heights would naturally follow. The City decided, however, that it did not have the resources to service and support Spadina Heights, so the area retained its owned identity.

From 1914 to 1923, Spadina Heights continued to attract the wealthy. In 1923, a petition was sent around to establish Spadina Heights and the immediate surrounding area as a separate and distinct municipality. Sufficient signatures were gathered, and on December 15, 1923, the Village of Forest Hill officially came into existence, separate from both the City of Toronto and the Township of York.[5]

The Village Council immediately took steps to preserve the unique residential character of Forest Hill. They passed a zoning bylaw designating a certain portion of the Village as strictly residential.

In its early days, South Parkdale provided a semi-rural retreat for many wealthy Torontonians. Pictured here is Colborne Lodge, the home of Toronto architect and surveyor, John George Howard. Built in 1836, the house was surrounded by a 165-acre estate which extended to the shores of Lake Ontario. Howard deeded his entire estate to the City to form the nucleus of what is now known as High Park. ▷

"By World War II, a small but prosperous community of cottage-dwellers had developed on Ward's Island and began spreading to Algonquin and Centre Islands. The Islands became a particularly attractive location for permanent residence during the extreme housing shortage which began just prior to World War II." ▷

In 1933, Council directed that all houses built in Forest Hill must have the front elevation designed by an architect. This often led to the entire house being architecturally designed and likely gave Forest Hill the highest proportion (among Canadian municipalities) of architect-designed houses.[6] A later measure established minimum lot frontages of 50 feet, compared to an average of 25 feet or less throughout much of the City of Toronto. By World War II, Forest Hill had evolved from a small rural settlement to a wealthy, prestigious residential community.

South Parkdale

A community less successful than Forest Hill in maintaining its character as a prestigious residential district was South Parkdale. Much like Forest Hill, South Parkdale was settled by wealthy City of Toronto residents seeking an escape from the increasingly crowded, active city centre. South Parkdale extended from Dufferin to about the Kingsway, from Queen Street West to the waterfront.

During the late 19th and early 20th centuries, it was the home of several prosperous Toronto residents, such as Edward Cousins, chairman of the Toronto Harbour Commissioners.[7] Most residences were impressive estates located on treed lots with large open spaces. Corelli describes one such place:

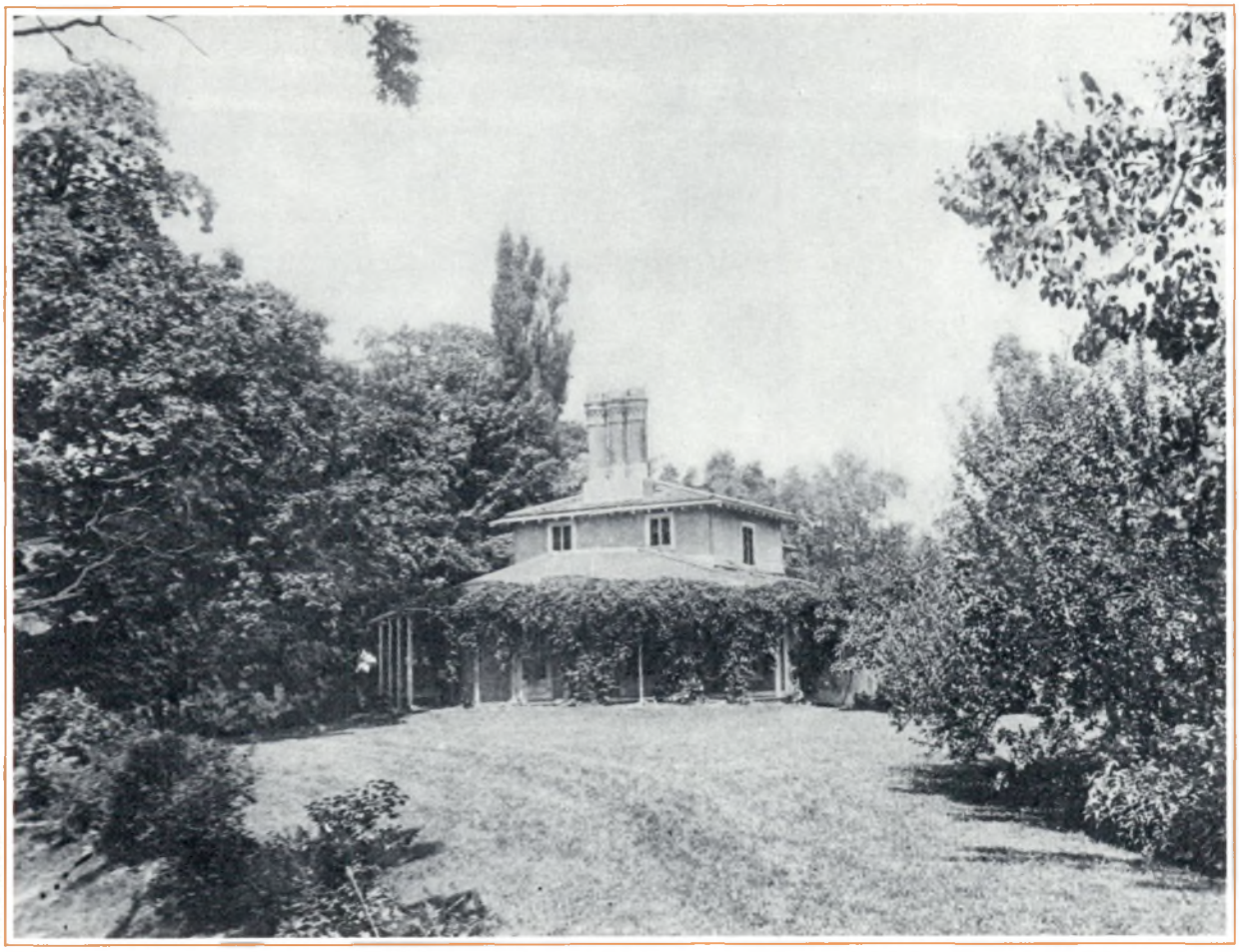
"...the grandest of all was the huge three-storey mansion occupied by the illustrious inventor, G. Plunkett Magann.

Fashioned of finely-chiselled red sandstone, the mansion and its floor-to-ceiling double windows faced the lake. The third floor was servants' quarters. Magann and his beautiful wife entertained lavishly so they built a stone guest house to accommodate overnight visitors.

Groundskeepers constantly fussed over the terraced gardens that dropped away to the water's edge."[8]

Unlike Forest Hill, South Parkdale was annexed to the City of Toronto and was unprotected by any zoning bylaws or other special measures. As immigration increased and development spread westward, pressure for change became focused on the South Parkdale area. The coming of the Depression hastened the departure

The grandest of the grand houses of Forest Hill, Casa Loma, was constructed between 1911-14 at a cost of $2 million by Sir Henry Mill Pellatt, a well-to-do stockbroker and financier. Located on Davenport Hill overlooking Toronto, the marble-floored, fifty-room structure was designed by E. J. Lennox from Sir Henry's drawings of European chateaux. Sir Henry, knighted in 1905 for his service in the Canadian militia, occupied Casa Loma until the death of his wife in 1924. He turned the building over to the City of Toronto following his financial losses during the Depression. Casa Loma is now a tourist attraction and convention centre. ▽



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of many of the owners of large estates, who could no longer afford the upkeep. They were replaced by investors who earned considerable income by converting the large homes to rooming houses for immigrants and families who doubled up in order to pay the rent.

By World War II, South Parkdale, while ostensibly a community of fine old homes, was in reality an overcrowded, poorly maintained area of immigrants, low-income workers and the unemployed.

Toronto Islands

This area represents one of the more special residential communities in Toronto. It began around 1830 when scattered settlement occurred on Ward's Island. Most settlers were fishermen, although some took up farming.

Eventually, Ward's Island attracted city residents who would come for summer camping and recreation, and by 1913, a street grid was laid out in order to organize and accommodate summer residences. In 1915, Ward's Island was increased in size through landfill operations, and a few permanent cottages were erected.

By World War II, a small but prosperous community of cottage-dwellers had developed on Ward's Island and began spreading to Algonquin and Centre Islands. The Islands became a particularly attractive location for permanent residence during the extreme housing shortage which began just prior to World War II.

The Annex

Another residential community of unique character and history is The Annex. Located between Avenue Road and Bathurst and extending north from Bloor to the CPR tracks, it was part of the 1793 land grant to Peter Russell, former administrator of Upper Canada.[9] Eventually, The Annex area was passed on through marriage to the Baldwin family.

In 1886 most of the land in the Annex area was purchased by a developer who subdivided and sold off the lots. He advertised:

"We now have the pleasure to place on the market an important addition to the better-class-residence part of the city.... No part of Toronto has improved so rapidly during the past two years as this neighbourhood, being already well built up with elegant detached and semi-detached residences... A few hundred dollars invested now will in a short time yield manyfold."[10]

The wealthy bought up these lots and built their homes close to Bloor Street, adjacent to the small, wealthy village of Yorkville. Many used carriages to travel to their businesses in the City, resulting in the presence of several carriage houses in the Annex. In 1887, the area received its name when it was annexed by the City of Toronto.

Particularly after 1890, several prominent families moved into the Annex:

"...men of property, bellies straining at weskits, transformed the area into an Imperial preserve for the affluent gentry and their offspring."[11]

By the turn of the century, they were joined by clerks, civil servants and junior businessmen who rented or purchased new semi-detached houses on Huron, Madison and Admiral Road. They were aided by the presence of the street railway system, which made the Annex accessible to the City centre. By 1910, a few small apartments had been erected.

Shown here is 3 Walmer Road in the wealthy part of The Annex. By the 1920's, buildings such as this were subdivided into highly profitable flats and bedsitting rooms for University of Toronto students. ▷

Roy McInnis Photography

The dwellings erected in the Annex encompassed a variety of architectural styles, and were all generally quite large and impressive. They were, for the most part, equipped with the most modern conveniences of the day, such as running hot and cold water and flush toilets.

By 1910, the Annex was almost fully developed as an upper middle-class residential community. At this time, however, it no longer presented an isolated, country-like setting for the wealthy, and many moved on to more prestigious areas, such as Forest Hill. Some retained their properties in the Annex for rental purposes.

By the 1920's, increasing numbers of family dwellings were converted to rooming houses or non-residential uses. Proximity to the University of Toronto was largely responsible for this change, as it created pressures for student housing. The trend continued during the Depression, as many owners could not afford to maintain their properties and thus converted them to flats and rooming houses or sold them to investors.

As World War II approached, an extreme housing shortage accelerated the conversion of single-family homes. The area had by that time lost its essential character, being recognized instead as an area of transient roomers, university students and childless couples.

Cabbagetown

A discussion about the nature of residential communities in Toronto prior to World War II must include Cabbagetown, for it represented the type of residential environment in which a large number of Toronto residents lived.

Cabbagetown is usually defined as the area bounded by King, Berkeley, Gerrard and the Don River. It took its name from the fact that many of its immigrant residents, who had fled from starvation in Ireland, dug up their front lawns and planted cabbages in order to ensure at least some type of steady diet. . The Irish were predominant in early Toronto – in 1851 there were 11,000 Irish, 5,000 English and 2,200 Scots in the City.[12]

Cabbagetown was the oldest part of Toronto. The City itself originated near the mouth of the Don River and the

The dirt and air pollution brought by the intrusion of factories into the Cabbagetown area took its toll. This photograph, taken in 1947, illustrates the sorry state of housing in the Cabbagetown area near the Gerrard Street East and River Street intersection.

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earliest residences were located in that area. While the mansions of the wealthy stretched out along the waterfront, the majority of dwellings were small cottages or row houses built along Berkeley, Parliament, Queen, King and other streets north of the Lake.

As Toronto developed, Cabbagetown retained its cottages and row houses, here and there supplemented by tenement apartments. Although several prominent Torontonians, including a number of mayors, grew up in Cabbagetown, the area became synonymous with working-class Toronto. Despite the age of the dwellings, most were maintained in good condition, and Cabbagetown presented a fairly attractive living environment.

After World War I, however, Cabbagetown declined. Some homeowners did not return from the War, while others took up residence in newer areas of the City, such as North Toronto. Dwellings often fell into a state of disrepair, and many were condemned and demolished.

Industrial interests occupied more and more of the land, particularly in the south, thereby removing existing dwellings and ruining the residential environment of the residents who remained. Industry brought dirt, noise, odours and air pollution to an area which had been clean and quiet. Through traffic, particularly trucks and other industrial vehicles, became an increasing problem. Streets fell into a state of disrepair. By World War II, Cabbagetown was a community to be avoided in seeking a decent residential environment in Toronto.

Jarvis Street

Jarvis Street took its name from the Secretary of Upper Canada, William Jarvis, who was granted 100 acres of land east of Yonge in the late 18th century. Jarvis' son, Colonel Samuel Jarvis, built an elegant dwelling and laid out orchards and gardens at the present-day intersection of Jarvis and Shuter in 1824.[13]

Eventually, Jarvis sold much of his land to the wealthy who built elegant mansions along the street. By the turn of the century, it was considered the finest residential street in Toronto.

By World War II, however, Jarvis Street and the surrounding area had become a deteriorated slum of ill-repute. An excellent Globe and Mail article entitled "Jarvis Street Falls From High Estate" traces its evolution:

"Its deterioration began at the foot, and like a kind of creeping paralysis spread upward along the body. The owners left their big homes and moved to St. George Street or into Rosedale. No other owners not quite so rich and exclusive appeared to occupy their abandoned homes. They fell gradually into the hands of people who turned them into boarding houses, rooming houses and eventually into apartment houses or what might be called residential hotels. These have been granted beer licenses, which has helped bring the street to its present low estate.

We regard the process with regret, but our feelings must be mild indeed to those of the doughty Sheriff Jarvis, a Family Compact man, for whom the street was named. Could he know the desecration that has befallen his name, he must be turning in his grave."[14]

The red brick, Georgian-styled York Mills Hotel pictured here in 1923 was one of numerous inns along Yonge Street — the main route to communities north of Toronto. ▷

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Yonge Street Communities

To the north of the City of Toronto, Yonge Street was the main focus of a large number of small, rural towns which eventually became incorporated into the City and North York.

In 1793, Lieutenant-Governor Simcoe made available 200 acre lots adjacent to Yonge Street to settlers coming to York County.[15] In order to qualify for the grant, a man "had to prove he was a professing Christian, capable of manual labour and a law-abiding citizen of the country in which he last resided."[16] He was also required to perform several duties within two years after his arrival before receiving the final deed. These duties included "clearing the land for cultivation, building a frame or log house at least sixteen by twenty feet with a shingle roof, and fencing ten acres of land. All timber across the width of the lot had to be cut, with thirty-three feet levelled off for half the public road."[17]

A number of families took up residence around main concession roads, such as York Mills, Sheppard and Finch. At York Mills, the Don River crossed Yonge Street, attracting three mill sites. Around the mills settled a number of families, mostly American and Scottish immigrants.

As the town became more populated, and transit lines in the form of stage coaches and omnibuses were extended to neighbouring communities, urban development became inevitable. In 1856, the Hogg brothers (whose father had lent his name to Hogg's Hollow) drew up a plan of subdivision, and advertised:

"The village possesses many privileges and advantages to induce families to Purchase and Settle, viz:

Three resident Clergymen, an experienced physician, several Churches in the Village and Neighbourhood, a good brick School House, Stores, Post Office, two extensive Flour Mills in operation, in the hands of Capitalists, and another, to be driven by steam and water, is now in course of erection by the Proprietors, who have a steam Saw Mill and Brick Yard in full operation, affording every facility to purchasers for Building. Three omnibuses run through the Village daily to and from the City, one carrying daily Mail."[18]

At Sheppard Avenue and Yonge developed the village of Lansing. The surrounding lands were agricultural. The Yonge-Sheppard junction served as a transshipment link to the City, as well as a post office, tavern and general store.

Farther north, along Yonge between Finch Avenue and Lansing, developed the town of Willowdale. It was originally settled by the Cummer family, who took up residence along the east side of Yonge after receiving their land grant in 1797.[19] A number of settlers moved in to the area in the early 19th century, most of whom were Americans. A few small structures, such as an inn and the Davis Leather Company building, were erected along Yonge south of Finch. These gave Willowdale a centre, and by 1857, some 150 people resided in the village.

With the establishment of the Metropolitan Street Railway Company electric car line along Yonge Street in 1890, pressure for suburban residential growth

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The elegance that was Jarvis Street is captured in this 1898 photograph of the Walter Edward Hart Massey residence. Walter was the third son of Hart Massey, the well-known philanthropist and founder of the farm implement manufacturing firm of Massey-Harris. Although the conservatory to the right has been demolished, the building still stands on what is now 515 Jarvis Street and is currently used as a restaurant.

increased. City workers began moving out into these and other similar communities along Yonge Street. Noticeable growth of communities along Yonge Street came after World War I when veterans sought land north of the City of Toronto.

Despite this increase in urban population, by World War II the Yonge Street communities were still essentially rural in nature. The area "was still little more than a constellation of tiny settlements separated by miles of farms."[20]

The above cross section of residential communities in Toronto prior to World War II, of necessity, omits many residential areas of equal importance, including Rosedale, the Beaches, the Danforth, North Toronto, Weston, Long Branch, Downsview, Etobicoke and others.

It does, however, serve the purpose of demonstrating the diversity of residential environments in the city. It also indicates the constant change and evolution of Toronto neighbourhoods and how many developed entirely different characteristics over time. □

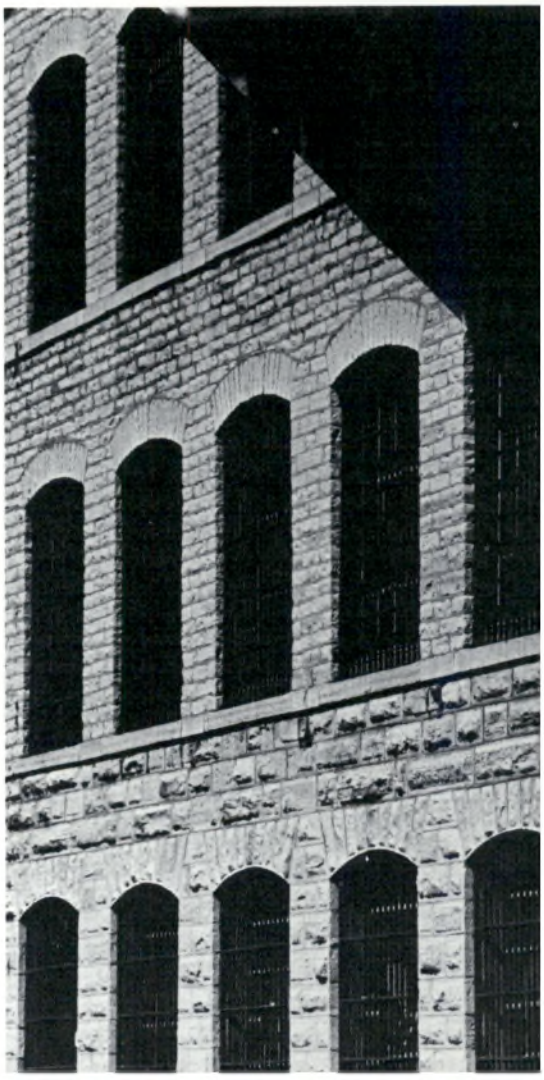
1 See, for example, C. C. Taylor, *Toronto Called Back* (Toronto: C. C. Taylor, Publisher, 1888), p. 505.
2 R. Corelli, *The Toronto That Used to Be* (Toronto: The Toronto Star Ltd., 1964), p. 47.
3 W. French, *A Most Unlikely Village* (Toronto: Ryerson Press, 1964), p. 7.
4 *Ibid.*, p. 9.
5 *Ibid.*, p. 12.
6 *Ibid.*, p. 23.
7 *Corelli*, p. 35.
8 *Ibid.*, p. 36.
9 E. Cull, et al, *The Annex Study* (Toronto: Urban Studies Department, Division of Social Sciences, York University, 1974), p. 5.
10 *Ibid.*, p. 6.
11 J. Acland, "The West Annex," *Exploring Toronto* (Toronto: Toronto Chapter of Architects, 1972), p. 70.
12 W. Hambly, "Cabbage Town," *York Pioneer and Historical Society Annual Report* (Toronto: 1969), p. 33.
13 J. Robertson, *Landmarks of Toronto* (Toronto: Author, 1894-1914), Volume 2, p. 1023.
14 *The Globe and Mail*, Toronto, January 7, 1948.
15 P. Hart, *Pioneering in North York* (Toronto: General Publishing Co. Ltd., 1971), p. 139.
16 *Ibid.*, p. 139.
17 *Ibid.*
18 *Globe*, October 29, 1856.
19 Hart, p. 172.
20 *Ibid.*, p. 258.

Quand la prison prend la forme d'une maison

par Claude Tessier

Afin d'implanter avec succès le régime carcéral auquel sont soumises les personnes condamnées par les tribunaux à deux ans ou plus d'emprisonnement, le Service canadien des pénitenciers s'est trouvé face à l'obligation d'adapter ses installations à sa réorganisation. Il fallait d'abord procurer au personnel les moyens de mettre en œuvre un programme correctionnel particulier dans un cadre physique soigneusement contrôlé. Cette volonté s'est traduite par la création à l'intérieur de chaque établissement, de « résidences » d'au plus 40 détenus fondées à leur tour sur la notion de communauté thérapeutique. La plupart des délinquants exigeant une direction souple et individuelle, c'est par l'institution de petites maisons de détention où la compréhension et les échanges sont davantage susceptibles de naître et de se développer qu'il s'avérait possible d'atteindre le but fixé.

Lancé en octobre 1971, le programme des résidences a comme objectif premier d'aider les détenus à réintégrer les rangs de la société. La création de rapports constructifs entre eux et les agents de réhabilitation en constitue la pierre d'angle. Répartis en groupes et placés sous la direction d'un surveillant et de quelques agents, eux-mêmes relevant d'un surveillant général dit « de classification », ils sont invités régulièrement à participer tantôt à des séances d'orientation, tantôt à des discussions de groupe qui les amènent successivement à assumer des responsabilités de plus en plus grandes dans l'établissement même et dans la collectivité. Le roulement des agents est réduit au minimum et priorité est donnée à la communication. Le travail et les cours de rattrapage auxquels ils avaient auparavant droit sont maintenus mais le cadre se trouve transformé afin de refléter la réforme carcérale. Les anciens édifices, on le sait, exprimaient l'hostilité à l'égard du criminel, la vengeance et le châtiment. L'architecture et le design des nouvelles installations doivent, au contraire, coïncider avec les buts de prompte réintégration du délinquant que l'on s'est fixés. Les éléments architecturaux de nature sécuritaire passent au second plan, l'aménagement devant désormais tendre à susciter d'abord chez le détenu une attitude réceptive à l'égard du programme d'orientation et de réhabilitation dont il est l'objet et à



favoriser la participation des groupes de citoyens et des volontaires particuliers qui se sont engagés à soutenir le délinquant.

Exigences fonctionnelles
A son arrivée en milieu carcéral, le détenu subit un examen qui permet aux autorités de le classer et de le diriger vers tel ou tel type de régime dont la durée et la surveillance demeurent la responsabilité des chargés de programmes. Ce sont l'équilibre et le degré d'adaptation du délinquant qui déterminent son passage d'un groupe hautement surveillé à une communauté plus ouverte jusqu'à l'élargissement partiel par le travail et enfin la libération complète. La mise en application du programme des résidences a lieu actuellement dans divers types d'établissements: les centres régionaux d'accueil, les pénitenciers à sécurité maximale, à sécurité moyenne et à sécurité minimale tels que les résidences communautaires, les chantiers ou toutes autres maisons surveillées abritant des travailleurs. Des centres psychiatriques régionaux reçoivent également ceux qui souffrent de troubles de la personnalité. Dans chaque cas, le degré de contrôle et de surveillance est proportionnel à la compréhension que l'on a des besoins des détenus. Les établissements doivent comporter toutes les commodités nécessaires au logement, à la nourriture, au travail et aux cours de rattrapage.

Au début, il importe que les délinquants soient soumis à des mesures de sécurité sévères afin que le personnel puisse les surveiller sans avoir à leur infliger de châtiment. Cela implique un lieu à la fois sûr et tranquille, propice à leur épanouissement personnel et où ils peuvent exprimer leurs préoccupations les plus intimes, donner libre cours à leurs opinions et prendre une part active à la vie du milieu carcéral et de la cité.

Implantation et acceptation
Le lieu d'implantation des résidences doit permettre une large gamme d'activités. Leur emplacement doit favoriser à la fois le maintien des liens familiaux et l'accès aux services que leur offrent les organismes de bien-être et de bienfaisance. En d'autres termes, cela signifie qu'il faut implanter ces bâtiments dans des villes d'une certaine importance ou à proximité de celles-ci en assurant la liaison par les transports urbains. Cela n'est pas facile à réaliser car la plupart des villes disposent d'un nombre limité de terrains; les règlements de zonage y sont généralement coercitifs et les collectivités ne sont pas toutes prêtes à accueillir ce genre d'établissement. Les centres de libération situés au cœur de la ville sont mieux reçus par la population du fait qu'ils comportent moins d'inconvénients. Plus un établissement est éloigné d'une zone urbaine, plus il coûte cher de le faire fonctionner, de transférer les détenus, de recruter du personnel compétent, de mettre en marche des programmes d'action en association avec la collectivité. Le prix avantageux que l'on paie pour un terrain situé loin de la ville ne compense pas les frais énormes qu'entraînent la construction de routes et l'installation des services d'égout et de traitement des eaux.

L'appui du public au programme correctionnel dépend de sa capacité à comprendre la raison d'être et les buts de la réorganisation carcérale. La crainte qu'il ressent devant la présence toute proche d'un pénitencier est injustifiée car les dangers sont minimes. A preuve, les villes où l'on trouve de tels établissements se félicitent de leur décision et sollicitent même la construction d'installations supplémentaires. A ce sujet, le ministère du Solliciteur général a mis au point un mécanisme de consultation entre le fédéral, les provinces et les municipalités de même

qu'une information détaillée permettant à celles qui le désirent, d'obtenir les capitaux requis. Aussi longtemps qu'il y aura des pénitenciers, il faudra des collectivités pour les recevoir.

Des pénitenciers remplis au maximum
Les anciens établissements pénitentiaires comme Kingston, Dorchester, Laval et le British Columbia Penitenciary sont nés avec le pays et ont grandi au fur et à mesure des besoins. A l'époque de leur érection, on insistait beaucoup sur l'aspect sécuritaire du lieu. Les murs en étaient élevés et l'on disposait d'un minimum d'espace pour les loisirs et les programmes de réinsertion. Les cellules étaient situées au centre du bâtiment, quelquefois dépourvues de fenêtres et superposées pour ne pas perdre d'espace. Les bâtiments de ce type abritent à l'heure actuelle plus de 1,000 détenus au Canada. C'est sûrement la solution la plus économique si le premier objectif est d'entasser les délinquants. Cependant, sous la pression de nombreuses critiques et devant la nécessité de recevoir un nombre plus grand de personnes, le Service canadien des pénitenciers s'est lancé, au début des années 60, dans un programme de construction de nouvelles maisons de détention. Celles-ci devaient comporter plus de superficie de récréation et d'ateliers et loger chacune 450 détenus au maximum. On allait les implanter dans des zones défavorisées du pays et on avait même fait l'acquisition de terrains en vue de l'érection d'un complexe pénitentiaire. L'idée de rapprocher le détenu de sa ville n'était pas plus répandue que ne l'était la collaboration des volontaires à sa cause.

Cependant, les critiques continuèrent de fuser et plusieurs associations s'occupant de la question, réussirent à gagner la sympathie de la population en faveur d'installations plus humaines et de programmes carcéraux de réhabilitation. A la suite d'assemblées publiques et d'études poursuivies en comités, le ministère du Solliciteur général se ravisa et décida de bâtir des maisons de détention plus petites composées d'une ou de plusieurs résidences. Il fut convenu qu'on les construirait dans les villes mêmes d'où viennent les détenus. L'aménagement serait adapté à leurs besoins et à ceux du personnel. Un agent ne pouvant connaître et diriger quotidiennement qu'un certain nombre de délinquants, ce nombre serait réduit à 180 dans les maisons à sécurité moyenne, répartis en groupes de 18, et à 192 dans les maisons à sécurité maximum, répartis en groupes de 12.

L'agencement d'un établissement
Chaque établissement constitue un ensemble autonome. Le terrain sur lequel il est érigé est suffisamment grand pour comporter un périmètre de sécurité. A l'intérieur, les pièces et l'équipement abritent toutes les fonctions d'un pénitencier. Les locaux prévus pour l'administration sont adjacents au périmètre, ce qui en facilite l'accès aux visiteurs et aux employés. Dans certains établissements, ils se trouvent situés à l'extérieur du pourtour, ce qui complique évidemment les rapports entre autorités et détenus.

Un service de réception et d'orientation est chargé d'accueillir et de libérer les prisonniers. Ceux-ci y reçoivent toutes les instructions dont ils ont besoin et c'est là que s'effectuent la remise et le contrôle des vêtements, en particulier lors des congés provisoires. On y garde aussi en réserve les effets personnels interdits dans la résidence.

Le personnel médical dispose d'une infirmerie et joue un rôle important au moment de l'accueil. Une petite salle sert de dortoir à ceux qui ont besoin d'être alités ou qui sont sous observation. Les soins dentaires, les diagnostics et les traitements mineurs sont également dispensés sur place. Lorsque les détenus doivent subir une grave intervention chirurgicale ou toute forme de traitement plus poussé, il faut recourir aux services de l'hôpital municipal.

Les locaux de réinsertion sociale comprennent diverses installations. C'est là que se déroulent travail et loisir de jour et de soir, là aussi que viennent se joindre aux détenus les volontaires de toutes sortes chargés de les distraire. On y trouve une salle de visite, une chapelle, des salles d'ergothérapie, une salle de réunions et de loisirs, dont un gymnase, lui-même contigu à une cour de récréation où l'on pratique toutes sortes de sports, hiver et été, souvent avec des équipes de l'extérieur. A moins qu'un détenu ne soit enfermé dans sa cellule, il doit pouvoir choisir entre plusieurs types d'occupations. L'époque où il était condamné à casser des cailloux est révolue. A l'heure actuelle, les programmes de réhabilitation se poursuivent le soir et en fin de semaine, ce qui exige plus d'espace et de personnel.

La zone repos et séjour de chaque résidence est aménagée de façon à loger les délinquants par groupes de 12 ou de 18, (ce chiffre peut être porté à 40) dépendant du type d'établissement. Chaque groupe est placé sous la direction d'un agent et dispose d'une salle de séjour ainsi que de chambres individuelles comportant une couchette, un pupitre, une chaise et une penderie. Les pénitenciers à sécurité maximum et ceux à sécurité moyenne comprennent en plus une salle de toilette et un lavabo dans chaque chambre. Les détenus y sont enfermés avant la nuit pour des raisons de sécurité et d'économie de personnel. L'agencement des pièces est conçu de manière à ce que deux groupes à la fois puissent accéder aux salles de récréation communes qui servent souvent, le jour, de salles de réunions. Cette disposition des pièces permet la surveillance des groupes et favorise leur émancipation graduelle. Les ateliers, les rencontres sportives avec des équipes d'autres établissements renforcent les contacts que le détenu est invité à entretenir au sein de son groupe. S'il y a lieu, les repas peuvent être apportés dans la salle de séjour, voire dans les chambres, grâce à des charriots chauffants. Cet usage rompt avec l'ancienne habitude de nourrir les prisonniers dans leurs cellules et supprime du coup les problèmes d'hygiène et d'alimentation inadéquates que l'on connaissait.

Chaque résidence comporte une salle à manger-cuisine. Pour prendre leur repas, les détenus peuvent, soit rester dans la zone séjour, soit utiliser des cafétérias où l'on assure deux ou plusieurs services. Des salles à manger et des salles de détente distinctes ont été prévues pour le personnel qui désire s'isoler à l'heure du midi et pendant les pauses-café.

C'est dans des salles spécialement réservées aux cours de rattrapage scolaire et professionnel que s'effectue le travail à temps plein des détenus, travail conçu sur le modèle hebdomadaire de l'industrie. On cherche en particulier à y recréer l'atmosphère qu'ils retrouveront à leur sortie dans des occupations semblables. Certains ateliers, notamment ceux de la métallurgie et de la mécanique automobile, sont spacieux et bien équipés.

On trouve également, dans chaque maison de détention, une zone réservée à l'entretien par les délinquants eux-mêmes des installations et des voitures, des salles d'entreposage pour les vêtements et autres articles ainsi qu'une blanchisserie.

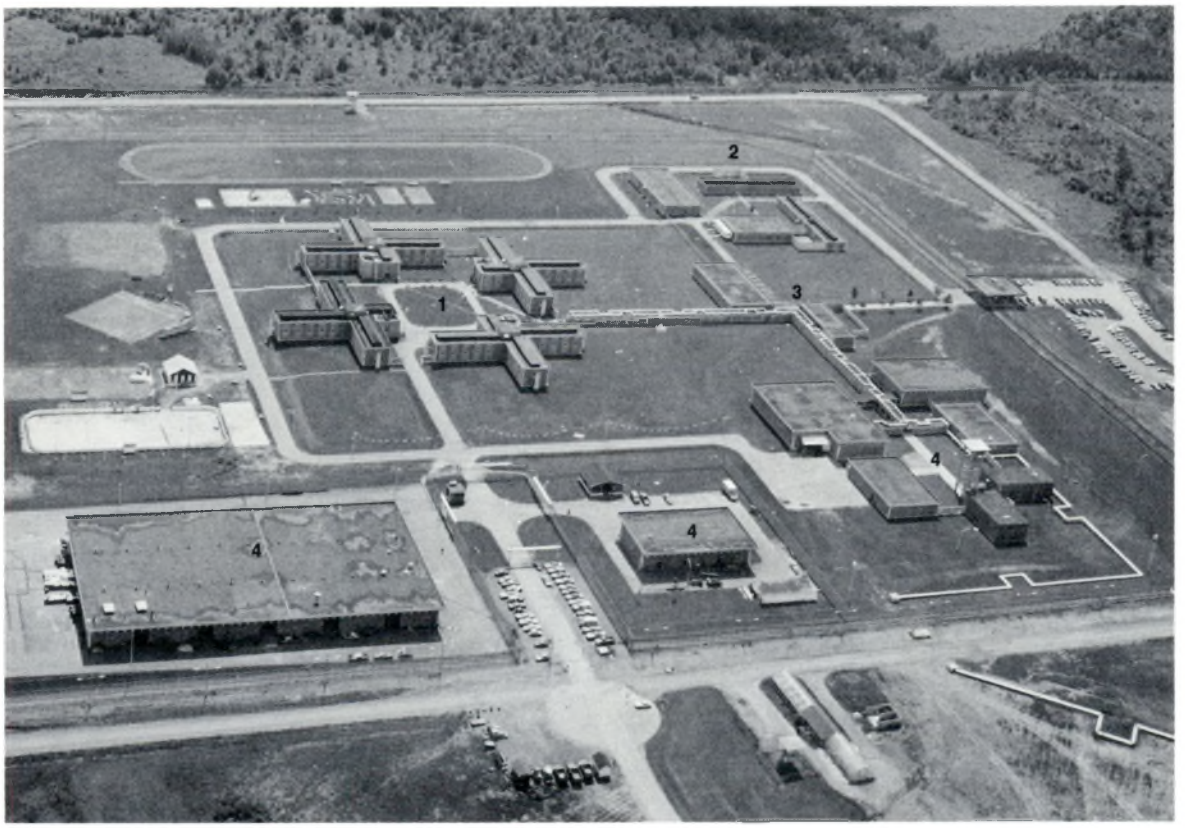
Les établissements à sécurité minimum ou les centres correctionnels communautaires ne comprennent pas les mêmes installations que les établissements à sécurité maximum et moyenne parce que les programmes du soir y sont peu nombreux et que certains détenus travaillent à l'extérieur. Ceux-ci bénéficient d'ailleurs de congés temporaires qui leur permettent d'assumer des responsabilités dans le quartier et de passer une partie de leur temps dans leur famille. Leur séjour y est bref et l'élargissement définitif en est le premier objectif.

Programme de sécurité
Il est évident que des régimes de détention trop rigoureux entrent en conflit avec les buts du nouveau régime carcéral et posent un obstacle réel à la réinsertion et à la réhabilitation du détenu. Il est nécessaire, cependant, de dépister au moyen

d'un examen sérieux le détenu dangereux qui constitue une menace pour son entourage. Le public perpétue trop souvent le préjugé que les pénitenciers ne sont que des établissements punitifs. Lorsque la sécurité en demeure la raison première, elle prend nécessairement le pas sur les besoins des délinquants. Les mesures de sécurité auront souvent la priorité sur les programmes d'insertion sociale coûteux en raison de ressources financières limitées alors que cet argent servirait mieux des objectifs véritablement correctionnels. Pour construire un établissement fonctionnel, les architectes doivent le considérer dans son ensemble et ne pas dissocier programmes, organisation et personnel. Les résidences favorisent précisément cette nouvelle approche personnalisée du détenu car les mesures de sécurité individuelles peuvent y être renforcées ou assouplies selon les circonstances. Une surveillance efficace du périmètre s'impose toutefois.

La société s'attend, d'une part, à ce que les détenus ne s'échappent pas des établissements. Le personnel désire, d'autre part, se protéger contre les voies de fait inopinées et empêcher les actes d'agression entre délinquants de se produire. Ces exigences bien légitimes ne sont pas faciles à concilier avec le programme correctionnel d'insertion sociale. La majorité des anciennes maisons de détention insistaient beaucoup sur les mesures de sécurité à l'intérieur des bâtiments: passerelles pour gardes armés, postes d'observation, barrières de contrôle, espaces séparant les agents des détenus, et sur les murailles d'enceinte et les miradors. Les périmètres actuels sont de plus en plus fréquemment constitués de deux clôtures métalliques bien éclairées ainsi que d'un chemin de ronde. Des guérites permettent de surveiller les zones clôturées et adjacentes sans donner l'impression de vouloir retrancher les délinquants du reste de la société. Grâce à ces mesures, un contrôle efficace est assuré et les moyens internes demeurent souples. Dans les pénitenciers à sécurité maximum, on assigne à certains gardiens armés des postes de surveillance stratégiques pour protéger le personnel et pour empêcher un détenu de prendre possession d'une zone. Dans les bâtiments à sécurité moyenne, les aires de grande activité telles que le gymnase et l'atelier ne comporteront pas de miradors, mais un système d'alarme permettant d'obtenir rapidement du renfort.

Tous les établissements disposent en outre, à l'entrée du périmètre, d'un poste de garde chargé de filtrer les visiteurs et autres personnes pouvant transporter des articles de contrebande. Dans ce poste existe une zone fermée où l'on procède à l'inspection des véhicules. La nuit, lorsque la plupart des aires sont fermées à clef, il suffit d'un petit groupe d'agents pour contrôler le périmètre et patrouiller l'ensemble. Bientôt, il y aura dans chaque maison un système radio-téléphonique complet pour communiquer au besoin avec l'extérieur. On utilise également des chiens pour effectuer les rondes de nuit le long des clôtures du périmètre et, depuis peu, des systèmes d'alarme électroniques. L'apparition sur le marché de systèmes électroniques plus perfectionnés permettra de réduire la patrouille chargée du périmètre et s'avérera aussi efficace contre les évasions que les murs dont le coût de construction est devenu prohibitif. □



Ministère du Solliciteur général

L'établissement à sécurité moyenne de Cowansville

1 résidences
2 équipement sanitaire et socio-culturel
3 administration
4 ateliers

A Catalogue of STRESS AND STR

by Daniel Cappon with
Mary Roche

AIN ... in Urban Life

The urban condition excludes virtually no one; the vast majority of people either live in the city or use the city, and few are left as untouched, genuine rural dwellers. Yet, this pervasive urbanism is often said to be stressful, evoking anxiety, confusion, aggression or escapism.

For a multiplicity of reasons, people do not generally perceive the real source of their stress. Many sources of stress (hereafter called strains) are imperceptible because of the nature of things and

the small range of man's perceptual mechanisms; this is true in the case of water and air pollution.

Many strains are difficult to perceive because people simply are not cognizant of their own emotions, such as feelings of boredom and loneliness. As well, through a deliberate (although unconscious) perceptual defense mechanism, most unpleasant strains are screened or shut off altogether. The only thing people can verbalize – and even that vaguely and inaccurately – is the effect of a strain, like fatigue or anxiety.

What then are these unarticulated, yet pervasive, strains or sources of stress in our urbanized world?

The following is an attempt to catalogue the environmental factors which constitute a likely strain or an excessive or adverse stimulus or challenge to the urban dweller and user.

Hopefully, this inventory or conceptual organization will be useful in setting priorities for intervention in urban stress; for assessing the factors in the quality of urban life (in terms of the physical and social environments and health); for laying the basis for further research; and for developing designs which would ameliorate the urban condition.

This task cannot await the full results of research because of the enormous attendant methodological difficulties, the increasing unwillingness of society to spend money on this kind of research and the cost in waiting for results while vital decisions are being made, in light of present knowledge.

An attempt will be made to describe as many unitary and independent environmental strains as possible, knowing full well that in the real world urban environmental strains exist in a double bind of impurity: they cluster and mingle almost indistinguishably with each other and their effect is influenced by a number of variables, namely the type, amount, duration, onset, frequency, intensity and meaning of the strain. It is a virtually endless task to describe each strain in terms of the six objective variables, let alone the variations of the seventh subjective factor, meaning.

In this catalogue, therefore, the dimensions of an urban strain will generally be limited to the type of strain plus two other dimensions such as amount and frequency.

We have categorized environmental strains in terms of decision-making intervention, starting with the most easily measured urban strains and moving through to the more complicated, longer-term, interactive strains. Thus, the strains are listed in the following priority:

1 discrete or single urban strains which can reach absolute levels of pathogenicity, beyond which it is demonstrable that a maladaptive stress response will occur;

2 a cluster of related, subliminal strains which tend to interact powerfully to produce a highly pathogenic effect;

3 a cluster of individually innocuous urban strains which when linked in a cybernetic loop with augmenting or distorting feedback reach some pathogenic proportions, and

4 a cluster of urban strains which over time have a latent, accumulative effect.

As you can see from the tables that follow, this review of urban strains has been divided as :

• source of strain – whether in the physical environment (be it natural or man-built) or the human environment (either social or individual);

• mediator of each strain – the physical, psychological or psycho-social transmitter of the strain; and

• stress reaction threshold – a value index beyond which a stress-producing reaction will occur. This value index is based both on the writer's intuition and on an extensive bibliographic search.

Physical Environment

Natural

Source

- Energy waste or pollution
  urban accelerated or increased in concentration
- Depletion of energy sources
  urban vulnerability (dependent also on organization and distribution of energy)
- Exhaustion of other non-renewable resources: metals and materials
  as above
- Exhaustion of special non-renewable resources: agricultural and recreational land
- Rapid exhaustion of renewable resources
- Vulnerability to natural hazards
  dependent on urban organization and vulnerability to man-induced environmental and meteorological changes
- Vulnerability to epidemics and pandemics
  airborne, waterborne, soil-borne diseases
- Susceptibility to diseases
  lung cancer and cardiovascular degeneration
- Vulnerability to malnutrition

How transmitted	*Value indices*
•atmospheric, aquatic, geologic, thermal or solid waste •physically induced changes by unchecked economic and technological expansion	•noxious levels of tolerance for each major category (viz "air pollution syndrome") and for each pathogen (1, 2, 3)
•heat for everyday life, industry and transportation •physically and socio-economically induced (viz strikes); unchecked economic and technological expansion	•20% annual increase in cost •projected exhaustion in one generation •industrial and transport disruption •no conservation policy (4, 5)
•industry and manufacturing suffers •social dislocation. Capable of technological replacement •unchecked economic and technological expansion	•as above (6, 7)
•food shortage, esp. protein •lack of open air recreation •physically and socio-economically induced	•loss of 30 acres per day from hinterland (8) •less than 40 gm protein per day (9)
•physically induced viz vulnerability of potable water supply •socially induced (viz pollution; strain on distribution; disasters or strikes) •unchecked economic and technological expansion	•general reduction of fresh water below 2.5% total on earth (10) •less than 100 gals/person/day total water usage (11) •less than 3 gal/person/day personal use (12) •less than 1000 cc drinking water/person/day (10) •no conservation policy
•physically and socially induced (like floods, heavy snowfall, excessive heat or humidity)	•to levels of paralyzed transportation; acute discomfort, spread of disease, disability or death (13, 14)
•physically induced •psychologically reinforced	•rising incidence (per unit of population) of over 1% per year (15, 16)
•physically induced or socially produced by disorganization in distribution of food, etc.	•rising incidence (per unit of population) of over 1% per year of malnutrition (17, 18)

◁ Clearly, worldwide major environmental stress and problems reflect themselves in all urban systems to a degree.

The specific ways in which they come a source of urban stress are related to the vulnerability of large cities to any major macro-event, like energy and food shortages or water pollution. It seems that although the city was originally a way of saving energy and resources and redistributing goods economically, its growth (like that of the dinosaur) defeated its original purpose for being. Probably large cities (megalopolises and beyond) accelerate energy depletion and the exhaustion of both renewable and non-renewable resources. Certainly they concentrate pollution, even if they do not augment it.

However, once the problem or pathology occurs at a macro-level, the large city because of its centralization and interdependency becomes extremely vulnerable to any breakdown in the organization of gathering, storing and redistributing a resource, like water. Also, the large city is vulnerable to the effects of adulterations, like radioactive fallout or critical breakdowns such as hydro and other essential services. The 1965 breakdown of a hydroelectric grid supplying the northeastern United States and Canada was a case in point.

Also, I suspect that urban concentration favours relatively unchecked technological and economic expansion and hence the vicious cycle of population pressures occurring at the inception of prosperity.

The value indices for macro-scale pathologies are easily set for the spectrum of physical pollutants, because there are absolute values beyond which they are pathogenic and lethal. When it comes to energy depletion, it is not easy to choose the early warning signs, beyond setting intolerable rises in annual cost which eventually cannot be offset by inflation. Industry must slow down or look to other energy sources. Productivity must decline, and finally we must get cold in temperate and cool climates. Eventually, of course, we might return to walking and cycling or the horse and buggy.

As for food, the crisis is upon us now. With a 2.5% annual rise in population, we need a 3.5% annual increase in food production, both grain and meat, including fish. This can be done only in two ways: bring more arable land under production (which, for a time, can be done in most places except the Middle East and Asia) and intensify farming. Intensive farming can yield a 2.5% increase, but will result in a colossal drain in energy. The remaining 1% must be derived from more arable land.

North America and Europe may manage for a hundred years or so, perhaps because their populations are beginning to decline; because there is extra arable acreage (if it does not all get paved); and because the technology and management are available. However, the immediate hinterlands of mammoth cities are rapidly losing their arable land. Intensification of farming tends to destroy the soil, unless there is plenty of water and unless all the elements are replaced and humus added. Moreover, the strain on fresh water resources becomes considerable, especially around large coastal cities. Hence, desalinization becomes urgently necessary.

Thus, eventually, we shall all run out of food and water, unless population stabilizes in the next century. The first warning is malnutrition, that is, less than the minimal protein intake of 40 gm daily. Before this, however, there will be a differential in the population whereby the cost of meat becomes prohibitive for the increasing members of the 'nouveau poor' – even the $10,000 per year white collar workers. Soya beans and fish can only take us so far, and already many people eat dog and cat food prepared from horse and diseased cattle carcasses. Other early signs of poor food distribution are outbreaks of dysentery and nematoda (worm) infections.

As with food, exhaustion of water can be indexed fairly easily on global and regional scales. And like all other resources, the distribution of water is more vulnerable in large cities than in rural areas. The individual feels the pinch in the dry season when water gets restricted for the householder's garden, laundry and ablutions.

The large city is also vulnerable to natural hazards. When its basic organization and emergency services become severely taxed, in terms of the routine of everyday life, there ensues a number of events: a massive threat to life; personal discomforts; search and rescue of disaster victims; and measures to prevent the spread of epidemics. Apparently, because of new warfare technology we can also look forward to man-made 'natural' hazards being unleashed upon the land.

The greater the operation of sewage disposal, the greater the hazards from epidemics. To offset this, the larger cities usually have better, more modern fail-safe systems. Nevertheless, when the barriers are broken, millions may be affected.

Generally, I took a rise of 1% per annum in any disorder, infectious or psychosomatic, to be indicative of stress.

Physical Environment

Man-Built

Source	*How transmitted*	*Value indices*
•Height of high rise *chiefly for living, but also for working*	•psycho-physically induced	•above 70 ft. or six to seven stories (19, 20, 21)
•Massivity of buildings *chiefly for living, but also for working*	•as above	•occupation by over 5,000 at one time; circulation of 10,000 people per day (22, 23)
•Public buildings *specialized viz airports*	•as above	•disorientation •discomfort and anxiety due to faulty circulation design and and inadequate information, especially in visual display (24, 25)
•Sensory and climatic *understimulation, lack of variability and noise in the micro-environments for living and working; no fenestration*	•psychologically induced viz monotony, lowered awareness, effacing circadian and other natural and entrained bio-rhythms	•fatiguing visual and other sensory noise, like steady and shadowless high illumination above 100 CP; lack of fresh air currents; or even and controlled climate (26, 27, 28)
•Auditory noise	•psychologically induced	•above 75 decibels with low and high frequencies and variations disrupting sleep (29, 30)
•Size, shape and height of rooms *chiefly for living but also for working*	•psychologically induced viz sameness or spatial monotony and sense of confinement	•average of 16 waking hours spent in same kind of box-type micro-environment (31, 32, 33) •room 7 ft. high with 90 sq. ft. per occupant (34)
•Lack of kinetic and visual access to the out-of-doors	•psychologically induced	•1 hour a day or less without visual or kinetic contact with the out-of-doors, not counting transportation (35, 36, 37)
•Transportation *daily (horizontal) home to work and back*	•psychologically induced	•more than 1 hour/day spent in traffic (38, 39)
•Transportation *vertical, obligatory (trans-oceanic)*	•psychologically induced •(flying and elevator phobia, etc.)	•more than occasionally (once in 5 years) and less than voluntarily (40, 41, 42, 43)
•Occupational and man-built environmental hazards *viz mining hazards and accidents*	•physically induced •psychologically reinforced by sense of danger	•more than one preventable but not prevented disease or accident ascribed to occupation or environment, in any one place (44)
•Special micro-environments *man-machine systems viz driving a car*	•psychologically induced	•insufficient information and visual display related to inadequate training and technical ability causing one major accident (45, 46, 47, 48)

◁ This category presents a harder challenge to index. A high-rise environment of seventy feet was taken as a source of urban stress because buildings above four storeys cannot be considered walk-ups and require a dependency on elevators, thus creating a bigger fire hazard. But, most importantly, seventy feet is beyond the distance for visual resolution of discrimination of facial features. In other words, a mother from up there could not distinguish her young son's face.

Massive buildings pale the individual into insignificance. The ball park figure given is the equivalent of some five massed towers or skyscrapers. Clearly this strain interacts with a number of others, particularly "powerlessness," listed under social environment. Public buildings are expected to be awesomely massive nowadays. But they contribute to stress when they tend to inspire fear and disorientation, or when they interact with the physical self-image of the dwarfed obligatory user who must encounter there the intransigent power of an alienated bureaucracy.

Designers clearly have little care for the vicissitudes of the user, even in a gross way. In an investigation of international airports, we found that designers had no clear notion as to whether they were aiming at a mini-city; a rapid-transit system, mode or interchange; or an international gateway. They certainly did not worry about the little old lady suffering from technological lag – an obvious interaction effect.

Micro-environments are the physical wraparound of our daily lives. As a general rule, the less the environment is under control the greater the strain. The fact that many of our diurnally entrained biorhythms are abolished by the design of huge buildings is a severe strain on sensory perception.

This, along with a number of other strains, such as the social "rat race," daily physical mobility, personal interruptions at work and at home (by the telephone and by strangers) leads to daily fatigue. Such fatigue is sufficiently relieved by the psycho-biological rhythm of sleep, enforced by the big city – namely, sixteen hours of continuous wakefulness, with increasing need of stimulation for arousal and vigilance (often worsened by alcohol or a similar depressant in false belief that it will stimulate) followed by eight hours of wasteful sleeping. In fact, two hours of sleep at any time, followed by four hours of activity would be much more efficient.

Noise adds to the fatigue-inducing strains. In this century, noise levels have doubled in the city, both in the air and on the ground. Its worst aspects are disturbed sleep and subconscious distraction. Noise, therefore, adds to the tension necessary for vigilance, as well as to the numbing effects of urban pressure.

The monotony of the sensory and climatic ambience must interact with the shape and size of the rooms, where most of our lives are spent, in order to lower the state of awareness and make arousal, let alone happiness and creativity, much more difficult. At the levels given, most rooms will seem claustrophobic even to the majority of people who prefer privacy, let alone to the 10% or so who relish the company of others (145).

Lack of kinetic access to the out-of-doors, even visually, will interact with break of contact with nature and alienate us from the natural environment. It is here perhaps, rather than anywhere else, that we may expect a culturally induced mutation, with eventual biological consequences, albeit in hundreds of thousands of years. The outcome might be *Homo artificiales*, a man made up of different anatomical parts (transplants), living in a completely artificial environment, totally out of touch with "nature."

The traffic hour daily psychosis may be relieved, for a time, by staggering working hours. It might be totally relieved when we learn what is the optimal distance between work, play and home and when we change our sleep rhythm to a reasonable cycle (146). Meanwhile, more than one hour on the road constitutes stress.

Vertical transportation is not gaining momentum in that no more than 15% of the population takes full advantage of flying. Fewer still may do so in the future because of escalating prices of fuel and trips. Those who do fly regularly, however, are numerous enough; there are 8 to 10 million flights a year from Toronto International Airport. Among these travellers there is a rising incidence of people who fear flying, but who must fly or lose their jobs. For them, air travel is a considerable strain. The American membership of the fear-of-flying-club exceeds a million.

The risk of falling victim to an occupational hazard viz.from black lung and silicosis to writer's cramp presents a major environmental strain. Special micro-environments, such as ocean submersibles, submarines, balloons, airplanes or space capsules, present strains in terms of the man-machine system only to the few. But the same kind of interface, which occurs when one drives an automobile, affects millions and is one of the main causes of death in so-called developed countries. The strain occurs at the man-machine interface, and the result may be accidents affecting both driver and innocent victims.

Physical (Natural and Built) and Human (Individual and Collective) Environmental Interfaces

Source	*How transmitted*	*Value indices*
•Nature contact *diminished or lack of it*	•psychologically induced either through lifetime urban living with no contact with nature, hinterland, wilderness or very infrequent contact	•no contact in a lifetime (unconscious deprivation), then the stress is due to contact with wilderness viz silence of countryside; much enhanced if alone •for person familiar with nature diminishing contact to less than once in 5 years (49, 50)
•Out-of-doors recreation	•psychologically induced	•less than 1 acre for 1,000 people, especially those without ground access (51, 52, 53)
•Population impacts *a) population explosion and implosion*	•psychologically induced (ultimately perceptual and preferential) •high density (overcrowding) in: •static public spaces like streets •transportation systems •living habitats •work spaces •all leading to perception of congestion	•beyond metropolis at the megalopolis level of 3 million or more (54) •density of 100,000 people per sq. mile or more (55) •land coverage of over 75 units per acre habitat (56) •buildings with working population of 5,000 or more per day and 10,000 or more circulating (57) •street jostling or crowds impeding walking (58) •slow traffic to 10 m.p.h. or less (59) •less than 50 sq. ft. per occupancy (60) •less than 30 cu. ft. per occupancy (61)
b) low density in city dwelling	•physical factor in transportation due to sprawl and psychologically induced effect	•city with density of less than 500 people per sq. mile. Minimal use of rapid transit (less than once a week); maximal use of personal transportation but spending more than one hour per day in transit (62, 63)
c) population displosion	•psycho-social effect	•minority groups (racial, ethnic, cultural, socio-economic age groups) rising rapidly (exponentially) and going beyond 10% of local population (64, 65, 66, 67)
•Urban residential specialization *company town or capital city*	•psychologically induced •excessive mobility •equal status •lack of life cycle diversity •lack of "wholeness" in culture due to life cycle specialized concentration	•an over-homogenized neighbourhood with over 80% of same kind (68)
•Social/physical isolation	•psycho-social effect •same physical effects of deprivation	•separation from family, familiar habitat or from homogeneous group for over 18 months (69, 70, 148) •being alone in wilderness or at sea (71) •socially isolated for over one week continuously (73) •being physically deprived of continuously fresh water and food for over 3 days (72) •being climatically stressed to the parameters of endurance for each factor over time (74)
•Urban blight	•physically and psychologically induced	•identifiable rows of houses in disrepair, amounting to 10% in many districts (75, 76)

◁ It is at the interface between the physical and non-physical environments that the larger strains and problems for mankind exist (125, 147).

First the moot question, already touched upon, is whether we need contact with nature and especially wilderness (or even the out-of-doors and parks) or not. And if so, for what?

Out-of-doors recreation is regarded as a lifesaver in urban living, although no one knows quite why. The figure glibly offered by the experts is ten open-air acres per 1000 people shut in the town, but the more important aspects are the degree of physical safety in the park in terms of violence, and the specific usages of parks in terms of sports, athletics, fitness and social well-being.

The next factors are those of population dynamics.

The first of the gross figures of population explosion and implosion in an urban region which constitutes a stress on all inhabitants is a city expanding to over three million people. It is a matter of natural observation that approximately three million is the margin of tolerance for sheer total number. Beyond that total urban population figure, anywhere in the world, there are increasing urban strains. Perhaps until recent years, London was the exception in that it seemed to be a reasonably healthy city, despite its 10 millions. But even then, it sprawled and wiped out the best of semi-urban southern England. And, once London's cracks were exposed, the whole unhealthy structure was soon revealed. The extreme example of urban disease is New York City. Surely this is the way all cities must go once they become neoplastic, like Tokyo and Sao Paulo, and all the other cities Jane Jacobs describes so well (147).

The hierarchy of densities given in the inventory flows from the large numbers of people counted in any given space such as public spaces, transportation, habitat and working spaces. They are likely to be judged as overcrowded and ultimately perceived by individuals as congested. Perhaps street jostling, impeded walking and the tiny space given to occupancy by an individual set the obvious limits, although we know from the experience of Hong Kong that tolerance varies widely.

It is also important to note the urban strain of low density, when there is a sprawl of hundreds of square miles, and access is not possible without the private automobile with all its attendant bad influences.

Population displosion cannot easily be indexed except in terms of an exponential rise (7 to 10%) of any minority group. The social profile of people in the service industries, such as hospitals, banks, the sales force of large department stores and eventually in government itself, soon reflects this rise in numbers of minority groups. This is where abrasiveness begins to be felt. Later, the minority groups become organized defensively or offensively, and eventually militantly. This increases the abrasive experience.

Once a minority group begins to exceed 10% of the total population of a previously homogeneous community, the presence of that group is no longer tolerated graciously. Thereafter, newcomers are not welcomed. The minority becomes a menace to the majority.

By the same token, excessive homogeneity in a neighbourhood or district, like a company town or a capital city, can also become a strain. This interacts with other factors of anomie, boredom and lack of design for encounter.

Social and physical deprivation was given as a reminder that it is one of the factors, often dispersed throughout urban life, especially in the elderly, which stretches human endurance. Eighteen months was the critical point of social deprivation for a married serviceman with children when posted thousands of miles away in a strange land on a tour of duty. After that period, he began to fall apart due to "separation anxiety."

Urban blight is easily indexed by any building inspector. It may not affect anyone, except those in the close vicinity. But if it is considerable, like a slum area, or patchy and distributed throughout the city, the entire urban region feels blighted. The poor may always have to remain among us but if the corpus of a city is blighted to a critical degree, say up to 20%, its health becomes sapped at the core. There is an obvious interaction here between slums and the poverties of people in a city (149).

Human Environment

Social

Source	*How transmitted*	*Value indices*
•Social and physical mobility *a) impact through dislocation*	•psycho-socially induced •turnover in the working population •cultural shock	•neighbourhood changes in population in excess of 1/5th annually or family or person moving once every 5 years (77, 78) •child moving to other city or place in excess of 5 times during childhood •cultural dislocation more than every 5 years (80, 81)
b) impact through geographic inertia	•psycho-socially induced cultural lag	•being born, living and dying in the same place. Not travelling beyond the regional boundary of the nation (82)
c) impact through compulsory migration	•psycho-socially induced instability	•major migration more than once in a lifetime; acquisition of a new citizenship more than once (83) •weekly transnational commuting and working (84) •more than 6 major trips per year (85, 86)
•Ennui or boredom *a) "nothing to do" "nowhere to go"* *•lack of opportunities for stimulation and encounter*	•psychologically induced •lack of places for encounter	•going "out" less than once a month •meeting "new people" less than once a year •visiting new places less than once in 5 years; extroverts are especially vulnerable (87, 88, 89, 90)
b) adolescent boredom	•as above	•restlessness, rebellion, drop out, opting out, drugs; increase in problem area over 1% per year (91, 92, 93)
•Vulnerability to essential services breakdowns *police, hydro, sewage, heat, garbage, postal service, fire, telephone, water, snow removal*	•physically and socially induced	•sudden and significant rise in consequent environmental pathology viz crime rate, gastro-intestinal infection, cold exposure, injury, death through fire, etc. (94, 95)
•Balance of primary (consorting) against secondary service relationships	•psychologically induced via urban organization and interdependence	•a majority of waking hours (16 hours per day or 42 years out of 75) spent with people who do not matter personally (96, 97)
•Occupational dissatisfaction	•socially induced through a monotony or repetition b lack of participation in goals or significant role playing in execution c insufficient reward in terms of expectation, output or quality	•no change of role, status or pay in over 5 years of continuous employment at one job •no perspective of end product; no say in goal or process; no appropriate expectation of change for the better. N.B. Clearly this needs to be age-weighted
•Breaks in love ties and meaningful relationships or employment, with net loss of love	•psychologically induced •breakup in family ties, marriage or sexual consorting, friendships or work relationships and no replacement in the immediately foreseeable future	•breakup in consorting in under 5 years; more than twice in a lifetime (100) •loss of or no acquisition of friends (101) •more than three losses of meaningful and gainful employment or reversals in a lifetime (102) •alone and useless in old age (103)
•Suicide	•psychologically induced •suggestibility rises to epidemic proportions	•rising from 20 per 100,000 population (104)

Human Environment — Social (Continued)

Source	*How transmitted*	*Value indices*
•Powerlessness *loss or non-acquisition of authority, respect or significance; human redundancy or obsolescence; replaceability and expendability*	•psychologically and politically induced a distance from political power and minimal influence and affiliation; non-participation in process. Rapid growth of government and bureaucracy b distance from all decision making and minimal influence at place of work; no particular role; no participation or affiliation; lay-offs and unemployment c loss of respect and dignity in family and social circles, if any before d short and easily extinguished memory of past achievements	•unable to clearly influence a single political, social, economic or psychological processes or human beings, especially after having had some influence before (105, 106, 107)
•Breakup, loss of or non-organization of neighbourhoods and communities. Jurisdictional slum. Social fragmentation	•psycho-socially induced a rapid mobility (voluntary or forced) and dislocation b immigration and population displosion c bankrupt local government d loss of authority of local government and police e no social cohesion or sense of community; an inchoate vicinity	•rising rate of non-reported crime and non-apprehension of criminals over 1% per year (108) •rising rate of crimes of violence over 1% per year (108) •withdrawal from downtown core at rate of better than 5 miles per decade (109) •spread of slums (110) •streets unsafe by daylight (111) •over 500 overlapping and conflicting jurisdictions not capable of rationalization (113)
•Social violence and crime	•disorderly and threatening crowds •lack of police protection and control •unsafe from violence and crime outside and inside homes	•deserting, deteriorating and corruptible police force and local government •access to whole city by day and night limited by fear •rising crime rates (114, 115)
•Poverty *economic, social, perceptual, informational or emotional deprivation, especially in face of rising expectation*	•socially and psychologically induced •physically reinforced by malnutrition, alcoholism, drugs, etc.	•person/family below current poverty line (116) •more than 15% annual loss of purchasing power (117, 118) •trapped in city, unable to seek better or regular employment elsewhere (119) •decreased concern for the freedom and the life of other people (120) •uninformed about consumer, employment, welfare and legal rights (118) •lack of caring by or authority from parents, marriage partners, children or peers (121)
•Under- and unemployment	•psycho-socially induced	•more than 10% unemployment (122) •high rate of underemployment of women, the elderly, students and the general population rising to over 1% per year (123)
•Discrimination *racial, ethnic, cultural, religious, socio-economic, educational or by age or sex*	•psychologically induced •population displosion, especially disaffiliated and cohesive minorities	•one instance of manifest discrimination or a series of instances of covert discrimination, resulting in a sense of inferiority and injustice (124)
•Inadequate bureaucracy	•psycho-socially induced •complex and improper barriers between governors and the governed	•inflexible, rigid and daily harassing individuals (124)
•Rapid change in values *absolute, conative, instrumental, behavioural or perceptual*	•psychologically induced resulting in confusion; social disorientation; and inability to make adequate decisions	•any major change in values occurring in less than 5 years; or many values changing at the same time (126, 127, 128)

◁ In this grouping, physical and social mobility means that children during their critical development years would not experience the stable environment of a community. The crucial figure is in excess of five moves during childhood. This is the threshold beyond which mobility has been found to constitute a strain for children, and the reaction is childhood disturbances at school and at home (79, 143).

Perhaps, the opposite condition – geographic inertia – is not so bad. Of all the listed strains, it is surely the most benign. Certainly, travel does not broaden any mind except one that is broad already.

Compulsory migration, on the other hand, is a major strain, depending on its onset. After middle age and in the absence of knowing the language and with minimal friends and relatives around, it is bad enough. But, the need to acquire a new citizenship twice in a lifetime has to be regarded as excessive strain.

A job which requires long weekly air flights across or within national borders or more than six major trips a year lasting three or more months, is also a strain. Here, however, we might see a new breed of men, the intercity people, bound closely to airspace and its fancy life, who when they land are rootless enough to be merely urban and not nationalistically identified.

Boredom is generally induced by understimulation and may be indexed by such social underexposure as going "out" less than once a month, not meeting new people more than once a year and not visiting new places more often than once in five years. Of course, it may be argued that given an adequate protective wall within family life, or given considerable introversion and an absorbing job, a person may meet the value indices given for boredom without actually being bored. Boredom may be said to be a state of mind resulting from a number of vectors, many of them urban in derivation. Mere personal, social and environmental exposure may not necessarily inhibit the arousal mechanism that offsets boredom. At the indices given, however, if a person is empty of ideas, of direction and bankrupt of interests, he is also likely to be bored. (150).

Adolescent boredom is a subvariety of the general condition but much more

regularly and commonly encountered in this sector of the population. Its effects vary from restlessness to rebellion and violence, but some of its less well-recognized environmental causes are lack of physical designs for encounter and lack of adequate kinetic expression of energy and aggression.

The city is notoriously vulnerable to breakdown in essential service industries like sewage and garbage disposal, fire protection and water supply. For one thing, rural settlements and small market towns hardly require the services listed above because the people are self-sufficient. But, strikes or disorganizations, such as in the supply of energy, the work of the police force or snow removal, affect all citizens. The index is similar to that given for natural disasters in that the effects are specific, namely a rise of 1% per annum in non-apprehension of criminals, crime rate or exposure to cold, etc.

A level of urban stress is easily indexed by a grossly improper balance between primary or consorting relationships and secondary relationships or service contacts. Simply stated, if the majority of working hours are spent in non-meaningful relationships, this constitutes a strain and also a loss of opportunities for love.

Job dissatisfaction is probably the rule, nowadays, in most urban employment. In fact, whenever the person is not self-employed – and even then – the amount of bureaucratic and other controls exercised may lead to his dissatisfaction. The indices given are self-explanatory and clearly related to the idea that job satisfaction depends on the degree of job participation and on joint progress (98, 99).

Loss of love, along any of the lines of consorting, from the obligatory in family life to the more elective type in friendship, is a feature of urban stress. The indices range from breakup in marriage or the equivalent beyond twice in a lifetime or more rapidly than within five years to being alone and feeling useless and unloved in old age. Reversals and losses of regular, meaningful employment qualify under the same rubric.

Suicide is an obvious and gross index of psychological and social ill-being. Its limits, in a population, are established statistically across nations.

Powerlessness or helplessness, as a result of loss or non-acquisition of authority, dignity, respect or significance as a human being, is an important index of humanity. All beings experience, at one point, (usually when still young and innocent of the real world) a sense of specialness, perhaps even of uniqueness. Certainly they feel important, at least to themselves, in their own sphere of influence. But in the urban scene of imploded people and talent with its apparently rapid turnover, people quickly lose their sense of self-importance by realizing their redundancy, their quick obsolescence and their ready substitutability.

The individual, because of his distance from decision-making loci, nonaffiliation and nonparticipation, feels he has little, if any, influence in public affairs; in the semi-public affairs of his employment; or even in his social and family circle, especially if he has lost status, say, due to unemployment or sickness. This inability to influence events on all scales, from political to family (especially if experienced as a loss), becomes an index of the whole generic strain of powerlessness or helplessness.

Similarly, there may be loss of or nonacquisition of a sense of neighbourhood or community. This too tends to diminish power and identity for the individual. In addition, inchoate vicinities and socially fragmented communities are liable to result from a jurisdictional slum and further alienate the person.

This entire picture may then be reflected directly in social pathology through rising crime rates, rising violence (over 1% per annum) or worse in a rising rate of nonreported crimes, in the spread of slums, in withdrawal to suburbia from the inner-city area and in the existence of jurisdictional slums (112).

In this situation, the individual becomes not only disorientated and saddened by the loss or lack of community, but positively frightened and physically insecure. His response to this is defensive withdrawal, further alienation and a sense of "every man for himself."

Certainly these psycho-social factors of strain, sharing the same mode of transmission, are bound to interact with vastly increased potentiating effects, in a common stress reaction, which we might call massive alienation (in both the meanings of the word – stranger and insane).

In this case, we can also clearly see how a stress reaction like the social pathology of violence and crime becomes an urban strain. It is mediated by disorderly and threatening crowds, by teenaged marauders, by break-ins, violence and by police demoralization, often combined with brutality which is usually a consequence of failure in the system of law and order. This is aided and abetted by the laxity of judges, who in their newly-found liberalism administer a permissive form of justice, while at the same time the growing points of society are stiffening into an attitude of self-discipline, responsibility and new bids for excellence.

This whole thing can be indexed by deterioration in the police force and local government and by the loss of trust of the ordinary citizen in those who are designated as his protectors.

Poverty, especially related to spreading slums, and interacting with other social problems like race relations (usually caused by a socially lagging government policy such as a disorderly immigration policy), exacerbates social pathology.

In this context the five poverties, psycho-socially mediated and usually complicated by chronic stress responses, like malnutrition and alcoholism, become a major strain. They are indexed each by economic, social, perceptual, informational and emotional (all deprivatory) parameters (149).

Under- and unemployment, as well as unemployability related to training and education, social rehabilitation and mental illness, are all both organismic and environmental conditions affecting the urban morale. They affect various sectors of the population (the women, adolescents, the handicapped, the male work force) in different ways, but a ball park figure of over 10% total unemployment comprises all these ills.

Discrimination in the range of any of the eight or so varieties, but especially the racial kind, forms a displosive element which when interacting with the poverties and with powerlessness erupts into unbridled violence and crime.

An inadequate bureaucracy can be the bane of urban social existence, especially when a sizeable population suffers from poverty and urban blight and hence from overdependency on governance. Inflexibility, rigidity and downright sadism leading to daily harassment of individuals is a value limit of tolerance in this respect.

Human Environment

Individual

Source	*How transmitted*	*Value indices*
•Family – Home and School 1. *family structure and relationships* 2. *child raising* 3. *age gaps* 4. *self-realization and identity crisis* 5. *old age* 6. *attitudes to death and to dying* 7. *fads in education, the professions, and society at large*	•psychologically induced via any or all aforementioned ways •single parent homes •adoption of disparate children •swing from permissiveness to authoritarianism •swing toward or away from peer group •delayed adolescence •delayed responsibility •swing in granting privileges and freedom •neglect of old age •misuse of individuals •increase in fear of death •swing in institutions governing the universal experience of individuals (viz education, health, etc.)	•a major deviation or instability in psychological milieu •trauma accentuated and accelerated by urban living, occurring at the rate of more than once every 5 years •individual deprivation before the age of two •psychological disorientation for more than one year duration (129, 130, 131, 132, 133) These need age weighting
•8. Competitiveness and materialism *the "rat race" especially following a prolonged period of protective overindulgence or permissiveness*	•psychologically induced •suddenly having to earn one's living and take one's place as a person in society; accepting responsibility and the emergence of a sense of pressure in usefully competing; staking out territory; acquisition of materials for living and pleasures	•not having worked responsibly until after age 21 years and then being plunged into a highly competitive labour market •expectations and standards beyond attainment in 5 years •accumulation of more than one major responsibility per year (134, 135, 136)
•9. Interruptions	•psycho-socially induced at work or at home	•a majority of tasks without proper closure in the day and in the week (137)
•10. Technological lag *sense of intellectual and general inadequacy*	•psycho-socially induced by rapid technological change and advancing expertise in the arts and sciences, leaving an untrained individual lagging or bereft of capability or skill •disoriented culturally	•rapid technical, cultural and intellectual advances so that in one decade a person will feel inept, deprived and alienated •unable to acquire needed skills (138, 139)
•11. Excessive vigilance *prolonged arousal and changes in sleep rhythm*	•psychologically induced by excessively sustained mental work, interruptions, aggravations and changes in sleep rhythm either personally (viz insomnia), socially caused (due to staggered hours or shift work); or physically induced (noise)	•sustained mental work, especially in monotonous over-controlled micro-environments for longer than four hours without a 15 to 20 minute break (141). More than 3 such periods in total; half of that if under pressure. Sleeps less than two hours (with 20 minutes of dreaming) for each of four hours of arousal (140, 142, 144, 146)

◁ This sphere elicits eleven situations of strain affecting the individual.

The arbitrary level of tolerance for changes, deviations and instabilities in the individual's psychological milieu herein offered is one such major change on the average of every five years, for instance, a change from an extended family to a nuclear or to an infranuclear family (the broken home) and a crisis in identity, whether of a minority group, a person, an adopted child, or an ordinary child.

Obviously, this sort of strain ought to be weighed in terms of the first, second, third and fourth half decade of development, because it has a power (perhaps as much as by a factor of ten) as it moves to the critical development period of early and relatively indefensible childhood.

For example, it has been established that parental, especially maternal deprivation (say due to death of the mother) generates stress reactions with much greater certainty if it occurs at or before the age of two than afterwards.

Similarly, the response of young people to urban strains, such as dropping or opting out, drugs, running away, etc., becomes perhaps an intolerable stress (positive feedback, augmenting the response) if its duration exceeds a critical period of say one year. Here again, the earlier these responses occur in the developmental period, the worse they are; hence there should be an age weighting to show this. For example, a ten-year old engaged in premeditated stealing, alone or in a gang, is much more likely to become a recidivist delinquent than a fifteen-year old who begins on his own.

The "rat race," whether due to a desire for materialistic gain, to inordinate ambition or merely moonlighting in order to keep one's head economically above water, is something to which urbanites become adjusted. In fact, once wound up by years of living competitively in the city, it is difficult for the rat-racers to relax or to enjoy a lowering of tension, even if this is called for by a doctor treating their hypertension. The rat-racing urbanites extend their race to social competitiveness and play. But if the "rat race" represents a change, like a young man's or woman's plunge from the protective over-indulgence of adolescence, into a dog-eat-dog abyss of the marketplace, then this becomes a first-class strain.

A change from not having worked responsibly for the first twenty-one years of one's life to having to accumulate more than one major responsibility (like marriage, parenthood and job) in one year, and/or the pressure of self-expectations and their non-attainment in reasonable periods of time (like five years), all are measurable factors of strain.

Perhaps a strain to which much direct attention has not been paid is that of interruptions in an office or in a decision-making job. These strains are liable to occur in conditions of overcrowding, work pressure and competitiveness. That interruptions can be damaging, ulcer producing and account for some of the 'behavioural sink' response of animals (like laboratory rats) under overcrowded conditions, there is no doubt. The arbitrary measure of frustration adopted for interruption is not making 'closure' over the majority of given or self-assigned tasks within each day or each week. Hence, there is a constant battle to catch up which can only be won by increasing work time, efforts, efficiency and tension.

Neither is it likely that the strain on those who are becoming increasingly inept in our rapidly technological society has been adequately noted. It is possible that in large cities thousands fall by the wayside simply because they can no longer master, manipulate or even respond to technical changes – not only at work but in everyday life activities, such as transportation, shopping and ordinary person-to-person dealings.

Such people become frightened and shy away from new techniques. They rely heavily on others. They may become the walking dead, afraid of death, yet even more afraid of the complicated life of the city. They yearn for the simple life and often they have the courage to cut urban roots and try rural life – only to find that survival in the countryside in modern times is equally, if not more dependent, on advanced technology. Thus, they either have to acquire new skills (viz snowmobiling, snowplowing, tractor work, etc.); or else they fail and stumble into helpless levels of poverty; or they pay through the nose and become utterly dependent on the services of others. Nowadays, every urban and rural person must be increasingly able to "do-it-himself."

Last, but not least, is another little noticed yet fundamental strain – namely excessive vigilance with its demands for immediate rewards and for having a good time at the end of each hard day's work. This means some eight hours of strain at work per day, probably with unequal and excessive strains of vigilance. For instance, at two to three p.m. there is a diurnal low period, often rendered lower by excessive food and drink at lunch time which results in a daily battle for arousal and vigilance. On top of that, there are usually eight hours of family life and 'fun at all cost' which requires continued vigilance, usually whipped up by depressants like alcohol instead of by stimulants. Thus, daily vigilance totals sixteen continuous hours of alertness before the mind is allowed eight hours of more or less utilitarian sleeping and dreaming.

Ideally, each 45 to 50 minute period of vigilance should be followed by five minutes of relaxation, in blocks of four hourly periods, after which there ought to be an entire change of content – from work to play, from fitness to learning. The tempo of four hours of activity followed by two hours of sleep with twenty minutes of dreaming is most effective.

One may measure the strain induced by inordinate vigilance from the difference between the above-mentioned ideal and what is experienced in reality. One may then come up with a measurement of strain if a person sustains alertness for longer than 3 or 4 four hourly periods without a break and without a change in rhythm and content, e.g. twelve hours of work, play or learning on end, or twelve hours of sleep and withdrawal on end when there is no physical need. Clearly, this strain interacts easily with those already listed, namely over-controlled micro-environments, such as in large downtown office blocks.

Conclusion

We should now be in a position to look over these items; add those that appear to be missing; distinguish more sharply between strain and stress-reaction-becoming strain (feedback); look for further and obvious clustering among urban strains and for the natural interaction among urban strains; and finally to indicate, however generally, the possibilities of intervention.

In doing this, we must have an alternative future scenario in mind, so that urban stress reactions, which may elicit eventual adaptations and solutions to problems, will not be eliminated in the false hope of a nirvana. In this way, only the strains that are plainly inductive of stress pathology, and to which one cannot adapt in time and would tend to become irreversible, will be eliminated, reduced or modified (125).

For the present, however, I leave this task in the hands of the reader and others interested in urban stress. □

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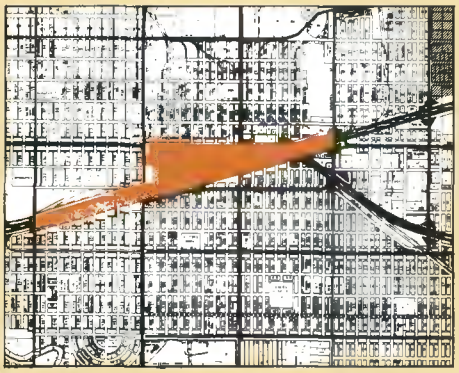
Proposition d'aménagement du centre-ville de Regina

par Michel et Claire Duplay

Notre proposition pour l'utilisation du terrain du chemin de fer se prolonge par des aménagements qui intéressent l'ensemble du centre-ville et des orientations dans le développement général de la ville.

L'hypothèse d'un développement de l'emprise urbaine de Regina n'est pas certaine: elle dépend des formes de croissance économique qui seront retenues au Canada comme dans les autres pays développés pour la fin du XXe siècle. Cependant, en tant qu'aménageurs de l'espace, nous devons prévoir des localisations préférentielles pour des programmes hypothétiques, tenant compte des flux et des centralités existantes qui sont, pour les habitants, un aspect de l'image de leur ville, des données immuables ou un déplacement non prévisible des facteurs géographiques et climatologiques.



L'actuel centre-ville

C'est pourquoi, après une analyse de ces données, nous avons conclu que le développement suburbain illimité et la dévitalisation du centre devraient être interrompus en priorité, d'abord grâce au renouveau du centre à l'occasion du déplacement du chemin de fer, puis par le choix d'une orientation bien définie des extensions de l'habitat individuel vers le nord-ouest et le sud-est, à l'exclusion des autres directions, réservées à d'autres fonctions. Ainsi le vent nord-ouest/sud-est, qui porte au sud de la ville les nuisances de la station d'épuration et les bruits de l'aéroport, et au nord de la ville, la pollution des zones industrielles et des gares de triage, est externe et parallèle aux limites du développement urbain.

A l'échelle de l'ensemble de la ville, nous proposons aussi de poursuivre l'aménagement paysagé de parc de loisirs le long de la rivière Wascana.

En ce qui concerne le centre-ville, nous proposons de rétablir la continuité urbaine actuellement rompue par les voies de chemin de fer, aussi bien entre le nord et le sud qu'entre l'est et l'ouest, dans cette partie du centre-ville. Nous effectuons une sorte de couture, un « remaillage » en prolongeant sur le terrain libéré, le maillage actuel de Regina qui donne une grande force à sa structure urbaine. Mais actuellement, cette forte structure urbaine

Mail culturel et commercial abrité: le forum

Galerie et musée de plein air

n'est pas complétée par une adéquation géométriquement coordonnée du bâti avec le système de réseaux, si bien que l'ordre urbain s'accompagne d'une certaine confusion morphologique dans le bâti. Nous proposons, au contraire, d'établir une relation entre le maillage et l'outil constructif: nous coordonnons la géométrie d'implantation avec un système d'outils constructifs combinatoires: hôtels, services, équipements, parkings, logements, qui permet l'intégration, la superposition des diverses fonctions urbaines et la permutation des programmes.

Il y aura donc, dans le sens nord-sud, une continuité bâtie (avec une circulation piétonnière protégée continue) entre le centre-ville actuel et la zone d'artisanat et d'entrepôts au nord.

Elle comprendra:

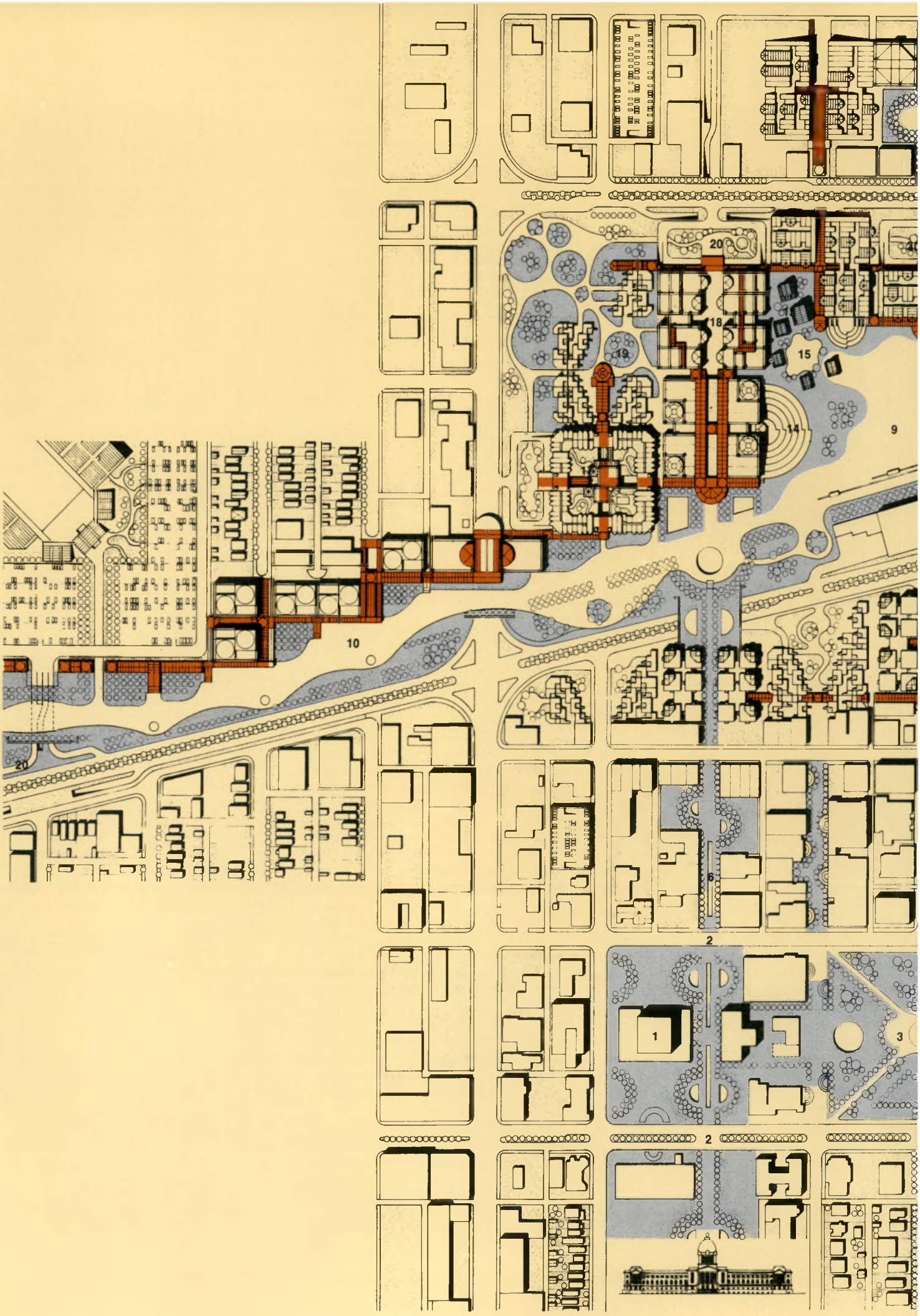
- la nouvelle gare routière, en remplacement de la gare de chemin de fer, avec la correspondance entre les autobus à longue distance et les autobus urbains rapides qui complètent le service de télébus,
- le forum polyvalent avec, au niveau du sol, le musée du chemin de fer,
- enfin, des commerces et des bureaux.

Cependant, nous conservons, au travers du maillage, une trace de l'angle actuel du chemin de fer sous la forme d'une longue promenade plantée d'arbres (le mail des fêtes) qui deviendra un élément de liaison est-ouest des terrains d'exposition au nouveau centre-ville.

L'échantillon de tissu urbain que nous voulons greffer comprend toutes les fonctions d'un centre qui complèteront celles du centre actuel par de nouveaux types de logements intermédiaires entre « collectifs » et « individuels », ainsi que des équipements socio-culturels.

Ces programmes sont organisés autour d'une grande place centrale verte que nous appelons « la Prairie » et qui nous a paru nécessaire, car le parc Victoria qui est actuellement le seul espace vert dans le centre, est situé très au sud. Nous proposons d'y réunir les souvenirs historiques de Regina. Un musée de plein air des traditions populaires pourra être logé dans les anciens silos à céréales, transplantés là autour d'un petit étang. Les vieilles locomotives aux cuivres rutilants du musée du rail pourront être exposées à l'intérieur ou à l'extérieur selon la saison.

Les liaisons piétonnières avec le centre-ville actuel sont toujours continues. L'hiver ou les jours de mauvais temps, les piétons utiliseront, à partir des parkings souterrains, des passages couverts ou protégés traités en serres et conçus éventuellement pour le chauffage solaire. Le réseau de passages piétonniers protégés pénètre dans le centre-ville actuel par la rue Hamilton jusqu'au parc Victoria. Pour le printemps et l'été, les piétons et les cyclistes disposeront d'espaces verts urbains de caractères très divers, qui permettront d'atteindre les espaces verts plus naturels périphériques au centre-ville. L'un de ces mails urbains sera l'axe civique nord-sud reliant le Parlement au futur Palais des Congrès par le nouvel Hôtel de Ville.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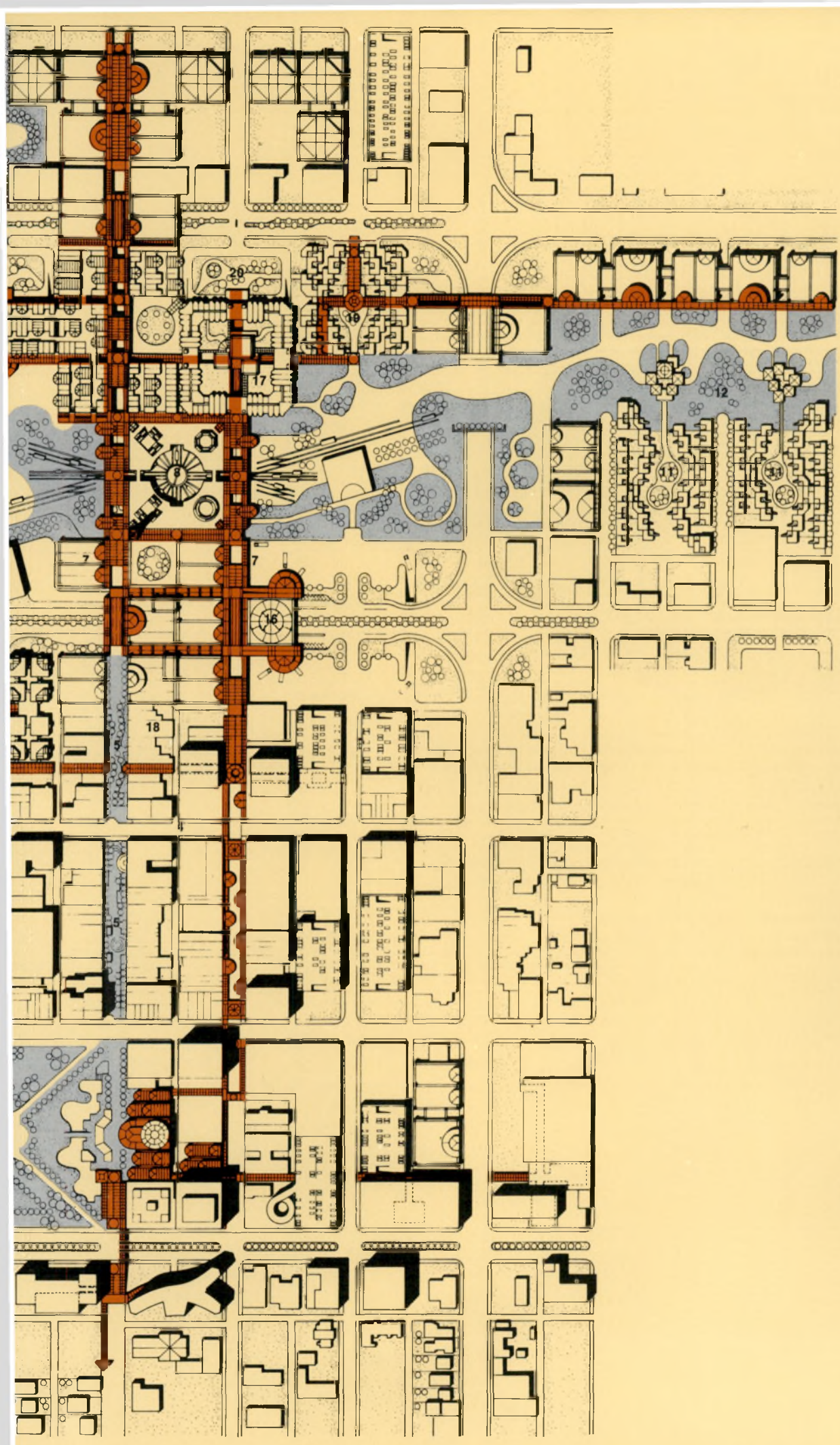
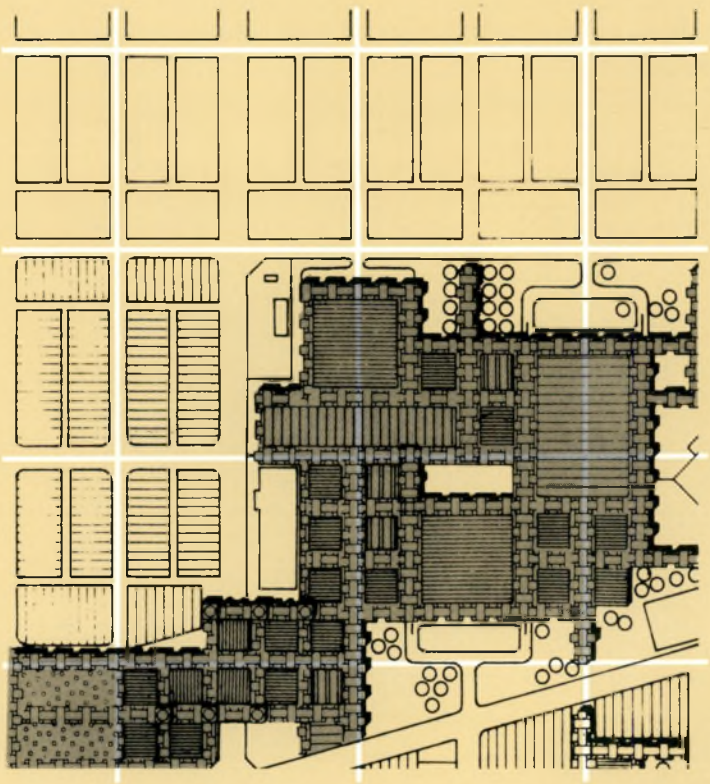


La proposition d'aménagement

1 Hôtel de ville
2 Axe civique
3 Parc Victoria
4 Centre commercial
5 Mail découvert
6 Centre administratif
7 Mail abrité
8 Forum polyvalent
9 Pelouses publiques
10 Mail des fêtes
11 Nouveau secteur résidentiel
12 Parc de quartier
13 Placette
14 Palais des congrès
15 Musée de plein air
16 Gare routière
17 Hôtels
18 Négoces
19 Habitations
20 Stationnement souterrain

Voles piétonnes abritées
Espaces verts



Exemple de raccordement des trames existantes et proposées.
Le système urbain de Regina est fondé sur une régularité des parcelles, avec une emprise de réseau de circulation plus ou moins large. L'îlot de base s'associe de 2 façons qui déterminent 2 largeurs entre parcelles.

Pour sa réalisation, qui s'étendra évidemment sur de très nombreuses années, le programme est divisé en opérations modulaires et autonomes qui peuvent être prises en charge par des promoteurs privés ou publics différents, le maillage de l'espace assurant la cohérence de l'ensemble.

Certains éléments sont invariables: ceux qui sont nécessaires au fonctionnement du programme ou de la ville (comme la gare routière), à la continuité morphologique urbaine, ou à celle des flux d'activités. Ce sont les opérations de base de notre projet. D'autres, au contraire, sont substituables: le programme proposé peut être remplacé par un autre de dimension équivalente, selon l'évolution des besoins de la population.

Ainsi prend forme et se précise le processus de programmation que nous avions proposé dès le début: grâce à un outil géométrique de communication sociale et de cohérence urbaine, les besoins progressivement révélés peuvent s'exprimer sans nuire à la qualité urbaine de l'ensemble du nouveau quartier. □

Right to Access:

Transportation Planning for Everyone

by Fredric A. Dahms

The number of potential jobs, personal contacts and entertainment possibilities available within a half hour drive of one's home is often used as a measure of a city's desirability as a place to live.

And, indeed, for the average citizen, the modern Canadian city provides a rich and desirable environment with a wider choice of jobs, residences, services, personal contacts and opportunities than has been available at any time in history.

Unfortunately, we are not all "average citizens" nor do we all drive cars. For an increasingly larger minority, our cities provide less mobility and fewer opportunities than were available in cities even twenty years ago. Transportation and land use planning have tended to make the city a worse – rather than a better – environment for many of the poor, the elderly and the handicapped.

The story of how this has happened is an interesting one indeed.

Transportation and Urban Development

As the raison d'être of most cities is to facilitate exchange and specialization, urbanization is unlikely to occur at all without transportation.

Improvements in transport have enabled raw materials, labour and power to be assembled and utilized at convenient locations, many of which have become cities. Within cities, areal specialization of functions in the Central Business District (CBD), industrial areas, shopping centres and recreational centres have all been made possible by improved transport. And the modern city, with its suburban industrial parks, peripheral shopping centres, low residential densities and sometimes declining CBD faithfully reflects changes in transport technology over the last two hundred years.

Three major eras in urban development, each related to the adoption of a major transport innovation, may be identified: the Pedestrian City; the Passenger Transport City; and the Motor City. The innovations described below generally came earliest to the largest, most technologically advanced cities and areas; spread more slowly to smaller cities and were adopted later in regions with less advanced technology.

Each major technological advance in transport increased the advantages of the upper and middle classes in our cities, but unfortunately often adversely affected the poor, elderly and handicapped.

The Pedestrian City

Before 1850, the spatial extent of all but the largest cities was a function of the distance that one could walk in an hour. In these cities, those who could walk had potential access to all major places of employment, recreation and shopping.

Typically, managers, proprietors, bankers and professionals lived in spacious houses on the most desirable residential sites near their places of employment while labourers and factory workers tended to cluster close to factories and workshops on the land that was unsuitable for industrial uses and unwanted by the wealthy. Generally, residential densities were high and there was very little physical distance between the homes of the rich and the poor.

With the exception of a few wealthy professionals and businessmen who commuted from country estates by horse and carriage, everyone walked to work in these compact, heterogeneous settlements. Few were denied access to any urban facility because they could not afford the cost of transportation. And, fortunately, the form and extent of the city were such that one *could* walk to most places of work, shopping or recreation.

The Passenger Transport City
Innovations in transport technology greatly altered the shape and size of the city after 1850. They also made access to urban opportunities and facilities increasingly a function of income and the availability of public transport services.

The horse bus, horse tram, commuter railway and electric tram or streetcar had two major effects on the city. First, they enabled those who could afford the fares and better housing to move away from the crowded, noisy city centre to live in the newly created suburbs along the tram or rail lines. Second, because the routes of these transport facilities converged on the old CBD, they greatly increased the value of the inner city land by making it accessible from greater distances than was possible by foot.

The ultimate result was the increasing concentration of employment opportunities at and near the focus of the radial transport routes. Demand for expensive central land, combined with innovations in building technology and the advent of electricity around the turn of the century encouraged the building of multi-storey offices and factories near the old CBD.

This concentration and the rapid growth of cities caused conditions in the central low-income residential areas to deteriorate. Shoddy multi-storey tenements often replaced single-family dwellings. Gracious mansions and solid houses, abandoned by the upper and middle classes who had moved to the suburbs, were often converted into apartments. In some instances, residential areas were taken over by commercial or industrial development. Increasingly, a worker's residential location in the city became a function of his ability to afford accommodation and transport from his home to his workplace.

By the late 1920's, a large proportion of the wealthy had moved to the spacious suburbs along the tram or rail lines, leaving those who could not afford the fares to live in crowded and unpleasant conditions near the city centre. Because residential densities were so high, however, many workers could still walk to their places of employment. Numerous job opportunities were available within a relatively small area near the CBD which was still the focus of efficient streetcar or commuter rail systems.

In larger cities, crosstown tram routes enabled tradesmen to travel about the city for as little as 10 cents per day. Convenience stores thrived within walking distances of most residential areas. Such stores were often located near the streetcar stop, giving rise to commercial ribbons along most streetcar lines.

In spite of the fact that the post-1850 city was considerably larger than the pre-1850 city, few persons were denied access to its facilities by a lack of transport or by distances too great to traverse on foot. By contemporary standards, public passenger transport was excellent and provided at a price that many could afford.

The Motor City
The introduction of the motor vehicle as a reliable mode of urban transport in the 1920's and its general adoption after World War II led to major changes in the form and extent of our urban areas.

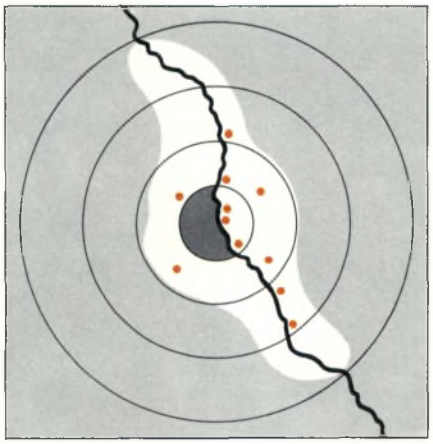
The extensive use of the car for commuting has encouraged urban sprawl, low residential densities and resulted in the decline of the corner store in favour of the suburban shopping centre. Increased worker mobility and the use of the truck for movement of goods have facilitated the dispersion of many industries to the suburbs. As will be demonstrated below, however, not everyone benefitted from these changes.

In many Canadian cities, it is absolutely essential to own a car in order to obtain employment, go shopping or visit one's friends. Even in our largest cities (which possess reasonably efficient public transport systems), it is almost impossible to travel from one suburb to another, or from the CBD to scattered peripheral locations without a car.

In spite of the fact that the areal extent of our cities is now many times greater than that of the Passenger Transport City, public transport systems continue to radiate from the original CBD. Furthermore, transport schedules are designed to carry peak passenger volumes from suburb to CBD in the morning, and from CBD to suburb in the late afternoon. Crosstown routes and weekend or off-peak services are generally woefully inadequate.

Unfortunately, many employment opportunities for unskilled workers are now in the suburbs, while the greatest residential concentrations of these people remain near the CBD. Public transport does little to provide them with access to work or suburban shopping.

High Income
Middle Income
Low Income
Employment Centre
Rail or Tram Line
Expressway



The Pedestrian City Pre 1850

- Compact.
- High Densities.
- Heterogeneous.
- Most jobs near CBD.
- Walking is major transport mode.
- High income areas near CBD - best sites.

There is no doubt that the number of opportunities available within one hour's *driving* time in our major cities is greater than it has been at any other period in history. On the other hand, the Motor City offers those without cars *fewer* opportunities for employment and shopping than did the Pedestrian or Passenger Transport Cities.

Those without cars are denied many potential opportunities in the modern Motor City; but this need not be so. If we are to plan our cities for *everyone*, we must plan to accommodate those who do not use cars. Before we can formulate and implement such plans, however, society must recognize the problems of the Motor City, and then accept social goals to guide its physical planning.

Spatial Injustice

A number of writers have adopted the term "spatial injustice" to refer to the adverse effects of recent urban growth upon many city dwellers. It is interesting to note that most of the research on this problem has been done in American cities, and that few Canadians appear interested in spatial injustice in the city. Transport planners have been more concerned with the issue than most, although their concern seldom seems to have been translated into action.

The author suggests that the findings cited here should be of major concern to all physical and social planners, as well as to our political leaders. In the final analysis, if we are to strive for a just society in Canada, new planning priorities and political action should result from an increasing awareness of these problems. Let us learn from the American experience rather than imitating their mistakes.

Access, Income and Mode of Travel

There is no longer any doubt that access to employment opportunities and other urban facilities is a major problem in most large Canadian and American cities. In major Canadian cities in 1972, only 65.3 per cent of the families and unattached individuals surveyed in a study of family expenditure owned cars (Table 1). Among those with incomes under $4,000 per year, only 15.2 per cent owned cars. Table 1 sets out comparable percentages for other income classes.

It is clear from Table 1 that in major Canadian centres the 28.6 per cent who earn less than $7,000 per year are heavily dependent on public transport facilities. Fewer than half this group own cars or trucks, and the percentage of ownership decreases with incomes. When all income groups are considered, fully 34 per cent of the inhabitants of our large cities are without cars.

The data indicate that accessibility to opportunities in our cities varies directly with income and that income normally determines the mode of transportation to be used. Unfortunately, the number of potential opportunities available by the various transportation modes are far from equal.

According to Hans Blumenfeld, the use of the car has increased the area that can be reached within one-half hour in urban centres by about 36 times that formerly reached by walking. Since the overall density of Canadian urban areas is only one-fifth to one-sixth that prevailing a century ago, however, urban facilities, jobs and amenities are now much farther apart and the accessible opportunities for car drivers have increased only about five times.

If the number of accessible urban opportunities has increased about five times for car drivers, it has *decreased* about five times for walkers who can reach few potential opportunities in one half hour by foot. The number of opportunities available to users of public transport facilities varies with the service provided and its cost.

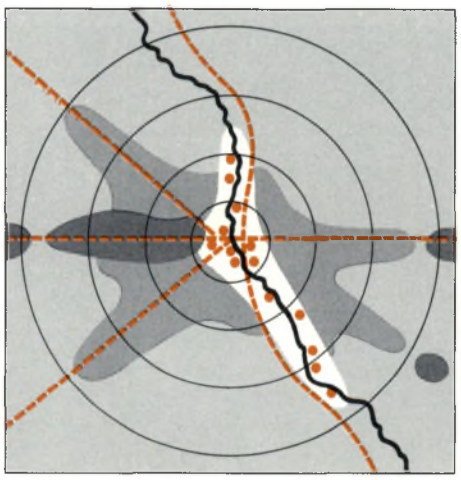
Table 1

Percentage of Families and Unattached Individuals Owning Cars in Eight Major Canadian Cities* 1972, by Income Class

Income Class	% of Population in Income Class	% with Income Below Class	Maxima Per Cent Owning a Car
All Classes	100.0	—	65.3
Under $4,000	13.3	13.3	15.2
$4,000-$4,999	5.4	18.7	28.4
$5,000-$5,999	4.7	23.4	36.7
$6,000-$6,999	5.2	28.6	49.8
$7,000-$7,999	6.9	35.5	50.0
$8,000-$8,999	6.0	41.5	65.9
$9,000-$9,999	6.4	47.9	75.7
$10,000-$11,999	13.6	61.5	83.4
$12,000-$14,999	16.1	77.6	88.1
$15,000-$19,999	13.5	91.1	87.0
$20,000-$24,999	5.3	96.4	90.5
$25,000 and over	3.6	100.0	86.2

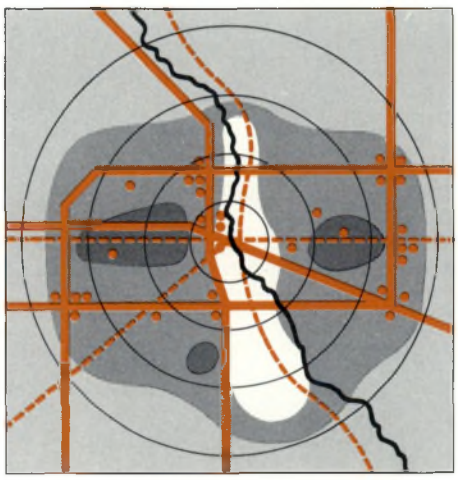
*Data are from the following Census Metropolitan Areas: St. John's, Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton, Vancouver, Whitehorse, Yellowknife. The population sampled represented 40.7 per cent of the households of private dwellings in Canada in 1972.

Source: Statistics Canada, *Urban Family Expenditure*, 1972, Ottawa, 1975, Table 24, p. 144 and Table 26, p. 148.



The Passenger Transport City 1850's - 1940's

- Growth along rail and streetcar lines.
- CBD - offices and stores compete with industry for space.
- Most employment still in CBD.
- Rail and streetcar (later bus) main transport mode.
- High income areas in commuter suburbs and along some streetcar lines.
- New middle class suburbs along most streetcar lines.



The Motor City 1940's - Present

- Low densities.
- Mainly homogeneous middle class city.
- Greatest proportion of jobs in suburbs.
- Access to jobs depends on car.
- Car main mode of transport.
- Most low income people near CBD.
- High income areas mainly in highly accessible suburbs.

Public Archives Canada

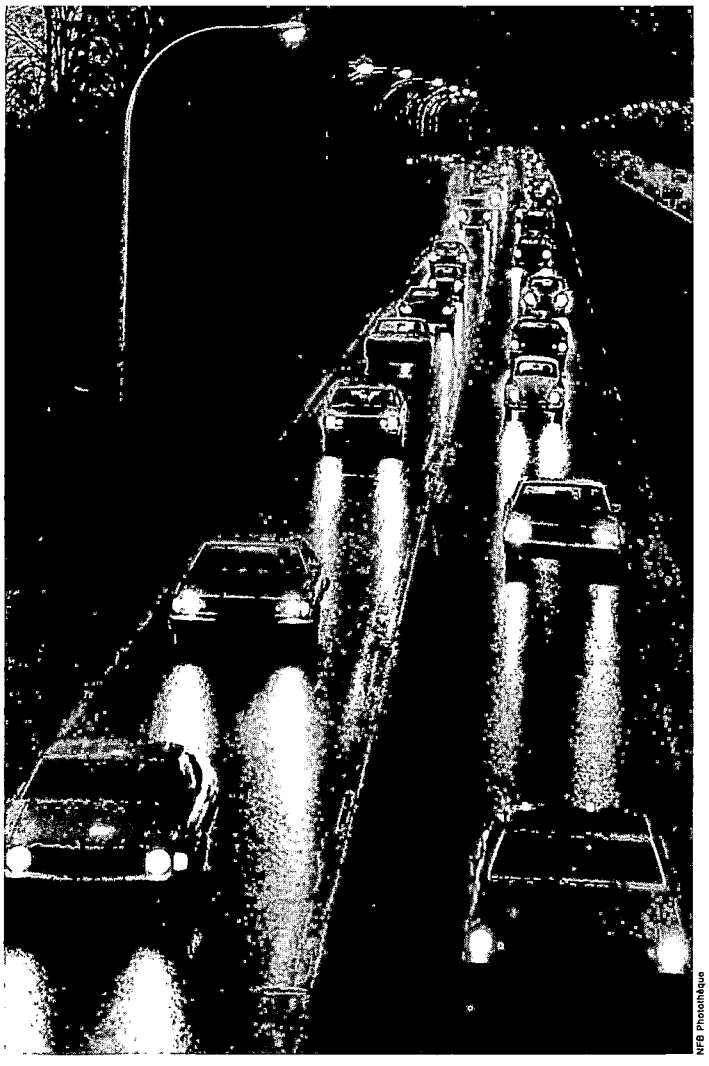
"The introduction of the motor vehicle as a reliable mode of urban transport in the 1920s and its general adoption after World War II led to major changes in the form and extent of our urban areas."

Public Archives Canada

Public Archives Canada

△
"In larger (post-1850) cities, crosstown tram routes enabled tradesmen to travel about the city for as little as 10 cents per day."

◁ "Before 1850, ... those who could walk had potential access to all major places of employment, recreation and shopping."



NFB Photothèque

"In many (modern) Canadian cities, it is absolutely essential to own a car in order to obtain employment, go shopping or visit one's friends."

Several specific examples will illustrate the disparity between urban opportunities available to those with and without cars. In a study of Washington, Myers found that 571,000 jobs were accessible in one hour travel time from a low-income area by bus, whereas 865,000 were accessible in an hour from the same area by car.

Alan M. Voorhees discovered that almost all suitable jobs were accessible from a low-income area of Nashville within 30 minutes by car. In contrast, only one-quarter of these jobs were accessible in the same time by public transport. Even more significantly, over one-quarter were totally inaccessible by public transport. In the same area, there were 10 hospitals accessible by car in 20 minutes for every one accessible in the same time by bus. Twenty-eight parks were accessible in 20 minutes by car, whereas none could be reached by bus.

In effect, many of our cities contain two distinct societies – one with cars and one without. Those people without cars comprise a large and important proportion of our urban population and are often denied the potential advantages of the city. Simply because urban growth assumes the availability of private cars, everything becomes increasingly difficult to reach by other means.

The Reverse Commuter

The problem of the "reverse commuter" in the city is now well documented. Numerous studies have shown conclusively that a large proportion of the jobs requiring unskilled workers are now located in the suburbs, while many of the poor and unskilled who once filled these jobs still live near the CBD. Many of these persons do not own cars, and public transport to scattered suburban industries is often very poor or non-existent.

It is a major problem for the inner-city dweller without a car even to seek employment, much less keep a steady shift-work job far from his home. The public transport that is available serves people commuting to the CBD from the suburbs, but is virtually useless for those who must travel from central residences to scattered suburban jobs.

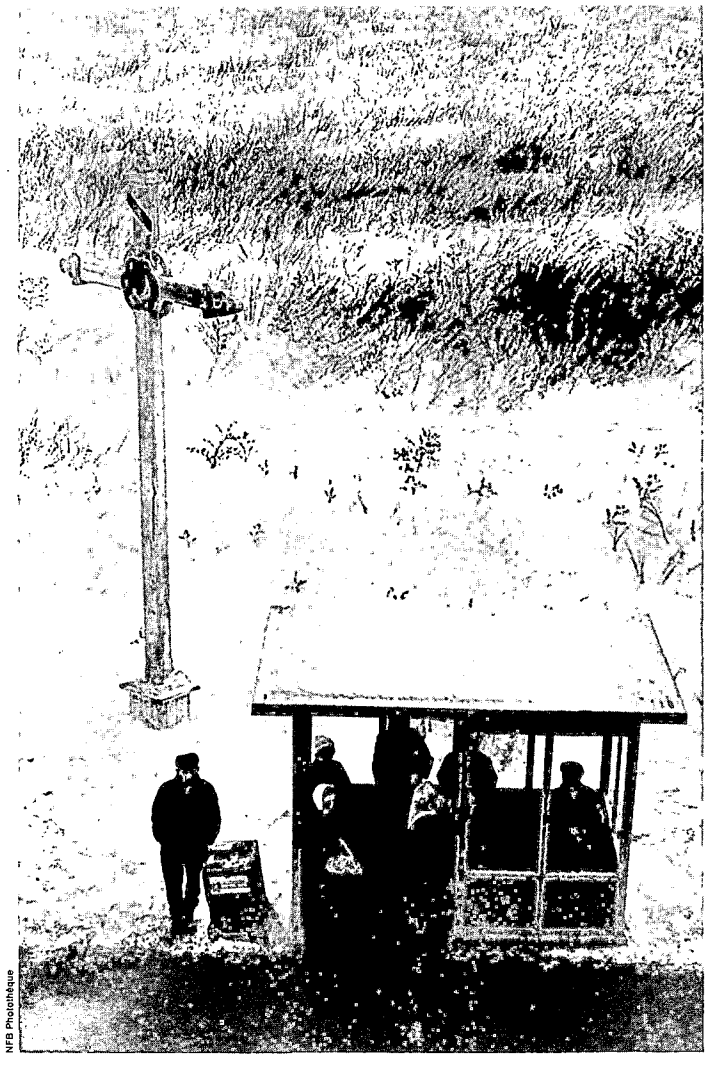
The Elderly

Stephen Golant has documented the problem of the elderly in the Motor City with special reference to Toronto. American studies are also available for a number of cities, and in general, their conclusions are similar.

When a person is too old or infirm to drive, he must rely upon walking, public transport or rides from friends to gain access to entertainment, shopping, the doctor or other facilities. The result is that, in many instances, the elderly in the Motor City are practically immobilized.

They often cannot cope with the complex schedules, the transfers and the crowds associated with public transport. Friends are not always available to drive them; taxis are costly and sometimes unreliable. A simple trip to the doctor or to church may become a major undertaking. Shopping is often a distinct hardship, and recreational travel is generally out of the question.

As defined here, the elderly are all persons 60 years of age and older. They



NFB Photothèque

◁ "In effect, many of our cities contain two distinct societies — one with cars and one without."

"When all income groups are considered, fully 34 per cent of the inhabitants of our large cities are without cars."
▽

NFB Photothèque

NFB Photothèque

"When a person is too old or infirm to drive, he must rely upon walking, public transport or rides from friends.... Shopping is often a distinct hardship, and recreational travel is generally out of the question."

NFB Photothèque

"Not only are they (the handicapped) often incapable of driving cars, but they frequently cannot negotiate the steps and tolerate the lurches of buses or subways (if any happen to be conveniently available)."

comprise an important and rapidly growing segment of our population. The number of elderly in Canada increased by almost 28 per cent between 1961 and 1971, while their proportion of the total population increased from 10.9 per cent to 11.7 per cent in the same period. Over 75 per cent of the elderly live in urban centres, and almost half of these reside in cities over 100,000 in population. For them, problems of access are often acute because many of them do not own or drive cars.

The Handicapped

It is difficult to overemphasize the problems of the handicapped in the Motor City. Not only are they often incapable of driving cars, but they frequently cannot negotiate the steps and tolerate the lurches of buses or subways (if any happen to be conveniently available). Persons with physical and/or mental disabilities may have difficulty with stairs; cannot easily be accommodated by trains, buses or subways if they are in wheelchairs; and may be unable to walk. For some, their disabilities mean almost total immobility.

It is difficult to estimate the number of handicapped persons denied opportunities because of immobility. A recent American study complains that there is a paucity of information about handicapped persons in urban areas. The best available estimates indicate that in the U.S. standard metropolitan statistical areas there is a total population of over six million persons with handicaps resulting in mobility limitations. A comparable estimate for Canadian census metropolitan areas is in the order of 600,000 – a sizeable group of potentially immobile citizens indeed.

Transport Planning in the Motor City

Unfortunately, years of planning almost exclusively for those with cars have exacerbated the problem of providing an acceptable level of transport to all residents of the Motor City. The major feature of most recent urban policy has been to accommodate the automobile. New roads to the suburbs have opened land for housing farther from the city centre. This has subsidized the housing costs of those who own cars by enabling them to acquire land which is less expensive than that near the city core.

With suburbanization and decreasing residential densities based on widespread use of the car, the demand for public transport has declined, usually raising its costs and/or decreasing the service provided.

For many years, the policies of our governments have had the effect of subsidizing the middle-class car owner at the expense of the poor. Massive road building programs, combined with urban renewal, have improved the accessibility of affluent suburban car owners to their central jobs, but have reduced the accessibility of those without cars. Furthermore, urban renewal projects (often associated with road improvement) have frequently reduced the stock of low-cost dwelling units.

Taxpayers cry out in alarm if a municipal bus service runs at a deficit; but few seem to notice the construction, maintenance, policing, and land costs (not to mention social costs) associated with the building of a roadway. A major reassessment of such planning policies in the just society is long overdue.

To plan for equal access, we must first determine *actual* transport needs and desires. Regrettably, standard transport planning techniques have generally failed to do this.

Most standard Origin-Destination Surveys detect only the needs and desires of those who already travel by car or public transport. Home interviews which ask people to list the origins, destinations, modes of travel and purposes of their trips do not reveal the transport needs and desires of those who make no trips.

Contemporary transport planning is a self-perpetuating system. It usually just adds land use and population projections to existing travel patterns. It then attempts to project traffic generation into the future and optimize the projected flows over a network of roads. It ignores almost totally the transport needs of those who do not now utilize transport facilities.

Such "planning" serves only to worsen the plight of the poor, elderly and disabled. It certainly does not equalize opportunities or increase choice for those now denied choice by a lack of appropriate transportation in today's Motor City.

Planning for Equality

If we accept equality of access and opportunity as an important goal in the Motor City, we must devise methods of determining the transport needs of those not served adequately by existing transport systems.

Our Origin-Destination Surveys must be designed to detect *latent* demand for transport rather than merely to reflect and project existing travel patterns. This will not be easy. It is very difficult, indeed, to determine how much use might be made of a service that has previously been unavailable to an individual or group.

Merely plotting the location of the poor in our cities and the location of suitable jobs for them would provide one rough indication of latent transport demand. In-depth interviews could be designed for those who do not own cars, and incorporated into all our standard Origin-Destination Surveys.

Access to manpower or unemployment files would enable investigators to plot the residential addresses of the unemployed and determine their skills and potential for employment. The same agencies could also supply the location of employment opportunities by type. No doubt there would be resistance to divulging such information to planners; but its potential usefulness is immense, and its confidentiality could be protected, as has been the case in American studies.

Plotting of public transport routes and schedules, the location of the unemployed and the location of appropriate available jobs would certainly indicate whether a potential demand for public transport facilities existed. Interviews with a sample of the unemployed (possibly at Manpower or Unemployment Insurance Commission offices) could indicate whether an actual demand for public transport did exist.

Those dealing with welfare cases, information referral, children's aid, the elderly and the handicapped on a regular basis could certainly identify the major transport needs of their client groups. Information from these sources should be available to our transport planners. To date, research on latent transport demand in Canadian cities has been neglected, and is now urgently required.

Conclusion

Canada lags behind the United States, both in recognizing that we have an urban access problem and in doing something about it. This is no doubt a result of the fact that we generally have somewhat better public transport facilities in our major cities than in comparable American cities. Nevertheless, we do have an accessibility problem for a significant proportion of our urban citizens.

Transport planners, physical planners and social planners should work together in Canada to ensure that physical planning reflects the social goals of our society. It is no longer satisfactory for transport planning to reflect only the needs of the car-driving majority in our cities.

We have planned long enough for the majority, and it is well served. We must now plan for *all* our citizens and must recognize the legitimate needs of the poor, the elderly and the handicapped. Their right of access to essential public services, employment, leisure opportunities and shopping has been too long ignored.

In our headlong rush to "improve" transportation in our cities, we have destroyed some of the access advantages formerly found in both the Pedestrian City and the Passenger Transport City. Our affluent society has the resources to make the potential opportunities and advantages of the city available to all its inhabitants. And now is the time to start. □

Acknowledgement: A number of the themes developed in this article evolved from discussions with Gale Bauman, Executive Director, Kitchener-Waterloo Social Planning Council.

Urbanisme et pétrole

par Jean Michéa

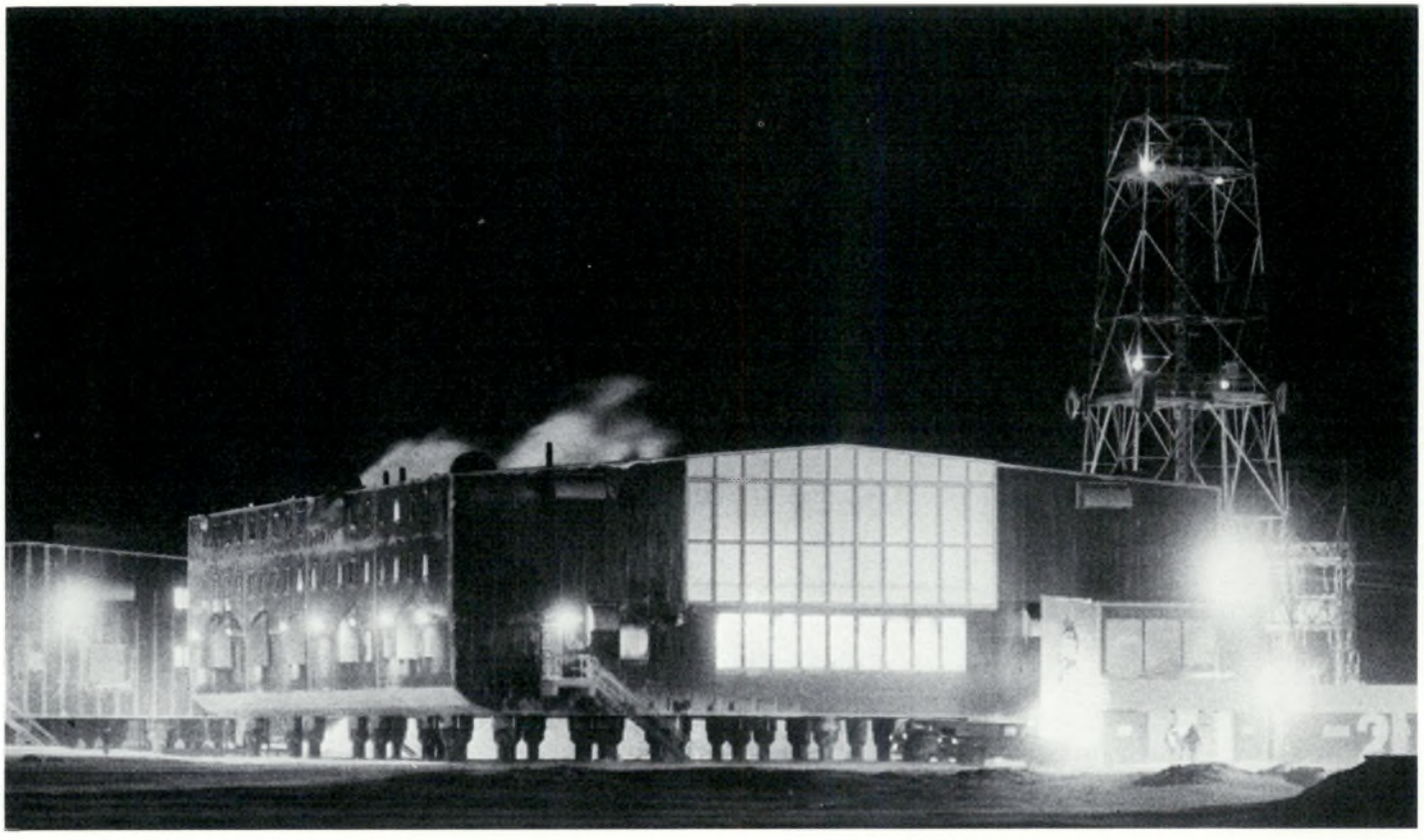
La nature semble se plaire à enfouir son pétrole dans les lieux les plus inhospitaliers: ici le désert, là l'océan, ailleurs la neige et la glace, de sorte que l'exploitation d'un gisement pose presque toujours un délicat problème à l'habitation des hommes.

Prudhoe Bay, située sur la côte septentrionale de l'Alaska, au-delà du 70e parallèle, n'échappe pas à cette nécessité. Ici, les conditions géoclimatiques sont extrêmes: le sol gelé, le froid et les tempêtes, la nuit polaire, l'éloignement de tout centre urbain, tout se ligue pour interdire aux prospecteurs et aux techniciens une présence permanente, un travail efficace, un délassement dans le confort. Or en dépit de ces obstacles, l'habitat que l'on a réussi à implanter sur la zone pétrolifère est remarquable et pour un anthropologue, plus encore que pour un architecte, la visite de ce lieu perdu dans les brumes de l'arctique est pleine d'enseignements.

Pour des raisons qui importent peu ici, l'ensemble de la zone est divisé entre deux groupes de contractants. Bon nombre d'installations techniques sont communes, de même, bien entendu, que le réseau routier de plus de 130 km, qui seul permet aux véhicules de circuler convenablement. Par contre, les bâtiments résidentiels sont nettement séparés et d'aspect extérieur assez différent. Celui de l'est, qui abrite 210 personnes mais peut être agrandi pour en contenir 600, ressemble à ce que les familiers des postes arctiques connaissent: un corps central, contenant sur 2 niveaux un quartier d'habitation et les services communs, sur lequel s'articulent, de part et d'autre, des ailes de 12 x 39 m où sont les dortoirs et les installations sanitaires correspondantes. C'est assez confortable, fonctionnel, mais c'est classique.

Par contre, l'habitation du personnel du second pétrolier situé à l'ouest de l'exploitation est beaucoup plus originale. Pourtant, de loin, elle apparaît comme un simple parallélépipède de 2800 m², aux parois de métal, silencieux et froid. Sur cette terre nue, qui serait un marécage si tout n'y était pas gelé, où seuls quelques « pingo » rompent la monotonie du relief, une telle construction s'allie bien au décor. De plus près cependant, on distingue, de part et d'autre du bâtiment central, des prolongements: d'un côté les garages aux multiples portes automatiques, de l'autre l'atelier et l'entrepôt. Le tout est surmonté d'une tour métallique, chargée d'antennes et d'appareillages mystérieux. De près enfin, on découvre autre chose: une partie des murs et du toit n'est pas en métal gris mais fait d'une matière transparente au travers de laquelle on aperçoit un jardin. Oui, un vrai jardin, long de 60 m avec des arbres, ou du moins des arbustes, des légumes d'Alaska et la végétation de la toundra. C'est sur ce jardin central, artificiellement illuminé en hiver, que donnent les chambres intérieures, situées aux deux étages supérieurs: il fait partie de l'aire consacrée aux loisirs, avec la piscine, qui est aussi une réserve d'eau contre le feu, le sauna, les installations de culture physique, le cinéma, etc. Et tout de suite, on comprend, à cause de ce jardin, que le bâtiment n'est pas tourné vers l'extérieur mais refermé sur lui-même; il est clos et il se suffit à lui seul. Au rez-de-chaussée, on y trouve les services communs: cuisines et restaurant, buanderie, dispensaire, etc.; par des cheminements clos on accède à l'entrepôt, aux ateliers de réparation, aux

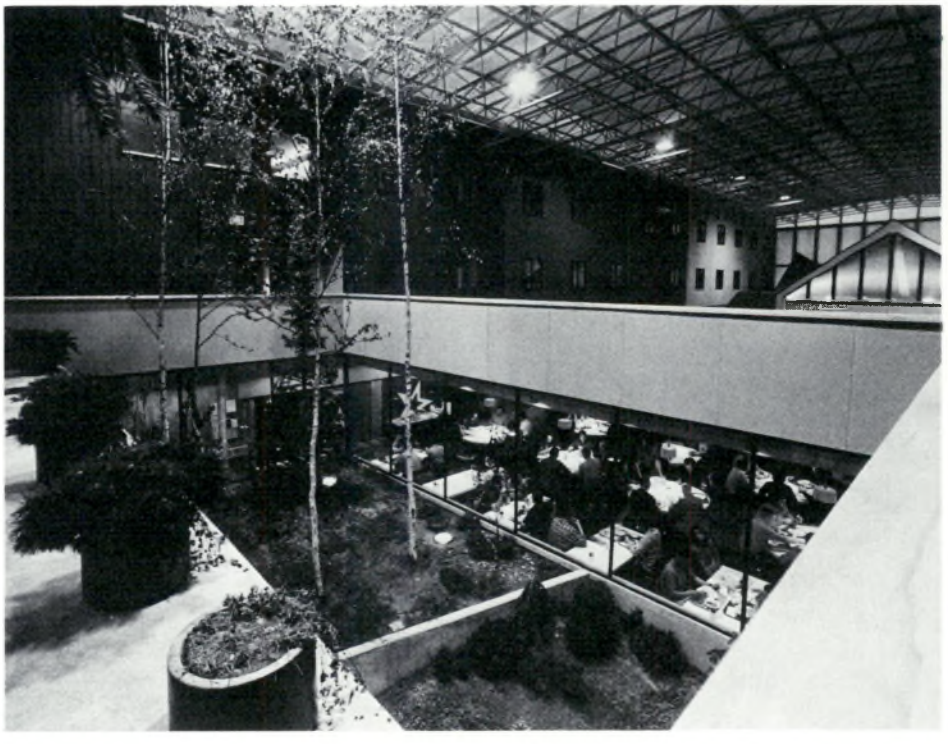
Complexe sur pilotis des pétroliers de l'Alaska



BP Alaska

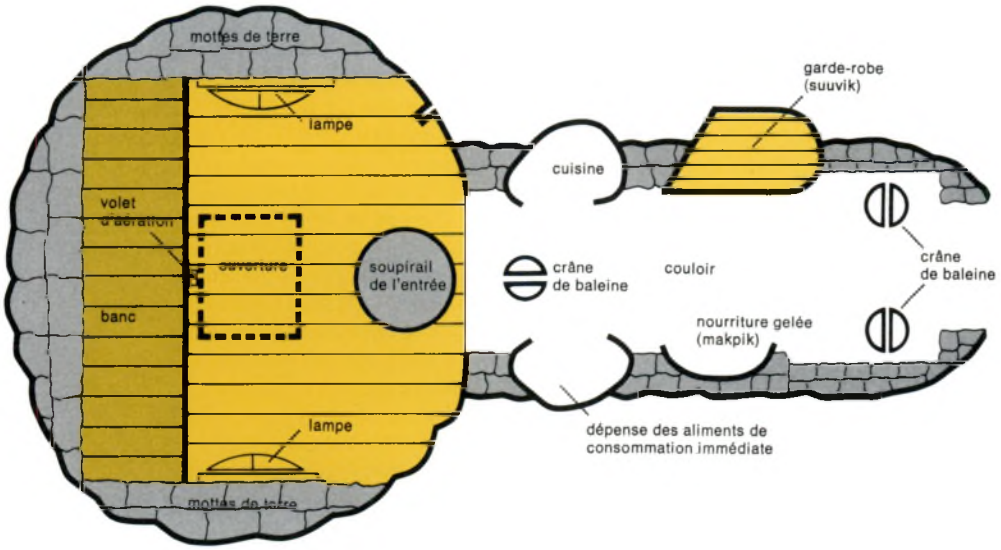
citernes d'eau potable – quatre millions de litres réchauffés et brassés – ou de mazout – deux millions environ de litres pour alimenter les moteurs, le conditionnement de l'air, les deux alternateurs de secours de 500 kW chacun, au centre opérationnel enfin, ces différents laboratoires d'où quelques hommes à peine peuvent par télécommande régler la marche des puits de pétrole, donner des ordres aux équipes extérieures, entrer en communication avec le monde lointain ou surveiller la centrale électrique, entièrement automatique, qui produit pour l'ensemble du gisement, l'électricité que consomme normalement une ville de 100,000 habitants.

On a dit de ce complexe d'habitation qu'il était un réfrigérateur, mais un réfrigérateur à l'envers: le froid est dehors,

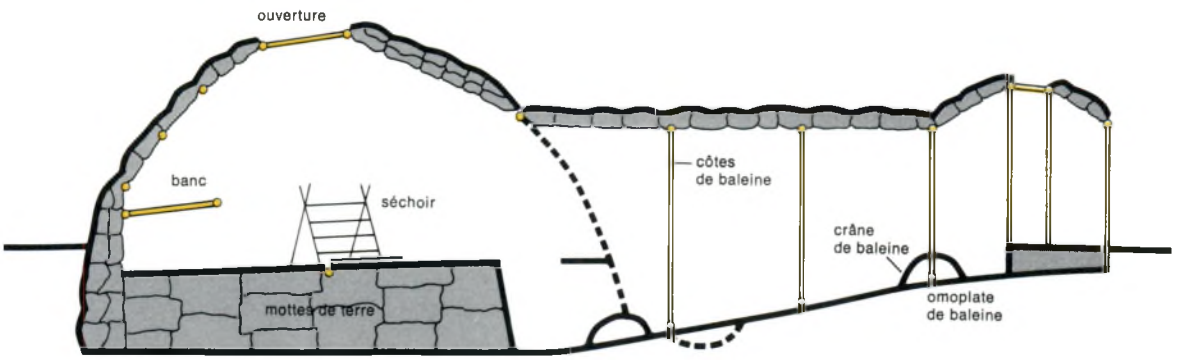


BP Alaska

Jardin intérieur et restaurant faisant partie du bâtiment résidentiel.



Habitation du pêcheur esquimau de l'Alaska. Dessin tiré d'une étude de Robert F. Spencer intitulée "The North Alaskan Eskimo: A Study in Ecology and Society" et publiée dans le bulletin 171 du Smithsonian Institution Bureau of American Ethnology. Smithsonian Institution Press, Washington, 1959.



Maison commune du Groenland. Illustration tirée de *Tales and Traditions of the Eskimo*, Henry Rink, Londres, 1875.

la chaleur et le confort sont à l'intérieur et de fait, les issues sont des portes de glacière aux joints électriquement chauffés pour éviter le grippage. On a dit aussi qu'il ressemblait à un laboratoire spatial. Prédéterminé sur plans, fabriqué en morceaux à Houston, essayé en soufflerie par maquette interposée, transporté via Seattle et le détroit de Bering, assemblé enfin comme un jeu de construction, c'est en effet le type même d'un habitat-laboratoire, où l'intégration des fonctions: travail, repos, détente, est portée à un point tel qu'on a obtenu ici un micro-milieu presque absolu et presque totalement indépendant du macro-milieu qui l'entoure et qu'il a pour mission de dominer et d'exploiter.

Or, cela est possible parce que ceux qui ont conçu ce bâtiment ont réussi non seulement à lui donner le caractère d'un milieu techniquement efficace mais aussi à en faire le cadre harmonieux d'une certaine vie sociale.

En effet, la population de *Prudhoe Bay* présente des caractères bien particuliers. Elle est peu nombreuse d'abord, de l'ordre du millier pour l'ensemble des installations; lorsque les forages seront terminés, la société pétrolière dont il est ici question n'aura alors à loger que 140 personnes environ. Par ailleurs, c'est une population exclusivement masculine, jeune et, techniquement parlant, hautement qualifiée. Il y a bien quelques femmes, secrétaires ou autres, mais elles ne sont pas logées au complexe. Il y a donc, d'une part, absence de vie familiale, ce qui rend inutile la recherche d'une certaine intimité, d'autre part, structure de hiérarchie et roulement dans les horaires de travail, ce qui facilite l'utilisation d'installations communes ou même semi-privées, comme par exemple les chambres à coucher qui comportent, accolées à un bloc sanitaire, deux cellules individuelles. On songe alors à une autre comparaison, celle que l'on peut faire avec un monastère. *Prudhoe Bay* est une ville de moines-ouvriers, tour à tour penchés sur leurs pupitres aux lampes clignotantes ou à l'écoute du monde, conversant avec une famille lointaine par le radiotéléphone ou assistant au championnat de base ball sur l'écran de leur téléviseur. Vie communautaire et, en même temps ou alternativement, vie intime et solitaire, face à ses pensées ou face aux cadrans, dans le ronronnement feutré d'une veille de laboratoire.

Par-dessus tout peut-être, ce qui marque la vie sociale des personnels de *Prudhoe Bay*, c'est l'extrême humanisation de son cadre. Humanisation qui atteint non seulement l'espace mais aussi le temps. L'univers que constitue l'habitat des pétroliers, qu'ils soient de l'une ou l'autre société est, par rapport à ce qui l'entoure, totalement artificiel. La construction a été importée, au sens fort du terme et, mieux encore, imposée à la terre arctique en dépit des contraintes du sol gelé, par exemple, grâce à des fondations sur pilotis articulés. La relation des hommes à leur habitat se fait non avec l'horizon proche des collines et des lacs glacés mais avec les horizons lointains qu'on atteint par l'avion ou par la radio. A *Prudhoe Bay*, la nourriture est excellente mais le cuisinier ne va jamais pêcher la truite ou le poisson blanc, il ne va jamais chasser le lièvre ou la perdrix des neiges; il contemple, sans y toucher, les oies qui nichent au bord des marécages ou les caribous qui défilent entre les amas de matériel. Tout cela est interdit, hors d'atteinte, comme si les hommes et la terre qu'ils regardent à travers les doubles vitres d'isolation appartenaient à deux mondes différents et irréductibles l'un à l'autre. Et que dire du soin que l'on apporte au nettoyage! Entre les rivières Colville à l'ouest et la rivière Canning à l'est, sur près de 250 kilomètres, des équipes ramassent systématiquement en été tous les déchets abandonnés pendant les travaux d'hiver; il y a aussi des milliers de barils laissés dans la toundra par les équipes de prospecteurs, de la ferraille, des ordures, des caisses, des cartons. Pour que ce ramassage lui-même n'égratigne pas le fragile tapis végétal, on a mis au point un véhicule spécial, le camion Rolligon dont les roues sont remplacées par des pneumatiques à basse pression en forme de cylindres, de sorte que la pesée exercée sur le sol est si faible que cet énorme engin peut passer sur le corps d'un homme sans l'écraser. Quant aux eaux usées, on les épure avant de les rejeter dans la nature. Comment, une nouvelle fois, ne pas penser aux astronautes, qui eux aussi prennent mille précautions pour ne pas souiller la lune ou l'espace sidéral.

D'autre part, le temps est tout aussi artificiel parce que les repères entre lesquels on voit la durée s'écouler doivent peu à la nature ambiante, à ce que l'on nomme communément le rythme des saisons. Dans l'arctique, ce rythme est particulier; il entraîne, par exemple, quatre mois sans obscurité et, à la latitude de *Prudhoe Bay*, 56 jours sans soleil. L'énergie électrique change tout cela, de même que le roulement des équipes de travail et les impératifs de l'efficacité technique font de ce qu'on appelle jour et de ce qu'on appelle nuit des concepts sans signification. *Prudhoe Bay* vit sans trêve; on n'y connaît ni le dimanche, ni le silence de la nuit et comme dans un monastère, l'horaire est découpé en tranches idéales; le travail et le repos de chacun sont prédéterminés; ils s'inscrivent dans un temps hautement socialisé qui n'a à composer ni avec la blancheur de l'aurore ni avec la migration des caribous; c'est un temps étranger à la terre arctique, un temps rythmé par la cadence des opérations techniques, par celle des messages qu'apporte de très loin, la radio.

Or si ces installations suscitent la comparaison avec le laboratoire spatial ou le sous-marin atomique, il ne fait guère songer à un autre habitat, pourtant tout aussi retranché du milieu environnant, celui que les Esquimaux ont longtemps édifié sur les mêmes lieux. Toutefois, cette autre comparaison n'est pas sans intérêt.

La maison indigène était faite de bois flotté, d'os de baleines et de terre. On y accédait par un couloir en pente qui empêchait l'air glacé de pénétrer jusqu'à la chambre centrale et jouait ainsi le rôle d'un sas. A l'entrée, une omoplate de baleine détournait le vent et évitait la formation d'une congère. Tout cela a été réalisé en mieux dans le complexe qui nous occupe parce que les moyens mis en œuvre sont infiniment plus sophistiqués; mais les principes d'action restent les mêmes et le résultat obtenu aussi. D'autre part, cette habitation était polyvalente; elle servait de chambre à coucher et d'atelier, de cuisine et d'entrepôt. Une série de niches, sur les côtés du couloir, ajoutaient à la multiplicité des fonctions

et au confort puisque le « suuvik », qui servait normalement de garde-robe, était, à l'occasion de la visite d'un ami, une chambre où son hôte lui laissait entraîner sa femme. Tout ceci se retrouve au Groenland, où la maison communautaire nous apparaît dans toute la diversité de ses fonctions ou encore en Alaska et au Canada, dans cette autre construction que les Esquimaux appelaient ici un « karigi » et là un « krangmat » ou un «kadgeviksak ». Il s'agit d'un grand abri dont le rôle principal est d'être une maison communautaire, tour à tour ou en même temps atelier où les chasseurs préparent leurs armes, sanctuaire où ils font retraite pour entrer en rapport avec les esprits qui gouvernent les animaux, théâtre où des danseurs et chanteurs masqués divertissent le groupe et jouent des psycho-drames, salle de banquet propice aux ripailles les plus gloutonnes.

D'autres similitudes viennent encore à l'esprit. Un Esquimau qui pêche en plein hiver construit parfois un petit abri à l'intérieur duquel il lui est plus facile de maintenir en permanence une ouverture dans la glace; de même, bien qu'à une autre échelle, les pétroliers ont imaginé de forer leurs puits à partir d'une structure close qui contient le derrick et ses installations annexes; par forage directionnel au-delà de 630 mètres, on peut ainsi obtenir six ou huit puits sans bouger de place et le déplacement sur un autre site ne dure guère plus d'une dizaine de jours.

Ainsi, en dépit d'une énorme différence dans les moyens techniques, on retrouve aujourd'hui ce que l'indigène avait inventé il y a longtemps. Cette différence n'est-elle donc que d'échelle? L'anthropologue serait porté à répondre négativement. En effet, ce qui sépare véritablement l'Esquimau d'hier du pétrolier d'aujourd'hui, c'est l'esprit dans lequel ils organisent respectivement leur habitat ou, si l'on préfère, c'est leur urbanisme différent. A partir de la maison indigène, le monde ne s'ordonne pas comme à partir de celle de l'étranger; dans un cas, malgré la protection du mur de terre et de neige, la nature reste présente et l'homme ne cesse d'y participer. Il en entend les bruits, il en perçoit la vie, il tressaille au crissement d'un pas, au coup sourd de la glace qui bouge, à l'appel d'une bête. Il sonde un silence du vent, car tout est porteur de message dans cet univers opérationnel et vécu bien avant d'être pensé. Par contraste, les techniciens du pétrole n'ont pas épousé l'arctique. Ils y sont venus malgré lui, malgré les obstacles qu'il a mis à leur installation et, pour défendre une certaine conception de l'écologie, des règlements édictés ailleurs interdisent de se nourrir sur place et même de jeter une boîte de conserve. De la sorte, leur urbanisme s'ordonne en fonction non du jeu dramatique de l'homme aux prises avec une terre par laquelle il doit coûte que coûte survivre, mais d'un autre jeu qui se joue sur une autre planète, lointaine et démesurée, avec des règles bien différentes. Cela apparaît mieux encore lorsqu'on s'attache au symbolisme des objets, puisque symbole, suivant son étymologie, signifie lien. La nourriture en conserve, les revues de la bibliothèque ou les pinups épinglées sur les murs des chambres, les films du cinéma ou de la télévision, le bain quotidien « indispensable », le leitmotiv de la pollution, c'est à travers tout cela que *Prudhoe Bay* se révèle étrangère aux lieux où elle s'est installée et reliée à un autre monde. Il y a là un langage car l'organisation de l'habitat n'est pas seulement une commodité technique, c'est aussi et surtout l'expression symbolique d'un comportement humain. Par cette réussite qu'est l'habitat des pétroliers se révèle toute une vision de l'homme d'aujourd'hui pour la terre qui l'abrite et le nourrit encore, mais au prix de quel désengagement! □

BP Alaska

Prudhoe Bay. Centre opérationnel d'une société d'exploitation pétrolière.

E. Morrell

BOOKS

Main Street: Windsor to Quebec City
by Maurice Yeates, Macmillan of Canada, commissioned by the Ministry of State for Urban Affairs, 1975, 416 pp.

Main Street looks at urban phenomena on a spatial scale seldom attempted in this country. The area studied stretches some 700 miles from Windsor to Quebec City along a corridor 100 to 150 miles wide. It contains 55% of the nation's population and 72% of its manufacturing employment.

Because of this unique perspective, *Main Street* is a valuable book with considerable information of interest both to the specialist and the concerned layman. The coverage is comprehensive, including physical form, population, land use, housing, economic structure, transportation and communications, government structure and finance.

In each subject area the author analyzes conditions and trends in the Windsor-Quebec City corridor (which he names the axis), and compares the axis to the rest of Canada and sometimes to urban systems in other countries. One chapter projects a comprehensive image of the axis in the year 2001.

The text is liberally spiced with hard-hitting conclusions and recommendations.

Yeates succeeds in demonstrating that the axis is an independent functional entity within Canada. Further, this entity increasingly dominates the country in economic activity, population growth and (though he does not mention it) probably, political power.

I am puzzled, however, by the style of *Main Street*. It should have been possible to create a book which deals with the subject matter at a reasonably sophisticated level without, on the one hand, lengthy expositions of complex methodological problems or, on the other, overly simplistic attempts at urban theory.

For example, the book begins with a theory of urban dominance which, though it may be valid, is much too brief and lacking in detail to satisfy the specialist. This is followed by an explanation of how the area was defined and how census subdivisions were classified which can only frustrate the general reader. This pattern is repeated throughout the book, though the style becomes somewhat more consistent in later chapters.

Yeates' work provides ample food for thought for researchers and policymakers.

For example, when compared with other elongated urban megalopolises (such as Boston to Washington, Tokyo to Osaka,

LU POUR VOUS

Une expérience d'urbanisme démocratique
Christopher Alexander, Editions du Seuil, Paris, 1976, 172 pages

« Christopher Alexander » et « Université de l'Orégon » évoquent pour nous une aventure peu ordinaire dans le domaine de l'aménagement urbain.

Un architecte connu est appelé à préparer un schéma directeur pour maîtriser et canaliser la croissance de l'Université et recréer l'environnement équilibré du tout début.

S'appuyant sur ses recherches passées: « Principes d'un bâtir intemporel », il se récuse et propose de travailler à l'édification du campus avec les usagers. Après avoir organisé les groupes, il demeure le simple catalyseur qui va permettre aux futurs utilisateurs formés en équipes de définir, à partir de leurs besoins, la forme même et le fonctionnement des espaces intérieurs et extérieurs qui leur apparaissent nécessaires.

Et pas à pas, au jour le jour, ils avancent ensemble dans cette recherche du milieu à créer, du bâtiment à intégrer, de la place à ordonner dans le contexte.

Christopher Alexander est un partisan convaincu de cette croissance dirigée, contenue par le milieu d'où elle émane. Le plan d'ensemble est pour lui une conception douteuse de l'aménagement. Il progresse lentement avec ses équipes de néo-aménagistes ayant pour objectif le fractionnement de la croissance et la priorité donnée à des éléments modestes composant l'ensemble.

Les principes mis de l'avant par Alexander ne peuvent s'appliquer en cas de croissance rapide. Il faut que les tissus urbains grandissent lentement, que chaque composante insérée ait le temps de se conditionner au milieu, de s'adapter afin d'éviter le phénomène de rejet.

Il est évident que la forme d'intervention prônée par l'auteur permet davantage de choisir et de concevoir les éléments de petite dimension et d'importance moyenne que les grands éléments d'un ensemble complexe et vaste.

Un aspect de la théorie d'Alexander nous laisse songeur. L'architecte admet que « les membres du Comité peuvent se sentir personnellement concernés par la pose d'une clôture, sur laquelle ils auront un point de vue intelligent et fondé » alors que pour un projet d'envergure, « ils ne parviennent pas à se sentir concernés: d'où le caractère abstrait de la discussion ». Ces limites se sentent dans la

London to Manchester), the Windsor to Quebec corridor has about 1/6th the population per linear mile. Thus, we should not expect problems related to high density on the same scale as in these other countries. As Yeates concludes, there should be considerably more opportunity in Canada for avoiding severe problems of congestion, pollution and overcrowding.

The evidence is overwhelming that the western third of the axis (Toronto and southern Ontario) will continue to grow considerably faster than the eastern third (Quebec). The result is that, by the year 2001, "the Canadian urban system will be structured around Toronto as the primary node, with Montreal serving the regional needs of Quebec and part of the Maritimes, and Vancouver serving much of the West." This has striking implications for regional balance and the sharing of power between the two major cultural groups.

The author presents a number of compelling reasons for an increasing concentration of economic activity in the most urbanized part of the country, the axis. However, evidence more recent than that used in *Main Street* suggests an important change in trends in this decade.

The Maritime and Prairie provinces are growing in population much faster than had been predicted in the early 70's, and Ontario is growing at a slower rate.

This may be a temporary aberration. But, if it continues, and there are some who believe it will, the result will be a future distribution of population much closer to a balanced national urban pattern than we could have hoped a few years ago. The question is why this countertrend has developed in the face of such compelling reasons for an increasing concentration of population and economic activity in the axis. If we knew why, we could perhaps capitalize on it to build a more desirable future.

Yeates also manages to effectively burst a few conceptual balloons. For example, the image of galloping urban development sprawling over huge amounts of farmland is shown to be oversimplified. Most of the land area lost to farming in the axis has been the result of farm abandonment, afforestation and transfer to recreational uses.

The indirect effects of urban growth (e.g., land speculation), which are much harder to trace, may be more important in this regard than actual physical sprawl. The problem is thus put into perspective, and the limita-

forme d'intervention qui nous est décrite, aussi attendons-nous de juger l'arbre à ses fruits.

Un voyage en Orégon s'imposera pour appréhender cet urbanisme démocratique et ses possibilités d'application aussi bien à un campus universitaire qu'à un centre-ville ou à un secteur institutionnel. Alors seulement, nous évaluerons la validité de sa conclusion: « Nous ne pouvons recommander l'adoption d'un schéma directeur conventionnel ni à l'Université d'Orégon, ni à aucune autre collectivité. »

Quant à nous, nous connaissons déjà des réalisations convaincantes et d'une authentique qualité issues d'un schéma directeur telles que l'Université de Berlin, de Candilis ou Tapiola en Finlande, ville nouvelle où l'habitant est heureux de vivre.

Ceci suffit à apaiser certaines craintes nées de la lecture d'« Une expérience d'urbanisme démocratique ».

Georges Robert

Les Paradisiennes
Brigitte Gros
Editions Robert Laffont
Paris, 1973

« Etre maire, c'est être à un poste d'observation privilégié et redoutable ». Brigitte Gros est en effet maire de Meulan, une ville d'environ 6,000 habitants, située dans les Yvelines à une quarantaine de kilomètres de Paris, sur la route reliant Beauvais à Orléans. Son arrivée à la mairie de Meulan en 1965, la place devant une situation critique. Logements vétustes — 70% des logements de Meulan dataient d'avant la guerre de 1914 — impossibilité de loger de nouveaux habitants, départ de la population jeune. D'où la nécessité pour la municipalité d'entreprendre la construction de logements sociaux sur son territoire. Le récit de Brigitte Gros décrit une lutte quotidienne contre les lenteurs et les rivalités internes de la bureaucratie. Critique sévère de la politique française dans le domaine de l'habitation, elle met aussi l'accent sur les conséquences humaines de ce manque de planification.

Le livre est divisé en deux thèmes: *Naissance d'une cité* et *Les femmes dans la cité*.

Dans une première partie, l'auteur décrit les obstacles financiers et administratifs à une urbanisation équilibrée. Le projet comprenait la construction immédiate de 800 logements sociaux (HLM) et la construction future de 700 pavillons individuels. La réalisation fut précédée d'une longue période de négociations avec un système bureaucratique compliqué et anonyme, défenseur et porte-parole de la centralisation administrative. Le maire de Meulan découvre l'impossibilité d'un aménagement complet de l'environnement et de la mise en place d'un équipement qui ferait de la cité du Paradis une entité vivante dès l'arrivée des premiers occupants. Les services essentiels ne sont que partiellement assurés. Le téléphone est inexistant, les services promis ne sont pas encore autorisés: pharmacie, garderies, crèche, centre culturel, etc. La rigidité des règlements administratifs est dénon-

tions of the usual measures suggested to control the loss of farmland become evident.

The housing specialist may be somewhat disappointed by *Main Street*. Though housing is studied from a spatial perspective somewhat different from the usual, we learn little about housing that is really new. But, the reader with broader interests will find much that is new in other chapters and will be able to relate these to the housing question.

Main Street is probably too complex for those with only a passing interest in the subject, but I commend it to the specialist and the well-read layman. The specialist can overlook the somewhat simplified presentation of theory, and the general reader can simply skip the more difficult methodological passages.

They will both be rewarded with a wealth of new information and a number of insights into the functioning of the Canadian urban system.

Reg McLemore

Behavioral Research Methods in Environmental Design
edited by William Michelson, Dowden, Hutchison & Ross, Inc, 1975, 307 pp.

The growing concentration of Canadians in urban areas has been accompanied by mounting concerns about the capacity of our cities to meet the social, psychological and health needs of their residents. One solution to the problem lies in increased collaboration between social scientists and the design professions.

Both groups have, in principle, recognized the need for such collaboration; however, they have approached each other warily. Social scientists harbour the sneaking suspicion that the voiced receptivity of designers to their ideas is only a matter of lip service. Designers argue that they accept the concepts of the social scientists and, tongue-in-cheek, state that they are only waiting to be shown practical methods for applying their theories to a concrete design problem.

This book, edited by William Michelson, constitutes one attempt to move the two professions from a position of ritualistic parrying to the envisioned mutually beneficial collaboration.

Accordingly, the objectives of the monograph are clearly stated:

- to indicate to the environmental designer the usefulness and characteristics of selected social science techniques for some of his ongoing problems; and
- to indicate to the social scientist a rich lode of context, ready and waiting to serve as a literal new world of application for the techniques at his command.

The book consists of six original papers written especially for this monograph. Each chapter attempts to systematically describe a specific social science research methodology; discuss its relevance to environmental design; review its utility; and present an application of the technique to a concrete design problem.

The chapter headings indicate the wide scope of the methods presented: "Strategic Decisions in Research Design;" "The Semantic Differential and Other Paper-and-Pencil Tests;" "Trade-Off Games;" "Survey Research;" "The Time Budget;" "Photographic Recordings of Environmental Behavior;" and "Observing Environmental Behavior: The Behavior Setting."

With respect to the social scientist audience, the book's objectives are admirably met. One gets the feeling, however, that the design professions

cée par l'auteur qui se voit refuser l'autorisation de tenter des solutions temporaires. Auparavant très mal logés, les premiers habitants de la cité du Paradis sont tout d'abord émerveillés. Petit à petit, un malaise profond apparaît chez les femmes qui doivent demeurer à la maison. « Pour une femme, le Paradis c'est moins agréable que pour un homme. » Brigitte Gros ne peut accepter cette situation. « Les sacrifices faits sur les équipements collectifs ne font qu'accroître les inégalités dans nos banlieues mal desservies. Et c'est sur les femmes que l'injustice pèse le plus lourd... »

L'analyse presque clinique faite par l'auteur du comportement des Paradisiennes inquiète et déconcerte à la fois. Sur 800 femmes, seules 36 ont trouvé des emplois dans la région. Lorsque l'on sait qu'en France, une femme sur deux travaille à l'extérieur de son foyer, l'on voit que la cité est coupée de la réalité sociale. Cependant l'on demeure déconcerté par l'engourdissement presque immédiat de la population féminine. Les femmes atteintes de la maladie des cités-dortoirs « n'arrivent plus à embrayer avec la vie ». Elles se connaissent à peine, ne sortent pas, refusent les activités mises à leur disposition, renoncent au travail à la maison, à des cours de recyclage. Seules semblent les passionner, les activités ménagères les plus banales.

Les résultats matériels sont positifs. Des familles habitant autrefois des taudis et des logements vétustes connaissent une amélioration de leurs conditions de vie dans des logements confortables et bien conçus. Pour une majorité, faute d'équipement collectif, le prix de ce modeste confort est bien lourd: isolement, chômage, neurasthénie, appauvrissement de la vie familiale, néant de la vie culturelle. Brigitte Gros demeure pessimiste bien que déterminée à poursuivre la lutte pour une réforme politique et administrative. Les banlieues vont-elles tendre à devenir des ghettos sous-équipés et mal desservis dont les femmes seront les premières victimes? Les véritables causes du problème sont très profondes. Pour Brigitte Gros, changer la politique et changer l'urbanisme sont une seule et même chose.

Christiane Bacave

Le cadre d'une recherche écologique interdisciplinaire
Pierre Dansereau du groupe EZAIM, Presses de l'Université de Montréal, Montréal, 1976, 343 pages

Le groupe EZAIM formé sous la direction de Pierre Dansereau, écologiste, a entrepris l'analyse de l'immense territoire acquis par le gouvernement canadien dans le cadre de l'aménagement de l'aéroport international Mirabel. L'étude porte, d'une part, sur une appréciation systématique des éléments du problème tant biophysiques que socio-culturels, et d'autre part, sur l'impact que représente l'implantation d'un aéroport d'envergure dans cette région.

would have been happier if the starting point of each of the chapters was a specific design problem rather than a social science methodology.

Although the focus of the book is (and rightly so) research methodology, the philosophy which underlies it deserves at least equal attention. Michelson's orientation is clearly the welfare of the individual not the aesthetics of the structure. As he indicates "the genesis of a (design) solution is not in its logic or in how well it photographs, but rather in whether it works or not. And there is no way to know the latter except to examine it explicitly."

At present there is an extraordinary lack of such assessment. The situation, Michelson believes, is comparable to one where airplane manufacturers build planes based on the performance of other people's unevaluated airplanes. In such a situation, it is only by luck that the needs and desires of people are met.

The effective collaboration of social scientists and environmental designers is one of several needed thrusts toward a solution to the urban crisis. However, a realistic assessment of the crisis suggests that even if optimal collaboration is attained, the impact may be much lower than expected. The problems are basically economic and demographic in nature, and these are not amenable to a design solution. At best, design can only soften their impact.

Alan Gilmore

The Landscape of Man
by Geoffrey and Susan Jellicoe, Thames and Hudson, distributed in Canada by Oxford University Press, 1975, 383 pp.

This is Susan and Geoffrey Jellicoe's magnum opus, both in terms of content and physical size.

The work is a fascinating excursion through the cultural history of selected civilizations as manifested in the development of landscapes. The largest and final section of the book, devoted to twentieth century landscapes with particular reference to post-1945 planning, builds on the ethos and landscape descriptions of the opening chapters.

The Jellicoes' thesis is that all design is influenced by the physical, metaphysical and socio-economic environment of the place and time where it occurs, and the practical application of the design philosophy subsequently affects these environments. In terms of landscape, the natural environment and

Cependant, comme le précise Pierre Dansereau, elle fut menée dans le sens d'une recherche scientifique et non d'une expertise d'aménagement, devenant ainsi un outil de compréhension du milieu plutôt qu'un élément dans un processus décisionnel. Cette approche, clairement établie par EZAIM, n'enlève aucune des qualités de cet ouvrage lequel présente à l'ensemble des aménagistes, un exposé écologique global, en ce sens qu'il déborde largement le cadre classique du milieu biophysique.

Ce premier volume d'une série précise la méthodologie de la recherche et la mise en oeuvre d'une interdisciplinarité étroite des équipes de travail. Le bilan de cette opération est contenu dans le chapitre V où une autocritique bien étayée permet d'évaluer les écueils propres aux études d'une telle envergure. Un chapitre complet, consacré à l'évaluation de l'impact de l'aménagement, se borne à un constat et à des mises en garde concernant tout le territoire, étant donné le rôle mineur joué par EZAIM dans la planification de Mirabel.

Ce texte collectif revêt une grande valeur de démonstration, car le cheminement de la réflexion écologique y est systématiquement exprimé ainsi que le détail des facteurs et critères d'analyse utilisés dans les dossiers sectoriels.

Cependant, la prise en considération de telles études, dans le processus d'aménagement, demeure problématique tant et aussi longtemps que les objectifs sociaux ne supplanteront pas les objectifs politiques aux commandes du développement de notre territoire.

Marie-Claude Robert

ancient cultures inspired contemporary designers to manipulate the landscape which, in turn, provides an altered physical environment to influence designers in later cultures.

In order to understand modern landscapes and current design trends, therefore, it is necessary to trace the development and interactions of major world cultures and their influence on landscape traditions. This the authors do well, choosing 26 "cultures" to illustrate their ideas. Each study is prefaced by a scenario of the physical and human environment concerned, followed by more detailed descriptions of individual landscapes and explanations of the design themes of the era.

Despite the size of the book (9" x 11", 383 pages, 702 illustrations), its vast scope from the prehistoric to modern times necessitates all too brief comments on the major intellectual developments of the world. By using photographs and diagrams to convey the bulk of their message, the authors have cut written commentary to a minimum. The philosophy of ancient Greece, for instance, is dealt with in 18 lines while the cultural, historical and environmental background of the twentieth century world covers four pages.

Considering the emphasis placed on the illustrations, their quality is poor. The diagrams and maps are not always clear, and their legends are difficult to follow. The photographs are excellent, but the black and white reproduction leaves much to be desired for they often appear flat and uninspiring.

The theme of historical influence which flows through this book is well illustrated by visual examples and has a great impact on the reader. A lightness of content created by the lack of written evidence and argument could be made up through further study of the books listed in the selected bibliography.

It is an entertaining work of reference rather than a textbook, and, as such, it is a book that I shall enjoy dipping into many times.

Janet Kiff

The Exploding Cities
edited by Peter Wilsher and Rosemary Righter, Quadrangle, New York, 1975, 238 pp.

When Harvey Lithwick published *Urban Canada: Problems and Prospects* in 1970, his shopping list of problems became the centre of discussion, especially by those polemicists who forecasted great catastrophies if urban growth continued unchecked in Canada.

Yet, despite the evidence of urban poverty, escalating housing costs, transportation congestion, environmental decay, social friction and fiscal squeeze, Lithwick felt that the idea of impending disaster in Canadian cities was not based on adequate evidence and that the urban crisis was "more an article of faith than a well understood phenomenon."

Instead, Lithwick suggested that an urban elite had influenced our prevailing attitudes about the urban environment. For them, "the problem of the city is the increasing threat to the environment in which they typically work and play." While this was not the main problem for the majority of urban dwellers, urban policies, nevertheless, were "oriented to improving the urban environment rather than improving the lot of urban residents."

The real urban problem in Canada, according to Lithwick, was the distributional problem of goods and services.

In another time and place, the observations of those gathered at Oxford, England in 1974 as part of a conference on The Exploding Cities (now recorded in book form) were much the same as Lithwick's.

The conference, co-sponsored by The Sunday Times and the United Nation's Fund for Population Activities, coincided with the UN's World Population Year Program and served as a forum for dialogue between city-watchers, planners, politicians, consultants and radical critics.

Principes directeurs pour la prévention des catastrophes: Aménagement préalable des établissements humains; Mesures en matière de construction visant à limiter les effets des catastrophes; Gestion des établissements humains
l'UDRO, Nations Unies, Genève, 1976.

Peut-on protéger totalement une ville contre les cataclysmes ou seulement la rendre résistante à ceux-ci? Un groupe d'experts travaillant pour le compte du Bureau du coordonnateur des Nations Unies pour les secours en cas de catastrophes répondent à cette question en nous livrant les trois premiers fascicules d'une série consacrée à ce sujet. Ce guide auquel le Pr Ciborowski, principal artisan de la reconstruction de Varsovie, a bien voulu prêter son concours, nous signale que c'est dans les domaines de la construction et de l'aménagement du territoire que la plupart des mesures de prévention doivent être prises. Le chapitre qui a trait aux inondations et aux moyens de les prévenir devrait retenir tout particulièrement notre attention. La Terre n'a pas fini de faire des frasques. Séismes, glissements de terrains, tsunamis, continueront encore longtemps d'agiter sa surface. Face à ses écarts de conduite, nous n'avons pas d'autre choix que de nous mettre à l'abri. *T. A.*

La grand'rue de Québec à Windsor
Maurice Yeates, MacMillan, Toronto, 1975, 470 p.

Nous avons notre embryon de mégalopole bien à nous. Il s'étire autour d'un axe dont le début se situe aux limites du lac Erié et dont le point terminal a été fixé, pour les besoins de l'étude, aux marches septentrionales de la capitale québécoise. Plus de la moitié des Canadiens y vivent. Pour le Canada, cette grand'rue est aussi la place du marché où s'affaire, sans pour autant se croiser, une population composée pour les deux tiers d'anglophones, l'autre tiers étant constitué de Canadiens français.

C'est cette réalité spatiale toute particulière que décrit le livre de Maurice Yeates, l'un des plus fascinants ouvrages qui aient été publiés, ces dernières années, en matière de géographie urbaine. Fascinant à la manière d'une immense radiographie sur laquelle apparaissent tous les « organes vitaux »: utilisation du sol, emploi, logement, migrations, structures économiques, etc.

Plutôt que de souscrire au postulat présenté dans cette étude qui veut que l'axe Windsor-Québec « renforce le caractère biculturel de notre nation et de la Confédération même », on songe, au fil des pages, à une dualité, sinon à un dualisme, et les comparaisons naissent de soi sur la santé des parties constituantes de cet axe: le Québec et l'Ontario. *T. A.*

The book, bearing the same name as the conference, is a kind of high-journalism account of that debate. Coauthored by two journalists, the book deliberately avoids the 'official proceedings' format by utilizing a schematic approach of first sketching the global background to urban growth and then examining both the cities of the affluent (upon which most of the myths and growth models of the developing cities are based) and, most importantly in the planetary context, the emerging "super-conurbations" of the Third World.

The basic premises reinforced throughout the book are that there are global implications to urban growth; that in addition to the explosive ingredients there are patterns which point to positive adaptation and change; and that the developing cities share many of the follies and assets of the developed cities. Yet, it is a dialogue tinted by crisis.

The crisis, as expressed by Lithwick, was raised at Oxford in the question – what is meant by "social justice in the urban condition?" Perhaps the phenomenon of the quiescence of the "urban mob" proliferating silently cannot continue to hold without "marked amelioration of urban conditions." The urgency for the "time-bomb" theorists lies in "integrating the poor into the development process" and turning the "urban cancer' 'into "a benign multiplying of cells."

Reversing the question asked by Barbara Ward in her Epilogue: "What in the urban experience of the developed world is relevant to developing countries?", we in the cities of the affluent should seek to integrate social services, narrow the income gap and adopt a vigorous planning strategy which distributes goods more equitably within the community. Developing cities, on the other hand, should examine critically the growth models of the developed cities and not repeat many of the disasters of London, Detroit, New York or Paris.

The authors provide evidence that the instincts towards self-help in housing programs, the importance of security of tenure and the need for wide-scale land control will begin to ease some of the "explosive ingredients" of the present urban condition. One lesson to be learned from self-help experiments in the Third World is that "people use resources and opportunities... when they have access to the necessary resources, and when they are free to act for themselves."

The "sites and services" approach to urban development now being utilized by the World Bank, for instance, while still experimental, suggests much promise, especially for housing the next billion city dwellers.

This book is not an indictment of urban planners. Rather, it is an urbane narrative, crammed with facts, coherently arranged to support both the general and specific observations about the problems and some of the prospects of the urban landscape. Its one weakness as an overview is its superficial examination of the two alternative societies: Russia and China.

Despite the gloom of *The Exploding Cities,* hope shines through: "cities are exploding, resources are under constraint. Either we have policy and generosity or we have disaster. The voices of reason, of realism and of conscience all urge us to choose that generosity shall prevail."

George Devine

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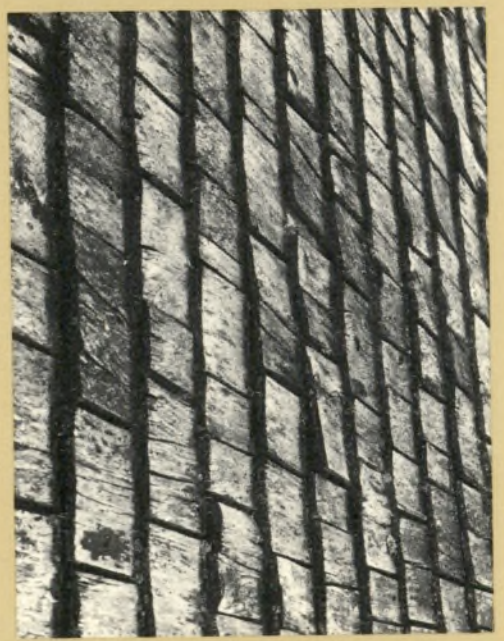

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