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Outdoor Play Areas for Children in High-Density Housing in Montreal

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements of the degree of Master of Architecture

Minimum Cost Housing Program
School of Architecture
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Abstract

Children form a bulk of the Canadian population, but have no control over the economic purse that decides their future. The “action-radii” of children between the ages of 6 years to 10 years is limited to the surrounding neighbourhood. This is also the age of physical exercise, emotional, social and full personality development in which play constitutes an important education tool. Over the years, the urgent need to create high-density housing led to subsidized housing projects. During this process, providing an ideal environment in which to raise children has been overlooked. So, what do the children do? Where do they play? The objective of this study is to decipher the functional and safe outdoor areas preferred by children living in high-density housing in Montreal. This led to the evaluation of various mini-parks in the neighbourhood of the Plateau Mont-Royal with respect to their design elements and the play patterns of the children. The identification of positively and negatively perceived play areas demonstrates the child’s point of view. This research investigates the relationship between the child, the open spaces and the surrounding built environment in an effort to create an awareness of the need to design a more responsive, cooperative and sympathetic environment for children in urban settings.
Résumé

Les enfants, partie intégrante de la population canadienne, n'ont aucun contrôle sur la politique économique qui décide de leur futur. Le rayon d'action des enfants entre 6 et 10 ans se cantonne à leur proche voisinage. C'est pourtant à cet âge que se dessinent les grandes lignes de leurs personnalités, émotions et sociabilités ; où le jeu constitue un outil essentiel d’éducation.

Au cours des années, la nécessité pressante de créer des logements à forte densité a donné naissance aux projets de logements subventionnés. Pendant ce processus, fournir un environnement idéal au développement des enfants a été négligé. Dans ce contexte, que font ces enfants? Où jouent-ils?

L'objectif de cette étude consiste à définir des aires de jeu à l'extérieur fonctionnelles, sûres et appréciées des enfants vivant dans les logements à forte densité de Montréal. Ce qui a amené à une analyse de divers mini-parcs dans le voisinage du plateau du Mont-Royal : des éléments de leurs conceptions et de leurs utilisations par les enfants. Le point de vue de ces derniers a été pris en compte lors de l'identification des terrains de jeux appréciés ou désertés.

Cette recherche étudie le rapport entre l'enfant, les espaces découverts et les habitations avoisinantes dans l'optique de créer une prise de conscience : la nécessité de concevoir un environnement urbain plus responsable, plus adapté et sympathique aux enfants.
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1.1 Purpose of Study

Canada is a federal state, made up of ten provinces and two territories, with a population which has just passed 30 million (1996). About 83 percent of Canadians live in urban areas, and almost one-third (31 percent) live in the three largest metropolitan areas: Toronto, Montreal and Vancouver. The housing stock consists of over 10 million units, of which a little under 7 percent is social housing. About 62 percent of Canada's housing is owner-occupied and the rest, about 30 percent, is private market rental housing. Housing policy in Canada has always strongly favoured market solutions (Jeanne M. Wolfe 121-22).

Until the middle of the century, housing was not considered an issue of significant concern. After the population expansion during this period, this opinion began to change. Following World War II, the country's immigration population increased dramatically. There was an urgent need to create high-density community designs. In its haste to satisfy these growing demands, housing evolved without any concern for respective individual needs. By the end of the 1950's, most major Canadian urban centers had exhausted their available raw land. In 1970, the government of Canada created a Ministry of State for Urban Affairs with the responsibility for the formulation of a housing policy, to be implemented through the Canadian Mortgage and Housing Corporation (CMHC) in cooperation with the provincial government housing agencies. The government, through the CMHC, contributes funds for subsidized housing. It handles construction, mortgage loans, home ownership, social housing and residential renovation with the aim of finding ways to meet the housing needs of Canadians today without burdening our future generations. Through the Office Municipal d'Habitation de Montréal (OMHM), the City of Montreal produces and manages rent based on income housing for low-income households. Also, with the help of various non-profit social organizations, the government has been working extensively with the sole aim of providing maximum housing at an affordable level (Insaf 14-27).
After the war, social housing evolved in three distinct phases. In the first phase of the early 1970's, these projects consisted of several high-density high-rise buildings grouped together that resulted in large concentrations of poor people in one area. Later, this resulted in a crime-ridden environment. The second phase of scattered small-scale projects started in the early 1980's. The third phase began in 1985 that reverted back to allotting public funds to low-income housing schemes by the government. In the 1990's, the creation of new social housing came to a virtual pause due to budgetary concerns of the provincial government, and the trend now is in the direction of renovation as a means of affordable housing (Insaf 14-27).

Urban planning interventions have longer-term effects on the urban environment than the immediate problems they aim to solve. This is why the housing policy must be more than just a response to identified problems: it should also define common goals and create a vision of what housing would become in the near future. A great deal has happened during these past years with respect to government interventions in the housing market at all levels, but much has yet to be achieved. The author's aim is not to offer solutions to providing adequate housing accommodations for various income groups in Canada, but rather to study and document their effect on a minor section of society, namely children. Children form a large bulk of the Canadian population, and have no control over the economic purse that decides their future. The necessities and comforts of dwellings for the low-income family has been studied, surveyed and improved over the years. But what about the importance of the relationship between the dwelling units and their surrounding open spaces? Have they been given equal importance?

We must go beyond the basic necessities of a warm place and a substantial roof. We must provide another necessity: the right kind of environment. The federal government feels a strong responsibility to provide a variety of low-cost housing programs. And, providing an ideal environment to raise the children has not been their primary goal. Brower (82) states,

“Open spaces with playgrounds, open fields, bicycle paths, tree-lined streams, and forest areas are the most vital amenities in urban settings and provide healthful conditions for active and passive activities essential for the physical, social, and creative well-being of children” (Fig. 1-1).
It is wrong to assume that children play to ease off their workload, then return to more important factors like studying. The psychology of play, through countless studies, has proven to be a child's way of learning, and the environment plays a significant role. For children, play is growth, expansion, and discovery of the world and themselves. It is an introduction to physical and mental activity, and the basis for creative ability and work. Play is, therefore, a mechanism by which for children to learn and live (CMHC, Play Opportunities for School-Age Children 6).

Where can the children play? In a rural community with little modern traffic, children may play almost anywhere. But with the technological revolution transforming peaceful rural life into an industrialized and urbanized community, the opportunities for

Fig. 1-1 An ideal small town neighbourhood.
(Source: Design in Familiar Places: What makes Home Environments Look Good, 1988, p. 82)
free and safe play are lost. Most neighbourhoods are mainly designed for adult-oriented, and children must fit into a world that hardly suits them; only their energy and imagination make it possible for them to succeed (CMHC, Play Opportunities For School-Age Children 5). There is a need to plan for new arrangements that acknowledge the right of every child to play with pleasure and in safety. It is economical to design and provide these facilities before the construction of the building, rather than trying to integrate them residually into the “left-over” open space at a later stage. As an architect, the author wishes to make a contribution in this field through this research proposal. This study will lead to the survey of a child’s habits, needs, play patterns, and a comparative user study of high-density housing with children (ages 6 to 10) to obtain a detailed analysis of the urban environment surrounding these children.

1.2 Rational for the Study

The author’s assumption is that the existing open spaces in high-density housing in Montreal are not ideal for the development of a child, and enough attention is not given to this aspect of the housing program. It is understood that with the tremendous changes during this century, there has been a wide gap in the opportunities for children to make optimum usage of their surrounding neighbourhood environment. Most of the urban environment is restricted to them, and the freedom of play is one of the major casualties. So, What do the children do? Where do they go? If we continue to disregard the intimate curiosity and spontaneous gaiety of children by restricting them due to large urban developments, it is not likely to remain with them later in adulthood. Having lived as a youth in a high-density neighbourhood in the city of Chandigarh, the author is aware of and understands the importance of not being able to play in a free environment. Chandigarh is an example of a modern town planning which was built without the input of the people and their culture. It does not incorporate the needs and requirements of the inhabitants, and thus, is isolated in its function and usage. As small children, we were dependent on adults to access the city parks for recreational activities. “A child who cannot play is deprived, while one who is always taken by the hand does not grow to be independent” (Verwer 110). This accounts for the abiding concern for creating a
"legible" environment. Eating up of the open spaces is not the solution for the demands of the growing population. There is a need to find a compromising solution to these respective problems. If we are required to live in high-density housing, why not use everything that we know about making our living safe, comfortable, supportive and life-enhancing?

It is essential to understand that children are innocent victims of the conditions of modern cities. How can their imagination be stimulated in the face of the architectural monotony of housing projects made of glass and concrete? The argument may be that they quickly grow out of childhood and, in a city like Montreal, outdoor play is restricted to only few months of the year. However, an architect can strive to provide for maximum seasonal enjoyment. It is essential and urgent to realize that the open space lands are rapidly declining, and consequently degrading the private world of children. There is, however, a big difference between the understanding of a child’s needs and the daily practice of design by professionals in providing for the needs of young children. Children's imaginations can be stimulated and their interests maintained by simple non-expensive structures: those do not always need high-maintenance schemes. Simple foresight by the planner/architect can transform the same place in two extremely different ways.

Children should have a more safe, responsive and cooperative kind of environment; that is the spirit of what the researcher is trying to accomplish in this design. Regardless of whether a neighbourhood is situated in a densely populated area (as is the case in the majority of housing projects); the open spaces must embrace the creation of significant vistas. They must provide both, a bicycle and pedestrian pattern of circuitous routes that project a feeling of spaciousness beyond the actual size of the neighbourhood, and be continuous and long enough to reach all the residents to allow them to extend their private realm into the public realm. The intrinsic relationship between the standard measures of developed and open space has to be retained as they create a sense of spatial intimacy within a group of houses.
Traditionally, open spaces were required on a percentage basis of the total residential area. However, as residential densities increased due to rise in costs for serviced land, the provision of open spaces was more related to population, as shown in the schematic diagram in Figure 1-2. To ensure the proper design of open spaces, a coordinated policy embodied in an official plan is desirable. “Although this figure will vary from municipality to municipality, 1 hectare per 1000 population may be used as a general figure” (CMHC, Site Planning Criteria 20). Perhaps it is due to the fact that children are flexible and adapt easily to any environment, that adult society has ignored their needs for appropriately designed spaces in many residential communities. This is especially true for the ages between 6 to 10 years, because at that age, children are in transition period of being protected, and gaining a little independence of their own. This is the critical age of physical exercise, emotional, social and full personality development. Children of this age play in spaces adults consider both appropriate and inappropriate. As an architect, the author understands that children’s play needs, their range of distance from home, their diversified interests, and the play pattern are a few of the essential criteria to be taken into account while designing for their play. This research recognizes that if the needs of school-age children are recognized, they will be more compatible with other age groups. The CMHC’s publication Site Planning Criteria states the following requirements under “Children's Play Spaces”:

“In comprehensively planned developments of over 20 family units appropriately located, designed and landscaped play spaces shall be provided for preschool and school-age children. A minimum of 2.5 sq.m.
per bedroom shall be provided for these purposes. The play area shall be included as part of Minimum Amenity Areas” (40).

These aspects tend to be overlooked in developments that have a high proportion of multiple family housing. The municipalities and the government have overlooked the allowance of residential areas to be built without suitable open spaces in the immediate vicinity. *When is the local government going to make public open space an absolute requirement rather than a friendly suggestion?*

### 1.3 Literature Review

Housing represents a lifestyle: where we live is often dictated by the jobs we have, and in turn, the location of our homes affects where stores, community services, parks and schools are situated. Thus, housing is the focus of our daily environment, and is also a concrete symbol of one’s self, a way of identifying with one’s family or with the group to which one belongs.

The study of children is often synonymous with the name of Jean Piaget. Piaget wrote numerous books in this field of research studying the relationship between the child and time, space, world, play, etc. The Child’s Conception of Time states, “Time and space form an inseparable whole. Time play the same part in regards to motion as space does in respect of stationary object. Also space suffices for the coordination of simultaneous positions” (1-2). Child’s Conception of the World explores the various conceptions of the world that children naturally form at the different stages of their development (1). The author explores the child’s notion of causality and reality through a result of a series of lab tests, clinical tests, observations, etc.

Although written in the late 1970’s, *User Generated Program For Low-Rise Multiple Dwelling Housing* is still valid as a fundamental reference. This document is a summary of the final report of a comparative user study of low-income housing for families with children. The Corporations’ main interest in this study was to obtain a detailed analysis of the design and planning features of housing. Accordingly, the
principle objective of the team was “to generate information pertinent to the development of performance criteria for future housing environments” (2). The CMHC publications on Play Spaces For Preschoolers, Site Planning Criteria, and Play Opportunities For School-Age Children: 6 to 14 Years of Age, all independently deal with different requirements, design details, landscaping elements, sizes and locations of play spaces. Each criterion is divided into different parts under the issues, the performance, the discussion, and the design requirements. User Generated Program For Low-Rise Multiple Dwelling Housing, a research paper, is based on the information gathered by a study of 75 families with 2-3 children in medium-density row or stacked housing projects built under the National Housing Act in Ottawa, Montreal, Quebec City and Sydney, Nova Scotia (2). Another document by the CMHC, From The Child's Point Of View: An Evaluation of Outdoor Spaces in Neilson Creek Housing Cooperative is based on an assessment of a small-scale project at Neilson Creek Housing Cooperative in Scarborough, Ontario. The intention of the project was to apply the CMHC guidelines to preschool and school-age play design concepts. After a year of resident occupancy, the CMHC carried out a detailed evaluation of the play areas and the overall use of the site from the point of view of children of all ages, their parents, and other adults. These projects give substantial in-depth information on people's needs, behaviour, and related environmental factors (1-2).

In 1994, an international conference was held in Ohio, USA. The theme was the “Future Vision of Urban Public Housing” Barbara Hendricks presented a paper at this conference, entitled Outdoor Play And Play Areas: A Vehicle For Community Development? Her argument was that there is a virtual disappearance of outdoor free play. It was not because children do not want to play outside, but that they cannot play outside due to the diminishing outdoor-free play opportunities. The result of the conference was that world-renown children play equipment manufactures donated equipment to be installed at two public housing sites in Cincinnati. Bill Lucas's article on “Playground of the Mind”, in the journal Landscape Design examines some of the reasons why school grounds should be a theater for children (19). The authors' research concludes that children value green spaces and prefer a natural environment. Where children have been involved in transforming their grounds, they have begun to experience the thrill of learning to “read” and “write” in a new medium (21).
Planning Neighbourhood Space With People incorporates social factors into site planning through several case studies. The author has examined the safety concerns of the users, their need to be with their friends, to express anger, or to control their turf. As a designer, Hester "Strives to be responsive to the needs of the neighbourhood residents" (2). The problem identified in Children's Play: A Study of Needs and Opportunities, by Holme and Massie, is that with the dynamics of urban environment, streets are unsafe, hillsides inaccessible, much territory is forbidden, and noises are unpopular (23). It is the urban environment in particular where the freedom to play is one of the major casualties.

The article by Moura Quayle in Landscape Architectural Review, entitled "The Changing Community Garden" reflects the changing priorities of people concerning open spaces. The author wished to force memories of the garden in the minds of today's generations as vividly as those that we cherish from our childhood (24-5). The Council for Children's Welfare believes that "Just building the play-grounds is not enough." The contrasting neighbourhood study in Children's Play involved three different approaches: a survey of mothers, a systematic observation of children around the neighbourhood, and administering play inventories to 1,800 school children. The concern for the welfare of children is directly related to changes in society as they effect children. Outdoor Play And Play Areas: A Vehicle For Community Development? has tried to focus on the future vision for urban housing where children form an integral component of the project and are not left with only a space allotted on paper to be detailed later. The research presented in Community Open Spaces has been instrumental in the creation of New York community-based open-space groups and in the development of influencing city support.

Housing As If People Mattered, by Clare Cooper Marcus and Wendy Sarkissian, provides practical suggestions for designing housing responsive to the needs of all the residents. Where children play and what they do, how people delimit their gardens, personalize their entries, decorate their homes, and meet each other in neighbourhood spaces is the premise underlying this book. Having spent the bulk of their lives in public housing and large institutional settings, the authors' goal has been, "As we are required to live in high-density housing, we might as well use everything we know to make our housing more comfortable, supportive, and life enhancing" (Cooper and Sarkissian p. x).
Books by theorists such as Doris Bergen, Joel Frost, Carol Simon Weinstain, Thomas Yawkey, R. E Herron, and the CMHC are a few names of those who provide a stimulating discussion in the field of child's play requirements and their importance as an educational tool. These theorists all concur that the positive relationship between the children and their surrounding built environment is essential to their development. Newman and Whyte have discussed the open urban space issues in their books City, Defensible Space, and The Last Landscape. Defensible Space is a study of the way in which low-rent public housing residents use space with suggestions from the architects for security concerns. "This is a model for residential environments which inhibits crime by creating the physical expression of a social fabric that defends itself" (3).

Publications by the Oxford University Press written by Alexander et al in the years 1975 and 1977, are books that describe an entirely new approach towards architecture and planning. The Oregon Experiment analyzes the master plan for the University of Oregon as an example and defines the process by which it could be adopted as a master plan for universities throughout the world. Through a series of interesting sketches it demonstrates how the spaces are used practically, and how they can be modified to operate more effectively. It explains, "Organic order states that the master plan attempts to set guidelines to provide for coherence in the environment as a whole, and still leave freedom for individual buildings and open spaces to adapt to the local needs" (16). A Pattern Language, on the other hand, lays down a set of guidelines for designing and detailing on every possible scale. It demonstrates how every small detail is fundamental to create the building as a whole.

1.4 Research Questions

What are the functional and safe outdoor play areas preferred by children in high-density housing in Montreal?

Sub-Questions:
- What are the "real" needs of children that meet their urge to explore and experiment?
• How to incorporate these particular needs of children in high-density projects?
• How do the inhabitants perceive their neighbourhood play spaces to be positive?

1.5 Objectives and Goals

This research requires the observation of neighbourhood play areas as perceived children. The study of various cases is an active mechanism with which to distinguish the preferred and the unwanted elements in children's play environments. The objective is to establish the fact that children do not require large-scale, expensive and aesthetically pleasing finished equipment for play. The author's goal is to evaluate small mini-parks in the surrounding neighbourhood with respect to their existing design layouts and then to correlate them with the functional usage by the inhabitants, and also with respect to children's play patterns.

A constructive policy giving top priority to the welfare of children can greatly contribute in helping them to adapt to their environment and to provide constructive education at home. The author is aware of many past studies completed in this field, and aims to identify a solution to this problem from a new angle, specifically from the aspect of the affordability of play areas in high-density housing.

The author's interest and goal in this thesis derives from a desire to:
• contribute to the knowledge mandated by designers and to close the gap between theory and practical usage.
• identify the relevant variables that define safe, sympathetic and responsive environment for children in the urban neighbourhood.

1.6 Methodology

As stated in the introduction, the aim is to gain knowledge that will contribute to the future design of play areas. The plan of study will be based on two methods: a literature review and a comparative field study.
a) The literature review will provide the necessary background knowledge to discuss the research in a meaningful and timely manner. It will provide the basis from which further case studies would then be conducted.

b) The final document will be a comparative analysis of various sites identifying their success or failure as open spaces in a high-density housing area.

The plan of study for attaining these objectives will be based on:

- Direct observations of children’s play patterns.
- Analyses of existing neighbourhood mini-parks with respect to the proposed design strategies.
- Identification of positive and negative elements in the play areas as perceived by the users’.

1.7 Scope and Limitations

As this research is concerned with small neighbourhood parks for children in high-density housing in the urban neighbourhoods of Montreal; the following factors will be considered when conducting the research:

- As school-age children (6-10 years) are the greatest users of the outdoor environment, their interests and needs will receive the highest priority.
- The investigation is limited to the inhabitants usage of the housing environment, with special reference to children’s play patterns, and the review of literature devoted to current open space trends.
- The aim is not to put forward a proposal, but rather to observe the existing design features.
- The conclusions would be in the format of schematic maps, which would decipher the positive and negative spaces in a play space, and the reasons that lead to such scenarios.
1.8 Thesis Organization

This research explores how children between the ages of 6 to 10 manage to meet their needs for playing in high-density housing areas, and what characteristics of such areas they prefer. The thesis will also explore the various play conditions available to children and their effect on child development as an educational tool.

The second chapter discusses the meaning of “play” itself. It explores the various educational and functional issues of play. It also defines the kind of outdoor play activities preferred by children. After establishing the importance of outdoor play activities for child development, the second chapter of this research is oriented more towards the architectural issues of play. Various elements and materials are explored to see which would best-fit children’s play requirements in terms of aesthetics, design aspects, economy and maintenance. These are explored in the context of their effect on various play activities; and the importance of play as an educational tool for the proper physiological and psychological development of children. Essentially it is important to create an environment where the size of the physical play elements are relatively in scale to human size, creating a comfortable urban space. This has been dealt with in Chapter Three. Chapter Fourth explores more direct design solutions and recommendations put forward by various theorists in the past and various government policies and implications.

The subsequent chapters deal with the investigation and analysis of live case studies where the positive and negative aspects of various sites in the neighbourhoods are highlighted. The evaluation of these sites will be demonstrated through schematic sketches and photographs. This research studies the relation between the child, open spaces, and the built environment surrounding them. The aim is to create sympathetic environmental features that will enhance the development of children and serve as a set of simple indicators applicable to urban settings for architects and planners.
Works Cited


Child and Play

2.1 Child and Play

"School-Age children tell you exactly what they feel and think. They inform you readily if they are sick, happy or miserable. They flaunt their skills proudly and proclaim their thrills and horrors loudly. They are high-spirited. They laugh easily. They cry easily. They are full of questions. Yet, they will withdraw into themselves and reflect at times. In school, they are wide- awake mentally and uncomplicated emotionally. These are crucial years for children- probably the most important years of education that has a lifetime impression on their minds" (CMHC, Play Spaces for Preschoolers).

Having established the rationale for the research in the previous chapter, the author wishes to instigate a theoretical study of play and its relevant influencing factors on the development of children. Children play throughout the world, and this activity is such an indispensable component of their lives that one is inclined to see it as the compounding basis of childhood. Indeed, "Play is vital; it conditions the harmonious physical, intellectual and effective development of a child" (UNESCO, The Child and Play).

Childhood embodies creating a social space in which to lay the foundation for optimum human development. It is to provide a context in which to bear the fruits of human evolution. "The child is given license to play and, in so doing, to explore the world" (Garbarino et al. 203-4). Their play is distinguished from adult play in that it doesn't have production as the goal.

Some people use the word "play" rather globally for almost anything that children do; others distinguish play from exploration, imagination, etc. In recent years, this topic has received a great deal of attention from a multitude of theorists as they attempt to pinpoint its pertinent contribution to children's development. The investigation of play in the following chapter is anticipated to serve as a window to the variety of aspects of the child's world, including their social and cognitive skills and its inherent contribution to the development of children. This forms the basic question of this chapter. The major argument confounding this research stipulates that under favourable conditions, play offers a unique and valuable contribution throughout the lifespan of every aspect relating
to healthy human development. The traditional division of play into physical, intellectual, social, physiological, and emotional developments will also be discussed. The objective of highlighting the positive features of the importance of child and play in this chapter is to form the basis for the next chapter in which the relationships between play spaces and the built environment will be explored. Guidelines proposed in the following chapters will deal jointly with the provision of elements in the open spaces and the environmental needs of children. Unless the essentials of the importance of the play environment as an educational tool can be established, it is not possible to justify the reason for investing so much time, effort and money in providing a “suitable” built space which corresponds to the actual needs of the inhabitants. After establishing the importance of play as an integral part of the overall development of children, it becomes essential to explore the appropriate kind of built environment that would further compliment and enhance this process. A non-sympathetic built environment leads to vandalism; the influence of which would also indiscriminately continue into adulthood. What children learn now, they remember forever. The next chapter of this research illustrates how the built environment can substitute the developmental process through a careful understanding of open play spaces in the urban neighbourhood.

2.2 Traditional and Cultural Play

Prior to the 1900’s, most outdoor play occurred in unplanned neighbourhoods or in rural settings (Johnson et al, Play and Early Childhood Development 261). Playgrounds for children have remained a relatively consistent feature through time. There is concrete evidence that children played since early times, distinctly evident in the form of artifacts and paintings (Fig. 2-1). Stone indicates, “Play, like other collective enterprises, is a collective representation of the arrangements of the society and historical era in which it is carried on” (5). The overall need for play and its various contributing factors is universal; the variety of play activities and playthings are all the cultural identity of their specific ethnic and social origin. “Games and their history provide insights not only into societies as they are today, but into the past history of people as
well" (UNESCO, The Child and Play). Homo Ludens states that genuine play is the main bases of civilization, and play and culture are interwoven with one another (5).

Fig. 2-1 Figures from history.
(Source: UNESCO, The child and play)

During Victorian times, various play equipment was invented such as swings, rocking horses, bicycles, etc. which are still used today as the basic essentials for any play spaces. This equipment was integrated in the total landscape of the city and the carriage ways, unique to Victorian times, used these pathways. A visit to the playgrounds was an activity that involved the whole family, both adults and children. The playgrounds were found in charming wooden settings and their structure exuded warmth and safety (Fig. 2-2).

Fig. 2-2 Victorian playgrounds exuding warmth and safety.
(Source: UNESCO, The Child and Play)
The start of Modernism saw the change in the function of these carriage pathways into highways. The practice of Victorian play equipment being abruptly introduced in urban settings without the concern to the surrounding landscape gave birth to many static play areas. Also, the basic problem being the factory-manufactured equipment which stressed more on the esthetic value rather than the practical value of the equipment. There has been a tremendous change in terms of material, the surrounding environment, play equipment, etc. with wooden equipment, metal pipe and chain link components (Johnson et al, Play and Early Childhood Development 262). Contemporary circumstances boast the development of a variety of educational tools. Some of these are discovery items, manipulative objects, creative elements, etc. The playgrounds are becoming more and more a staging area for exciting intellectual exercise as well as physical activity. Yet, we still have a long way to go to make these revolutions a part of our minimum requirements for the mini parks along with the big city playgrounds.

2.3 What is Play?

Today we are aware that people do not naturally spring into fully developed civilized citizens, they must be cultivated and taught progressively. Play is the keystone of human development. Understanding what play can and should mean to our society, is essential. The exact meaning of play is very broad and therefore difficult to define precisely. The Oxford English Dictionary defines play as, “A method to occupy oneself in (a game) or in another recreational activity.” This definition however, does not indulge the spectrum of features attached to this term. If we are to study about play in detail, it is critical to consider all of its multiple functions that can be considered from different perspectives. Some other definitions of play discussed by Holme and Massie (31-40) are:

Play is a ladder to a child's mental development. It is an educational process of tremendous importance and the right of every child. Social skills like sharing, co-operating, and physical, mental and emotional competence are best learned through interaction with other children. Play is embodied with a high degree of motivation and achievement. Children build their confidence by their own power.
Play offers freedom of action to a child. This is their unique world. They can carry on trial-and-error activities without the fear of ridicule or scolding. This is an important boost to their ego and self-confidence. In circumspect, they have everything to gain, and nothing to lose.

Play provides children with an imaginary world that they can conquer. They manipulate their environment as they please, and destroy it as they please. Their sense of achievement is tremendous. There is freedom of choice and action with an absence of boundaries that are not granted in the adult world.

Play furthers interest and concentration. All children have a natural urge to explore and discover. They watch everything other people do with utter absorption, and then imitate everything with greater concentration through play without the fear of failing (Photograph 2-a).

Play offers opportunity for mastery of the physical self. Children learn to control their body movements according to the requirements of the surrounding settings. Fun and exhilaration are the defining components of physical play.

Play incorporates children's self-initiated efforts towards adjustment and control of their environment. Every time their efforts are successful, it gives rise to feelings of self-worth and development of confidence to accept new challenges as they come.

Play is also a communication tool. The child starts with signals and this leads to conversation with others of the same age. Thus, continuity is established and children gain knowledge about other children's imaginative worlds, simultaneously sharing their own with them. This reciprocity is their first step towards interaction and influencing one another in the context of their play relationships.

Play is also a means for developing competency because it enables children to act on their environment, becoming more effective in their goals and aims and thus receiving personal satisfaction.

Play is not an activity that is exclusively restricted to childhood. This activity carries through adulthood; it just changes its appearance. It is unstructured in childhood, and then increasingly becomes more goal oriented. This justifies the expression, “Let the games begin!” before the start of Olympics. This is a very important play activity for
adults. Play is more ritualistic and religious than any other form of activity. Lawrence Halprin (1969) demonstrates in The RSVP Cycles, whereby the ritualistic dance sequence is also a form of play (112). The ritual act represents a cosmic order. Homo Ludens describes play as a sacred activity that contributes to the well-being of the group (9). “According to ancient Chinese lore, the purpose of music and dance is to keep the world in its right course and to force Nature into benevolence towards man” (Huizinga 14). Another example can be taken as the Festival of Colors (Holi) celebrated every year in India. This is a very religious festival, and is celebrated by both adults and children by engaging in the act of play. Here play is seen as an example of culture and tradition in the adult world. Play is a sacred activity, temporarily a real world of its own.

In addition to parameters of a religious nature, the perspective returns to the fundamentals and the diversified educational elements of play, which are of great significance in the process of growing-up for children. Children are highly self-motivated to determine the how and why of things in their play. Through this kind of process children continue to mature through a trail and error method.

2.4 Educational Functions of Play

The preceding theories and definitions suggest that play serves an important function in the education and development of young children. In Japan, there is a saying, “Play well and learn well.” It is possible for adults to consider both play and learning as independent elements, however children see them as two inseparable elements. Also, during school hours, a specific time period is set aside for play activities. This is because play is also a part of education. If developed at an early age, it makes children more open to accept new friends and environment as their action radius increases with age. Through play, children come into contact with experiences they never knew existed and thus develop a curiosity for, gain knowledge about, and deepen their understanding of their environments. “Play is a spontaneous activity of children that fosters physical, mental, and social development. During spontaneous play children actively become involved with their surroundings in order to develop and exercise skills in these domains” (Zimring and Barnes 310).
Children seek to understand external realities in play. It is a place with possibilities for opening and expanding new horizons. Play is a process that has no assigned or expected end product. Children cannot fail when they engage in free play. Thus, there is freedom to explore, invent, and test a full range of possibilities. Through imitation children learn what they can about what it is like to be grown up. This is the reason why psychologists stress portraying best behaviour in front of a child. Play is an activity that allows young children to repeat experiences and to understand them more completely. In play, they can express ideas for which they have no words. Social activities also take children into a different environment. Play is a natural part of childhood. So, do we take it for granted that play is necessary? Or do we look into the contributing factors essential for the development of the body?

"Educational functions of play relate to areas of cognitive, creative, language, social, and physical developments" (Spodek and Saracho 15). Many other developmental issues as discussed by various theorists are stated below:

2.4.1 Creative development: School-age children are very interested in learning how to manipulate and use tools to make or repair objects (CMHC, Play Opportunities for School-Age Children 13). They enjoy the whole process of just being able to create something of their own. Unless this development is nurtured, many children lose their spontaneous expression and creative problem-solving skills (CMHC, Play Opportunities for School-Age Children 13).

2.4.2 Social development: The primary task of childhood is to be socialized into becoming active members in culture. During play, children learn how to share and get along with others, respect others, be patient, etc. They learn all about the social rules enforced by our society and how it affects our life. Social development continues throughout life, but in childhood the influence of play on the course of social development is especially evident (Athey 19).

2.4.3 Emotional development: Play can be a medium for the expression of positive feelings and for learning to handle those feelings constructively. They learn to control their temper in front of other people. It helps them to deal with anger, hurt, and pain (Miller 7-8).
2.4.4 **Physical development**: Enjoyment of sports in school-age children is largely derived from the exercise of the muscular system. Physical energy finds its outlet in play in a constructive fashion (Athey 11). The mastery of physical skills has an important impact on a child’s self-image (CMHC, *Play Opportunities for School-Age Children* 10).

2.4.5 **Intellectual development**: Children formulate theories and explanations about what they observe. They do this by manipulating their environment, experimenting, creating and moving towards self-expression (CMHC, *Play Opportunities for School-Age Children* 10).

Play also keeps children occupied: being engrossed in play keeps children away from dangerous situations that require constant supervision from the parents relegating it difficult for them to carry on with other tasks.

2.5 **Relationship Between Exploration and Play**

An article by Wohlwill explores the various relationships between play and exploration. He stated that exploratory activity and play are generally linked together by the fact that they both share a similar motivational basis, yet represent different forms of behaviour. It is important to arrive at a consistent distinction between them, not only in order to arrive at a full understanding of each, but also to appreciate the interrelationship that exists between them. Exploratory activity tends to be highly stereotyped, that is, unvarying across a given situation, whereas play may take on a great variety of specific forms and commonly include activities involving objects and competitive sports (145). The author compared response sequences for exploration and play in terms of a schematic diagram where a child first approaches an object with curiosity and then ventures to manipulate it. This leads to the conclusion that immediate surroundings adjacent to the home are very important to children in this age group (6yrs to 10yrs), in order that they feel at home and safe. “Exploration is preferred when the material is not fully familiar so that some degree of uncertainty remains to be solved. Once the child has been able to reduce such uncertainty to some satisfactory minimum level, a play phase
can ensue, provided of course the materials provide the opportunity for it” (Wohlwill 158). As the investigation of the object decreases, other activities involving the object increase, which can be labeled as, play. This is demonstrated in Figure 2-3 below.

![Figure 2-3 Ratio between time investigation and play activity.](image)

(Source: Child’s Play, 1984, p. 160)

We can conclude with these observations that investigation and exploration are directional and oriented towards a specific environment; while play occurs only in a known environment where the child can relax and feel “at home”. This helps us to understand that the relationship between exploration and play is relevant to the development of a child.

2.6 Relationship Between Play, Imagination and Creativity

The following Figure 2-4 by Lieberman offers a schematic presentation of the possible relationship between play, imagination, and creativity as first-order elements, and playfulness, divided into sense of humor, manifest joy, and spontaneity, as second-order elements. The sequence that the child will generally follow will be that of imagining a certain situation, then gaining confidence in it through the explorative play activity, and finally creating something of a positive nature from the sequence (107-8).
Materials that would commonly regarded as “junk” to adults may be very relevant to the end product of imagination and creativity for children. This is also demonstrated by Figure 2-5 where a child builds an entire imaginary city from discarded materials.
2.7 Categories of Play

School-age children indulge in play activities in many different ways. Their play patterns are varied and flexible according to the opportunities available to them. Observation of their play pattern has helped to classify the categories of play to many theorists as mentioned below:

2.7.1 Physical Play: During this type of play, children engage in simple repetitive muscle movements. This appears first in infancy and is gradually replaced by constructive play. It involves the use of functional movements of objects in a goal directed way in building or constructing something (Photograph 2-b). It is the most prevalent form of play during the pre-school and school age years, and occupies almost 50% of free playtime (Bergen, Play as a Medium for Learning and Development 53).

2.7.2 Creative / Cognitive Play: Creativity is the process when the imagination is given full free range. “Creative children are usually physically, cognitively, and socially spontaneous, as well as humorous and joyful” (Spodek and Saracho 15-6). In cognitive play, children create objects and roles, and develop awareness between the real and imaginary (Photograph 2-c). As remarked by Johnson et al (Play and Early Childhood Development), “Cognitive play and creative play often blend or go together” (85).

2.7.4 Social Play: The socialization process requires children to learn to get along with others. According to Spodek and Saracho, “The early childhood is, above all, a social environment. Here they learn a wide range of verbal and non-verbal communication skills and deal with their peers' feelings and attitudes” (17). In this play, children interact with other children (Photograph 2-d).

2.7.5 Symbolic Play: “The substitution of one object for another is included in the structure of symbolization” (D. El'Konin 222). Also, the assumption by the child of the role of an adult is an original form of symbolization (Photograph 2-d). In play development we encounter symbolization twice according to D. El'Konin. First, during the transfer of activity from one object to another, and second, when the child assumes the role of an adult as a means of simulating social relationships.
Fig. 2-d Social Symbolic play.
(St-Jean Baptiste school, Montreal)

Fig. 2-e Quiet retreat play.
(Pointe-aux-Trembles, Montreal)

Fig. 2-f Stereotypical play area.
(Montreal downtown)
Fig. 2-a *Imitation.*
(Housing in Westmount, Montreal)

Fig. 2-b *Physical play.*
(Parc Jean Jacques-Olier, Montreal)

Fig. 2-c *Creative Cognitive play.*
(St-Jean Baptiste school, Montreal)
2.7.6 Quiet Retreat play: Everyone, at one time or another, requires solitude in order to understand themselves or their surroundings intently (Photograph 2-e). This is reflective of a child's wish to be alone (CMHC, Play Opportunities for School-Age Children 15).

2.8 Play Requirements and Organization of Spaces

Theoretically, the best play environment will be the one from which the child gains the most knowledge, the greatest skill competency, and opportunities to gain physical, social and cognitive skills. But these play settings are a fragile phenomenon and often are destroyed by the heavy-handed rules and regulations of adults. A quick survey of today's urban recreational scene would reveal an appalling lack of concern for the environment. Despite studies conducted during free play in early childhood centres that may have contributed some information regarding the influence of play materials on children, they only provide an idea about the play materials rather than specific guidelines to employ when arranging a playful environment. They do not observe what happens when these are altered in terms of space, equipment, and arrangement of furniture. Is the reason for this that so many expensive new playgrounds are stagnant and not favoured by children? As seen in Photograph 2-f, if we provide them with a stereotypical play area with factory manufactured equipment, it does not initiate play activities; rather it initiates vandalism. This particular example in downtown Montreal resembles a leftover relic of a pipe and steel factory with an asphalt base. This is a typical example of a "play area" which is a waste of resources. What parent would feel safe leaving their children unsupervise in an area like this? Why are these areas even considered planned? Who is gaining from these areas? This is a long list of several imperative questions which we, as adults, with the power to change society, have to ask ourselves.

The author believes that it is possible to give children opportunities for free and creative play even in a densely populated built area if thought and imagination are brought to task. It is a fact that when these aspects are ignored in the built environment, the future of young people is endangered. There is an urgent need to develop their
independence; and the essence of our providing for them must be to give them the freedom to choose. We have to focus on how children perceive their areas and what they respond to positively. Friedberg stated in his notes, “When play was an issue, he found answers with the child, and not with the administrator, manufacturers, or programmer. He found the children screaming for an environment that would exercise the mind as well as the body” (Looking Back 12-3).

A certain amount of risk is essential for creative outdoor play. But what is to guarantee that this will not be overdone causing serious injury? These safety hazards can be caused by inappropriate design, inadequate maintenance, improper surfacing around play areas, etc. Sensitive design can increase challenges in play, while simultaneously reducing injury. Inadequate play areas in the neighbourhood often offer nothing constructive to children, and the limited play activities create a restrictive built environment around them. A variety of play areas in the immediate proximity of a child’s home, providing multiple play zones with diverse paths in the play spaces, lead to a rich pattern of play behaviour.

2.9 Planning for Play

Physical planning for children in the residential environment has almost always come to mean the planning of playgrounds. This is critical, but it is wrong to assume that these are the only play areas inhabited by children. They play everywhere throughout the residential community; and planning for their play must sufficiently recognize this phenomenon and accept the fact that tidy playgrounds meet the needs of adults, but hardly respond to the everyday play needs of children. We should not forget that planning for play is a question of communication. According to Bengtsson, “We often plan as if play was a kind of task that the child takes to the playground to perform” (23). We then forget the very essence of play.

The major consideration in residential settings is that school-age children do not use specific areas for play. The key guideline of a successful housing scheme is that the design of the setting of units is as important as the design of the building itself. The entire landscape scheme should be conceived in terms of children’s play pattern and scale. All
parts should be designed with a view to their use by children. Children's play spaces should be designed to stimulate their total development, providing opportunities for social interaction as well as physical, creative, and cognitive play.

According to Steen Esbensen (Legislation and guidelines for children's play spaces in the residential environment), "Environmental psychology states that the physical environment provides cues to children, and their reactions to these cues can either aid or hinder their learning" (12). She further defines various play zone requirements for an ideal environment essential for children as drawn in Figure 2-6 below. “Developing by-laws for open play spaces in high-density housing has become as critical as the demand for land and redevelopment of urban areas. The rights of childhood are affected when these standards are developed for space allocation” (Esbensen, The Early Childhood Playground 123).

![Figure 2-6: Play zones for an "Ideal" playground.](Source: The Early Childhood Playground: An outdoor classroom, 1987, p. 12)

Over the last decade in Canada, ten deaths have occurred in playground-related accidents (CMHC, Play Opportunities for School-Age Children 19). Safety is a concern of paramount importance for all, both designers and parents. The cartoon series of “The Simpsons” dedicates one episode to this issue in which Homer Simpson is concerned with the safety issues of the neighbourhood children. This shows him stuffing all the play equipment in the playground with balls of cotton to prevent any accidents. This issue is
not only related to equipment design, but furthermore to traffic issues. Children cannot control their movements in the same way as adults. Their senses are not fully developed and they have only limited experience to refer to. Traffic and children do not mix well. Traffic is strong and brutal; children are small and tender (Bengtsson 21). The sense of a safe environment in terms of security and congested roads without safe pedestrian walkways is also a major concern to all parents. If traffic areas and pedestrian areas can exist side by side, the quality of the environment can be improved as shown in Figure 2-7 below.

![Fig. 2-7 Traffic and play.](Source: Site Planning for Cluster Housing, 1977, p. 178)

Play spaces for children are the places where learn how to use their muscles; they coordinate what they see with what they do. They explore what they truly are with neither pretense nor fear. They acquire new skills and learn when to use them. Their play involves the solving of problems and the making of decisions; this is very obvious when one watches them. Together, these theories provide a rationale for the use of play as an educational tool; and thus the rationale for this study.
Works Cited


3.1 Introduction

Human beings have constantly striven to better their living conditions. However, in their drive to create a practical modern world, they have forgotten that the natural beauty of unexplored forests is as important to a growing child as food and water. Most vast building schemes are planned without the love and understanding of nature and the urban scale. For children, outside living is more important than inside living. Young children living in high-density areas run the risk of being lonely. A study by Dr. Fanning in Germany proved that children, who are confined within flats and are not in contact with nature, are bored with the monotony of their lives (Lady Allen 12). They live through long empty hours and are criticized by adults when they fail to develop a positive interest in activities later. But what are they to do? They play on the streets of the surrounding built environment and amuse themselves with self-made activities, which often leads to acts of vandalism.

Play, as talked about in the child environment literature, means any kind of spontaneous activity initiated by children themselves. Environment as used here means the physical (natural and constructed) space used for such purposes. A built environment is defined as the result of human-built utilities, services, construction, etc., and is a constantly changing phenomenon depending upon its interactions with other built elements (Untermann and Small 74). Play is a very private and subtle phenomenon, constantly in flux. For this purpose, it is essential and difficult to integrate it into the private-public space distinction of the urban environment.

"The environment impinging on child development is not only physical or designed environment, but also cultural and social" (Moore, State of the Art in Play Environment 173). This tells us that the interrelation between the social and physical environment is more important to a child's experience than either taken in isolation (75). This is ascertained in Figure 3-1 on the following page by Wachs (300).
Children's interactions with their surrounding physical settings are direct, simple and easy to observe. They often spend their time in contingent places. Holme and Massie (94) show the nonsuccess of playgrounds in terms of low attendance rates by children compared to other alternative outdoor play spaces like roads and pavements, through a series of alternative case studies. Adults often become angry with this, yet “These forms of urban space unintended for children reflect their needs and desires that go beyond what
they find in the formally planned spaces for them" (Michelson 90). As an architect, to the author this demonstrates a lack of coherence of the landscape and the open space in the total design of the site. Each pavement and each street should be treated as an individual design element and acted upon accordingly. All spaces should flow into each other and form a whole uniformity. By recognizing this fact in the planning and designing of the total site, the design for open spaces in the built environment could be developed to facilitate and foster the accommodation of children’s needs.

Kiossoglou observes, “No one is satisfied with the present conditions in the city, yet few consider their responsibility to act in any way to improve it” (96). Unfortunately, children's needs are often not a high priority even in spaces specifically intended for them. Architects do not give enough thought to the developmental characteristics of the users, and generally design them without their input. The reasons for this first include not being aware of children's needs, and second, because their needs are minimized due to budgetary limits. Who should encourage designs that reflect sensitivity to children's special needs? Society is indifferent to the importance of play as an educational tool, and in low-income housings, long-term cost benefits are not calculated.

What is in a space that affects the behaviour of people? What settings invite children to involve themselves in constructive play patterns? These spatial clues can be used to support future design goals for young children. Since the importance of play activities for the development of the child has been explored in the previous chapter, the importance of understanding the environmental factors influencing the play activities cannot be ignored. This chapter explores the diverse possibilities in the built environment related to play spaces for children in high-density housing which are suitable to children and affordable to developers. It focuses on immediate, small-scale outdoor environments around the residential areas, and how the specific features of the neighbourhood play facilities directly affect children's play patterns.

What do we know about the relation between the physical environment, the children's play behaviour, and their subsequent development? This would form the basic question of this chapter. The outdoor environment study would include different types of settings linked with high levels of play pattern.
After the importance of play and development is explored, to determine where, how, and when children play is essential. Since play takes place in an environment, the object should be to recognize this and study the relation between the built environment of play spaces while delineating satisfactory requirements for children's play. These areas should provide a stimulating yet safe environment in which children can experience the risk-taking element of doing, failing, redoing, and succeeding (Weinstein and David 9-10). Photograph 3-a illustrates a play pattern by a child who is energetically involved in the task of jumping and climbing for ten minutes until balance is attained following each journey.

3.2 Built Environment and Behaviour Issues

Our built environment and surroundings do influence our actions. This has been confirmed over the years by many researchers like Deasy, Lang, etc. But in our present civilization, there is less balance between the two. One always tries to dominate the other. The environment is an integral part of human behaviour. It does not only surround humans, but also manipulates and directs them. Glenn mentions “To endanger our environment is to endanger us” (3). Fundamental to understanding the role of the built environment in peoples' lives, an understanding of what environment is defined as is essential. Cooper and Sarkissian have delineated a successful neighbourhood built environment as:

The most successful clustered housing schemes have been those where the psychological, social, and aesthetic importance of the communal outdoor space has been recognized from the beginning. This is not some little piece of luxury green space to be fitted in after building location, parking, fire access, and so on have been determined. If done sensitively, the outdoor space can be the heart and soul of the community- where children play safely, where adults meet and stop for a chat, where people exchange ideas over an oasis- identity can be forged in a desert of look-alike homogeneous streets (189).

The built environment results from the changes in the social and cultural environment of the people. Bechtel comments “Human organizations need to be of a
Fig. 3-a Jumping and climbing.
(Pointe-aux-Trembles, Montreal)
certain scale in order to derive positive benefits from environment” (163-64). In the built urban environment, the creation of childhood places should not be left to chance or developed under pressure; they have to be designed and developed before. Instead of asking, “How does the natural environment affect the child?” should we ask, “To what aspects of the built environment do children react?” we would get more insight into their preferences and needs. It is clear that a change in the physical environment brings a change in the child's behaviour. For example, if we want to allow them to run, we have to provide enough open space to do so. In high-density areas, buildings dominate the landscape, and open spaces play a minor role. This can causes an adverse impact on the behaviour of the residents. Thus, it becomes more important to “manipulate” the environment and to avoid this state.

Much research has been done and volumes written on the variables effecting the development of children. But the effect of the built environment in this regard has not been emphasized to that extent. First, is the question of the ways in which the physical settings are significant for the growth of a child. This aspect goes beyond providing “enriched” and “stimulating” settings in the open spaces. The author believes that this can be developed as an important characteristic, effecting the developmental process in a child, with a better physical environment through which the child derives meaning, purpose, form, and structure of the settings.

According to Moore, “Child and environment are in a delicate balance with each other, both altering information and experience to fit with existing ideas, while simultaneously altering the structure to conform to the information” (State of the Art in Play Environment 182). The dominant aspect running through this chapter is that the child's play behaviour is affected by the surrounding settings and the context in which it occurs. For this, it is essential to measure a child's perception of the physical settings. “The environmental experience of children consist of objects, places, and spaces that satisfy their biological, social, physical, and cultural needs which other objects, places, and spaces do not” (Proshansky and Fabian 24). Weinstein and David put forward diversified propositions to guide inquiry on the interactions between children and the built environment. Accordingly, unpopular physical settings communicate symbolic message from the adults that children are not worthy of comfortable and pleasing
surroundings (6-7). All built environments should foster personal identity and encourage the development of competence through landmarks and boundaries representing the spatial environment. Provision of opportunities for growth through exploring, playing with interesting materials, climbing, roaming, etc., and to cultivate a sense of security and trust in the surrounding environment is needed. It should be remembered that if the built environments for urban children are shrinking and diminishing in quality, so too, are the environments for adults.

3.3 Urban Form and Urban Scale

Many of the activities that provide a setting, within which a child may assess and bring changes to the environment, should incorporate urban design elements in terms of their scale and form. Facilities should not only be on a human scale, but rather on a small enough scale to be manageable by children. This is possible if the planner develops better land-use masterplans, neighbourhood designs, or zoning regulations. The architect should be able to create individual housing clusters, which respect the scale of the neighbourhood and the community. The principal concern is to understand the physical environment and to help shape it to better serve the inhabitants’ needs. In good urban spaces, children can take part in the life of the city on the whole. Although it is not easy to create these theories and employ them immediately, have we not already lost enough time on these theories? To tackle these problems, we can employ a number of approaches ranging from the solving process to the functional analyses. Studying how the physical environment is transformed, may constitute another approach that would enable us to record various social and economic processes (Lynch and Rodwin 84-5).

In our daily lives, there are certain places that magnetize us visually more than others. Although common people do not necessarily understand all the design principals that compromise their urban form, they are nevertheless aware of them, and their acceptance or rejection of a particular place documents that. “The visual quality of the environment must satisfy our intellectual and emotional needs as well as support the social aspects of our lives” (Lucic 1-2). Elements of neighbourhood open spaces are yards, streets, parking, etc. Urban implies that these spaces are small and over used, and
thus creates noise and privacy problems for the adjacent units. Presently, buildings are
often built with disregard to this, and create open spaces wherever possible just to fulfil
the requirements of zoning by-laws. The built environment is aesthetically appealing and
comfortable when the relationship of the elements is relative in scale to the human size.
This is especially true for the younger generation whose scale is even less than that of the
adults, this imparts them a feeling of uneasiness in the open spaces left for their play
activities. A playground is basically a child's world. An adult should feel uncomfortable
and out of place; only a structural environment built to the child's proportions can
achieve this. The scale required has to be distinct for reasons of safety, skill and
challenge (Friedberg 117). A Design Guide for Residential Areas of the County Council
of Essex states:

The relationship between the “effective height” of the buildings and the
width of the space is critical if a harmonious urban space is to be created. If
too high in relation to width, a feeling of oppression may result; if too low, a
feeling of exposure and vulnerability.

Therefore, the scale created can be situational. This is also true at the city level. But
on a local community level, it is the question of individual design. As architects, we
should be able to inspect each space individually, and decide the scale judiciously. The
urban form of the neighbourhood is an elementary design feature. “The form of a
building has an enormous impact on the street score. It influences open space around it,
as well as its relationship to adjacent buildings” (Halprin, The RSVP Cycles 94). The
specific goals of an architect/planner should be to create an agreeable, friendly,
aesthetical and harmonious built environment, which is also in scale to all the inhabitants.
Developing guidelines to make these issues a complete part of any design proposal would
one day see a much better world in terms of urban form and urban scale. According to
Halprin (The RSVP Cycles), the whole city landscape should come alive through
rhythmic movement of the pavements, streets, sculpture, etc, all together stimulating total
environment for the creative process of living (9).
3.4 Urban Child

We all agree that we want livable cities for our children. Unfortunately, the mobility of children is restricted in most North American cities (Lennard, Livable Cities Observed 112). It is very important to use every available opportunity to create calm and green areas surrounding their residential settings to neutralize this fact. We need to perceive this issue and build cities that perform to children's needs on their scale. Many children these days live in apartments where it is forbidden to keep animals except dogs and cats. Close and intimate contact with nature is possibly the greatest loss suffered by children. This is the reason why we stress sending our children regularly to summer camps. But is this fair in our responsibility towards them? They are sent to summer camps as though a week amongst nature will somehow restore and enliven their spirits. An article by Yi-Fu Tuan illustrate an example of teenagers from Brooklyn, whose capacity to enjoy and benefit from nature had been warped into indifference and fear. When taken to a summer camp for the first time, they were frightful of small fishes and the darkness around them. They were incapable of lighting their own fire or baiting their fishing hooks. This parallel is corroborated further in the considering that these were the same teenagers who lead their friends into gang wars in the city (11-2).

Gruen observes, "The development of our children is determined through learning reality in forms of confrontation, and a clear realization of danger" (109). We have to question the faith we have in these children as being responsible and able to respect and safeguard nature for future generations. One day, the future of the world’s cities will be their responsibility. Should we expect them to give something to their future generations that we ourselves are unqualified of giving them? Lennard (Livable Cities Observed) gives guidelines to affirm children’s interest and participation in cities and neighbourhoods:

- The presence of adults to take responsibility.
- A network of safe and traffic reduced streets.
- A legible and meaningful urban environment.
- Visually interesting characteristics of the built environment.
- Contact with nature so that they can learn to respect it (116).
3.5 Urban Neighbourhood

The *neighbourhood environment* can be defined as the urban environment that belongs to a particular group of buildings, a housing area, or a block. The planning and design of a neighbourhood, together with the contents and quality, varies with the type and character of the buildings in question. A building without common land around it is isolated from society. According to Unterman and Small (74-5), *open spaces* include all land that is not occupied by the developed form. These include all open parks, streets, parking, etc. Moreover, open space is not just undeveloped land; it is meant to be used and enjoyed. Every inch of outdoor space can enhance the development if it is initially considered in the site development process. The advance of large-scale projects changes the quality of the built environment surrounding the neighbourhood. This is most clear in high-density housing where an effort is made to use very available piece of land for further growth. “In addition to the open spaces created by the city, there is a need in the city for neighbourhood parks” (Halprin, *The RSVP Cycles* 30).

Neighbourhood settings are very critical in their implications for learning social values and place-identity development. “These areas encourage more social play between different genders and ages, and also have the potential to contribute to a child’s development” (Moore, *State of the Art in Play Environment* 190). Lennard describes some social goals of a new urban neighbourhood as a place where people feel recognized, play a valued role, children grow up within a familiar environment, and a neighbourhood has its own sense of identity (*Livable Cities Observed* 35). To ensure that the children’s need and right to play are protected, an effective combination of by-laws and community education must be established. “Traditional growth patterns are isolated from the environment, isolated from activities, and ultimately isolated from individuals” (Ryn and Calthorpe 1986). More important than providing open spaces is the total integration of this area into the residential setting of the home. According to Sharonov, the requirements for the spatial arrangements of buildings for children should:

- Demonstrate simplicity in the play spaces surrounding them.
- Clear, simple and precise form of the structures.
- Scale of the child should not coincide with that of adults (120-21).
The environmental features that were found to engage the interest of children, stimulate their play actions, and increase imagination are the features of the natural environment" (Sebba 419). The results of this research show how these can be included into the urban neighbourhood through careful and sympathetic understanding.

3.6 Spatial Arrangement of Outdoor Spaces

Adequate open spaces in the city are a biological necessity essential to life. These can also be termed as open breathing spaces in the developed fabric of buildings. Large open areas are fine for the city neighbourhood as a whole; but they do not provide a base for the function that is common to a cluster of households. They look and feel deserted on this scale. They may look good in the drawings; but in real life they end up as desolate and dead (Alexander et al, A Pattern Language 339). Zoning affects the street score. “In New York City, the open space ration provision of the ordinance stipulated that each building must provide its own open space on its own property. The result has completely changed the look and feel of New York because it has forced a series of homes each on its plaza” (Halprin, The RSVP Cycles 94). A Pattern Language specifies, “Give over 25% of the land in house clusters to the common land which touches the homes which share it” (339-40). The authors explain this through the sketch below (Fig. 3-2).

Fig. 3-2 Common meeting ground.
(Source: A Pattern Language, 1977, p. 340)
In their book, The Oregon Order, the authors stress that unplanned growth leads to loss of coordination between the various parts. The masterplan should clearly delineate parameters to provide for a unified coherence in the environment as a whole, and still leave freedom for individual buildings and open spaces to adapt to distinct local needs. There has to be an order in any development that is undertaken (Alexander et al, The Oregon Order 15-6). The same holds true for small-scale neighbourhood spaces. Therefore, there has to be specific order in the element of neighbourhood play also. Play spaces do not correspond to the order of masterplan, rather on a much smaller scale, to the order of individual neighbourhood design. Clusters should be flexible to adapt to the growing needs and requirement of the inhabitants, while simultaneously form a coherent whole in the community. A true order for an environment can only emerge when individuals are given the freedom to act free and simultaneously coordinate by mutual responsibilities, not by constraint. The architect should be able to define this process and act on it accordingly. “The aim is to organize an ideal network to tie together the spaces for individuality” (Salzano 33). Buildings and spaces created between them should relate to each other to make a meaningful whole. Given below in Figure 3-3 are some examples from Site Planning for Cluster Housing.

Fig. 3-3 Optimum use of wasted open spaces.
(Source: Site Planning for Cluster Housing, 1977, p. 172)

Make all outdoor spaces around the neighbourhood positive in nature, and give each space a degree of enclosure to define it so that it does not “spill” over. It is
fundamental for open areas to let the airflow in. Big cities are abounding with small empty lots and small alleys of urban land. Montreal is no exception. In most cases, these are generally garbage-collecting lots with little or no real use or value. Ironically, this situation is most common in high-density areas where the need for recreational areas is the highest. Creating balanced positive outdoor spaces from such areas is most challenging, but not impossible as demonstrated in Figure 3-4. These are the examples of simple and non-expensive alternatives.

![Figure 3-4 Positive outdoor spaces.](Source: A Pattern Language, 1977, p. 521-22)

Also important is to avoid open spaces that seem to belong to no one as these areas may fall prey to vandalism. The challenge is to select and mix a variety within a realistic knowledge of space and location requirements: preserving this should be an indispensable part of our future vision. The aim should be to design a cluster of houses around various focal points so that everyone can walk through them without the feeling of trespassing, while simultaneously being welcoming.

### 3.7 Density and Home Environment

The fact that neighbourhood density figures are based on a combination of all neighbourhood land makes them a valuable tool in total planning and housing. Through control of the overall densities and the masterplan, the local government can keep all densities within the limits necessary to health and amenity. Open spaces provide a means
of enhancing and enriching the natural landscape elements. If we obey the system, it promptly provides easily accessible space for informal recreation. This is what a definition for the *home environment* is described as (De Chiara 200-4). The *American Standards for New Urban Area* states that the neighbourhood parks require a minimum of 2.0 acre of an area per 1000 inhabitant population, and should serve an area of 0.5 miles. Space requirements for children’s play areas are required to be a minimum of 0.5 acre per 1000 population with an ideal size of 1.0 acre (200).

The definition of density differs according to the population figures in different cities. Therefore, we need to compare and balance the density figures as it affects the quality of life. For example, this figure varies from the City of Montreal to the City of Toronto. The high-density areas of Montreal may be initially termed as the medium-density areas in the city of Toronto. What is important, is to visualize the quality of life for individual cities.

Overall, the findings of this chapter suggest the need for the thoughtful design of space to create an environment that provides balanced opportunities for play in the built environment surrounding the residential high-density housing. Play theory suggests that some types of play behaviours are more desirable than others for their contribution to development. One of the difficulties facing the architects and planners is to know where to find the most recent information on all aspects of play, as research is widely scattered. The author is taking the initiative of bringing all this material together and making it readily available for them in Chapter Five. The author’s plea is to bring a more sensitive awareness of places where people live and where they bring up their families; to relate the scale of children to the buildings surrounding them to establish a sense of belonging.
Works Cited


4.1 Introduction

School-age children are the most important group to consider as the home and the immediate surroundings are the focal point of their daily activities. Once exposed to the neighbourhood settings, children become aware of a larger and more different world. Familiarity of the neighbourhood environment allows children an emotional safety in an otherwise new and strange physical environment in which to play. Being close to home is as important to them as for their parents. This is a reciprocal relationship as the parents show considerable desire to know where their children are playing. Planning for children's play involves the design of the whole neighbourhood, and also the relationship between the outdoor-indoor environment.

Some people assume that it is possible to achieve a perfect balance in the built and open environment only if it is pre-planned and everything is designed according to the masterplan. Only then would we be able to create spaces that are functional and aesthetically pleasing. This is where the needs of an urban planner are required. The other opinion is that due to various reasons such as funding, time limits, residents' opinion, location, etc., this may not be possible. We may lose the individual integrity of small parts resulting in a monotonous development that is neither desired nor functional. The contribution of an architect is essential here. The mandate is to find a harmony between these two professions and to work together towards a better community. We have to allot spaces in the masterplan for children, while simultaneously giving individual attention to the smaller mini-parks. This issue has urged the author to review and understand some of the design guidelines for play areas by different authors. This includes looking into the design aspects for play spaces with regards to school-age children before the actual study of live cases dealt with in Chapter Five. These are a set of guidelines, which have been agreed to by developers and architects in this field, over years of research. The author’s concern, while reviewing these, is to see how these are practically implemented by the administration in the designated neighbourhood mini-parks, and then used by the inhabitants and how they influence the children’s play patterns.
4.2 Outdoor-Indoor Relationship

Where children go and what they do there is the result of what is available to them within a range that is appropriate to their age. "This action-radius expands with age. It starts inside the housing unit, to common areas within, to areas immediately adjacent to residential buildings, to larger play areas, to streets, etc." (Schoenauer 57). This "action-radius" of separate members of the family varies according to different age groups and thus establishes an environment of different extents for each person (Fig. 4-1). For children between the ages of 6 to 10 years, this radius is limited to neighbourhood mini-parks, which are readily accessible to them and comfortable to their parents. This indoor-outdoor relationship enables easy supervision of children by the family as seen in Photograph 4-a of a housing development in Ottawa. In an ideal dwelling, the boundary between indoor and outdoor areas should not be prominent. Spaces should "flow" into one another maintaining continuity.

![Fig.4-1 Action radius.](Source: Cities, Suburbs, Dwellings-in the postwar era, 1994, p. 57)

The outdoor play environment is an extension of indoor classroom learning. Hart and Sheehan observe that various types of outdoor environments and available equipment influence the behaviour of children in various ways (669). Yet, what are the possibilities
of providing these areas in the overgrowing high-density housing communities where the increasing cost of land is continually a problem? We need to take a closer look at this housing where clusters of smaller apartments and housing units are balanced by communal outdoor space. These open spaces should form an integral part, both visually and practically, of the total scheme. Cooper and Sarkissian states, “Children are the main users of the outdoor spaces and most influenced by their design” (Housing as if People Mattered 13). This effects their overall behaviour patterns. Therefore, the residential areas should be planned to fit the children’s psychological and safety needs appropriate to their growing process, and safe from dangerous confrontations. The importance of the question of outdoor play space lies in the central role that play occupies as a prominent role in the physical, cognitive, social and emotional development of the child as discussed in previous chapters.

4.3 Design Issues

Variation and liveliness in terms of layout, design, and materials, make the residential environment more surprising and fascinating, more challenging and identifiable. Play facilities enabling the developmental process for growth need to be identified and incorporated in the neighbourhood settings. The diversity of nature also provides endless play opportunities. What are the probabilities of providing these in our play areas? The equipment providing challenge with a range of choices also provide multiple creative play opportunities. Many authors like the CMHC, Marcus, Sidney, Frost, Esbensen, Friedberg, Holme, Massie, Yawkey, Bergen, etc. have explored these issues over the years. Following is a compiled analysis from these authors, and more.

4.3.1 Buffer Zone:
Enclosure around the periphery that defines the area and discourages it from spilling out of limits. It act’s as a buffer zone against air and noise pollution and also screens off objectionable views (Fig. 4-2) if suitable elements are used. Variation in the material used can enable this element to double as play equipment.
4.3.2 Natural Landscaping:
Natural wild areas are rarely preserved within housing projects (CMHC, *Play Opportunities for School-Age Children* 41). According to some architects, clean and neat surroundings avoid evolving crime in the area. What about children's needs to explore, hide, run, etc.? In an urban context, one often seeks to dominate, “to overcome”, nature rather than to give nature a chance to open out. These areas provide opportunity for quiet retreat play (Photograph 4-b). Frost claims that “The use of plants in children's outdoor environment opens up a new yet ancient way of creating play spaces which increases their learning abilities, creativity and imagination and serve as an essential design tool element”.

4.3.3 Mounds for Play:
Children are naturally inquisitive by nature. Change in the level of ground will always attract them. These areas add interest and play value to the surroundings and provide excellent casual play areas for all seasons (Photograph 4-c). Difference in the ground level leads to climbing, clambering, and sliding. These all are examples of physical and cognitive play patterns. This is how children play.
Fig. 4-a Supervision of children. (High-density housing, Ottawa)

Fig. 4-b Natural landscape open space providing for quiet play. (Pointe-aux-Trembles, Montreal)

Fig. 4-c Creating mounds for play. (Pointe-aux-Trembles, Montreal)
4.3.4 Sand Play:
Why this particular material medium gives intense pleasure to children is no mystery. It encourages them to handle materials in their own way in a free and to engage in creative activity. Sand can be moulded into any form and gives scope to children's destructive impulses without any actual damage. Children can always be seen playing in sand (Photograph 4-d).

4.3.5 Water Play:
Water for children is an object of curiosity, exploration, manipulation, and use. It provides creative, social, and intellectual play. It is the joy of childhood, but because of the cost factor, it is usually provided only for aesthetic purposes, and not for play (CMHC, Play Opportunities for School-Age Children 45-6). Photograph 4-e shows a development with a water feature in the very centre of the site for recreational and aesthetic purposes.

4.3.6 Climate:
To create an environment that compliments the developmental process, it is essential to design play spaces while keeping in mind the various micro-climatic factors and their effect on child's play (Photograph 4-f). This factor should result healthy and comfortable spaces, and the areas should be sheltered from winds, sun, rain, etc. to provide cooler zones in the summers, and warmer ones in the winter. Children's skin is highly sensitive to harsh micro-climatic effects.

4.3.7 Surfacing Materials:
The materials in the built environment are essentially the most effective tool available to planners which could make the same area a concrete jungle; or a favourable area through the intelligent use of surfacing materials in appropriate places. If located in the wrong place, hard surface areas can prove to be very dangerous. Steen Esbensen (The Early Childhood Playground) has indicated the impact of falling on various surfacing materials clearly in Figure 4-3 (28). Play areas should provide as much soft-surfacing as possible, using hard surfacing only
Fig. 4-d *Innovative sand play.*
(Parc University Settlement, Montreal)

Fig. 4-e *Water play.*
(Pointe-aux-Trembles, Montreal)

Fig. 4-f *Play of sun and shade.*
(Parc University Settlement, Montreal)
in specific places. The majority of existing and developing built spaces for children are still of the asphalt type, with fixed and expensive equipment. These "over-elaborate" spaces are the pride of designers and children are doomed to make the best of these situations. Rich mix of safe surfacing elements would lead to an enriching environment where it is possible to indulge in many play patterns.

![Fig. 4-3 Surfacing materials.](Source: The Early Childhood Playground: An Outdoor Classroom, 1987, p. 28)

4.3.8 Loose Materials:

If provision is made for the storage of loose material on site (Fig. 4-4) available to children, it leads them to constructive play where they are involved in finding practical solutions through construction. It serves children's inventive drive and keeps safe from undesirable activities.

![Fig. 4-4 Availability of loose material.](Source: CMHC, 1997, p. 59)
4.3.9 Challenge:
This is the key to gain the attention and full use of force by the children in a constructive fashion (Photograph 4-g). If scope for this facility were not available to children in places meant for them, it would lead them to venture into dangerous zones, using the equipment in an unsafe manner. Each element becomes an issue to conquer and to prove their mastery. This is the most intense form of physical play when children learn to exercise and develop their muscles (Johnson et al, Play and Early Childhood Development 271).

4.3.10 Swings and Slides:
Swings of various types also provide challenge and the experience of risk. These are a favourite among school-age children. Slides and climbing structures create interest and give them the opportunity to stretch their muscles (Photograph 4-h). Photograph 4-i demonstrates a play space in Central Park, New York City, where children enjoy this slide integrated into contour of the hill, designed by landscape architect Paul Friedberg. If careful attention is not given to the stability, base cover, corner details etc., it could lead to fatal accidents in the play spaces.

4.3.11 Seating:
Children have favourite places where they gather together and “hang” around. If there is no seating provided, they occupy rocks, grass, or any other form of material in sight (Cooper and Sarkissian, Housing as if People Mattered 176). The most successful public areas offer a combination of informal seating- ledges, walls, steps, etc. that allow for spontaneous activity and properly oriented seating that can provide supervision of the whole site simultaneously. These places also act as the interaction point between the children and the adults.

4.3.12 Play Modules:
This equipment with complex assimilation of linkages, flexible material, graduated challenge, wide variety of experiences, ropes, slides, and ladders enable children to engage in constructive physical/social play. “These are the design
Fig. 4-g Challenge is the key to play.
(Westmount park, Montreal)

Fig. 4-h Co-ordination of legs and arms.
(Pointe-aux-Trembles, Montreal)
features that are associated with high level of play” (Johnson et al, Play and Early Childhood Development 269-70). Modules increase the complexity of individual pieces, and flexibility holds the children’s interest. These are needed to catch children’s attention and get the play started (Photograph 4-j) (Johnson et al, Play and Early Childhood Development 272).

4.3.13 Aesthetics:
The aesthetic appeal of nature is strong in its affect on feelings and behaviour. The irony is that what gives satisfaction to children is generally cumbersome for designers. But this conflict can be resolved, and it would be possible to give children what they want without creating permanent eyesores. Photograph 4-k is an example of a non-expensive, safe and visually pleasing cum recreational structure providing opportunity for body movement.

4.3.14 Traffic hazards:
In today’s cities, the physical area closest to home is the street. The play areas here are limited due to motor traffic, although they still attract children in spite of their dangerous consequences. Children can always be found playing near them (Photograph 4-l) due to their fascination with the automobiles (Fig. 4-5).

Fig. 4-5 Children like cars.
(Source: Environmental Planning for Children’s Play, 1970, p. 21)
Fig. 4-i *Metal slide integrated into the hillside.*
(Central park, New York City)

Fig. 4-j *Variability and flexibility.*
(Westmount park, Montreal)
Parents are afraid of traffic and keep their children in their own gardens, so children never have enough chance meetings with other children of their own age to form groups, that is essential for a healthy emotional development.

![Diagram of roads and pedestrian paths](source: A Pattern Language, 1977, p. 273)

A solution needs to be found to segregate vehicular traffic and play areas for the safety of both young and old. Alexander et al (A Pattern Language 273) proposes various arrangements of pedestrian paths and roads so that the two are separate, but also meet frequently (Fig. 4-6). Photograph 4-m illustrates another example of eliminating the traffic hazard through visual impact.

4.4 Residents' and Children's Participation

Places immediately around the home such as streets, sidewalks, and yard, are the places people feel most responsible for, where they feel safest and most in control. These places are essentially an extension of home, and they provide a network of play spaces that encompass the entire block. Brower explains, "Children have detailed knowledge of the play opportunities and challenges of all near home spaces, surfaces and objects in them. Being young, their play is confined to the block" (Good Neighbourhoods
**Fig. 4-k** Visually pleasing and safe structures.
(Neighbourhood of Mont-Royal Plateau, Montreal)

**Fig. 4-m** Eliminating traffic hazard.
(Vienna, Austria)

**Fig. 4-l** Kids on the street.
(Pointe-aux-Trembles, Montreal)
These open spaces can be managed and designed with critical attention from the neighbours and create a social identity to the place which a child can understand and take pride in.

The communities, who help build their neighbourhood, take pride in them and their potential for making the neighbourhood a better place for children is strong. This sense of community belonging also discourages vandalism. The end product has unique setting characteristics such as available space, climatic conditions, and specific play needs for their children. It is the effort of the whole neighbourhood. "The essential characteristic of community in the ecological sense is that all the parts are functioning within their habitat, that no one element outweighs the other, that each contribute to the whole" (Halprin, The RSVP Cycles 3). In the field of architecture, the plans are all precise and fixed, and the resulting building emerges in response to an event that is pre-planned and then simply assembled on site. This is also true to the city of Chandigarh designed by the French architect Le Corbusier in the year 1950. Chandigarh, though beautiful in visual form, lacks congruence with the lifestyles of Indians due to ignorance of their culture, tradition, religious beliefs, etc. It did not evolve over a period of time, but was planned "for the people" who had no participation in its process.

The planning of play spaces must be integrated into planning of the community. First, participation is inherently positive. It brings together both adults and children and creates feelings between them and their immediate surroundings. Second, they know about their surrounding needs and possibilities more than others do. Consequently, they create places that are better adapted to their play functions than those created by developers and approved by administrators. Also they would have the opportunity to identify for themselves the issues that are currently alive in their neighbourhoods and be helped in getting responses.

4.5 Planning Forms of Cooperation

"Play is a royal road to the child's conscious and unconscious inner world. If we want to understand his inner world and help him with it, we must learn to walk this road" (Bettelheim 35).
This is very true. Our first step in helping children is to understand them, and to learn to appreciate their concerns and requirements. There are several ways this can be done. But how may children contribute in this matter? We continuously overlook what children experience, feel and think. This is confirmed by the fact that children build their own play environment when possible with readily available loose parts. We must explore this source as the factor for the planning since they may have more original perspectives than the adults may.

Play is not only a behavioural phenomenon, but also a developmental one with its own distinctive sequences. The challenge of play for teachers, parents, and recreational workers is to intervene in order to optimise the educational consequences of play without scarifying its essence. The essence of good teaching and good parenting lies in their ability to think about the needs of young children and to respond without unnecessary interference. In summary, the challenge of play may be as much the adults' challenge as the children's. An understanding of the reasons for children's play as well as its consequences may help educators to perceive play as a potential rather than as a challenge. It is important to understand those areas where different forms of cooperation are required. Paul Sutton (38-9) portrays this concept diagrammatically in Figure 4-7.

![Fig. 4-7 Planning forms of cooperation.](Source: Crossing the Boundaries: A Discussion of Children's Service Plans, 1995, p. 39)
In this representation, examples of areas of potential cooperation between health, social services, and education authorities are indicated where the circles overlap. Thus there are areas where both bi-lateral and tri-lateral cooperation are possible, which might be the most fruitful areas for the joint commissioning and provision of services.

The necessary steps towards the improvement of the built environment should include the revision of by-laws to correct errors and omissions, and the development of standards for the manufacture of play equipment. Open spaces are certainly dominated by children, but the reins for its development are in the hands of adults who would be held responsible for the final outcome.


Montreal Case Studies

5.1 Evolution of Montreal Parks

La Ville de Montréal has been working extensively for many years in the development of Montreal parks. Their publication on Cadre de référence pour le développement et la mise en valeur des espaces libres de Montréal (1-6) discusses the evolution of these parks in significant detail. According to this publication, public squares were the dominant open space in Montreal until the first year of the 19th century. They played a central role in the economical, social and political life of the city. Most important institutions were located around the squares. These spaces were free and generally had corbel surfacing. Under English rule, these became more formally developed open spaces between the years of 1840 and 1890. Assuming more esthetical values, these areas developed into large urban entertainment areas.

These spaces are the ancestors of the extensive developed parks that appeared later in the city. By the end of the 19th century, Montreal developed three big parks, namely Saint-Hélène (1874), Mont-Royal (1876), and Parc Lafontaine (1888). During the Victorian era, these parks offered refuge against the industrialized city and provided contact with both landscape and nature. Later, at the beginning of the 20th century, the concept of democratization became more popular, and leisure activities gradually gave way to the development of active recreation in these areas. During the 1920's and 1930's, private and religious organizations practiced most of their initiatives to this purpose. It was not before the 1940's that the city became involved in these developments with the objective of equal distribution of such areas within the city complex. The development of these new spaces with sports activities as the major concept is a typical of North-American concerns, resigning aesthetic concerns. Thus, modifying their function, the 1950's and 1960's saw the peak of the intermarriage between leisure and sports parks. This resulted in the creation of the "Service des parcs", in 1953, whose aim was to create and maintain such areas. By 1971 the Service des parcs was in charge only of the maintenance of such areas. A new organization for cultural and recreational activities was established as the "Service des sports et loisirs" in 1971.
After World War II, and the subsequent birth of Modernism, increasing traffic in the city relegated certain public parks as obsolete. Interventions into old neighbourhoods led to the development of mini-parks. The beginning of the 1980’s saw programs for upgrading backyards and small lanes. These included the development of streets, pavements, landscaping, bike paths, etc. Historic readings of open spaces show a great diversity of spaces with different functions and an interchange of social-symbolic expression to games, sports, aesthetics, greening, conservation etc. Parks are a way to give citizens a quality open space and a good life (Ville de Montréal, Cadre de référence pour le développement et la mise en valeur des espaces libres de Montréal.1-6).

Appendix A provides the general status of the open spaces in the city of Montreal, and the ratio between the percentage of the areas of various parks in Montreal with respect to the current status.

5.2 Contributions by the City

Metropolitan parks, district parks, public gardens, school parks, and mini parks are just a few of 700 parks that compose Montreal’s heritage. In order to ensure that these spaces adequately meet the required needs, a team of landscape gardeners and technicians from the Ville de Montréal work year after year with new installations and refittings. The maintenance of these parks involves a large group of activities. The parks, the gardens, and the public places occupy a little more than 1800 hectares of the territory of the City of Montreal (Ville de Montréal, http://www.ville.montreal.qc.ca/parks/repertoire/intro.htm). The department of Service des parcs decided to try the method of “re-naturalization” of an open area, leaving more areas to nature in selected sectors. These experimental sites were selected according to the frequency of usage by local residents. This new approach has the double advantage of meeting ecological as well as economic needs.

How are the parks planned? The parks evolve at the same rate as the population attending them. After an intense study of an area, the advisors to the city recommend how to create parks, to renovate others, or to adapt them to the present needs of the district in constant evolution. Adventure playgrounds for children are gradually being adapted to
the recent Canadian standards (Ville de Montréal 3). How are the parks arranged? New parks are created where the city has space. Old parks are the subject of renovations (Ville de Montréal, http://www.ville.montreal.qc.ca/parcs/repertoire/intro.htm). However, we still we have a lot of ground to cover and this is just the beginning of a very long process.

5.3 Investigation and Analysis of the Case-Studies

Old examples form the much-needed background information for the new proposed designs and also for any upgrading proposals. Either way, it is only through the evaluation of similar areas of study that researchers can complete their own study. Therefore, this chapter concentrates on the study of various case studies. Instead of focusing on a single case, six cases were chosen to get a greater insight into the factors that influence the development of a particular site.

All the cases chosen are located in the district of the Plateau Mont-Royal in Montreal (Figs. 5-i and 5-ii). The scale of the cases, as mentioned in the previous chapters (refer to p. 12), is that of small neighbourhood parks, also categorized under the heading of “mini-parks”. Mini Parks, as defined by the City of Montreal (Lefebvre, Service des parcs), is an open park with an area of under 0.5 hectares. Infants and small children residing in the surrounding neighbourhood are the target users. These existing mini-parks are equipped with standard play equipment and serve a similar user group of residents. They are all maintained and funded by the “Service des parcs”. This includes garbage collecting, grass pruning, regular painting, reinstallation or repair and replacement of broken equipment, cleaning of sanded areas, etc. The parks are cleaned everyday in summers of the broken bottles, drug syringes, papers, etc. Equipment is painted, and the sand is changed very three years (Lorrain, Horticulture en parcs). This leads to an overall enriched and clean environment, but that is where the similarity between these cases ends. As the author will illustrate in the following pages, each park has a unique history and has a different impact on the surrounding neighbourhood and its inhabitants.

All the recorded observations have been undertaken by the means of observations, informal interviews, photographs, sketches, etc. Identifying children’s play patterns has
been the primary goal. The intention has not been to provide guidelines through these studies; rather to observe how these areas are used, or not used, by children in their present conditions and to propose conclusions in a wider context. The case studies will be presented in two major sections. The first will consist of the investigation of the present conditions preceded by their historical review. The second section concentrates on the major findings and interpretation of these findings by identifying the unused or abused spaces and the overcrowded (well-liked) spaces. The attitude of the inhabitants will also be discussed.

The interpretation of each case is sketched in a form of a schematic map that summarizes the current state of these areas. These include the marking of unused areas which need to be redesigned; maximum used areas from which we get an insight into the functional spaces; and also the areas that should be left as they are. Areas marked by the cross lines represent negative spaces which are in need of complete re-design in terms of enclosures, surfacing materials, play equipment, plant materials, etc., depending on a particular case. The dotted areas in all the maps indicate overcrowded spaces indicating the residents’ preferences. These analyses provide an overall review of the mini parks and demonstrate the spaces that are either positively perceived, or negatively perceived by the inhabitants of these parks in present day. It is investigated that when the children engage in free play in some spaces, they decipher it as functional; and when the adults supervise the children in places they approve of, they are identified as safe places. Together these issues identify the positively perceived play spaces, and the ignored or avoided places are then assumed to negatively perceived by the inhabitants. Thus, these sketches classify the functional and safe outdoor play areas preferred by adults and the children living in the high-density Plateau area of Montreal. The resulting analyses are further integrated with the literature studies, programs and policies done previously in Chapter four. In some cases, the studies confirm these findings, and in other cases, they raise key questions and issues that have not yet been dealt with. It is anticipated that these findings will provide some useful information for other researchers working in this field. To architects who have the power to change the outlook of the city; developers who are involved with the whole construction system; private organizations who are concerned with the quality of life; and finally the inhabitants who are the most effected group.
Fig. 5—Plateau Mont-Royal.

(Source: http://www.ville.montreal.qc.ca/paress(repertoire/repertoire.htm)
Fig. 5—ii Plateau Mont-Royal.
(Source: http://www.ville.montreal.qc.ca/parcs/repertoire/repertoire.htm)
5.3.1 Parc Lionais

Parc Lionais was created in 1977 and is named after rue Lionais where it is entered on the southern side. The total surface area is 0.05 hectare (643 sq.m) (Service des Parcs). It is located between rue de Buillon and avenue Hotel-de-Ville on the west and east side respectively. The surface is laid with grass, and a concrete pathway runs in the center. It is enclosed on two sides with a metal mesh (Fig. 5-iii).

Surroundings:
It lies on the junction of two major roads on either sides. The surrounding neighbourhood includes residences with three stories on two sides, and across the streets. Trees are scattered along the boundary of this small space defining the periphery of the mini-park.

Diverse elements:
4 wooden benches 1 trash can

Analysis:
This park is more of a relaxing space for elders and mothers with toddlers than a mini-park for school-age children. Being located at the junction of two cross roads, it gives a good visual angle to the adults, and an excuse to relax in the sun and pass the time of the day. A row of trees in the back provides some shade during the day. Three access points into the small space see it more as a circulation area. Lack of fencing in the front does not define the space, and the road area spills over onto the park. Four benches grouped around in a circle in the center of the space create a focal point of the park and this leads to concentrated usage by the inhabitants. This aspect demarcates it as the only positively perceived area in the entire park, leaving the rest of the site unused. Lack of variety in material, including impact absorbing surfacing like sand (refer to p. 53-4), makes it difficult to manipulate the space and turn it into a more interesting environment. There is much scope for upgrading in this mini-park (Fig. 5-iv).
Fig. 5-iii Parc Lionais
(Source: Service des parcs, des jardins et des espaces verts, 1999-05-12)

Fig. 5-iv Schematic map of Parc Lionais
Fig. 5-iv PARK LIONAIS

- Needs enclosure to avoid the spill over of play area.
- Introduction of enclosure - quiet retreat play area.
- Seating forms the focal point for social play.
- Circulation zone:
  - Dead open space
  - Over crowded space
  - Unused space needs planting

Rue Lionais
Rue De L'Hôtel-De-Ville
5.3.2 Parc Denise-Morelle

This park was created around 1985 and was named on the 4th of July, 1990, after Denise Morelle (1926-1984) who was involved in the theater since she was a small girl. Yesterday's children still remember her as a "witch" after one of her very successful roles. She was a professional singer who invested her life in the Canadian Theater (Service des Parcs).

This park lies north of rue Marie-Anne and on the side west of rue Rivard. The total surface area is 0.04 hectare (530 sq.m). This area is broken up to provide a small section of space catered to infants. It is fenced in the front and the back with a low height wooden railing, and a concrete pathway meanders throughout this tiny space, providing access to the play module and defining the circulation pattern for the adults (Fig. 5-v).

Surroundings:
The area lies in the center of the neighbourhood with two and three storey apartment buildings on either side. Windows from the surrounding buildings open onto this space. Several fully-grown trees are spread around the site providing just a touch of nature.

Diverse elements:
3 wooden benches
1 site lighting post
1 trash can
1 metal logo signage

Play elements:
1 metal climbing module including a slide

Analysis:
Situated in the center of the neighbourhood, this park is often used as a thoroughfare by the residents living behind the park. This secures constant movement through the park. The scattered seating arrangement along the circulation ensures easy supervision by the adults, resulting in less misuse of the site. This feature demonstrates the act of citizens taking control of their surroundings. Also the windows of the buildings facing the park form a formidable volunteer security force. Clusters of small shrubs all over the site are visually pleasing and they provide opportunities for quiet play (refer to p. 28), and serve as an excellent source for hide and seek. The pathway leading to the junior
play module ensures safe access. Locating the play module (refer to p. 55-6) at one corner of the site leaves a lot of open space in this enclosure. This space gives rise to running and rolling activity. Overall, this park has a special intimate quality that is sought by the local residents.

On the other hand, lack any kind of stop signage on the access road warning the public of the park gives rise to traffic problem issues (refer to p. 56-7) by the inhabitants. A lack of variety in play equipment, loose materials, surface mounds, etc. leads to monotony in the play pattern after a time, and this makes the children look for other things to do. This condition gave the author a chance to scrutinize the negatively perceived issues in the play systems by the children. Observing the children playing on the snow mounds in the winter (Photograph 6-b) demonstrates their need for creating mounds for play, which would also be practical for their development. The few scattered trees do not provide any climatic alternatives (Fig. 5-vi).
Fig. 5-v *Parc Denise-Morel*
(Source: Service des parcs, des jardins et des espaces verts, 1999-05-12)

Fig. 5-vi *Schematic map of Parc Denise-Morel*
PARC DENISE-MOREL
TYPE DE SURFACE

DATE : 28-05-98
ÉCHELLE = 1 : 500
RG = 00310-000
CARTO = 31H0434

Ville de Montréal
Commission des parcs, des jardins et des destinations vertes.
Division juridique des parcs
Redaction programmatique d'information

TYPE DE SURFACE
- pelouse (sup : 406 m²)
- sable, gravier (sup : 36 m²)
- dur (sup : 124 m²)
- parc (sup : 530 m²)
Needs more innovative enclosure design

Create more elements for social play

Shrubs define the play space

Introduction of new plant material to break up the area and provide retreat play

Rue Rivard

Fig. 5-vi PARK
DENISE-MORELLE

Circulation zone

Lighting Post

Leave as it is

Junior Module

Dead open space

Space to run and roll
5.3.3 Parc Napoleon

Parc Napoleon lies between avenues Napoleon, Coloniale, and rue Saint-Dominique to the north, west and east respectively. It was created around the 1970's and the major renovation on the surroundings of this park was done by the city on the 14th of October, 1998. It covers an area of 0.02 hectare (272 sq.m) (Service des parcs). The surface is made of grass, flat stones, and wooden chips, and is outlined with a concrete border. A low height metallic mesh in the front and a higher metallic mesh on the sides and the back define the parameters of this space (Fig. 5-vii).

Surroundings:
Two sides lined with the vertical walls of the surrounding buildings "dwarf" this small enclosure. Only a metallic mesh screens the car parking lot in the back.

Diverse elements:
- 1 wooden bench
- 1 trash can
- 1 metal logo signage

Play elements:
- 1 solid metal module

Analysis:
This park demonstrates the maximum acts of vandalism in all the surveyed cases. This mini-park was rarely observed with children involved in any creative play patterns. Due to the inappropriate use of surfacing material, it is highly accident-prone (refer to p. 53-4). This is a typical example of a "left-over" space within the urban fabric of the neighbourhood (refer to p. 42), and was converted into a mini park as a residual after thought when the need was felt by the city to create an open space. The metallic play module does not encourage any physical or creative play activity (refer to p. 55-6). The car parking lot visible at the back of the mini-park makes this space dreary to the eye, with no "safe" space for children. The residents feel that it is inappropriate to leave their children alone here. This highlights the negative perception by the inhabitants. Nature has very little to contribute here. The front and backsides of the mini-park are left open, and thus do not provide any protection from cold winds. The single seating bench leaves a lot to be desired (Fig. 5-viii).
Fig. 5-vii *Parc Napoleon*

(Source: Service des parcs, des jardins et des espaces verts, 1999-05-12)

**Fig. 5-viii Schematic map of Parc Napoleon**
Fig. 5-viii PARK NAPOLEON

Car parking

Needs protection from wind

Dead open space

Play Module

Unused open space break it up

Single seating discourages optimum usage of the play area and restricts supervision

Unused open space break it up

Circulation zone

Unused space

Needs total redesign

Avenue Colonial
5.3.4 Parc Laval

Created in 1974, Parc Laval covers an area of 0.03 hectares (313 sq.m) (Service des Parcs). It is located south of avenue Des Pins and east of avenue Laval from the entrance. The surfacing is made up of concrete and is punctured with sand base play areas. An enclosing of metal railing in the front defines the parameters (Fig. 5-ix).

Surroundings:
Three sides of the park are lined with vertical walls from the sides and the back of the surrounding buildings.

Diverse elements:
4 wooden benches 1 trash can
1 lighting post concrete stairs
1 drinking water fountain 1 metal logo signage

Play elements:
1 sandbox in concrete 1 junior merry-go-round
3 spring horses based in sand
1 metal geodesic dome of 2.4m diameter 1 junior plastic spiral slide

Analysis:
The backs and sides of urban buildings surround this mini park on three sides. Thus, for a good part of the day, this area is in the shade. The non-flexible and metallic play structures make it impossible for any physical play activities to occur and the non-availability of loose materials on the site also limits the imaginative play patterns (refer to p. 54). There is an existing electrical board with loose wires that is highly dangerous, and although the play structures are in scale with toddlers, this park remains desolately vacant. Concrete steps also contribute towards making this an accident-prone park. The lack of spread-out trees does not provide for climatic alternatives. This element distinguishes this park as not suitable for young children by the adults. Overall, this mini-park is not perceived positively by many of the inhabitants, demonstrates a lack of understanding of environmental factors (refer to p. 37-8) influencing child’s play patterns (Fig. 5-x).
Fig. 5-xi Parc Laval
(Source: Service des parcs, des jardins et des espaces verts, 1999-05-12)

Fig. 5-x Schematic map of Parc Laval
Opportunity to create for retreat play, social play, or natural play.

Electrical board

Drinking water

Unused space - only circulation area

Non-flexible metallic play modules

Seating

Needs more attractive enclosure

Avenue Laval
5.3.5 Parc Drolet-Rachel

Created in 1995, major renovation was done on the 7th of August, 1995, by the city. Covering a surface area of 0.09 hectares (853 sq. m), a small area of 20 sq.m is specifically designated for infants (Service des Parcs). Accessed by rue Drolet on the east, it lies to the north of rue Rachel. It is fenced off in the front and the backsides with a low height plastic railing and a 6'-0” high metal mesh, respectively (Fig. 5-xi).

Surroundings:
Enclosed by the vertical walls of the houses on two sides, a church lies on a third side. An alley along one side provides access to the rear of the apartments. Located across the street are typical Montreal duplex houses with external staircases. The whole environment is aesthetically pleasing to the eye. The whole site is dotted with a few scattered trees.

Diverse elements:
- 3 wooden benches
- concrete border
- 2 picnic tables
- amphitheatre
- 1 metal logo signage
- 3 trash cans
- concrete stairs
- 2 metal posts
- 1 drinking water fountain

Play elements:
- 1 “junior” metal module with ropes and slide.

Analysis:
This mini-park was the most unique area that was surveyed. This is due to the fact that an amphitheater is integrated in the layout of this small play space. This amphitheater was designed to provide an opportunity for symbolic play patterns (refer to p. 27) where young children could engage in free play. The steps are made of concrete and are very frequently used as informal seating by both children and adults. These steps also provide an opportunity for climbing and jumping. Scattered picnic tables serve as instruments for social play activities (refer to p. 27) between various children visiting this park; also providing a place to gather around. This mini-park responds more to the needs of an
amusement park rather than a small neighbourhood recreational space. Regular usage is by the school children from the neighboring primary school St-Jean Baptiste.

Although surrounded by three-storey buildings on all sides, this park relieves the pressure of the built-up surrounding neighbourhood due to its large size. The entire environment provides for a comfortable human scale (refer to p. 39-40) within the urban environment due to the openness of the site and the use of the play module scaled in all its parts for young children. The entire site projects a feeling of spaciousness. Even the amphitheater steps are in scale with that of small children. Colour variation in the play equipment (refer to p. 56) with impact-absorbing surfacing like sand and grass at the base makes it pleasant for both children and parents.

The scattered seating arrangement invites adults to sit around, enhancing public-policing. Open to traffic only on the front side, this area is less prone to traffic hazards. A small shrub along the perimeter defines the boundary. Locating the play module in one corner of the site leaves the rest of the site for the children to explore and run without being threatened or overwhelmed by other restrictions in their path. This area makes optimum usage of the whole site with evenly scattered play activities (Fig. 5-xii).
Fig. 5-xi Parc Drolet/Rachel
(Source: Service des parcs, des jardins et des espaces verts, 1999-05-12)

Fig. 5-xii Schematic map of Parc Drolet/Rachel
Fig. 5-xii  PARK DROLET/RACHEL

- Needs climatic control elements
- Unused space: break it up (create mounds for play)
- Good visual angle seating
- Physical/Symbolic play area
- "Dangerous" amphitheater
- Picnic table
- "Yellow grass" due to animal excrement
- Drinking water
- "Rue Drolet"
5.3.6 Parc Jean Jacques-Olier

This park is an example of a typical urban mini-park located in the neighbourhood of rue Drolet, avenue Duluth and avenue Henri-Julien. This park was created around 1974, and was named on the 8th of January, 1974, after Jean Jacques-Olier de Vaudreuil (1608-1657), who was a priest and founder of the “Ordure des supliciens”. He was also a co-founder of the “Societe Notre-Dame de Montreal”. This small area is divided into two parts; for infant activities (273 sq. m.) between the ages of 2 to 6 years, and for young children (569 sq.m) between the ages of 6 to 12 years. The total surface area is 0.09 hectares (990 sq. m) and is the largest area surveyed by the author (Service des parcs) (Fig. 5-xiii).

Surroundings:
This park is enclosed by a 6’-0” high metallic mesh in the back, and a low height metal railing in the front. Low shrubs screen the front road traffic and high vertical walls on the other sides. Fully-grown trees are scattered around the site. The grass base supports a meandering concrete pathway in the center.

Diverse elements:
- 6 wooden benches
- concrete border and pavement
- 1 metal signage
- 2 trash cans
- 1 drinking water fountain

Play elements for infants:
- 4 kindergarten swings
- 1 “junior” metal module

Play elements for small children:
- 4 swings for 6 to 12 years old children
- 2 spring horses
- 1 “senior” metal module
- 4 monkey bars for hanging

Analysis:
This is a big park with the capability of accommodating a large number of residents. It is very well maintained, and seems to be the only park surveyed that was entirely bereft of vandalism. The explanation for these occurrence lies in the fact that the abundance of play spaces and the variety of play equipment makes it a very functional...
space. In terms of maintenance and security, the inhabitants have no complaints. The sensitively distributed seating provides visual access to adults from every point. This is an excellent example of a park that acts as a breath of fresh air in the dense fabric of the urban neighbourhood. The introduction of speed breakers on the access road encourages adults to let their children venture alone to the park. Also the back entrance to the area gives an alternative access to avoid the main road entrance. Strangers are easily identifiable in this park as the parents take responsibility to survey the site regularly.

Intermixing the layout of play equipment of different age groups provides a trouble free environment. The reason, as given by the residents, is that it makes the smaller children to look up to the bigger children for guidance. Also the scale of the play equipment compliments the different age groups. The provision of a variety of equipment like swings, slides, a climbing frame, monkey bars, etc. assures constructive and physical play activities (refer to p. 56). Adequate impact absorbing material around the play module allows for jumping and sliding play patterns. Parents visiting the park are assured that their child will not wander off as the park is fenced in with shrubs and railing at the entrance. Fencing the park with shrubs also screens off the play zones (refer to p. 51-2) from the view of the outsider.

The uniqueness of this park is the functioning of numerous amenities and alternatives, which keep the children occupied, and active. This park houses a large open green space. This is an example of a play area that covers all the design issues of safety, variation, liveliness and accessibility (refer to p. 51), and thus children engage in various play patterns (Fig. 5-xiv). The whole park is viewed in terms of its positive influence on the children development, simultaneously considered safe enough by the adults.
Fig. 5-xiii *Parc Jean Jacques-Olier*
(Source: Service des parcs, des jardins et des espaces verts, 1999-05-12)

Fig. 5-xiv *Schematic map of Parc Jean Jacques-Olier*
PARC JEAN-JACQUES-OLIER
GESTION DIFFÉRENCIÉE DES PELOUSES

TYPE DE SURFACE

- Pelouse (sup : 569 m²)
- Sable, gravier (sup : 273 m²)
- Dure (sup : 138 m²)
- Parc (sup : 980 m²)

CLASSE 1
- Sup : 000 m²

CLASSE 2
- Sup : 569 m²

CLASSE 3
- Sup : 000 m²

LIMITÉE D'ACTIVITÉ

DATE : 00-07-10
ÉCHELLE : 1 : 2000
RG : 0322-000
CARTO : 3191.1032

Ville de Montréal
Service des parcs, des terrains et des espaces verts
Planification des parcs et gestion du PTI
PARK JEAN JACQUES-OLIER

Possible space for quiet retreat play

Benches restricting unwanted entries

Shrubs and trees provide visual screening and some climatic alternatives

Unused open space

Good usage of corner

Infant swings

Unused space

Junior Play Module (6-12 yrs)

Seating providing good supervision of play area and circulation both

Space to run and roll

Junior swings (6-12 yrs)

Infant Play Module

Monkey bars
Works Cited

Lefebvre, Pierre-Alexandre. Personal interview. 5 Dec, 2000.

Lorrain, Marc. Personal interview. 5 Dec, 2000.


Conclusions

6.1 Synthesis of Literature Review and Field Research

An open space in the city should be able to coordinate an ideal network in which the spaces for play could be tied together effectively. This network should also be actualized where pedestrian pathways and cycle pathways link together all the sites of social, physical and environmental quality. The requirement is to identify well-developed and planned spaces where it is easy, enjoyable and secure for children to play together. The neighbourhood mini-parks should also have a special intimate quality recognized by the inhabitants. This calls for an organic order within the whole evolvement process, also leaving space for flexibility in individual cases.

An open space is intended to cater to the requirements of children using non-exorbitant strategies and ensuring an accident-free environment to the parents. The problem has been explained and edited in theory (refer to Chapter Three), but not solved yet. To solve this problem, the case studies clarify how these areas failed to generate an order that they were meant to. Once the analyzed schematic maps were assembled together, the solution to the design flaws emerged concurrently. The need is to inter-link the positively perceived areas, and the negatively perceived areas to structure a more proportionate space, which is also approved by the inhabitants. The study shows that this does not mean investment of more funds (refer to Chapter Two and Four). Minor re-adjustments to the overall space and the introduction of simple, but more creative elements can originate two extremes. The analysis of the mini-parks “speak” of similar needs and requirements. They all demonstrate the same design failings, like traffic issues, that have either been overlooked or have been ignored. They point out similar elements and features, like complex playing modules with sanded base, which exhibit the children’s preferences. By observing the adults and the children’s play patterns, their real needs and the functional usage of each play space becomes lucid. Looking at some of these schematic maps, we can see which mini-parks need major improvement in terms of equipment and surfacing materials, as well as non-expensive modifications to achieve optimum utilization of the mini-park.
Safety Issues:

Parc Napoleon and Parc Laval demonstrate maximum dead and unused open spaces that are a waste of an area in an already diminishing urban land (see Figs. 5-viii and 5-x). In addition to being scarce, these play areas in congested urban environments are also not designed for optimum usage. Parc Napoleon is rendered “unsafe” by the residents due to the location of parking lot right behind the play space (Photograph 6-a). Parc Denise-Morelle is one of the examples where the unutilized open space is large enough to be broken down to create small enclosures for different play activities (see Fig. 5-vi). These enclosures can be identified with the addition of a few non-expensive elements such as earth mounds, plants, wooden logs, etc.

Indoor-Outdoor Relationship:

As inferred from the case studies, the special relationship between the mini-parks and the indoor-outdoor environment is highly approved of by the residents. A resident in the neighbourhood of Parc Jean Jacques-Olier commented (1st March, 01), “I bring my 4-year old son three to four times a day to this park. I also send him here alone. This is because I can hear him while I am in my house. Having a park in the neighbourhood is a luxury.” Another resident stated that after their children come back from playing, “They are less demanding, and being tired makes them less irritating. They also make new friends and learn new things everyday.” Providing play opportunities in the immediate vicinity of the home proves to be beneficial for the adults while alternating as a developmental tool for the child growth.

Natural Landscaping:

Analyses of these case studies indicate that although some design considerations have been kept in mind, several design features have still been overlooked. It was duly noted that the unused spaces in the play areas were somewhat similar in all cases. This concludes that there is a need to provide a full range of play patterns, not for just of one particular activity. A play environment where children can interact with nature is fundamental (refer to p. 52). With the introduction of a few planting materials and tucking away of the play module within a cluster of trees, one could create a positive mixture of sun and shade for play activities in Parc Napoleon, or in any other park. A lack of natural environmental elements like trees, shrubs, wild grass, water feature, etc.
was observed in all mini-parks. This issue brought up negative comments by the residents of all parks, except the residents of Parc Jean Jacques-Olier. "This park has nice trees with enough shelter for me and my child. In autumn season, my children collect the fallen leaves and create many fascinating things." - resident of Parc Jean Jacques-Olier (1st March 01).

Climatic Concerns:

The residents’ concern over the effect of harsh climatic conditions on the youngsters was a big issue. "These scattered trees provide enough shade for me, but it is not enough for my young kid." - resident of Parc Denise Morelle. Sympathetic landscaping not only enriches the environment, but also provides various micro-climatic alternatives (refer to p. 53). Children will always prefer to play in the open sky irrespective of the climatic conditions. As responsible adults and designers, we can only make sure that they do not get ill during this playing process.

Surfacing Materials:

Previous studies indicate that hard surfaces like concrete are more prone to accidents (refer to p. 53-4). This is true, but simultaneously the survey shows that children are more attracted towards those areas. They like cycling, running, jumping, etc. on these surfaces. But the lack of well-integrated layout of this material as seen in Parc Laval, makes this area accident-prone. By giving careful understanding to this material, and locating it in appropriate places, a more hazard-free and well-liked environment can be created. "The amphitheatre in Parc Drolet-Rachel with concrete base and concrete platform is a waste of space and I never give permission to my children to venture near it." - teacher at St-Jean Baptiste (15th Feb. 01). Much activity was observed around the sanded surfaces. The residents responded, "These are the only areas where we are comfortable leaving our school-age children unsupervised." The children preferred these areas as they could "make so many things in the sand!" These aspects indicate the elements that meet the children’s urge to experiment and explore. Creating a safe environment where children can experience some risks would be an ideal play space.

Creating Mounds:

The absence of any kind of difference in the ground levels, and mounds to play with creates monotony in the space. These instead, would add interest and play value to
Fig. 6-a Location of car parking behind the play space.
(Parc Napoleon)

Fig. 6-b Snow mounds in winter for climbing and sliding.
(Parc Denise-Morelle)

Fig. 6-c Non-flexible metallic railings.
(Parc Drolet-Rachel and Parc Napoleon)
the surroundings and provide for all seasons (refer to p. 52). Young children playing on
snow mounds in winter in Parc Denise-Moreelle demonstrate this (Photograph 6-b). This
process of climbing and sliding is a continuous one. Designing paths with sloped levels
instead of concrete steps would again lead to a stimulating environment. Why has this
design issue been ignored in all the mini-parks surveyed? This element is most cost-
effective and gives rise to physical and cognitive play patterns (refer to p. 27). Mounds
can also be integrated into the total site layout to screen off the objectionable views if
designed along the periphery of the space (refer to p. 51-2). A resident of Drolet/Rachel
comments, “If I had the permission, I would demolish the concrete amphitheatre in this
park, and design a big earth mound with sand base in that space for my children to play
with” (15th Feb., 01)

Enclosure:

Enclosures for the play areas should be aesthetically pleasing and also conceive as
a play feature. This is being in the form of wooden logs, earth mounds, small shrubs,
small water feature, colourful wooden blocks, etc. Non-flexible metallic railings in all the
mini-parks eliminate such activities (Photograph 6-c). The natural planting along the
railing in Parc Jean Jacques-Olier (see Fig. 5-xiv) and Parc Denise-Morelle creates a
buffer zone screening off the traffic, creating a small world for the children within. Parc
Lionais (see Fig. 5-iv) has the surrounding roads “spills-over” onto park due to lack of
appropriate fencing defining the parameter.

Access Points:

Multiple entries into many of the surveyed parks illustrate the change in the
function of the open spaces from children’s play areas into throughways used by the
residents. This makes it difficult to restrict the entrance of undesired strangers, and thus
gives rise to more concern in terms of vandalism. It is difficult to identify the “problem
creating” users from the real users. Contradicting views from a resident of Parc Jean
Jacques-Olier (1st March 01), “It is no problem as we all recognize the residents and can
easily identify the stranger in the area. We also meet new people who do not visit the
park regularly, and thus increase our social circle of friends.” This is the intimate quality
of the mini-parks that is sought and approved by the inhabitants. Option of having a door
at the main entrance of Parc Jean Jacques-Olier renders the park safer (Photograph 6-d).
Traffic Hazards:

Locating Parc Lionais on the junction of two vehicular cross roads gives rise to many traffic problems. Similarly, opening the other parks directly onto the main vehicular road is also a problem. Play theories in the past (refer p. 56-7) have put forward many different solutions to this problem. Simple insight into this problem before integrating the fabric of play into the total urban environment would have been helpful. In cases of “after thought” play spaces, giving access to the area through existing side alleys where possible, would be a very simple solution. The small children of Parc Jean Jacques-Olier, were frequently observed using the back entrance into the park that runs through the alley. This avoids the need for the adults to accompany the children to access the neighbourhood parks. Incorporating these small details into the design layout would enhance the users’ real needs, that is, being able to play in an unrestricted environment.

Play Modules:

The introduction of play modules with imaginative design, varied colours, textures, and geometric forms with an impact-absorbing sand base gives occasion to a variety of play experiences (refer to p. 55-6). These modules challenge children to use their bodies and to develop balance and coordination. They also create a rich mix of activities: physical, social, creative and cognitive, which support full child development (refer to Chapter Two). Play modules in Parc Jean Jacques-Olier are especially good examples that stimulate various play patterns such as climbing, hanging, sliding, rolling, walking, etc. (Photograph 6-e). Equipment designed to have smooth corners and surfaces, that function smoothly, further enhances their ability to induce constructive play activities. On the other hand, the non-flexible metallic equipment used in Parc Laval and Parc Napoleon (Photograph 6-f) are a waste of investment and occupy much needed space for other activities like being engaged in physical and cognitive play patterns.

Maintenance Issues:

Another concerning issue that came up alike in all parks was maintenance of these parks. Although the city regularly cleans the spaces, the residents still have complaints regarding it. A teacher at St-Jean Baptiste School observes, “When I take the children to the parks on Mondays, I have to survey it first and pick up broken beer bottles, dog excrement, drug strings, etc. It is very dirty. A small section of Parc Drolet/Rachel has
Fig. 6-d *Door at the entrance renders the park safer.*
(Parc Jean Jacques-Olier)

Fig. 6-e *Play module with a rich mix of activities.*
(Parc Jean Jacques-Olier)

Fig. 6-f *Non-flexible metallic play equipment.*
(Parc Laval)
“yellow” grass due to dog excrement” (see Fig. 5-xii). Another resident of Denise-Morelle park states, “I never let my children play in the sand, not because of the sand getting in their clothes, but because of the fact that this sand is often littered with dog and cat excrement, and can never be properly cleaned. I raised this issue often with the animal owners, but they never listen.” Signs put up by the city restricting the entry of the animals in these parks as seen in Photograph 6-g do not prevent this problem. “The City employs only two inspectors who make sure that animals do not enter the parks, but this is not sufficient enough. It is the responsibility of the owners to clean up after their animals” (Lorrain, Horticulture en parcs). Very few theorists have looked into this issue, and a strong need is felt by the inhabitants to resolve this issue in case of all parks, including big city playgrounds.

Urban Scale:

Although the scale of the play equipment is manageable for young children, the overall scale of some of the mini-parks is dwarfed due to the surrounding tall buildings. These are examples of open spaces that are not integrated in the fabric of the urban environment, and reflect insensitivity to children’s needs and the influence of the environment on play pattern is also diminished (refer to p. 42). For example, being surrounded by the backs and sides of three storyed buildings on three sides, Parc Laval sees a good part of the day in the shade; and a child is dwarfed by the surroundings (Photograph 6-h). On the other hand, Parc Drolet-Rachel and Parc Jean Jacques-Olier are two examples of an open space in the urban environment that relieves the pressure of the built-up surrounding neighbourhood. However, the lack of enclosure defining the parameters of Parc Lionais gives it a very wide scale, and the children feel uncomfortable in it. Also the scale of individual equipment on the site should be looked into. For example, the drinking water fountain in Parc Drolet/Rachel corresponds to the height of bigger children, but not to the height of smaller children. “I have to pick up the small children for them to be able to drink water.”-teacher at St-Jean Baptiste School (15th. Feb. 01).
Fig. 6-g *No entrance to animals.*  
(Parc Drolet/Rachel)

Fig. 6-d *Door at the entrance renders the park safer.*  
(Parc Jean Jacques-Olier)

Fig. 6-h *Scale of the park dwarfed by the surroundings.*  
(Parc Laval)
As correctly stated by Alexander et al, “Diagnosis of an area is not a master plan. Diagnosis tells us what is wrong in the present; while the master plan tells us what is right for the future” (A Pattern Language 156-7). The interpretations of these case studies are not meant to be the prescription for a future masterplan; but the objective is to look at each site as an individual “breathing” and “talking” open space. The goal of an architect should be to “listen” to what each space has to say and then to embark on the design process. The site should challenge the architect to create what is required and what is good for that specific area. These analyzed schematic maps identify the variables that define the safe and responsive environment for young children while simultaneously being approved by the adults. They contain substantial information about the current state of the mini-parks and the urban designers, architects, social organizations, students, etc. can distinguish what is relevant to their particular case and act accordingly; modifying the information befitting their requirements.

By themselves, these examples of mini-parks are not adequate enough to propose guidelines for future projects. But a collection of various similar maps could serve as a tool to avoid repetition of comparable mistakes, and establish an overall design proposal with respect to the residents’ and users’ real needs and their outlook. If we follow this sequence of making schematic surveyed maps of all mini-parks in the city, and then follow the simple modification process, in the end we could achieve an organic order of mini-parks in the whole city. The final order selected after this process would give rise to an ideal order for the urban open play spaces for young children in the neighbourhood settings. The proposed schematic maps can be modified to work better with additional input from the inhabitants of each particular site.

These mini-parks are spaces for social play for school-age children, and a meeting point for adults. They represent an informal communal space where children play safely and adults meet and stop for a chat. This aspect itself makes it essential to employ community participation in the design and upgrading proposals. Properly oriented seating close to the play modules creates a social place for adults and children alike. Parents take shifts to look after the neighbourhood children. This also encourages social play between children. Places providing for gathering places with the provision of picnic tables further enhance the social play pattern (refer to p. 27). When questioned about the design
features and the layout to facilitate and advance children's play patterns, they all had something new to recommend. This demonstrates the lack of involvement of the inhabitants at the design stage for these parks. Adult participation enriches the play atmosphere (Photograph 6-i). Over the years, the residents have now “learned to accept them as they are” and to make best use of these local facilities. A resident of Parc Drolet/Rachel, who is also a regular visitor of the Parc Jean Jacques-Olier, when questioned about designing for the neighbourhood mini-parks, comments, “If I was given the money and the space to create a mini-parks, I would make one very similar to Parc Jean Jacques-Olier. But simultaneously I would look into the option of restricting the entrance to dogs and cats. I would plant different types of trees and shrubs and would see to their regular maintenance” (Photograph 6-j). The facility of having an open park in the immediate proximity of their dwellings is good enough.

The role of an architect should not culminate here; rather it should go well beyond this issue and provide for a life-enhancing environment. Resident’s involvement could be forced in the future designs. Halprin comments on the importance to community participation in his book where he defines the RSVP process as:

“RSVP cycle is a balanced scheme in which all the parts are mutually related and constantly interacting. It functions best when all parts are operating. Its purpose is to make procedures and processes visible, to allow for constant communication and ultimately to insure the diversity and pluralism necessary for change and growth” (The RSVP Cycles 5).

According to him, this is the most important issue without which the development process is incomplete as the building forms are constantly evolving due to their interaction with the inhabitants. This is the aim that the author has been trying to accomplish and rationalize throughout this study. The play space that is integrated within the surrounding urban landscape with legible site character and a human scale would lead to a stimulating atmosphere for the development of school-age children. The basic urban open spaces give character to the city, and the neighbourhood open areas give quality and character to the life surrounding it.
Fig. 6-i Adult participation enriches the play atmosphere.
(Parc Jean Jacques)

Fig. 6-j Re-designing of the outdoor play areas for school-age children.
(Teachers at St-Jean Baptiste school)
Works Cited


Lorrain, Marc. Personal interview. 5 Dec, 2000.


Bibliography


Lefebvre, Pierre-Alexandre. Personal interview. 5 Dec, 2000.


Lorrain, Marc. Personal interview. 5 Dec, 2000.


Appendix A

"General Statistics of Montreal mini-parks with respect to the ratio between the open spaces and the numbers and areas."
(Source: Ville de Montréal, 1992)
## STATISTIQUES GÉNÉRALES

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1 hectare = 10 000 mètres carrés

"General Statuesque." (Source: Ville de Montreal, 2001)
"Table of the categories of open spaces with respect to the numbers and the areas." (Source: Ville de Montreal, 1992)

"Table of the ratio between the open space per district."

(Source: Ville de Montreal, 1992)
### Superficie des parcs et lieux publics locaux
(à aménager), par type

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"Table of areas of open spaces demarcated by park type."
(Source: Ville de Montreal, 1992)

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### Superficie des parcs et lieux publics locaux (à aménager), par arrondissement

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*Source: Ville de Montreal, 1992*

"Table of areas of open spaces demarcated by district."
(Source: Ville de Montreal, 1992)