

HOUSING THE FAMILY IN 2001

The urban explosion: Housing the family for the future.

James A. Murray, FRAIC, MCIP, RCA.

Paper presented at the Fourth Canadian Conference on Children.

Ottawa, June 11-13, 1979



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PREFACE

The Children's Environments Advisory Service's Research and Development Program for the International Year of the Child has as its objective the advancement of good environmental planning and appropriate family housing design that supports the needs of children and youth (0-18).

An in-house CMHC IYC Committee, consisting of representatives of various CMHC divisions that impact on family housing and regional representatives, identified the gaps in the field. The committee selected projects of directed research to close these gaps and identify problem areas, to find solutions where possible, and to provide input to corporate policy and programs in the field of family housing. Five categories of investigation were selected to respond to these needs:

- Assembly/Production of Data

To assemble a data bank on the condition of children in relation to their residential environment and to relate this data to data being collected by other departments and agencies.

- Evaluation

To examine existing housing situation catering to the needs of families with children at home.

- Design and Awareness Material

To develop proposals for improving housing and the surrounding environment through design.

- Demonstration

To construct demonstration facilities for children, or to introduce improved facilities for children in on-going projects.

- Development of Policy Proposals

To review the condition of children in Canada, and present proposals to meet or correct emerging problems in relation to housing.

The CMHC IYC Committee will develop for CMHC Management a policy paper based on the facts, figures and findings of the Research and Development Program for IYC, with implications for future policy, programs and research affecting family housing.

The Children's Environments Advisory Service plans to use the focus on children made possible by the Year of the Child to plan new directions for our service. We intend to conduct further research, provide additional resources and sustain the momentum of our advocacy role within CMHC.

This project is one of 21 projects (titles on last page) in the Research and Development Program for the International Year of the Child. These reports are distributed by the Children's Environments Advisory Service and are available from the Canadian Housing Information Centre.



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ABSTRACT

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The report deals with changing trends in demography, family composition, and social structure and their impact on housing and neighborhood design. Specific examples were used to describe the impact on children and their families. The concern for the human condition and particularly the needs of children in the built environment must be translated into design. Specific factors of importance for the design of housing and communities for families in the future were identified.

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My given topic is "The Urban Explosion; Housing The Family For The Future". I would like to exercise the speaker's prerogative and ignore the topic, except for coming fairly close to the program's question, which said, and I quote from it, "How does the 1.5 child (Isn't that an impossible idea?) shape our communities and our housing?". And I have to ask, or is it the reverse? To paraphrase Winston Churchill's observation on buildings, should it be said we shape our communities and our housing and our communities and our housing shape us, and for our attention today, shape our children. As an architect and planner, I would like to categorically state "yes" to this question. Design does shape the human social condition - a sort of planning and architectural determinism you might call it. But frankly, I very much doubt it. This does not deny that it is useful to evaluate the built environment from a users' perspective in order, if nothing else, to disclose the dysfunction of buildings and communities as life moves through

them and in spite of them. But architectural determinism is, I fear, a very shaky philosophy. The idea that good neighbourhood design will produce neighbourliness, or that good housing design will produce familial togetherness is unlikely. I am backed up in my concerns about this by the eminent British sociologist, Maurice Broady, who put it very clearly when he said "Physical design has at most only a marginal effect on social activity. Design assists human activity; it does not create it". In spite of this, architects like me embrace the functional fallacy that users of our creations will react to them as we architect/planners react. I think again for that there is little evidence.

So I must begin my remarks, to this Fourth Canadian Conference on Children uncomfortably conscious that my focus of attention on the influence of the child on the physical plan and design of communities and the architectural design of housing is very secondary to the very real social problems and needs of all users. I found it a very difficult thing to separate out the problems of a design nature which are specifically related to a concern for children from those problems that are applicable to design for people generally, though they may be the same. In other words, if you say the obvious platitudes like "make the place safe," are you talking about child safety or adult safety or human safety? So I am, I fear, a little suspect in the

framework of my remarks because I was very anxious to avoid the rhetoric of good intentions, and to advance positive observations and proposals on the child as a design determinant. I listened with all trepidation at lunch to a bit of a conversation in which somebody spoke about being an effective grandparent as if it was something you had to learn. Well, I am an effective grandparent and I never learned it. So here I am going to pontificate to you now for about three-quarters of an hour if you will bear with me, on matters many of which come natural to architecture and to community planning. I will try to present a concern for the human condition in the built environment but in particular I am going to try to relate design concerns specifically to the needs of the child.

Let me start off with some observations on the nature of people and children as it affects design. You have just seen Humphrey Carver's thoughts in the film "The Family House" which served as the base of the book entitled "The Family Years". In my view, those first two pages are the most eloquent and the most important pages that I have found anywhere in English writing about this sensitive problem from a very humane person who thinks about it in a way that I wish I could match.

(Incidentally, I understand that I am second choice to Humphrey Carver for this address, and I am proud to be second choice to

him.) He sensitively reminded us in the film that you just saw, that every generation must re-invent the house and, I would add the larger community, because not surprisingly as families and households change in size and nature, and as all of us take up new possessions, new activities and new social roles, the house should change with it. The physical re-invention shapes and is shaped by the life cycle from infancy to old age. The re-invention, in my view, reflects shifting economic and social and technical aspects of what is undoubtedly an increasingly leisured, educated, permissive, affluent, disturbed, urbanized society and its matching children. Thus, our communities and our dwellings, like our children, become a sometimes embarrassing reflection of our individual and mutual social values, our personal preferences and prejudices, our technologies, our institutions, our governments, and I fear, our pocketbooks.

People's needs are not static. They differ according to habits, tastes, incomes, household size and nature, and the stage of lifecycle. Nor, are the emotional and physical needs of the children static. Therefore, we have to say that change is a basic human characteristic. But as an architect, I also realize that permanence is a built-form characteristic, as brick and mortar is tough stuff. The design solutions that we work out must be ever zealous for children, and for adults. For all we

must encourage flexibility. For example, there is little point in talking to you endlessly about designing a house so closely detailed to the young child or the child-rearing stage that it becomes unadaptable to the more mature family requirements. Therefore, I immediately bumped into trouble because I could not bring myself to say things specifically about design that did not bear a relation to that child of three; oh no, it's five; no it's seven, it's eight, it's twelve! We saw that transition in the film and we must all keep that in our mind as we think of this problem. But I think I could try this out on you. What present and emerging social and economic aspects of people and children most strongly relate to our focus of attention this afternoon -"Design and the Child"?

I have jotted down five or six points that might be of that kind of significance. We haven't time here to elaborate on them; they become almost a shopping list. But first of all, it is the growing number of single parent families, and secondly over a third of married women now work, (Happily the whole status and role of women in society is changing). I will couple those two things together so they are not obstructions to what we are talking about today. Obviously the growth of single parent families and the number of married working women means that the community design must think much more carefully on the provision of the day-care function for pre-school and elementary school

age children within the community. Here and there I can talk from actual experience on this. I know it is not very fascinating to look at the walls of suburbia for leadership but in Erin Mills, the new town that I have been working on now for over ten years, we have built occasionally little neighbourhood buildings and later handed them over to the people of the neighbourhood, in which the child care function comes to bear in a very informal way. Those buildings have been, I hope, thoughtfully located near the elementary school on the theory that the older brother or sister may toddle the smaller one off to these places because the school building itself cannot fulfill that function.

But there are a couple of ideas that have a direct bearing, if you will, on the child in the community. There is, of course, a declining birth rate and fewer children later in life. This means that there must be fundamental changes in the housing stock, away from the reality and the mythology of the single family house, at least the large single family house because it is about the last thing we are going to need in the face of these incredibly changing demographics and the nature of households and families. These more compact houses, and these more compact spaces, may mean, will mean, fundamental changes on the provision of child play spaces, child exercise spaces and child care spaces.

The fourth point with a socio-economic basis that might be worth our noting is that increasingly family activities move out of the home. (Humphrey's film showed this.) Things that used to happen in the home, right the way from employment, to education, to child care, to recreation, have moved out into the wider social and physical framework of the community and neighbourhood structure.

Fifthly, housework is more mechanized. This is supposed to mean, though I have not seen much evidence of it, more free time. Family-centred activities will increase, bringing new spatial and functional demands to the design of the house. I think that we have to keep in mind the cost of housing, the oppression of its capital and operating costs. If we are to meet certain aspects of that challenge we are led to smaller houses and to denser sites which have a bearing on the child in the home environment.

Perhaps to be a little more specific let us consider a couple of factors of a social nature. The one is the nature of the changing demographics. This is a phenomena not directly on topic but of enormous implications for it. What I wanted for all of us to think in our own way about is the phenomenon of the shrinking household size as people sort themselves out into households of two basic types - either as non-family households,

or as family households, what used to be called 'wedded bliss'. In 1951, that sorting out went on at a rate of about four persons average per household. By 1971, it was down to 3.25. We are en route inevitably by 2000 to about 2.75 persons per household. This is because of increasing independence of young people who establish their own separate household at the earlier age, changes of lifestyle, increased number of widowers, and older persons. The shift from family to non-family household types has been profound. Perhaps you would believe me if I point out that in the 1950's wedded bliss won 90 to 10, and now wedded bliss is hanging in there at 75% family households to 25% non-family households, and single person households are very much on the increase. I noted the other day that in a comparable Canadian time span, 3,000 marriages were matched by 2,500 divorces. I must occasionally refer to Erin Mills. It is a little parochial to do so but it is my source of experience in some of these matters. Remember 75% of household formation is now family households and 25% is non-family and not so very long ago, it was 90% family, 10% non-family households. I hope I am not throwing too many figures at you but there are just a few that are important. As a result of some very complex studies - the best of our ability to try and fight our way through a tangle of mathematics - Erin Mills recently agreed to plan for about eighty five thousand people in the central areas of the

new town form in about 3 or 4 years. So we had to think about what kind of houses we had to provide.

These figures might interest you, just by comparison. We concluded that suburban conditions would be more conducive for slightly larger family households. To figure that demand we studied the household composition in the whole city and found that single person households, accounted for 11%; 2 person non-family households 5%, 2 person family households 21%, 3 person family households 18%, 4, 22%; 5 and plus, 23%. Or 63% of the households consisted of 3 or more persons. A recent Ontario study seemed to indicate that by 1985 half of all households will be childless couples, and single adults. This is not to say that the problem of 'The Year of the Child' is going to vanish into the problem of the 'The Year of the Single Family Household' but there are certain implications there.

The other important factor, (and I assure you it is the last one I am going to try any statistical nonsense with) is to remind us of the emerging age groups. Let us consider the age groups in functioning packages like 0 to 4 - the pre-schoolers; and 5 to 13 - the elementary or K to 8 crew; 14 to 18 - the secondary students in 9th to 13th grades; and 19 to 64 - the productive years. (Might I remind us that 45% of the population is now carrying the entire load of the productive civilization, for

what that's worth) and then there is the 65 and plus - the elderly. How about the numbers in the groups at Erin Mills? Based on a large sample of 85,000, we anticipate that in the new community, 10% will be in the 0-6 age group, 17% in the elementary school group, (that's both public and separate schools. I want you to tuck this in your mind, because it is a little bit of a disaster shaping up in neighbourhood planning which affects the child.) 7% in the high school group, about 57% of the population in the productive years and the elderly currently running at about 9%. What is forecast is the decline in the young and a slight increase in the productive years and a major increase of over 10% in the years ahead of the elderly. I would mention to you that this idea of age distribution has more influence on employment ratio, child care, and education systems, than on housing design, except perhaps, for the elderly. Family formation, incidently, will peak statistically in 1986, when the 25-44 marrying age bracket is at a maximum.

Let us look at, for a moment, one end of that spectrum the 0 to 4 group or the preschoolers. I hope that it will give you an idea of the dimensions of the problem, as I see it in new communities. I guess I should preface my remark about the preschoolers by saying that despite all the thought and care we put into the early days of planning Erin Mills, we forgot completely one thing - I am embarrassed to admit this to this

audience - the child. And we forgot particularly the preschooler. We did not think really accurately about these shifts of demography, and of life styles that I have drawn to your attention, and now we are trying to think our way through it, mend the fences and get things working again. We think that 10% are preschoolers and on a considerable amount of investigation we get about (here's a more hideous thing than a 1.5 child - a .3 child) .3 preschoolers per household. Twenty five percent of those require child care; half of these are full day care and half require half-day care or nursery care. If I unscramble that arithmetic using an example, you take the classic school centered neighbourhood traditional planning theory which plans for approximately 6,000 people. You get 600 preschoolers (that is 10%). If you follow that tiresome arithmetic through towards the accommodation for the preschoolers, you would want to have probably two facilities for about forty children each to handle this problem, probably one in relationship to the elementary school building and others maybe in a church or wherever.

I thought you might be interested in hearing from me a little bit about how we are trying to close in on the problem in terms of community design. Having said something at the one end of this spectrum of the children I might legitimately deal also with the teen age years. This really puzzles me. Maybe out of

this conference or others there may be some guidance. If not, it is an area desperately needing some useful and translatable social research. The teenage group is the most neglected in terms of facilities. Teenagers are provided no place, generally speaking, of their own and have no place to go. So they "hang-out" outside public areas. Management and adults see this as undesirable behaviour and attempt to move them out. The home is generally too small and too supervised to facilitate teenagers getting together. Middle class teenagers have access to cars, larger homes and vacations but for those of more modest means, this is becoming an enormous and difficult problem that requires more your skills than mine as a architect and community planner. It is very much in my mind because we need teenage centers. Teenagers say that supervision, perhaps could be provided by the teenagers themselves or someone who understands and who can talk to them. The supervisor should probably be on a permanent and not on a volunteer basis, because the enthusiasm soon dies away. I am very conscious of this problem because of one of the commissions that I am working on at present. Following ideas that again came from Humphrey Carver in "Cities and the Suburb", when he said that all the desparate things that we put into communities would be much richer, much more interfaced and much more interactive, if they could be brought into meaningful focuses. So we are cheerfully busy at a sub-centre for a component of the town structure of Erin Mills

of about forty thousand people, bringing together such items as shopping, interfaith centres, child care, handicapped children, recreation programs, libraries, elementary, secondary, and post-secondary education. Indeed, a lot of it is built. A couple of weeks ago I was asked to serve as architect for the community centre and I thought pragmatically what this means. The big gap in the program is the teenage problem in that suburban context. Very sincere, very skilled people are working with it, but I need eventually a little direction. You could build a room of 300 square feet and hope it works. I doubt it. And is it really a thing or is it the whole fabric of the total community? But it is certainly, in my view, a missing dimension.

Perhaps, before leaving that topic, I might mention something about vandalism. In a recent Urban Form article on vandalism and neighbourhood improvement by, I think, Mark Shrimpton and David Fuchs based largely on St. John's, Newfoundland experience, it was pointed out that about a third of all vandalism is a by-product of children's play. But you need not take too morose a view of this because, and I quote from the article, "It is a part of all children's play to take things apart, climb trees, throw stones or scribble on walls, and things naturally get damaged during such activity". This sort of damage is the predominant kind among children of 12 or so.

Typically a small group of boys is involved, many of them who do not go on to commit any other crime. Local child density influences instances of vandalism in urban places. This Canadian statement on it concluded with a very wise thing which sounded very much like reading Jane Jacob's 'Life and Death of Great American Cities' with the preoccupation with "eyes on the sidewalk". A single long-term resident watching from his or her window can exert more control over the behaviour of children than a squad of policemen can ever hope to do. The children know that they are being observed and that their parents will hear of any errant behaviour (I don't know if the reverse is true). Similarly, neighbourhood population stability means that the proprietor at the corner store is more likely to ring the parent of a child caught shoplifting. Echoes of Jane Jacob's echoes of some aspects of community design! I think that a good deal of the vandalism obviously reflects the parents' distrust and dislike of the environment, but ugly buildings, shoddy maintenance, indifferent management and lack of interest in the residents are the triggers for much of the vandalism. I have experienced it as a school architect, a shopping centre architect, and to some degree as a non-profit housing architect. Sometimes vandalism, is in a curious way a creative thing because it is 'positive environmental modification' to give it a kindly word - translating the dull and uninteresting into the opposite. What are the design responses? One of them

would be the clear demarcation of a very old, very important and continuing idea - territoriality - so important to housing development. The result is a clear understanding of what is my responsibility, my neighbourhood's responsibility, and the rest of the world's responsibility. This is not an airy theory; this a strict social design determinant that has to be looked after. For any of those of you who are interested in studying this a little further I would recommend Oscar Newman's "Defensible Space". This means designing visibility of the community in all its aspects so that there are not the hidden areas and areas of hard usage. My exercise in hard usage detail was designing a community social centre in downtown Toronto. I had to design it like a battleship and make it look like a yacht!

So let us turn our attention a little bit to children at play. I found a rather jaundiced view in the California Law Review by William Prosser. He said "Children, as well known to anyone who has been a child, are by nature, unreliable and irresponsible people who are quite likely to do almost anything. In particular, they have a deplorable tendency to stray upon land which does not belong to them and to meddle with what they find there". Now is there a design response in community and housing to this rather cheerful thought? I would say yes. Consider points that I find so well set out in the publications by Polly Hill on the importance of play and the way it is handled.

Surely play, and I have to make this as my own observation, is a deep and urgent need. I remember reading somewhere that someone 150 years ago gave it a good definition when he said "Play is the highest expression of human development in childhood". It is crucial to intellectual development. It is not an end in itself. It has a preparatory purpose, that is learning to adapt to adult society. The child's play opportunity, or its lack, determines to some considerable extent the sort of adult he or she will become. So what does this do to us? How do children play? Where do they play? What do they do? I referred to some British and American studies. I did not know the Canadian studies too well about where they play. Rather interesting things come out, though not very surprising maybe. But when they looked at urban children in low and medium high rise development in, would you believe, an enormous survey of 45,508 children (I don't know how those 8 got in there), they said this about play patterns. Two fifths of children played mostly on the roads and pavements, less than a tenth of them with adults and that was for low and medium density developments! The gardens were the next favorite play area and a poor third was the designated play areas. It seemed to some degree to explode a mythology dear to my heart that if we could emphasize the on-the-ground family type of accomodation with the garden spaces and so on, that it would go a long way in providing for certain aspects of play. I still think it does, but I hate to be told

as I am told by this that really it is not necessarily so. In older areas, over half the playing is on roads, and in the British examples that were quoted, it was well over 60%. Two important leaders in the philosophy of community planning in the United States were Clarence Stein and Henry Wright, who did some work on accidents. Most accidents were happening not in the places where there was high speed traffic curiously enough, but where there was disorganized traffic, where the children played in a parking compound or near some carport and shelters. It is that backing up car, or that garbage truck which has gone into reverse in a tight situation. These are worth thinking about. They seem very obvious when you state them, don't they? But you just walk out into the new areas, and look at the new row housing areas, particularly the condominiums, the fifteen unit walk-ups. God knows is not a high density. Look at them on Tuesday morning and you get one view. Look at them on Saturday morning and you simply would not believe the difference. They are overwhelmed with traffic, parked cars and children darting in and out among them - really a very unsafe environment.

What do children do when playing? According to a Department of the Environment (UK) study of 45,000 subjects there were 33% running and walking, 11% bikes and wheeled toys, 11% roller skates, 7% ball games, 7% playground equipment and others 10%. I did not like to ask what they were up to but I have my

suspensions! That gives us 65% of these kiddies that were active, and the others were inactive, and I was pleased to find that 27% of them were just standing still, idling, or thinking of what to do next. They also looked at the relevant popularity of play equipment. Conventional equipment was curiously, or maybe not curiously, the most popular for all ages. Ball games were little used. The children's preferences in interviews were for the old things, like the conventional equipment. They did not like static things. It hurt me as an architect to find that they did not like these clever sculptured affairs that I had sometimes perpetrated in play lots. They crawled through them once and abandoned them. But they really like things in which they had their own input; that is the harder they push, or the faster they run or the more they manipulate, the more result they get out of it. The adventure playgrounds were very, very popular with the children. The criticism, sometimes voiced by the children in their own way, was that they were a bit dangerous. There were too many bossy children around. (They must have been mine!) They were dirty and muddy and getting dirty and meeting danger are not liked or needed by all children. Among certain parents in certain areas of the British cities evaluated, there was a kind of adult resentment of the adventure playground areas because they looked like dirty, junky places. 'Second rate places for second rate citizens' is how

someone said it, rather than the marvelous things they actually did for kids themselves. Does this matter?

The types of playgrounds that we try to fit into our community structures, new and old, are: the traditional, which I think are characterized by equipment like swings, and slides, and see-saws, and climbing bars; the contemporary playgrounds which seem to put more of an emphasis on novel forms, textures and sculptures, beloved by architects but not by children, (I put one on a little shopping centre. It does not work too badly there because the kids crawl in and out through this thing while mother is spending the family fortune and it does not have to occupy them for long); the creative play areas designed by adults to nurture the child's total development; and the adventure playgrounds, in effect, not designed by adults at all but by children using scrap materials. These seem to be the range that we are trying now to fit into the new communities. But the idea I want to leave with you is that in any community structure, play settings are not synonymous with playgrounds because in truth, children play everywhere - roads, parking areas or sidewalks - but the pre-schoolers tend to hang around the door steps for very obvious reasons. At higher densities in the higher buildings they play in lobbies, community rooms, elevators and hallways.

I wanted then to say a few things to you, if I may, about children in the community and then about children in housing. On the whole suburbs ought to be very good places for children. It has open space and considerable safety, yet paradoxically this supposed children's paradise is not at all a paradise for children. The smallest children are more often alone. I think it is simply due to the low density generally, whereas in crowded urban scenes, children are on the street fending for themselves, falling all over each other. Although we hear a lot about the danger of high density on the child, we might equally think about the social danger of low density in these residential environments. This is an interesting problem when you think of the influence of the child, or care or concern for the child on community design. Two basic ideas have ruled city planning and community design, whether you look at India, or Sweden or Britain or the United States or Canada and that is what has been called the school centered neighbourhood theory. If we look at the structure of communities, using some sort of building block or social cell, it would look like this. First the neighbourhood, which is made up of small clusters of houses. Then the neighbourhoods clustered around a school that might, for want a better word, be called a community, and then clusters of those communities around a city center forming a cellular view physically and socially of the town. It has worked very well for quite a while. But here is the big problem

as I see it, and it is a rather interesting one. In the school centered neighbourhood theory the size is determined by the number of parents or population that generates a workable elementary school. The school is thought to be at the center of the community, and the path to it for the children is at best safer than if they have to cross major arteries which may surround the community. At a convenient distance, probably there is planned the park related to the school. There is a hierarchy of road systems between collector roads which pick up the neighbourhood traffic and deliver it to the outside or to the point of neighbourhood focus and the residential streets which may be very quiet, private and as safe as possible. There is a range of housing mix, or social mix, etc., etc. At the neighbourhood subcentre you might find the elementary school, the residents building, the child care facility, perhaps a corner store, and the day care facilities. This is the physical form of a community resulting from a social view of the neighbourhood. The only trouble is that the demographics of school/child generation are changing so drastically that the whole theory is in considerable difficulty because where 5 to 6 thousand people used to produce the elementary school, they do not any more. The problem is that you have to design many years ahead with a large community and you have already laid out the infrastructure of roads and sewers and certain decisions have been made to the best of your ability. Then you find that the

fundamental basis for the neighbourhood structure is now not corresponding to it. It may indeed be that the neighbourhood theory is a bit parochial in any event, and puts too heavy a social burden on neighbourhoods.

The next link up is the community, which, I generally tend to think of as 3 or 4 neighbourhoods - about 20,000 people which come to focus around the middle level of this 3 level structure. Twenty thousand people will generate secondary education, secondary institutional development and shopping, food-based largely. So each community has its subcentre. At Erin Mills we have been involved in the last several years with one of these subcentres. I mentioned to you that the community of forty thousand has one centre. It was a mistake we made originally. I think that we really should have had two centres serving twenty rather than one for forty thousand people. But there we are, and we are trying to improve things as it goes along. At that centre right now we have certain elements of specialized child care, handicapped children, emotionally disturbed children, all being integrated into it. We are just hoping to goodness that it all works together. It is a risky concept. Would you understand if I said that the malls of the shopping centre run right on through and become the corridors of the high school? Either the high school will ruin the shopping centre or the shopping centre will ruin the high school or it

may be important to make sure that the educational process takes place in the reality and distraction of the total community and its operations. And then you could add to community planning such things as transit systems that meet modern needs of mobility and flexibility. I will not bore you with the hierarchy of open spaces. They too run through the whole structure of the town. Starting from the tot-lot, they range to the neighbourhood park, maybe about five acres near the school, to the community park for the larger scale, more formalized, more structured play at the community level and for the specialized things that might occur. It is very fashionable to have a lake in a new town. I do not know a new town that does not have a lake. It may solve a lot of the child problems, but that is yet to be seen. Incidentally, you run into all sorts of little difficulties along the way with these things. For instance, we would all pay our respects to the idea of tot-lots, or small parks near the homes. Well, you just try taking any God-fearing municipality to accept the dedication of a third of an acre, or a fifth of an acre or, a quarter of an acre, much less an acre. They are not geared to that. They are ready to assume the dedication of land at the neighbourhood level but even that is very difficult. When I planned experimental housing to see how densely we could put family-type housing without resorting to high rise buildings or even medium rise buildings using ground-related buildings, in Erin Mills, I

wanted a little quarter acre park with it. I could not get it dedicated.

Incidentally, in the new town of Columbia in the States, that has been solved in a rather interesting way that I will just touch on. There is something called the Columbia Residents Association which is compulsory. All residents of the town belong to the association, and the association owns and runs the social-physical fabric of recreation and social affairs in the community. It now has many millions of dollars worth of these so they can do such things without tripping over municipal standards. But otherwise that is a very hard thing to bring about.

So let us conclude then with some thoughts about the child and housing design. We should be matching dwellings to people rather than the other way around. I would mention to you only that there are in my view, as far as it affects the child only three kinds of basic housing. There is on-the-ground housing such as single family housing, duplexes, rows, and patios. There is ground-related housing which is the low-rise walk up, where the mother can yell down three floors with some hope of being heard, and if Johnny is caught short, he may make it up to the washroom before its too late. Then there is the ground-unrelated whether its high density low profile, or high density,

high rise. Ground unrelated units are basically elevator type buildings. There is a no man's land, incidentally, of buildings which are too high to walk up and too low for an elevator, so you get this kind of break off in the middle. You can make yourself an interesting diagram (I used to play around with this) if you drew Mr. William Shakespeare's the 'Seven Stages of Man', from a child to an ethereal angel with wings at the far end. You can draw lines of affinity between this range of housing types and the various stages of the life cycle. But attached to this idea is the question of density and how densely you can put housing on the land. Here we do not have the time or place to think about it in any depth but generally its thought of as being either low, or medium, or high density housing. Low density is about 10 to 15 units per hectare, and that means single family housing and the semis. The middle density is the range of row houses and the upper densities range from moderate rise apartments to very high density apartments. Incidentally, I noticed on the CMHC exhibit an indication that as density increases, the density of children increases and their play space per child decreases. I remember that the British had a study a few years ago which seemed to point out to them that in their experience, which was considerable, the physical deterioration of the housing site began to take place at about a hundred and twenty persons per acre. At those kind

of densities and the consequent child generation the site just gets too much use and gets itself in trouble.

I guess a remark on high rises, that much maligned but perfectly reasonable housing form, would be in order. I am going to give two completely opposite points of view regarding the impact on children who live in high rises and you have the pleasure of taking your choice. I quote from two eminent sociologists who can be nameless. One says: "Children who live in high rises seem to have a poorly developed perception of individual privacy and little understanding of territory. The physical form of a residential environment plays a significant role in shaping the perceptions of children in recognizing the rights of others. Differences in family structure, lifestyle, funds for staffing and accoutrements that make high rises work for middle income families make it unworkable for low income families". If you do not like that view, here is another one. In the 1971 North York/Toronto study (unless there is something peculiar about North York, and there could well be), living in apartments appeared to have, this I am quoting directly from the study, "no detrimental effect on children's attitudes, activities or behaviour". The study compared pupils from high rise apartments with pupils from single family housing and found children living above the fourth floor did not differ from their peers in school behaviour, social skills, or concept of self. Single family

pupils have slightly better motor skill development. No difference in participation in or out of school activities. In another similar study in the Toronto area (these are by the way not studies by developers; these are studies by educational authorities), "35% of children in suburban high rise buildings belong to youth organizations compared to 12% in suburban single family houses". And if you think it is hot stuff to be involved in the boy scouts and this and that, you can make your own judgment on those kind of figures. So, we get into very dicey areas when, as I said at the beginning of my talk, we try to match up social propositions in an architectural determinist point of view.

I want to discuss with you something that has become very fashionable recently in housing and urban form - the multiuse building or the so-called megastructure. I have built some of these. I built one called Crescenttown which is home base for 2,700 families in a series of related buildings on podiums with inner streets and with connections directly into the subways. It has the largest private nursery operation, I think, in Toronto, and has the shopping and indeed the school built in it.

And looking back on it I have to wonder if it is a reasonable way of doing things. Once again in the St. Lawrence Project in

downtown Toronto, (this is a very interesting non-profit housing proposition) there is again this mega-structure point of view, where the happy child gets out of his suite on the 6th floor instead of the 30th (which may be an improvement) goes down the elevator and in effect into the school. I learned so much walking from Parliament and Carleton to Church and Gerrard streets as a child that this building-in of things worries me. I am mentioning it to you, because you may have insights on it which should be voiced to those who, like myself, are involved in these building forms. But it is in my view a rather worrisome thing.

I did not tell you how to plan a house. I do not have to tell you about the obvious like recognizing the family cycle, making sure you can see out to the garden from the kitchen and keeping the front door steps as a play location. But I thought I might just trigger in your mind a few thoughts about safety in the home as it applies to children as my concluding points. Again, a recent thorough British study discloses that 8,000 persons in a year in England die of accidents in the home and 80,000 are seriously injured. Why? Sixty-seven per cent of those accidents or deaths were personal factors, that is worry, fatigue or illness; 25% was faulty maintenance and 8% was faulty design. Most affected were those under 5 or over 60, so obviously for this conference, it is important to express a

concern for the child in physical design. Food preparation is potentially more dangerous than any other home activity. For instance, very simple things in the kitchen such as ample space and best possible arrangement for the work process is crucial. Ranges should never be dead-ended at the end of the counters, particularly where they are beside doors, because all you need is a pot handle sticking out and some child is scalded brutally. Window drapes should not be near the stove. Simple things, when we talk about them here, but time after time they are neglected. Double acting doors frequently used by the family with no way of seeing what is happening on the other side have caused an awful lot of very serious accidents. Even side hung, cupboard doors are hazardous when open, as any of you know who bent down to pick something up, and you know the consequences. There should be comfortable vertical reach in these food storage spaces. If the young play in the kitchen, to particularly avoid problems of burning and scalding, you need to have lots of room. Other kinds of worries in home design are, slippery floor finishes, single steps which are not enough to see and just enough to fall over, long runs of stairs (I saw one in Humphrey Carver's film with a bunch of rubbers and a bicycle and a few things down at the bottom) just are an invitation to accidents. In high buildings, such matters as safe windows which will not open to let a child fall out seem so obvious but they are being built. I made a calculation a while back in

which I proved to myself that somewhere close to 20,000 children are living in high rise apartments high up in the Toronto area. Now these are hazard situations. If the railings have horizontal bars, the children will climb on them. If the spindles in the railings are far apart, a child's head can slip through. There is the question of vertigo in adults. I remember watching my mother going out on the balcony of her apartment and teetering at the edge, just sickened by the fact that she did not have a feeling of security on that balcony. It had a nice open rail design. These are simple things, aren't they, when we talk about them yet I know in my own work I too easily find that I cannot think them through carefully. I am just listing a number of potentially dangerous situations. Obviously poisonous cleaning fluids, polishes and medicines should not be within easy reach of children and remember the laundry is a very dangerous area. And about leisure hazards: We need places to put away bicycles, tools, and toys, so as not to fall over them. The home workshop should have a lock on it when the children are young because of power tools, and sharp tools. The question of water - even a shallow pond can be a death trap to a child. The protection of swimming pools is essential. Consider even the sleeping habits - the loss of sense of direction which particularly affects the old and the young as they wake up in the middle of the night for instance.

There is often not an adequate path of light to the w/c, or you pass a dangerous stairwell on the way. The bath is a very common place for accidents. No windows over the bathtub because reaching over it has caused more accidents than you can think of. Lighting switches should be located so you can see the way ahead. And of course, one of the worst culprits of all in higher buildings, is the whole question of elevator equipment. I am very conscious of that because on a personal note, a very dear friend of ours in Winnipeg three weeks ago, called for the elevator. The elevator door opened, he stepped off and fell 20 floors. The elevator was not there. These kind of things can happen.

So that is a sort of rambling discourse, if you will, over various aspects of community and of housing design that hopefully are applicable to your main concern which is the child. As I say, I find it difficult to separate out those aspects of what I have tried to say that are particularly related to the child and those which are just common sense for the whole problem of family living. So I thank you for your tolerance of my inability to anchor more closely on just the child.

PROJECTS SUPPORTED BY CMHC AS PART OF THE RESEARCH AND DEVELOPMENT PROGRAM
UNDERTAKEN BY THE CHILDREN'S ENVIRONMENTS ADVISORY SERVICE (CEAS) FOR THE
INTERNATIONAL YEAR OF THE CHILD

The research reports from the following projects are available through the Canadian Housing Information Centre, Canada Mortgage and Housing Corporation, National Office, Montreal Road, Ottawa, K1A 0P7.

1. INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF LEGISLATION OF PLAY SPACES

This will provide a basis for comparison of CMHC standards and policies with those of other countries, regarding the allocation of space for children in the residential environment and is seen as a resource for municipalities establishing such standards.

Aussi disponible en français.

2. HOUSING CANADA'S CHILDREN - A DATA BASE

The compiled statistics will provide a profile of Canadian children and their housing.

3. MAINTENANCE AND RETROFITTING COSTS OF CHILD-RELATED FACILITIES IN THE REAL ESTATE PORTFOLIO

Life cycle costing of child-related facilities and maintenance costs due to lack of child-related facilities will be used to determine cost effective solutions.

4. EVALUATION OF EXTERIOR FACILITIES FOR CHILDREN IN THREE LOW INCOME PROJECTS

The report will provide an evaluation of three approaches to play space design in terms of play experiences, use by different age groups, accessibility, and resident satisfaction, using a technique that allows children to respond naturally.

5. CHILD'S PERCEPTION OF THE NEIGHBOURHOOD

The study will document how children use selected urban neighbourhoods that vary in character and the influence of the design of the neighbourhood on the children's activities.

6. HOUSING NEEDS OF URBAN NATIVE FAMILIES - A COMPARATIVE STUDY OF CHILDREN'S AND PARENTS PERCEPTIONS

A study of the needs of native children and their parents in the area of housing, neighbourhood and community, on the basis of which housing strategies can be developed to respond to their needs in the urban setting.

7. WORKSHOP: "HOUSING THE FAMILY IN 2001", FOURTH CANADIAN CONFERENCE ON CHILDREN

The report deals with the changing family structure, the needs of children and the suitability of present forms of neighbourhood design to house the future family.

8. LOST AND FOUND: RECYCLING SPACE FOR CHILDREN

The study deals with the identification of waste or unused spaces in residential projects and design suggestions to recycle them into play spaces for children.

9. OUT OF THE CELLAR AND INTO THE PARLOUR - GUIDELINES FOR THE ADAPTATION OF RESIDENTIAL SPACE FOR THE CARE OF PRE-SCHOOL CHILDREN

The study will utilize existing knowledge of indoor and outdoor environmental requirements of children in order to accommodate the developmental needs of pre-schoolers in conventional family living space.

10. PRAIRIE WINTER PLAY PATTERNS

The project goal is to provide for children's play during the winter months, and will be conducted in two parts: (a) A study of social and environmental factors influencing children's activities in winter, and (b) A study of climatic, topographical and environmental factors that must be considered in the design of winter play facilities that accommodate physical, social, creative and intellectual play.

11. DESIGN CRITERIA FOR THE DEVELOPMENT OF A SHELTERED PLAY SPACE IN MEDIUM TO HIGH DENSITY FAMILY HOUSING PROJECTS IN THE ATLANTIC REGION

The report will examine the need for sheltered play facilities in high density family housing projects and recommend design details such as location, size, space allocation, construction materials, and play facilities.

12. PROJET PARAPLUIE - A USER GENERATED SHELTER DESIGN FOR THE RECREATION OF SCHOOL-AGE CHILDREN IN A MONTREAL PROJECT

The report will document a procedure that was used to involve school age children and their parents in the design, implementation, maintenance, and management of a sheltered play space, as a possible model for other residential developments.

Aussi disponible en français

13. GUIDELINES FOR THE SELECTION OF CONSTRUCTION MATERIALS, CONSTRUCTION METHODS, LANDSCAPE MATERIALS AND VEGETATION USED IN PLAY SPACES

An inventory of materials, finishes and methods with a description of qualitative characteristics and possible use in a play space in terms of user groups, climatic conditions, availability and maintenance will be produced.

14. PLAY SPACES TO ACCOMMODATE DISABLED CHILDREN

Design suggestions will be developed for an integrated play space that accommodates both disabled and normal children.

15. CHILDREN'S PLAY SPACES ON ROOF DECKS

The study will result in design suggestions that deal with the technical aspects, such as drainage, containment, and control of the microclimate, as well as the provision of stimulating play opportunities for child users.

16. LA SECURITÉ DES ENFANTS VS LA CIRCULATION - AUTO

The study will analyze accident statistics and traffic patterns in selected multiple housing projects and develop design suggestions in terms of traffic separation, lighting, landscaping, barriers, etc., to minimize the conflict between automobiles and children.

17. A CASE STUDY OF A COMMUNITY PARTICIPATION PROCESS FOR IMPROVING A NEIGHBOURHOOD TO BE MORE SUPPORTIVE OF CHILDREN AND YOUTH.

The case study will identify the process of community participation, the mechanisms available, the problems faced, and the resources tapped, and will serve as a model for other communities.

18. ADAPTATION OF CMHC DESIGN GUIDELINE ADVISORY DOCUMENT "PLAY OPPORTUNITIES FOR SCHOOL AGE CHILDREN, 6-14 YEARS", TO MUNICIPAL LEGISLATION

An example or model policy guideline on planning for play for school age children that is applicable to the municipal residential development control approval process and is written in such a way as to be easily adopted by municipalities.

19. MANAGING URBAN SPACE IN THE INTEREST OF CHILDREN

The proceedings of the International Symposium, dealt with the allocation of urban space to respect children's interests and the political, legal and socio-economic conditions required for various forms of organizations to function adequately. The report has been published by "Man and his Biosphere", the organizers of the symposium. Requests received will be forwarded to "Man and his Biosphere".

20. INCENTIVES AS AN AID FOR IMPROVING THE QUALITY OF THE FAMILY HOUSING ENVIRONMENT: A POSITION PAPER

The position paper will investigate alternatives which can serve as incentives to developers under the National Housing Act, to provide children's facilities within residential developments.

21. MONOGRAPH SERIES

Monograph one: Child Pedestrian Safety in Residential Environments.

Monograph two: Families with Children Living Off the Ground.

Other titles will be announced in the CEAS newsletter.

CHILDREN'S ENVIRONMENTS ADVISORY SERVICE



RESEARCH AND DEVELOPMENT PROGRAM



CMHC's participation in the International Year of the Child.



Canada Mortgage
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