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COMMUNITY PARTICIPATION IN NEIGHBORHOOD PLAYGROUNDS:
A NEW YORK CITY EXPERIENCE

by

SUKWON PARK

A dissertation submitted to the Graduate Faculty in
Psychology in partial fulfillment of the requirements for
the degree of Doctor of Philosophy, The City University of
New York

2002

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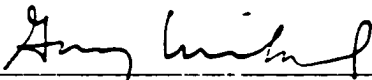
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This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Dec. 27, 2001
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Abstract

COMMUNITY PARTICIPATION IN NEIGHBORHOOD PLAYGROUNDS:
A NEW YORK CITY EXPERIENCE

by

SUKWON PARK

Advisor: Professor Gary Winkel

The purpose of this study was to examine the proposed benefits of participation by comparing playgrounds designed using a participatory approach with those designed without participation. The present study also examined how user involvement in different design and management stages affects the final design products and maintenance.

Eleven participatory examples, which cover four different levels of participation were selected. Seven non-participatory playgrounds were chosen for comparison. Multiple techniques were used to collect information: interviews, checklists, informal observations, and archival research. Five adult users at each playground (a total of 90 people) and twenty-three participants were interviewed. In addition, playground design committee members, representatives of technical assistance organizations, and designers were interviewed. Checklists were used to check the safety, maintenance, and cleanliness of each playground.

Content analysis was used to extract meaningful categories from the interview data. In addition, to find out whether there were any statistically significant differences between the responses of the participatory playground users and those of the non-participatory users, t-tests were conducted.

It was found that there were many factors such as legal, economic, political, and structural constraints which affected the participatory process. Almost all of the participatory and non-participatory playgrounds offered similar equipment except couple of the participatory sites. Despite these constraints, differences between participatory and non-participatory playgrounds were found on a number of outcome measures.

The results were consistent with earlier studies that suggest participation would create an environment that fulfills the needs and preferences of the user. On the other hand, this study failed to fully support the claim that participation contributes to a greater sense of community among those engaged in the process. Furthermore, the claim that participation has environmental maintenance benefits was not supported by this study.

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Table of Contents

COPYRIGHT	ii
APPROVAL PAGE	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	vi
TABLE OF CONTENTS	viii
LIST OF TABLES AND FIGURES	xi
CHAPTER ONE: INTRODUCTION	1
Statement of Purpose	4
Definition of Terms	4
CHAPTER TWO: LITERATURE REVIEW	5
Participation	5
Definitions	5
Types of Participation	5
Benefits of Participation	8
Proposition 1	8
Proposition 2	10
Proposition 3	12
Playgrounds	13
A Brief History of Playground Development in the U.S.	13
Types of Playgrounds	16
Use of Different Types of Playgrounds	26
Playground Safety	36
Current Conditions of New York City Parks and Playgrounds	39
Parks Inspection Program	40
Research Questions	42
CHAPTER THREE: METHODOLOGY	43
Site Selection	43
Data Collection	46
Interviews	46
Checklists of Safety, Maintenance & Cleanliness of Playgrounds	48
Archival Research	49
Data Analysis	49
CHAPTER FOUR: FINDINGS	51
Community Participation in Neighborhood Playgrounds	51
Research Question 1	51
Technical Assistance Organizations	52
The Trust for Public Land	52
The Council on the Environment of New York City	54
The Parks Council	55
Operation GreenThumb	57
Partnerships for Parks	57

User Participation in Neighborhood Playgrounds	59
Sauer Park	59
Sunshine Playground	65
6 th & B Garden	73
Cherry Tree Playground	84
Experience of the Volunteers	89
The Experience of Technical Assistance Groups ...	93
User Needs and Preferences	94
Research Question 2	94
Demographic Qualities of Users	94
Playground Components Used Most by the Children	97
Children's Favorite Features.....	99
Playground Characteristics Liked by Adult Users	101
Playground Characteristics Disliked by Adult Users	104
Desired Changes by the Adult Users	106
Satisfaction with the Playgrounds	107
Other Playgrounds Used	111
Playground Safety	113
Sense of Community	116
Research Question 3	116
Cleanliness and Graffiti	120
Research Question 4	120
Summary	122
CHAPTER FIVE: DISCUSSION	124
Benefits of Participation	136
User Evaluations	137
Benefits for Children	139
Sense of Community	140
Cleanliness/Maintenance	142
Safety	143
Reflections on Participation	144
Limitations of "Alternative" and "Co-design" Types of Participation	144
The Political Problems of Participation	145
Liability	146
Implications	147
Design Issues	147
Policy Issues	152
Research Issues	158
Limitations of the Study	159
Conclusion	159
APPENDIX	
Appendix A	161
Appendix B	175

REFERENCES 194

List of Tables and Figures

Figure 2.1: Views of the Traditional Playground	18
Figure 2.2: Views of the Adventure Playground	19
Figure 2.3: Views of the Designer's Playground	21
Figure 2.4: Views of the High-Tech Modular Playground..	25
Table 3.1: Study Sites	45
Table 4.1 Brief Analysis of Participatory Playgrounds..	53
Figure 4.1: Playground Equipment in Sauer Park	60
Figure 4.2: The Entrance Area and the Composite Play Structure on the Sunshine Playground	67
Figure 4.3: The Fence, the Stage, and the Pavilion in the 6 th & B Garden	75
Figure 4.4: The Sculpture in the 6 th & B Garden	77
Figure 4.5: The Children's Area in the 6 th & B Garden ...	78
Figure 4.6: Playground Equipment and Tire Swings in the Cherry Tree Playground	86
Table 4.2: Best Thing That Has Come Out of the Participation	90
Table 4.3: Worst Thing That Has Come Out of the Participation	92
Figure 4.7: Age Distribution of the Children	96
Table 4.4: Playground Components Used Most by the Children	98
Table 4.5: Children's Favorite Features.....	100
Table 4.6: Playground Characteristics Liked by Adult Users	103
Table 4.7: Disliked Aspects of the Playgrounds Reported by Adult Users	105
Table 4.8: Desired Changes by the Adult Users	108
Figure 4.8: Satisfaction Scores for Each Playground	110
Table 4.9: Reasons for Other Playground Use	112
Table 4.10: Playground Safety Check Results	115
Table 4.11: Means and Standard Deviations for the Expected Length of Residency, Number of People Known, Frequency of Conversation, and Satisfaction with the Neighborhood	118
Table 4.11: Type 3 Tests of Fixed Effects	121
Figure 5.1: A child on Her Own Swing	153

CHAPTER ONE:

INTRODUCTION

Many neighborhood parks and playgrounds have been criticized because they fail to serve their users. For example, Clay (1971, 1972) found that many miniparks and playgrounds throughout the country were overbuilt and frequently failed to satisfy the users. Some argue that new playground equipment lacks challenge and complexity. Therefore, it often resulted in the misuse of the equipment (Scott, 2000). One of the suggested reasons for the failure to satisfy the needs of users is the lack of users' direct involvement in the design or management of parks (Francis, Cashdan, & Paxson, 1984).

There are many advocates who believe that participation is the only way to truly incorporate user needs and values into planning and design. For example, Alexander, Silverstein, Angel, Ishikawa, and Abrams (1975) believe that participation is important because it is inherently good and users of a building know more about their needs than anyone else. Also, Hart (1987) argues that concrete turtles and other weird objects in American playgrounds are unused "because of no involvement in their design by the users, children" (p. 226).

Another proposed benefit is that participation would develop a sense of responsibility towards environments and, as a result, the environment would be less prone to litter and

graffiti. Iltus and Hart (1994) claim that many New York City playgrounds are vandalized and abandoned as a result of the lack of community participation.

Enhancing a sense of community among those engaged in the process is a third benefit of participation. Francis (1982) found that those local residents who had participated in creating community gardens and parks felt that this increased their attachment to the neighborhood and their confidence in the area.

Unlike proponents of participation, some critics assert that user participation is time-consuming and inefficient since the eventual users lack the expertise and the final design product would be of unprofessional quality. Eckbo (1983) claims that participation will result in mundane design solutions since average people tend to accept simple and familiar solutions to avoid unprecedented concepts which are difficult to visualize or understand. However, Kaplan (1982) points out that this is a misconception. He argues that when material is presented in a comprehensible way by using effective graphic materials, most people will function competently and the outcome will be a solution which is reflective of user needs.

Another objection to participation is that it will create chaos because the design process is left to untrained people. In response to this objection, Alexander et al. (1975) insist that user-design will not produce chaos and possible chaos can be resolved by the use of the shared "pattern." As we make a

sentence by combining words when we speak, laypersons could design their buildings, or any other kind of environments, for themselves by using archetypal patterns. In support of their position they cite the fact that the most wonderful places in human history were not designed by architects but by laypersons.

As seen above, "Positions both advocating and opposing user participation appear to be based primarily on ideology and assumption rather than on empirical evidence" (Wandersman, 1979a, p. 185). Although two decades have passed, this is still very much true. Also, there exist some empirical studies which do not support the proposed benefits of participation. Wooley (1985), for example, claims that the hypothesis that user participation results in greater satisfaction was not fully supported by his research. Israel (1988) found that participation in a mural project did not increase participants' or residents' sense of belonging or community. She also indicates that community participation in the mural project did not prevent the mural from having graffiti.

Furthermore, even now, user participation is a slippery concept that takes on many different meanings in the literature of architecture and landscape architecture, as well as planning. Unfortunately much of the available work in the participation literature involves how-to guides or simple descriptions of the participatory process with little or no evaluation. Therefore, there is a need for more empirical studies that critically examine participatory design.

Statement of Purpose

The purpose of this study was to examine the proposed benefits of participation by comparing playgrounds designed using a participatory approach with those designed without participation. Also, this study examines how user involvement in different design and management stages affects the final design products and maintenance.

Definition of Terms

Participation is difficult to define. For my dissertation the following approach was used:

The Participatory Playground: Playgrounds were regarded as participatory when there was community participation in design, construction, and/or maintenance. These playgrounds have a group of people, sometimes called "friends of the park," who are consistently involved in the playground.

The Non-participatory playground: Playgrounds without any forms of consistent community involvement were included in this category. Also, all the city playgrounds were regarded as non-participatory unless there was a higher degree of participation in design or in maintenance.

CHAPTER TWO:
LITERATURE REVIEW

This chapter consists of two parts. The first part deals with the participation literature and the remaining part covers playground related literature.

Participation

Definitions

A number of definitions of participation have been proposed by researchers. Participation can mean "any process by which the user of an environment helps to shape it" (Alexander et al., 1975, p. 39). Participation can be defined as "face-to-face interactions of individuals who share a number of values important to all" (Sanoff, 1992, p. 55). On the other hand, Baldassari, Hart, and Lockett (1980) see participation as "the sharing of power by all members of the society" (p. 6). As seen above, participation is a very broad term. Indeed, as Sanoff (1992) has pointed out: "Participation means different things to different people and different things to the same people, depending on the issue, its timing, and the political setting in which it take place" (p. 58).

Types of Participation

Several types of participation have been proposed. The

earliest typology was developed by Arnstein (1969). She defines participation as redistribution of power. She argues that participation without redistribution of power is an empty and frustrating process for the powerless. Based on examples from federal social programs, she proposed eight rungs on the ladder of citizen participation representing three levels of involvement. The two bottom rungs of the ladder, the first level of involvement, are manipulation and therapy which she defines as nonparticipation. The next three rungs, the second level of involvement, include informing, consultation, and placation. These are a token variety of participation since users have no decision-making power. The final level of involvement includes partnership, delegated power, and citizen control. These three rungs represent true participation in which citizens can directly influence decision-making.

Wandersman (1979b) proposes five types of user participation in planning: 1) creation of parameters and objects, in which the environment and its components are designed by the user without preconceived parameters by experts or paying clients. In this type of participation, the user has decision-making power; 2) self-planning, in which alternative plans are generated by the user who has the responsibility for decision-making; 3) choice, in which the user chooses between alternative plans provided by experts; 4) feedback, in which the user's ideas and opinions about a plan are solicited by the expert who has the decision-making power; and 5) no participation, in which the expert makes the

decisions for the user.

Wulz (1986) has identified seven forms and stages of participation in architectural design. They are: representation, "questionary," regionalism, dialogue, alternative, co-decision, and self-decision. According to him, the seven forms exist between the poles of expert autonomous architecture and user autonomous architecture. Representation is the most passive form of participation. In this form, the architect, relying on his/her professional knowledge and experience, subjectively integrates the special needs and wishes of the user in the process of design. In the second form, "questionary," the architect utilizes knowledge on user needs gained from scientific research and investigation. A drawback of this form is the fact that what is liked by the majority of the people is not necessarily preferred by all people. In regionalism, the architect reflects user needs by questioning the local residents and by studying architectural and symbolic qualities in a specific area. Dialogue is a form of participation in which informal two-way communication occurs. Users comment on the architect's proposal at an early stage in the design process. Decisions, however, are made by the architect. Alternative is a form of participation in which local residents are given the choice of several alternatives within a fixed frame. In co-decision, users are involved from the beginning of the design process and their influence changes from being passive to being balanced between the designer and users. Self-design is the final form of

participation. In this form, decisions are made by citizens themselves.

Arnstein's conceptualization of participation does not deal with various stages of the design process since it is based on federal social programs. Her conceptualization is heavily focused on the distribution of power. On the other hand, Wulz's conceptualization is comprehensive and better explains participation in design. His terms, however, are somewhat confusing. Also, representation and questionnaire are categories that deal with different degrees of the designer's utilization of existing knowledge. In these stages no users are involved although Wulz might argue that there is user involvement since the information was gathered from anonymous users. Although Wandersman's conceptualization is rather brief compared to that of Arnstein's and Wulz's, his differentiation between alternative design generation and alternative design selection is an important point that was ignored by the others.

Benefits of Participation

Drawing on the review of the participatory literature, this section presents three propositions regarding the benefits of participatory design/planning.

Proposition 1: Participation would create an environment that fulfills the needs and preferences of the user.

Baldassari et al. (1980) propose that participation

produces a better quality end product. They argue that "participation can result in a better finished product not only because the ideas of individuals have been recognized but also because of the results of collective creativity" (p. 14). Wates and Knevitt (1987) also claim that the only people who have expert knowledge about the quality of a particular environment are the inhabitants - the users. Therefore, without their knowledge and wisdom, any intervention is likely to be insensitive and unrelated to the needs and aspirations of the people it is intended to serve. On the other hand, Wooley (1985) suggests that insufficient evidence has been found to support the hypothesis that user participation results in greater satisfaction. He conducted a study to test the proposition that users/occupants will be more satisfied if they participate in design. He used a survey kit called the "Housing Appraisal Kit" developed by the British government to assess consumer satisfaction with housing. The satisfaction levels of fifty-five estates throughout England and Wales had been previously assessed by using the Housing Appraisal Kit. He compared the satisfaction scores in forty-two public housing estates to those of three new co-operative housing estates built by a participatory approach in London. It was found that residents of the three participatory design case studies did not show substantially higher levels of satisfaction than users/occupants of public housing. He concluded that user participation in design does not necessarily solve the problem of interpreting user

requirements and turning them into building more successfully than conventional approaches. He also suggested that the degree of overall control by the users was a more important variable than participation in design.

As Wandersman (1979b) pointed out, there is a need for the investigation of "the validity of user participation as a technique of providing 'objectively' better environments than those planned by experts without user participation" (p. 480).

Proposition 2: Participation contributes to a greater sense of community among those engaged in the process.

Francis (1982) found that those local residents who had participated in creating community gardens and parks felt that this increased their attachment to the neighborhood and their confidence in the area.

Israel (1988), however, found that participants' or residents' sense of belonging or community was not increased as a result of participation in a mural project. She studied the impact of the creation of a participatory art work, a mural in a residential area. One of the goals of her study was to examine claims that participation increases people's sense of community and helps prevent vandalism. She used in-depth analysis of the creation of the Football mural in the Newcastle Upon Tyne region of Northern England. The mural contained local images such as images of the Tyne Bridge and Newcastle's football team and castle. She worked as a facilitator and was closely involved in the process of

creating the mural. The author came up with a final design while working with children. Then the children interview team collected people's reactions to the proposed design. About thirty children participated in the painting. Although some of the children who participated showed some difference in their sense of community, overall the children who participated did not express a greater sense of belonging to the community than those who did not participate.

Also, a study done by Julian, Reischl, Carrick, and Katrenich (1997) revealed no differences in sense of community among groups at three different levels of participation. The research was conducted to evaluate a local United Way planning process that was designed to elicit citizen contributions to planning decisions. The authors tested several hypotheses about the relationships among participation, sense of community, empowerment, and attitude congruence with policy decisions. One of the hypotheses was that the higher the individuals' level of participation, the greater the sense of community. Study participants were randomly assigned to one of the three experimental conditions representing high, moderate, or low levels of participation. At the high level of participation, participants had access to planning information and an opportunity to communicate formally with policy makers. At the moderate level of participation, participants were able to access planning information only. At the lower level of participation, participants neither had access to policy information nor had an opportunity to communicate with policy

makers. Although it was found that there was a significant effect of participation regarding sense of empowerment, there were no differences in the sense of community across the groups at different levels of participation. The authors suggest that no differences were found in participants' sense of community because of the lack of power to influence pertinent decisions.

Proposition 3: Participation has benefits for environmental maintenance.

Hart (1987) argues that children's involvement in participation not only leads to a better quality environment but also has implications for its maintenance. Since participation provides a sense of ownership, the environments will be less likely to have graffiti or be vandalized. Sheat and Beer (1989) also propose that vandalism and abuse of the design would be much less likely to happen in participatory design projects. Spivack (1969) found that older children involved in creating a playground developed a sense of identification with, and responsibility for the publicly owned property. However, Israel (1988) found that community participation in the mural project did not prevent the mural from having graffiti although participation might have delayed the appearance of graffiti.

So far I have written about participation and its benefits. As seen above, there is conflicting evidence which rejects or supports the propositions. To test the proposed

benefits of participation, I designed an empirical study which compares participatory playgrounds with non-participatory playgrounds. In the following section I will briefly discuss the history of playground development in the United States.

Playgrounds

A Brief History of Playground Development in the U.S.

The playground movement started with the sand garden which contained a large sandbox made of wood. It was established in Boston in 1885 at the suggestion of a medical doctor who had seen sand gardens in Germany. The sand garden was introduced to keep unsupervised small children from playing in dirty, congested, and dangerous streets (Cavallo, 1981). In 1886, a portion of the Charles River Embankment in Boston was set aside as a children's play area. In the following year, an open-air gymnasium containing play apparatus, pools, and a track was created in Charlesbank (Newton, 1971). School playgrounds were established slowly through the nineteenth century by moral reformers. The leaders of the playground movement declared that the playground would be "the womb from which a new urban citizenry - moral, industrious, and socially responsible - would emerge" (Boyer, 1978, p. 242).

The playground movement is closely tied to the reform park movement. The reform park (1900 - 1930) (Cranz, 1978, 1982) was born around 1900 to satisfy the need for playgrounds and local parks. The activities provided in the park were

heavily child-oriented even though the needs of adult men of the working classes were met. Also, public health concerns motivated the provision of swimming pools in the park. The reform park movement stressed physical exercise, supervision, and organization (Cranz, 1978, 1982). In New York City, play equipment such as slides and seesaws and playleaders for neighborhood playgrounds in slum districts were provided by an advocacy group, the Outdoor Recreation League. In 1902, the Parks Department took the responsibility for the playgrounds. In the following year, Seward Park, the first municipal park in the country to be equipped as a permanent playground, was dedicated and became a model for similar playground developments. In 1906, the Playground Association of America (later the National Recreation Association) was created. By 1915, there were 70 playgrounds in New York City (City of New York Parks & Recreation, 1988).

In the 1930s, the idea of using parks as a mechanism of social reform was abandoned by park administrators and a new era, emphasizing active recreation, started. During 1930s - 1960s, organizational structures, park design, and programming were rapidly standardized and playground plans were duplicated (Cranz, 1978, 1982). In the 1930s and 1940s, sturdy surface materials such as clay, turf, concrete, and asphalt were introduced and playground fences appeared. Also, playground equipment became simplified, safe, and well-built because supervision was no longer available. As a result, adventurous gymnastic equipment was replaced by the "pipe frame exercise

unit" (Cranz, 1982). Many playgrounds were built in New York City but in some cases playgrounds were provided not to enhance children's play experiences but to confine and restrict children. The "marginal" playgrounds in Central Park were created mainly for that reason. Then Park Commissioner Robert Moses' remarks clearly show what he wanted when he created the playgrounds in Central Park:

These playgrounds are equipped with small-size swings, seesaws, slides and playhouses, shower basins, and benches. They are surfaced with a resilient asphalt preparation, which prevents digging and eliminates dust. They are fenced and the gates are locked at night. Located near the major entrances, they intercept children on the way into the park and provide a place in which excess energy can be worked off without damage to the park surroundings. (Quoted in Gotkin, 1999, p. 61)

In the 1950s and 1960s, some novelty play equipment was introduced. Inspired by the success of a small children's amusement park (also called Kiddieland, Storyland, or Fairyland), park departments around the country introduced free-form play sculptures. By using concrete, fiberglass, and plastic, play equipment manufacturers introduced animals, vehicles, and abstract shaped play equipment (Cranz, 1982; Crowder, 1999).

Since 1965 all unbuilt spaces were viewed as potential sources of psychic and physical relief by open space designers and providers. Small lots, previously regarded as unusable either because of their size, shape, grade, or proximity to busy streets and incompatible land uses, were turned into new types of parks - the tot lot, the "adventure" playground, and the "vest-pocket" parks (Cranz, 1978, 1982). Depressed inner-

city areas in the United States saw many vest-pocket playgrounds in the 1960s (Erickson, 1985). To satisfy immediate needs for playgrounds in underserved low-income areas, Friedberg (1969) proposed the modular playground. Unlike the traditional playgrounds which take one to two years to produce, the modular playground could be easily installed without footings and foundations. He proposed that modular systems could be stockpiled and when there is a need, those play facilities could be transported and installed on site. Also, if necessary, they could be dismantled, removed, and reused.

In the 1970s and 1980s, many playground equipment manufacturers introduced modular wood equipment with decks and attached play options (Frost, 1989). During the 1980s, metal modular playground equipment became popular and continues to be used in current playgrounds. Also, in 1984, the Playground for All Children, the country's first playground for both disabled and able-bodied children, opened in Flushing Meadows-Corona Park (City of New York Parks & Recreation, 1988).

Types of Playgrounds

Although many types of playgrounds are used currently, they can be roughly divided into five general categories: the traditional playground, the adventure playground, the designer's playground, the creative playground (Frost, 1978), and the high-tech modular playground.

The traditional playground is usually located in public

parks and schools. It is composed of commercially manufactured steel play equipment such as swings, seesaws, jungle gyms, and slides set in asphalt which have been unchanged for decades. Sometimes they contain sandboxes (see Figure 2.1).

The adventure playground (often referred to as a "building yard" or "junk playground") was first proposed by a Danish landscape architect in 1931. The actual building of the first adventure playground was realized in 1943 in the Copenhagen suburb of Emdrup (Erickson, 1985; Lady Allen of Hurtwood, 1968). In the adventure playground, a variety of raw materials such as discarded lumber, tires, pipes, bricks, and other junk are available. Children use these materials to build their own play environment with restrictions only to prevent hazards. In addition, other play opportunities are offered, including gardening, cooking over fires, caring for animals, and more (see Figure 2.2). Since the 1950s, many adventure playgrounds were built throughout Europe, especially in England, Denmark, and Sweden (Henniger, Strickland, & Frost, 1985; Pedersen, 1985). The concept was brought to the United States in 1950 but it was not until the mid-1960s that other adventure playgrounds were created. By 1977, twenty American cities had this type of playground. In general, the concept was not highly supported in America for a number of reasons. First, the provision and training of qualified play leaders was a problem. Next, the adventure playground was mistakenly regarded as unsafe and noisy. Finally, these

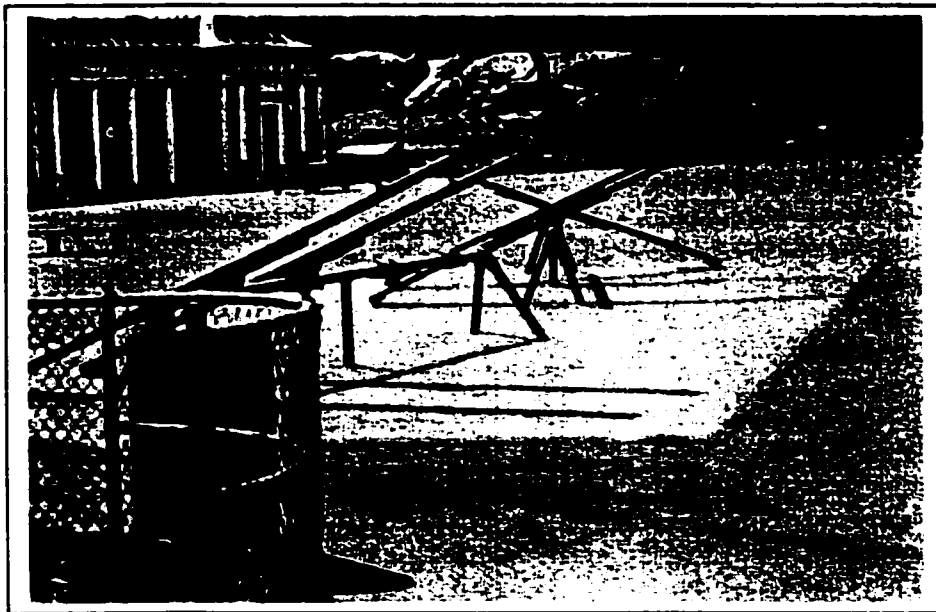
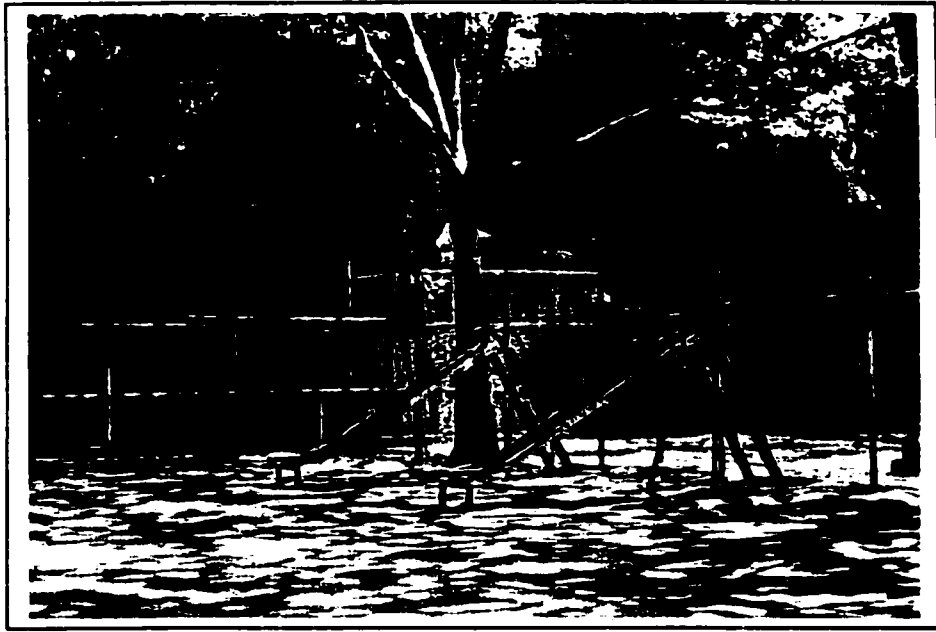


Figure 2.1. Views of the traditional playground

The picture in the bottom is from *Design for Play* by R. Dattner, 1969, p. 35.

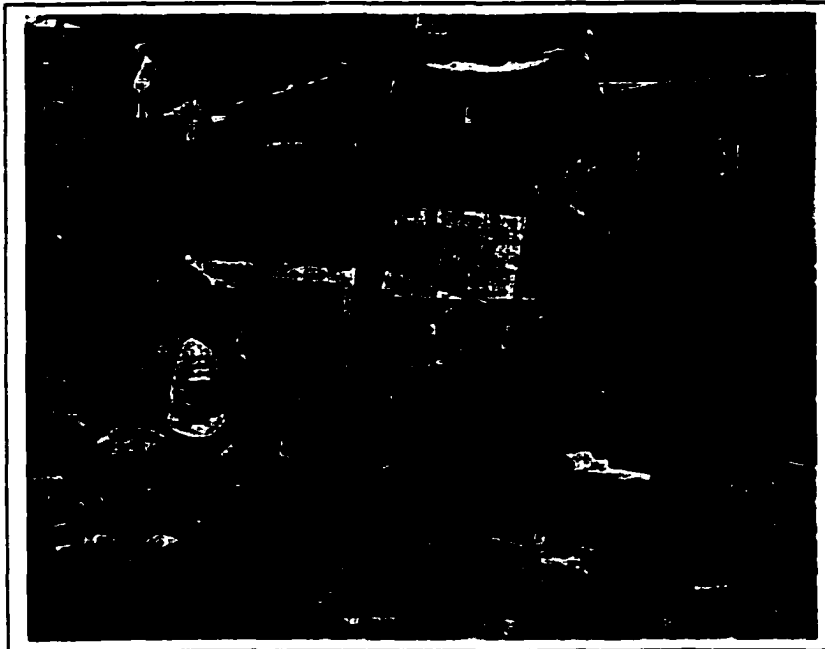


Figure 2.2. Views of the adventure playground

From *Design for Play* by R. Dattner, 1969, p. 44 (top);
Planning for Play, by Lady Allen of Hurtwood, 1968, p. 62
(bottom).

playgrounds were not aesthetically pleasing to many people (Cooper, 1970; Erickson, 1985).

An article by Spivack (1969) clearly shows how some adults felt about an adventure playground. As a city planner, he was involved in the creation of an adventure playground. He and neighborhood children transformed a severely vandalized flat playground into a playground with built structures constructed with industrial surplus materials such as railroad ties and telephone poles. Although the children were happy with the playground, some of the parents and neighbors were not satisfied with the appearance of the playground. This aesthetic conflict eventually destroyed the project. One day the project was demolished and replaced by a flat, blacktop paving. Soon the city installed some new fencing and playground equipment. However, within days the fences were vandalized and the playground was filled with broken bottles.

Dissatisfaction with the traditional playground and the popularity of the adventure playground led to a new distinctive type of playground - the designer's playground or "contemporary playground" (Hayward, Rothenberg, & Beasley, 1974). New playground equipment was designed to replace the dull colors and stark designs of the traditional play equipment (Erickson, 1985) (see Figure 2.3). Conventional equipment was replaced by slabs, mazes, tubes, and platforms. Also, the intention of improving the aesthetic appearance of the playground and stimulating children's imaginations



Figure 2.3. Views of the designer's playground

From "Recreation Needs in Urban Areas" by R. Weaver in W. N. Seymour, Jr. (Ed.) *Small Urban Spaces*, 1969, p. 24 (top); *Design for Play* by R. Dattner, 1969, p. 77 (bottom).

resulted in so-called play sculpture. Paul Friedberg and Richard Dattner were two of the most visible leaders of the designer's playgrounds (Crowder, 1999). Friedberg (1969) proposed the idea of "linked play" and advocated the use of modular play equipment. Unlike traditional, isolated play equipment such as slides and swings, creation of large connected forms by using the modular system allow "continuous and linked" play possible. He also suggested that children should be encouraged to use some types of construction materials such as ropes, wires, and boards. Furthermore, he recommended the involvement of children in modifying the play facility:

Imagine, for example, children equipped with a kit of nuts, bolts and wrenches, and various lengths of wood with predrilled holes. The pieces of wood would be attached to the play facility by means of existing holes. This would not only develop cognitive and manual skills, but also allow the child to change the basic form of the playground during the course of his play or learning experiences. (p. 108)

Unfortunately, his idea of involving children in the creation or modification was not realized in his playgrounds.

Dattner's Adventure Playground in Central Park was a combination of the adventure playground, traditional playground design, and Noguchi's sculptural play environments. The name Adventure Playground is somewhat misleading since it is not the same type of playground that was popular in Europe. It was rather a "sanitized, aestheticized version of the European model and with its mounds, steps, walls, slides, and tunnels was clearly reminiscent of Noguchi's playground

designs" (Crowder, 1999, p. 54). Isamu Noguchi's contribution to playground design started in 1933 when he introduced the "play mountain" concept. He designed a playable space by tilting the surface into steps of a pyramid with usable interior space. The spiral shaped ridge was a slide or was used for sleds in winter. He designed several other playgrounds in New York City but they were never realized (Noguchi, 1968). However, his design concept was not forgotten.

In fact, influenced by Noguchi, Dattner designed the Adventure Playground in Central Park containing sculpted landforms that allowed children a variety of activities such as climbing, jumping, and balancing. He also incorporated slides and ladders into the structure, which prevented the possibility of a free fall (Dattner, 1969).

Although the condition of the playground was improved, these playgrounds had some problems. They were expensive to build and often used hard construction materials to deter vandalism. The equipment was fixed without having any moving parts. The lack of opportunities to manipulate the environment while playing resulted in many abandoned playgrounds (Eriksen, 1985). In addition, liability and maintenance issues related to water features, which were frequently incorporated into the design, were partly responsible for the disuse of this type of playground (Crowder, 1999).

In reaction to the expensive designer's playground, a new type of playground emerged - the creative playground. These

playgrounds often involved community members in planning and construction. They are composed of discarded, surplus, or inexpensive materials such as rubber tires and railroad ties. Loose parts such as sand, sand toys, and blocks are most often found in these environments (Frost, 1978).

Another type of playground that can be seen currently is the high-tech modular playground. This is a combination of the traditional playground equipment with the modular system, introduced by Friedberg and others (Crowder, 1999). Today most of the play equipment manufacturers produce modular equipment which can take a variety of forms (see Figure 2.4). Current playgrounds are dominated by primary-colored modular play units. Jungle gyms and seesaws that once dominated playgrounds decreased in part because of safety concerns. Also, the number of moving parts such as merry-go-rounds and rocking animals has been reduced. It is fair to say that safety conditions in playgrounds have been improved. However, the drawback of the high-tech modular playground is that many of them are boring and lacking challenge.

In summary, the traditional playground has serious limitations since it fails to support and encourage the total development of children. The designer's playground lacks opportunities for manipulation. The adventure playground and the creative playground are more reflective of user needs. However, they tend to be aesthetically unpleasant to some people. The primary reason that these community-built



Figure 2.4. Views of the high-tech modular playground

playgrounds disappeared was the growth of liability concerns over accidents. Only the play equipment manufacturers could afford to confront this problem. Almost all of the designers of participatory adventure stopped building these after the 1970s (Cooper, 1970; Hart, personal communication). The high-tech modular playground is also criticized by some experts since it lacks challenge.

As seen above, there are several types of playgrounds developed to meet different needs of children and adults. In the next section, I will discuss how different types of playgrounds are used by children.

Use of Different Types of Playgrounds

A body of research has looked at children's use of different types of playgrounds. Hayward, Rothenberg, and Beasley (1974) studied three playgrounds that differed considerably in physical form. They were identified as the traditional playground (containing some form of swings, slides, seesaws, and climbing bars), the contemporary playground (somewhat sculptured, frequently based on sand or concrete forms), and the adventure playground (offering a selection of loose parts such as tires, wood, tools, plants, and so on but no adult provided permanent play structures). Behavioral mapping, behavior setting's records, and interviews were used for data collection. The results clearly showed that there were distinct patterns of playground attendance and use at each playground. The

contemporary playground had the highest numbers of users, followed by the traditional playground and the adventure playground. The contemporary playground also had the highest percentage of preschool children. On the other hand, school-age children and teenagers comprised approximately 77% of the total number of adventure playground users. In contrast, school-age and teenage children at the traditional and the contemporary playgrounds represented only about 30% of the total users at each playground. The authors conclude that the adventure playground was a setting that could offer important opportunities for older children. Also, the results suggested that the provision of loose parts (e.g., tires, wood, tools, plants) contributed to the potential for children to design their own activities.

Although Hayward et al.'s (1974) research suggested that the contemporary playground was more popular than the traditional playground, other studies found no significant differences between the two types of playgrounds. Hart and Sheehan (1986), for example, conducted a comparative study of preschoolers' play behavior at both a traditional and a contemporary playground. They assessed the effects of two different types of playgrounds on the social, cognitive, and physical aspects of play behaviors in preschool children. The playgrounds were located in the same area and were divided by shrubbery that provided a natural barrier. The traditional playground contained slides, sandboxes, swings, and movable equipment such as tires, cable spools, and wooden crates. The

contemporary playground included a Gazebo-type structure with a slide and tire swings, a sandbox, extensive sculptured landscaping, and walkways. It contained little movable equipment and provided less open space than the traditional playground. Forty randomly selected children (20 boys and 20 girls) of 2 age groups (2-3 years old and 4-5 years old) were observed using video cameras. Barricades separated the two playgrounds and children were asked to stay on an assigned playground. It was intended to observe each child 12 times on each playground but because children sometimes were absent for a day, a total of 408 observations from the traditional playground and 447 observations from the contemporary playground were conducted. Scenes of the videotapes were coded by six pairs of coders. In the study, the authors found that the contemporary playground showed more passive physical activities such as sitting, standing, and walking. There were no differences between the two types of playgrounds regarding verbal interaction, cognitive play, or social play behaviors.

Similar conclusions were reached by Brown and Burger (1984). By using a time sampling method, Brown and Burger observed a total of 72 children on six playgrounds located at preschool or day-care facilities. Instead of labeling the playgrounds as traditional or contemporary, the authors developed a 19-item scale which covered four areas: social/affective, cognitive, motor, and practical considerations. Assessment using the scale resulted in three higher-rated sites (with more contemporary designs) and three

lower-rated sites (with less contemporary designs). At each playground, children's behaviors were coded in social, language, and motor categories. The results indicated no significant differences between the higher-rated sites, as a group, and the lower-rated sites, as a group, regarding the amount of social, language, and motor behaviors exhibited by the children. However, when the sites were compared to one another individually, some differences were found. Site 1, one of the higher-rated playgrounds, showed the lowest amount of motor behaviors and relatively medium amounts of social and language behaviors. The researchers proposed three possible reasons for the finding. First, although the playground was aesthetically pleasing, it did not necessarily enhance desirable behaviors. Second, despite the potential for alteration, the play structure was never changed. Finally, even though sand play was available, it was improperly located in a high traffic area. By contrast, Site 4, one of the sites rated lower by the authors, promoted the highest levels of desirable social, language, and motor behaviors. Two multifunctional play structures at Site 4 offered more extensive opportunities for physical activity than the play structure at Site 1 did. Also, Site 4 provided more encapsulated or enclosed areas, as well as an abundance of wheeled toy vehicles such as tricycles, big wheels, and wagons and a flat riding surface. The authors concluded that the most important design aspects having the most important influence on children's behaviors were zoning, encapsulation, and the

provision of appropriate materials.

Another comparative study of a traditional and a creative playground was conducted by Campbell and Frost (1985). To examine the effect of different types of playgrounds on the play behaviors of 2nd grade children, Campbell and Frost studied a traditional playground and a creative playground located at the opposite sides of an elementary school. The traditional playground contained manufactured playground equipment such as seesaws, a merry-go-round, swings, a slide, and trapeze bars. The creative playground, on the other hand, provided a slide, two separate tire swings, a movable seesaw, a boat, and a platform structure with high slides and windows. The creative playground included a quantity of large planks, crates, and reels for construction and a corner shack which held a variety of riding, dramatic play and game equipment. A total of 55 children (23 boys and 22 girls) were included in the study. Each child was observed twice during a play period. The observations were conducted once a week for 10 weeks. The observer watched each child for ten seconds and scored each for a social and a cognitive category of play. The traditional playground was found to be more likely used for functional and parallel play. In contrast, constructive and solitary play were more likely to occur on the creative playground. Overall, the presence of different equipment and materials had a significant effect on children's behavior.

Similar findings were documented by Frost and Strickland (1985). They studied children's equipment choices in the

outdoor environment during free play. A total of 138 children from kindergarten to 2nd grade were observed. Three play environments which differed in play equipment were created and children were allowed to make their own equipment choices. Play environment "A" consisted of a complex unit structure containing space for climbing, two tire swings, a slide, a firefighters' pole and ladder in a sand area. Play environment "B" included 16 different structures including balance beams, chinning bars, obstacle climbers, a suspension bridge, a slide, and so on. Play environment "C" was comprised of a slide, a fort, a boat, a car, a picnic table with benches, three kinds of climbers, wheeled toy vehicles, a wheel vehicle track, a storage shed and so forth. The observers, trained teachers of the children, coded the equipment being used by each child on a scale map. It was found that play environment C was the most popular of the three environments with 63% of the observations. The authors concluded that children preferred play equipment that can be adapted to their play schemes. In other words, children preferred movable, complex equipment that offered several play options.

A study of a tire playground was done by Weinstein and Pinciotti (1988). The researchers studied a newly built tire playground which replaced an empty, fenced-in blacktop schoolyard. The authors observed children's behavior on the schoolyard for two weeks before and after the construction. A total of approximately 400 children who were in kindergarten through grade three, were observed during recess periods. The

central structure of the playground consisted of three pyramids of tires which were linked by tire bridges. Two slides were attached to two of the pyramids. The playground also included balance beams and monkey swings. The authors found that organized games and uninvolved behavior were significantly decreased while active play (e.g., running, climbing) increased significantly. Also, the tire playground fostered interaction and allowed retreat and solitude. Finally, significantly more pretend play was observed after the construction of the playground.

Susa and Benedict (1994) examined the relationship among pretend play, creativity, and playground design. The pretend play behaviors of 80 children who were using a traditional and a contemporary playground were observed by two trained observers. The traditional playground contained two swing sets, a slide, a merry-go-round, and a seesaw. Since it was a part of a larger park, it also provided large open spaces with picnic tables under trees. The contemporary playground, designed by Leathers and Associates, included a linked play structure constructed of pressure treated lumber. Each child was observed for approximately 15 minutes and the length of time that the child spent on pretend play was recorded. Another phase of data collection was conducted when the children came off the play equipment. After answering some questions about play and playgrounds, the children were asked to produce as many possible uses for a 3-foot-wide empty wooden cable spool. The results indicated that more pretend

play occurred on the contemporary playground that on the traditional playground. Indeed, the contemporary playground was more complex and offered pretend facilitators such as rockets, castles, tunnels, and bridges. Also, the authors found that the children on the contemporary playground generated significantly more ideas for the spool than the children on the traditional playground did. Therefore, the investigators suggest that playground design influences the development of creativity.

Unlike the previous studies which compared different types of playgrounds, Naylor's (1985) study examined the uses of specific items at three playgrounds. The three playgrounds contained a sufficient number and variety of items such as slides, swings, jungle gyms, bars, a fort, and so forth. Two observation methods were utilized by the author. By using a time-sampling method, he observed the number of users on each piece of equipment, the characteristics, and play activities. The observations identified 1,526 users from the three playgrounds. Sixty-nine children were tracked and children's play activities, items used, and time spent on an item were recorded. The findings indicated that of 29 items studied, 14 items supported only one activity. Surprisingly, some of these "single-use" items were more popular than other multi-use items. He concluded that the opportunity for movement was the determining factor in popularity. In other words, children preferred items such as swings and slides which allow them to move quickly with minimum efforts. Also, the author found that

items such as the Fort and Tire-slide which encouraged social play in addition to physical play were more popular than equipment with only one mode. The equipment combining two or more play modes was more popular than single mode equipment.

Kirby (1989) examined the use of enclosed spaces in a half-acre preschool play area by thirty-six preschool children. She found that both natural (two vegetated corners of the playground) and built (two elevated decks connected by a bridge) enclosed spaces were highly preferred over other playground equipment such as a pyramid and balance beam. The behavioral mapping data show about one-half of the use occurred in settings with enclosure.

Although various studies revealed some differences among different types of playgrounds, the designated types of some playgrounds are somewhat misleading. For example, the traditional playground studied by Hart and Sheehan (1986) contained tires, cable spools, and wooden crates which are not the typical elements of the traditional playground. Indeed, some researchers (e.g., Frost, Shin, & Jacobs, 1998; Pinciotti & Weinstein, 1986) seem to agree that it is difficult to generalize the findings from previous comparative studies, since there exists a variety of playgrounds within a particular type. On that account, Frost et al. (1998) argue that labeling a playground is highly arbitrary since no two playgrounds are identical. Moreover, they point out that some researchers reached erroneous conclusions because they compared studies of playground types by using names that did

capture the diversity in playgrounds categorized as a particular type.

Also, previous comparative studies had some limitations. Hayward et al.'s (1974) study, for example, does not fully consider many other factors which could influence children's play activities at each playground. That is, it is possible to argue that the differences in play were influenced not only by the different features of each playground but also by other factors such as personality differences of children, age differences of children, and socioeconomic status of children (Pellegrini, 1987; Wohlwill & Heft, 1987).

Despite the fact that the findings from these comparative studies should be interpreted with caution, several important issues for playground design were revealed from the research. It seems that "loose parts" (Nicholson, 1971) have benefits for children's development. Play environments having more loose parts are more likely to encourage cognitive, social-cognitive, and cognitive-motor play than settings lower in loose parts because they allow children to manipulate them during play (Moore, 1985). Also, complexity of equipment, movability, modifiability of the play materials, opportunity for movement, enclosed areas, and zoned play areas seem to enhance children's play experiences.

Although different types of play occur in different types of playgrounds, no one type of playground is sufficient for children's developmental needs. Also, "No matter how ingenious or radical play equipment may become, it is mainly one

important ingredient in the child's play environment" (Frost, 1989, P. 23). Therefore, attention and efforts should go beyond the development of play equipment and be directed to the development of comprehensive play environments which include natural features, portable materials, support structures, and developmentally appropriate play equipment. However, since it is not always possible to provide total play environments because of constraints such as size of the site and budget, it would be desirable to locate different types of playgrounds in proximity to each other (Moore, 1985).

While it is very important to provide environments that satisfy the needs of children, another important factor is the provision of safe environments for play.

Playground Safety

Play is important to the development of children and they have the right to play in safe environments. However, increasing fears for children's safety prevents parents from allowing their children to play unsupervised outside. Several reasons such as traffic accidents, "stranger danger," fear of abuse from other children, and drug dealing in some areas generate fear in parents. As a result, children are increasingly isolated and confined to a narrow geographic environment (Smith, 1995).

Another type of safety is physical safety. According to Henniger et al. (1985), most playgrounds in the early 1980s provided too many opportunities for children to be seriously

injured during play. They pointed out that safety hazards existed because of inappropriate design and placement of equipment, inadequate maintenance, or inappropriate surfacing underneath and around playground equipment. A national survey of elementary school playground equipment also shows the dangers of school playgrounds. According to Bowers and Bruya (1988), the safety of children is in jeopardy each time they use school playgrounds. The safety problems were caused by design problems and neglect in maintenance. The major maintenance problems identified by the National Elementary School Playground Equipment Survey were sharp corners, edges or projections, exposed concrete footings, and unsafe surface materials. The major design problems were hard swing seats, sharp corners, edges or projections, and the height of the equipment. It was also found that the developmental needs of children were overlooked in school playgrounds. Only two-thirds of the playgrounds studied contained smaller sized play equipment for young children, only one-fifth had sand play areas and fifteen percent had wading pools.

The safety conditions of playgrounds have improved since the 1980s. The U.S. Consumer Product Safety Commission (CPSC) has established voluntary guidelines for equipment and surfacing. The Handbook for Public Playground Safety by CPSC, originally developed in 1981 and revised in 1991, 1994, and 1997, includes specifications for the use of play equipment and provides recommendations on age-related designs and play components. Although there are no required standards regarding

the manufacture or installation of play equipment or surfaces, an examination of playground equipment catalogues of the 1990s indicates that the manufacturers are adhering to Handbook recommendations to avoid possible negligence charges. In fact, unsafe playgrounds in New York City endanger many children and cost taxpayers millions of dollars in lawsuit payouts (Salkin, 1996). The fear of litigation forced municipalities, playground equipment manufacturers, and many designers to be more sensitive to safety issues. The Parks commissioner's comments clearly demonstrate his concern about liability issues. He stated that, "In today's litigious world, the children come to the playground with parents and the parents comes with lawyers. Often, the parents are lawyers" (quoted in Martin, 1996, p. B4).

Despite the awareness, during 1990-1995, the number of injuries on the playground requiring emergency department treatment was approximately 208,260 each year. Nearly 70 percent of all injuries occurred on public playgrounds. Most public-playground injuries were associated with climbing equipment (40%), slides (22%), and swings (21%). About seventy percent of equipment-related injuries result from falls. Other injuries resulted from collisions with moving equipment or other children. Sharp edges, protruding hardware, and pinch points also present hazards (Thompson & Hudson, 1998).

Fortunately, most injuries are preventable. While it is difficult to provide a completely safe playground, the hazards that increase the risk of injuries should be

removed. Regular safety inspections and improved setting design can be effective ways to provide a safe play environment.

Playground issues represent one aspect of the present study. Current park conditions and maintenance issues provide further information about the context for this study.

Current conditions of New York City Parks and Playgrounds

The Department of Parks and Recreation of New York City operates more than 1700 parks, playgrounds and recreational facilities, which cover more than 28,000 acres across the five boroughs. In Fiscal Year 2000, the Parks Department spent approximately \$400 million to cover the operating expenses and capital expenses. The expense budget covers the total expenses that Parks as an agency incurs, including salaries. In 2000, the capital budget was approximately \$200 million, quadruple the 1994 budget of \$51 million. It is used solely for new construction projects and major repairs in parks that cost over \$15,000 (City of New York Parks & Recreation, 2000a). While capital budget has grown, funds for maintenance and staff have decreased.

A significant change in the maintenance of parks has been the introduction of the Work Experience Program (WEP). The WEP workers, who are welfare recipients, help care for parks and playgrounds by performing basic maintenance tasks like removing litter and graffiti. This program is intended

to provide career training and job experience to welfare recipients although the advocates of welfare recipients argue that it is not fair to ask the recipients to work for their benefits. The introduction of WEP has improved the conditions of parks and playgrounds a great deal. New York City parks and playgrounds are much cleaner than before (City of New York Parks & Recreation, 2000a).

Parks Inspection Program

The Parks Inspection Program (PIP) began in 1884 and expanded to the current system of 24 two-week rounds and 24 biweekly summary reports a year. Trained inspectors from the division of Operation and Management Planning (OMP) perform over 3,000 inspections at ratable sites each year by using hand-held computers and digital cameras. Each inspected site gets either "acceptable" or "unacceptable" ratings for overall condition and cleanliness. The cleanliness and the conditions of the play equipment of New York City's playgrounds have been improved as a result of the use of welfare workers for clean-up and changed procedures for allocating capital funds. According to the Parks Department survey, 96% of playgrounds were rated clean in 1999, compared with 74% in 1994. Parks are rated every two weeks on five cleanliness features: graffiti, glass, litter, weeds, and damaged lawns. The overall condition is determined by examining seven structural features - the play equipment, safety surfaces, paved surfaces, sidewalks,

benches, fences and trees, and combining the ratings with cleanliness ratings. In terms of overall conditions 87% were rated acceptable in 1999, compared with 42% in 1994 (City of New York Parks & Recreation, 2000b).

In sum, during the last three decades, many empirical studies on playgrounds have been conducted and knowledge about children's needs, preferences, and behavior has accumulated. Even though there were flaws in some of the studies, previous studies appear to suggest that a playground should be a setting not only for physical development but also for social, cognitive, and emotional development. Since it is difficult to provide all the desired activities in one setting, different types of playgrounds should be offered in close proximity. Unfortunately some of the newly built or renovated playgrounds do not appear to reflect the knowledge gained from previous research. As a result, some playgrounds are underused or abandoned.

Proponents of participation argued that user needs will be better reflected in playgrounds that were built by participatory approaches. They further argue that participation enhances a sense of community among the participants and that it has maintenance benefits. However, empirical research has not fully proved the benefits of participation and has not produced consistent evidence. This concern lead me to the following research questions.

Research Questions

The following questions formed the basis of a comparative study.

- 1) What are the different ways that people participate in the design, construction, and maintenance of a neighborhood playground?
- 2) Does the final product of participatory design reflect more user needs and preferences than that of non-participatory design?
- 3) Does participation contribute to a greater sense of community among those engaged in the process?
- 4) Does participation lead to less vandalism and abuse of the playground?

CHAPTER THREE:

METHODOLOGY

Site Selection

Although many combinations of participation can exist, there are roughly five levels of participation in playground design and construction. They are: (1) participation in design only; (2) participation in construction only; (3) participation in design, construction, and maintenance; (4) participation in maintenance only; and (5) no participation.

A list of possible study sites was compiled from a review of literature on community open space in New York City and suggestions from people who have in-depth knowledge of the subject. Site visits were made to examine the existing equipment and the maintenance of the sites. Playgrounds that are only for private use were removed from the list. Since the oldest participatory site was built in 1993, I limited the study sites to those less than 6 years old for more equitable comparisons. Thus, some older playgrounds that were neglected and run down were removed from the list. Actually there are many playgrounds in New York City that need to be renovated. Initially, I wanted to include three examples for each category. However, I was not able to find 3 examples of participation in installation/construction. For that reason, only one site (Renaissance Playground) was chosen. I also found that

participation in design only sites did not exist since in many cases if community residents were involved in design, they participated also in the maintenance. Therefore, a new category of participation in design and maintenance was generated. Originally, it was intended to select nine participatory playgrounds and nine matching non-participatory playgrounds. In two cases (the 6th & B Garden and Creston Community Playground), however, it was impossible to find matching non-participatory playgrounds in the same neighborhoods. In these cases, playgrounds that were located in close proximity were chosen although there was community participation in maintenance.

Finally, eleven participatory examples, which cover four different levels of participation (participation in installation, participation in design and maintenance, participation in design, construction, and maintenance, and participation in maintenance) were selected. Also, seven non-participatory playgrounds for comparison were chosen. They are located within the same neighborhoods (see Table 3.1).

Most of the study sites were playgrounds, although two of the sites (El Sitio Feliz and the 6th & B Garden) were community gardens which accommodated children's play and gardening. Most of the sites were open during regular hours with the exception of community gardens, which open when a

Table 3.1

Study Sites

PARTICIPATORY PLAYGROUNDS	NON-PARTICIPATORY PLAYGROUNDS
Participation in design and maintenance only: 1. El Sitio Feliz 2. Sauer Park	1. Poor Richard Playground 2. Dry Dock Playground
Participation in construction only: 1. Renaissance Playground (PS 194 Playground)	1. F. Johnson Park
Participation in design, construction, and maintenance only: 1. 6 th & B Garden 2. Sunshine Playground 3. Creston Community Playground	1. No matching site 2. Blake Hobbs Park 3. No matching site
Participation in maintenance only: 1. First Park 2. Cherry Tree Playground 3. White Playground 4. Tompkins Square Park 5. Mount Hope Playground	1. ABC Playground 2. 103 rd St. Playground 3. Thomas Jefferson Park 4. No matching site 5. No matching site

member of the group is using them. Of the study sites that I have chosen, the 6th & B Garden, Creston Community Playground, and El Sitio Feliz (The Happy Place) have controlled access.

Data Collection

Multiple techniques were used to collect information: interviews, checklists, informal observations, and archival research. The data collection was carried out in the summer/fall of 1999 and 2000 in New York City. It was conducted in four New York City neighborhoods: the Lower East Side, East Harlem, Central Harlem, and the South Bronx. The site was visited on weekdays and weekends, covering morning, afternoon, and evening hours.

Interviews

Four different groups of people were interviewed. They were: 1) playground users (caregivers); 2) people who were involved in the participatory process including some playground design committee members; 3) representatives of technical assistance organizations; and 4) a designer.

1. User interviews

Five users at each playground were interviewed to investigate caregivers' views of children's preferences for and satisfaction with play experiences and play settings (a total of 90 people). Information was gathered in brief (5 minutes), tape-recorded interviews, conducted with parents

or caregivers. Interviews were conducted at the playgrounds. An opportunity sampling method was used to find respondents. The respondents consisted of users who were willing to participate in the interview. Users were chosen by area of the playground, sex, and age. Interview questions covered levels of satisfaction, what user liked and disliked most about the playground, and four questions concerning a sense of community (see Appendix A.1).

2. Participants' interviews

To recruit interviewees, letters explaining the study and requesting an interview, were sent to those who had participated in their neighborhood playgrounds. The letters were sent with the help of two Parks Outreach coordinators and a neighborhood organization coordinator. A total of 24 letters with a stamped/addressed envelope for return were mailed and seven - 29% response rate - agreed to be interviewed. These people were contacted by the phone and a meeting was scheduled. Interviews were conducted mainly at playgrounds or at participants' residences. The individuals already interviewed were asked to provide phone numbers of some neighborhood participants who might be willing to speak to the investigator. Eventually, a total of twenty-three people who had participated in the process were interviewed to find out whether participation had any impact on their sense of community and to obtain the background history of the playground project. Interview questions covered whether

the participants felt more involved in the community because of the project, how they felt about the outcome of the project, and what was the best and worst thing that has come out of the project (see Appendix A.2). The interviews took an average of 25 minutes to complete.

3. Playground construction committee members', designers', and representatives of technical assistance organizations' interviews

Playground design committee members, representatives of technical assistance organizations, and a designer were interviewed to obtain a history of the participatory process. The interview questions involved: who started the project, who was involved, how many people were involved, when people were involved, the role of the community and the designer, and how they felt about the process and the outcome of the project (see Appendix A.3, A.4, and A.5).

Checklists of Safety, Maintenance & Cleanliness of Playgrounds

Checklists were used to check the safety, maintenance, and cleanliness of each playground. The safety checklist was developed by utilizing the safety checklists of Frost (1979), U.S. Consumer Product Safety Commission (1997), and Consumer Federation of America (1998). Issues included in the checklist were surfacing, general hazards, equipment height, deterioration of equipment, security of hardware, drainage, age appropriateness of the equipment, swings, and

dangerous equipment.

The maintenance/cleanliness checklist was formulated by modifying the checklist used by the New York City Department of Parks & Recreation. The checklists provided information on the condition of the playground equipment and maintenance. Playground equipment was checked once for safety (see Appendix A.6). The cleanliness of the playground was checked three or four times on different days of the week (see Appendix A.7).

Archival research

Archival research was performed to gather information regarding the life history of each playground. The archival materials were gathered from The New York Times, local newspapers, residents who were involved, a designer, Department of Parks and Recreation, and web sites of technical assistance groups.

Data Analysis

Interviews were transcribed verbatim and content analysis was used to extract meaningful categories from the interview data. Initially all interviews were read by the author to determine the diversity of the interview responses. Then, a sample of interviews was chosen and the coding process began. As I went through the interview, I underlined a word, a phrase, or sometimes a sentence which might represent a possible category. Then, I developed these

categories into those that were close to what the interviewee said. The identified categories were written in the margins. With these main coding categories in mind, the remaining interviews were coded. Whenever new categories were added or changed, all interviews were recoded. Also, to achieve stability, the same interview was coded more than once by the author. Furthermore, the same text was coded by a doctoral student to insure intercoder reliability.

To determine whether there were any statistically significant differences between the responses of the participatory playground users and those of the non-participatory users, statistical analyses were conducted by using SPSS 10.0 for windows and SAS for windows v.8. T-tests were utilized to examine variation in a sense of community, maintenance, and cleanliness.

CHAPTER FOUR:

FINDINGS

In this chapter, I will present the findings regarding the four research questions.

Community Participation in Neighborhood Playgrounds

Research Question 1: What are the different ways that people participate in the design, construction or installation, and maintenance of a neighborhood playground?

Volunteers are involved in their neighborhood playgrounds in many different ways. Some are involved in one-time events such as Green-up Month in April and May or Clean-up Day in October when volunteers paint fences, plant bulbs, rake leaves, and engage in many other park beautification activities. In some cases, volunteers are involved in a one-day installation of playground equipment. Also, volunteers help their local parks by participating in cleaning and painting, planting and gardening, organizing special events, fundraising, tree care, and organizing sports programs. In other cases, people are involved from the inception of the design and continue to be involved in subsequent maintenance.

Among the eleven participatory sites that were studied, five (Mount Hope Playground, First Park, Cherry Tree Playground, White Playground, and Tompkins Square Park) involved participation in maintenance only; three (the 6th & B Garden, Creston Community Playground, and Sunshine Playground) had participation in design, construction, and maintenance; two (El Sitio Feliz and Sauer Park) included participation in design and maintenance; Renaissance Playground had participation in assembly (see Table 4.1). Of those, I will describe four sites in detail. To provide some background information, I will first describe some of the technical assistance organizations that have been involved in the creation and/or maintenance of neighborhood open space.

Technical Assistance Organizations

The Trust for Public Land

The Trust for Public Land (TPL) is a national nonprofit organization founded in 1972. The main objective of the organization is to protect land for human enjoyment and well-being. TPL's involvement in the creation of community managed playgrounds in New York City started roughly in 1995 when the Deputy Mayor of New York City announced the City

Table 4.1

Brief Analysis of Participatory Playgrounds

CRITERIA		SITE	6 th & B Garden	Creston Community PG	Sunshine Playground	El Sitio Feliz	Sauer Park	Renaissance PG	Mount Hope PG	First Park	Cherry Tree PG	White Playground	Tompkins Square PG
STAGE OF PARTICIPATION	Participation in Design	◆	◆	◆	◆	◆							
	Participation in Construction	◆	◆	◆				◆					
	Participation in Maintenance	◆	◆	◆	◆	◆			◆	◆	◆	◆	◆
INITIATION OF CONSTRUCTION OR RENOVATION PROJECT	Grassroots Group	◆					◆		◆	◆	◆		◆
	Technical Assistance Group		◆	◆	◆			◆					
	City											◆	
TYPE OF EQUIPMENT	Manufactured		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
	Community-built	◆											
LOOSE PARTS		◆											
NATURAL ELEMENTS		◆	◆	◆	◆	◆				◆			
ACCESS	Full Access			◆		◆	◆	◆	◆	◆	◆	◆	◆
	Limited Access	◆	◆			◆							
SAFETY HAZARD	Unsafe Swings					◆						◆	
	No Safety Surfacing	◆											
	Equipment Higher Than 6 Feet		◆						◆	◆	◆	◆	

Spaces program to create temporary playgrounds on vacant lots. The plan was to fund the project through the installation of billboards for advertising. Since advertisers were not interested, nothing happened. In 1996, the Mayor and the Trust announced a new program with the old name that would create not temporary but permanent playgrounds which would be funded by traditional philanthropic funding. The program was launched in 1996 with four initial sites. Later, one site in East New York was dropped from the list since it had funding from other sources. Three of the sites that I studied (the 6th & B Garden, Creston Community Playground, and Sunshine Playground) were developed through this program.

The Council on the Environment of New York City

The Council on the Environment of New York City (CENYC) is a nonprofit organization formed in 1970. As part of the Office of the Mayor, CENYC has office space, telephones, and a couple of vehicles. Also, since several city commissioners are members of the organization, they provide some assistance to projects when the projects fall within their jurisdiction. The organization, however, raises money to cover salaries and expenses. It runs four major programs: Greenmarket, environmental education, the Waste Prevention

and Recycling Service, and the Open Space Greening Program. The Open Space Greening Program (OSGP) assists community people in creating or enhancing community open spaces by providing substantial technical and material assistance. Since 1978, CENYC has sponsored 49 gardens and playgrounds under the "Plant A Lot" (PAL) project, as well as under the auspices of the Open Space Greening Program. In 1992, El Sitio Feliz was chosen for a program known as "Lots for Tots." Lots for Tots are park/playgrounds for children in childcare centers and for neighborhood children and parents on weekends or after hours. Initiated in 1984, the Lots for Tots program is a collaborative effort of Plant A Lot project, the City Volunteers Corps, and the Mayor's Inter-Agency task Force.

Also, a part of the Open Space Greening Program, "Grow Truck" delivers tools and distributes donated plant and garden materials to projects all over New York City. The organization also provides small grants to support community managed open spaces.

The Parks Council

Since 1905, the Parks Council has been involved in the creation, protection and improvement of public space such as parks, open space, recreation areas, and waterfronts. In

1989, the Parks Council started the Success Garden program. This program was a response to lack of sufficient outdoor resources to educate school children in underserved neighborhoods about environmental issues. In partnership with School District #5 and community-based organizations, the Parks Council came up with the idea of creating a garden designed and planted by school children and used as an outdoor classroom, an oasis for the community, a resource center for the other schools in the district, and eventually as a model for replication in other school districts.

In 1990, the design of the first Success Garden, Harlem Success Garden, involving a group of students from a neighborhood junior high school, commenced and two years later it was finished. Since its opening, classes and neighborhood activities such as a kindergarten salad bed planting, a weed collection, story-telling workshops, and festivals have taken place in the garden. Currently, the garden contains play equipment, flower and vegetable gardens, a gazebo, a stage and benches, a tool storage shed, and a pond. The success of the Harlem Success Garden propelled the construction of many other Success Gardens: the East New York Success Garden, Williamsburg/El Puente Success Garden in Brooklyn, Mott Haven/St. Ann's Success Garden and Highbridge/Mosaic Success garden in the Bronx.

Operation GreenThumb

GreenThumb is a community gardening program sponsored by the City of New York/Parks & Recreation Department. The program was initiated in 1978 in response to the financial crisis in the 1970s which severely affected housing and neighborhood conditions in New York City. The financial crisis resulted in a large amount of unattractive and unsafe vacant land. By providing materials and technical support, the GreenThumb program helped neighborhood gardeners transform derelict land into attractive community gardens. These gardens often contained play areas for children and sitting areas for adults. Currently there are approximately 700 neighborhood groups and thousands of gardeners who participate in the program. The program provides training workshops in garden design, construction, and planting techniques. It also supplies materials such as tools, fencing, lumber, topsoil, and plant materials (City of New York Parks & Recreation brochure, n.d.).

Partnerships for Parks

Partnerships for Parks was an initiative of the Parks Department and the City Parks Foundation. The non-profit organization was founded to respond to cuts in public funding and staff for New York City's parks and to increase

community support for local parks. The organization plays a major role in creating and strengthening community groups who help care for neighborhood parks and playgrounds. Since 1995, four hundred Friends of Parks groups have been formed through Partnerships for Parks. The organization believes that when people feel a sense of ownership over their local parks and playgrounds, they are more likely to contribute to their upkeep. In 2000, there existed approximately 40,000 members of Partnership for Parks (Partnerships for Parks, n.d.; City of New York Parks and Recreation, 2000a).

The five organizations discussed above are the major technical assistance groups in New York City that help community groups in design, construction, and/or maintenance. Particularly, TPL, CENYC, and GreenThumb were involved in the creation of the sites that I studied. The Partnerships for Parks acts as a liaison between the Parks Department and neighborhood volunteers. In the following section, I will describe the roles of technical assistance groups and volunteers in the process of creating and/or maintaining the neighborhood playgrounds.

User Participation in Neighborhood Playgrounds

Sauer Park

This park is an example of community participation in design and maintenance. The park is located at East 12th Street between Avenues A and B in the Lower East Side. It occupies .433 acres (see Figure 4.1). When it first opened in 1934, it was equipped with a play area, wading pool, brick field house and comfort station, flagpole, and commemorative tablet. Additional lands were added to the site in 1965, 1989, and 1992. During the 1980s, the park was completely dilapidated. There were heroin dealers and homeless people living in the park. Prostitutes used the area for their business. There were many arguments and fights; even gun fights in the park. One woman's comments clearly show how bad the park was. She said, "It [Sauer Park] was horrible. I used to look out my window and see people shooting up in there and go to the bathroom. They were getting welfare checks here. It was crazy."

Also, in the 1980s, the neighborhood as a whole was in disrepair. Many buildings were abandoned by their landlords and became the property of the city. The renters living in two of these buildings on the block bought the buildings from the city and became homeowners. Some of these



Figure 4.1. Playground equipment in Sauer Park.

homeowners played a major role in the long revitalization process of the park and the neighborhood. At the beginning, a core group of 5 or 6 people tried to bring about changes by themselves without the city's help. They literally swept up glass and collected the needles on a daily basis or on the weekends.

The first organized effort to clean up the park started in October 1985 when the first community rally was held. Two months later a petition with over 500 signatures was sent to the Parks commissioner requesting the installation of a fence and the renovation of the playground. Residents formed a block association in 1986. They attended community board meetings and began to lobby for change. Eventually, the park was fenced off with recycled fencing. Then, in 1987, the Parks Department proposed a basketball court on black tar. However, community residents were not happy with the plan. Quotes from one of the block association members clearly show how people felt. He stated:

They [the Parks Department] were basically tear down these existing structure to put asphalt on the ground and say good-bye. So, we said, "No. If that's your idea of renovating the playground, we would rather have it fenced off." And they couldn't believe it. In the community board they said, "Oh, you are making a big mistake because the Parks Department is offering this. If you reject it then it will be years and years before they do anything else." We said, "That's okay. We would rather wait. This park has been in disrepair for 15 years. We would rather wait." (48-year-old male)

In spite of the block residents' efforts, park conditions were not improving. There were about 50 homeless people living permanently under a brick arcade in the park. In 1990, two of the block association members won seats on the community board and that helped the reconstruction project climb higher on the board's priority list. After a long delay and much frustration, the design was finalized in 1991 and the ground was broken in 1992 with the help of the Manhattan Borough President, who was able to finance the reconstruction through discretionary funds (Brown, 1993).

Members of the East 12th Street Block Association played a major role in preparing plans. The grass-roots design process was started mainly by a grandmother and schoolteacher who prepared the rendering of the existing park and distributed photocopies to other residents. She asked them to suggest new ideas. People wanted a playground for small children and a safe place for seniors. They hoped to include safe surfaces, shade trees, benches for old people, a sprinkler, flowers, and grass.

The Parks Department design was quite different. The design did not include any plants at all mainly because of maintenance issues. But the strong resistance of the community enabled the inclusion of flowers and grass. The roofs of the pavilions were modified, slatted like a trellis

rather than closed, to reflect people's concerns about possible uses by drug dealers and prostitutes for undesirable activities. For the final details of the plan, two members went to the Parks Department design office at Flushing Meadows-Corona Park in Queens and spent several hours with the designer moving things around. Eventually the suggestions of the community were incorporated into the design and the final plan was accepted at a Block Association meeting.

The final design was very close to the ways in which the community designed it. But this was possible only through strong community involvement. When asked whether the designers were responsive to the community's needs, a member stated:

They [Designers] were [responsive] but they were forced to be [responsive]. Initially they were not and they were resistant. But when they were finally forced to, by our refusal, accept anything but [what] we wanted. Then I have to say they did respond. But they didn't come here desiring to be responsive. They came here with opposite attitude. They came here with contempt to the community and we had to force them to respect us and the good thing I say about them is that in the end they did. (48-year-old male)

The renovation, which cost \$540,000, introduced some new features such as a spray shower, pavilions, and modular play equipment. When the park was renovated it was agreed that the block association and Friends of Sauer Park would

participate in the maintenance of the park. The Friends of Sauer Park was a group formed to take care of the park. It was more like a sub-committee of the block association. There were about 30 active members. However, the block association became much smaller since many people felt that they had fixed many problems or disasters and there was no need to bother to meet and talk about much smaller problems.

After the park renovation, the main concern of the block association and Friends of Sauer Park was to keep the park in good condition and use. Although drug dealers were gone due to the yearlong construction, they could come back again. Actually drug activities were still evident on the block. To prevent drug dealers from coming back and taking over, volunteers introduced positive activities such as karate for youth, yoga classes for mothers and babies, Tai-chi classes, and a block party. They opened and locked the gate. Also, a volunteer swept the park for an hour at 5 o'clock P.M. Three years after the opening, programs were discontinued since the park was not big enough to run programs like karate classes and there were enough people using the park. However, the efforts to clean, plant, open and close the park continued.

Also, there was a design change. Originally there were four plots where kids could dig and plant flowers. But

children had no interests in plots. They wanted a space where they could just run around. Therefore, the plots were removed and replaced by a lawn area.

Currently, a 46-year-old female volunteer works full-time at the park. She opens and closes the park. She turns the sprinklers on in the morning during the summer and checks the playground equipment. If there is any problem, she contacts the Parks Department. When I visited the park one day she was setting up a small plastic pool for small children. As soon as she filled the pool with water, children jumped in and played with some water toys. She sat right next to the pool and monitored the children's activities. Although she felt good about her involvement in the park, she was not satisfied with the other core members' involvement. She mentioned that "I am a little annoyed with some of the people who are supposed to help. There are a lot of people who were very gung ho before it [Sauer Park] opened but now they will not be bothered." Indeed, members of the Friends of Sauer Park were very active at the beginning but only 6 people are actively involved now.

Sunshine Playground

This playground, located on East 101st Street between Lexington and Third Avenues, is an example of participation

in design, construction, and maintenance (see Figure 4.2). After a fire that destroyed the two existing buildings on the site, the area was used as a parking lot for the nearby police precinct for many years. Because of the vandalism, the police decided to remove the cars and closed the lot. After the closure, the site was a dumping ground for many years. A 46-year-old woman's comments clearly illustrate the condition of the site. She said:

After the police gave up, it [the lot] was terrible. There was drug dealing going on here. They used to dump cars, tires, garbage, and refrigerators. I mean anything. They just dumped here. It was terrible because the junkies would come here and shoot up. They would have sex in the bushes. It was terrible.

In 1997, twin sisters, one of them the manager of the abutting building, began to clean up the lot. They wanted to create a garden and playground where the nearby building tenants could come and enjoy themselves. They contacted GreenThumb and got some materials such as tools, wood, soil, flowers, and shrubs from the organization. GreenThumb also provided materials for chain-link fences and about 6 volunteers put up the fence and planted flowers and shrubs. Their efforts, however, were not supported by other neighborhood residents. Even though the sisters cleaned the lot before they left, it was filled with garbage when they came back the next week. They were not receiving much

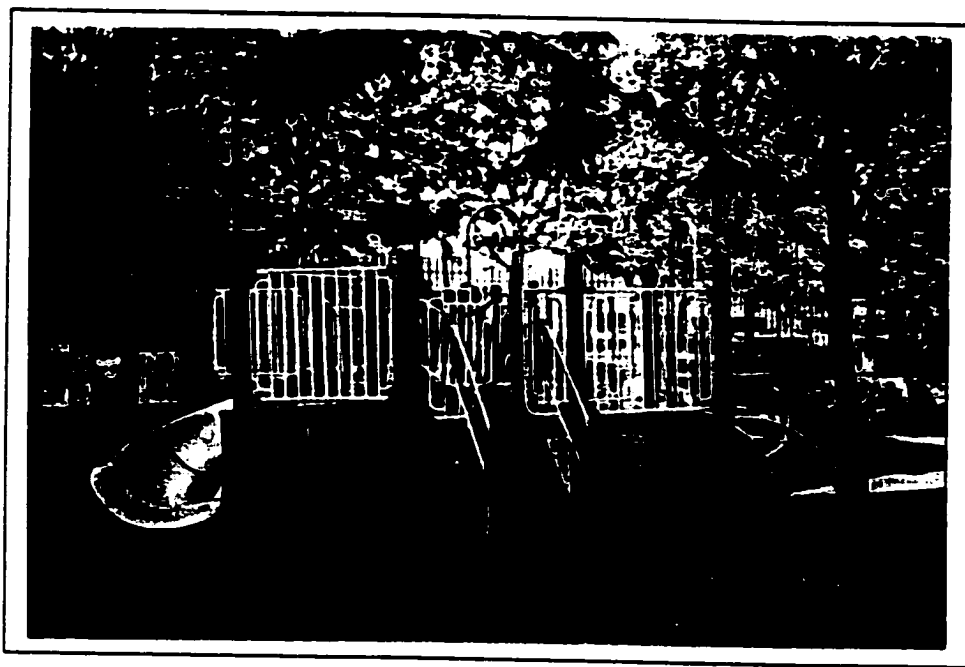
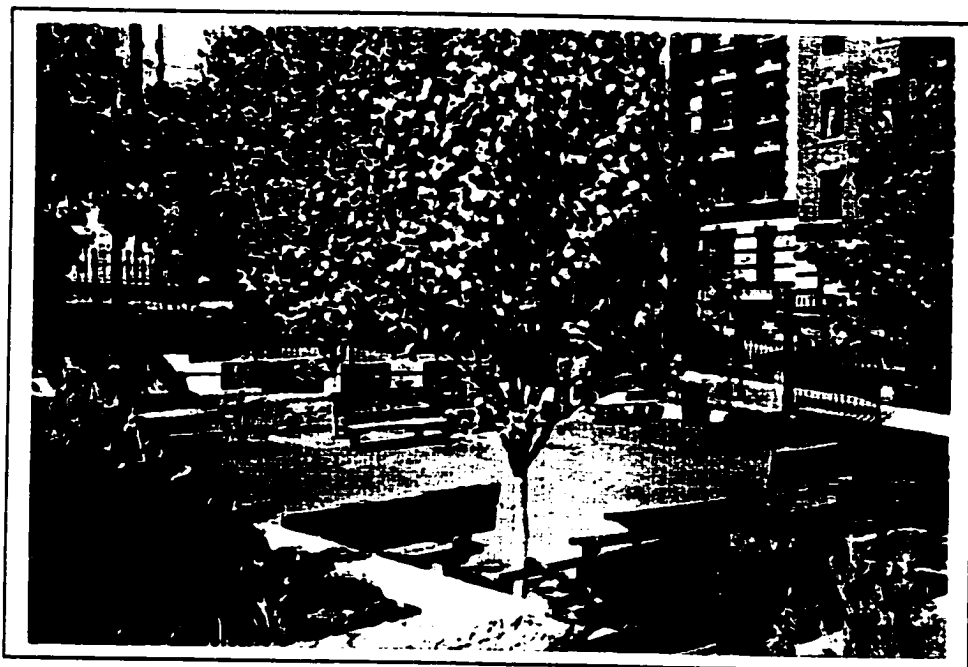


Figure 4.2. The entrance area and the composite play structure on the Sunshine Playground

cooperation from local residents. Many people did not want to help but criticized when the sisters tried to do anything. They had been struggling for 7 to 8 months. Further questions to the sisters about the problem revealed that they were unaware of why it happened. Then, one day one of the twins received a letter from the City of New York stating that the lot would be taken away. Indeed, the site was operated under a short-term license from the city's GreenThumb program and was subject to eviction with 30 days' notice.

About a month later, while the husband of one of the twin sisters was cleaning up the backyard of the adjacent building, he noticed that professional contractors were excavating the lot. So he approached them and found that they would build a garden and playground. It was a big surprise to him. Now developing the park is an effort shared by the Parks Department, Supportive Children's Advocacy Network (SCAN), and the TPL. SCAN is a not-for-profit community-based organization that provides child welfare services. At that time, SCAN workers were located in a nearby elementary school. Therefore, SCAN members were very familiar with the community. One of the problems the youngsters from a housing project had was a lack of a safe place that they could play. The only local park was

inundated with drug activities. Children who were playing there were often afraid because the drug dealers had pit bulls in the park. Also, the park did not provide separate areas for small children and senior citizens.

SCAN invited a group of parents who received services at SCAN and their children to discuss things that they would like to see if they had a park. The group met weekly for 6 months. SCAN had applied to the city for a vacant lot. The TPL decided to provide an empty lot to SCAN since it had a clear vision and had been managing a Parks Department recreation center in the Bronx. The TPL hired an architectural firm to work with the SCAN members on conceptualizing and designing the park. A design committee was formed. The committee included a representative from SCAN, parents and youngsters who were in the discussion group, a representative from the TPL, and a designer from the architectural firm.

After surveying the parks in the local vicinity, the design committee members concluded that a park for toddlers and seniors was needed most in the neighborhood. They wanted to include toddler's play equipment, a gazebo, benches and tables, and garden plots for children. Three schematic options were generated out of the meetings.

The final decision was made when the designers brought in a booklet with lots of play equipment. The design committee members talked about things such as the depth, the size, the level of risks, and the ages. After the discussion, play equipment was chosen and installed by the professionals. Overall the budget played a major role in the exclusion of a water element. A sprinkler would require plumbing for proper drainage. Otherwise, there would be safety and liability issues.

Then, something very unique happened. SCAN found out that there were twin sisters who had tried to make the park. Actually, SCAN and the twins had been working independently. Another phase of community participation in construction began when the twins became members of the park committee. One of the twins had a contract for maintenance with SCAN for one year that ended in May of 1998. There were twelve members on the park committee and they built the gazebo, planters, and little flower boxes. The members and some children were involved in the planting. They also introduced some programs for children such as egg hunting in the spring, a Fourth of July barbecue, Halloween party, birthday parties, and Youth Night.

Lack of participation and support from people on the block made volunteers frustrated and eventually they spent

less time in the playground for a while. Meanwhile, the playground had been deteriorating. According to a volunteer, some local parents were not "really responsive and they are not being responsible either." She said that some parents were not disciplining their children and not teaching them to respect what they have.

Around May 1999, the volunteers became more involved when they noticed the park did not look well kept. They initiated a mural project that included many children. The mural project took place on three different days at three different times. I went to the site on the second day of the project to conduct informal observation. There were about 20 children and they sketched their ideas on plain paper and later they traced the drawings on the wall. There was an artist who assisted the children with the drawing. He did not force his ideas but waited until the children came up with their own ideas. There was an uncomfortable moment when the children fought for the paintbrushes. Somehow the artist had not brought enough brushes and some of the children were sad since they could not participate in the activity. Eventually they shared the brushes and around 6:30 p.m. the project's second day ended. A week later the project was finished. The mural bears the names of thirty-one children who participated in the project.

The playground had been experiencing some maintenance problems. Because of an insufficient number of volunteers, proper supervision of the park had not been provided. Adult supervision is critical for the safety of the children and maintenance of the park. However, many times unsupervised children had been roller blading in the park. Also, they were vandalizing the park. The following quotes show the kinds of things that happened in the park.

The old man got almost beaten up here because he tried to tell the kids not to do. I think he [a boy] was hanging on a tree and he started pulling the tree down to a point that the tree almost broke. So when the senior citizen who was one of the volunteers called the kid's attention, the kid ran home and brought back three men that would gonna beat the old man, literally beat him up. My sister was the one to stop them. You see. These kinds of worst thing could happen if you don't have responsible people taking care of it... Like that girl that I said she would be get evicted, the six-year-old. Why would a parent let a six-year-old in the park alone? That's not being responsible.

On a pleasant evening in July 2000, a meeting was held in the park to discuss the maintenance of the park. Excluding three core members, five new people signed up for the clean-up scheduled for the following Sunday. There were some block residents sitting on the picnic table who did not want to join the meeting. Their children were roller blading in the park, which is against rules. A volunteer felt unhappy about what they were doing. She commented that:

We gotta do some sanding and put some stain, till the ground and stuff again. But it's gonna be a struggle because people don't cooperate. Even though we have the meeting and talk about it, they don't care. They just sit back and just let the kids do whatever they want. The kids can get hurt easily in roller blades and going there [the composite play structure].

Besides the lack of interest and cooperation from the local residents, the distant location of SCAN contributed to the oversight problems. SCAN chose the park because it was located in close proximity to a school where social workers from SCAN provided services. Since the social workers were no longer in the school, it is hard for SCAN members to oversee the park. The closest SCAN site is located on 116th Street between 1st and 2nd Avenues, which is 15 blocks away. Also, the youngsters who were the anticipated users of the park were unable to use the park since it was a long walk for them to go there.

6th & B Garden

This community garden with a children's area is another example of participation in design, construction, and maintenance. The corner of 6th Street and Avenue B was literally a dumping ground. In the spring of 1983, a nearby resident happened to walk by one day and saw a tomato plant that sprouted up. She and a handful of residents came in and

started to clean up the garbage and rubble and made garden plots and had little cookouts. Then it became a member of GreenThumb program in 1984. GreenThumb provided good soil and the wood that was used to build garden plots. After they set up the plots, the original volunteers wanted to create a place that could be enjoyed by the surrounding community. They built a stage and started to offer programs such as arts and crafts workshops. The garden plots have grown to over 100 from less than a 10. In mid 1980s, the garden members formed a not-for-profit organization, the Sixth Street and Avenue B Community Garden, Inc.

Currently the garden contains a stage, a children's area, a pavilion, a sculpture, garden plots with flowers and vegetables, over fifteen fruit trees, and over fifty flowering shrubs. The garden is surrounded by a fence designed by garden members. One of the designers calls it "the Big Wave." The fence has all the garden members' hands cut into it. It is a symbol of protection and of members' contribution in creating the garden. A pavilion, built in the early 1990s by members, sits in the middle of the garden. At the western end there is a stage that was designed and built by members in 1996 (see Figure 4.3). Also, there is a 37-foot internationally famous and

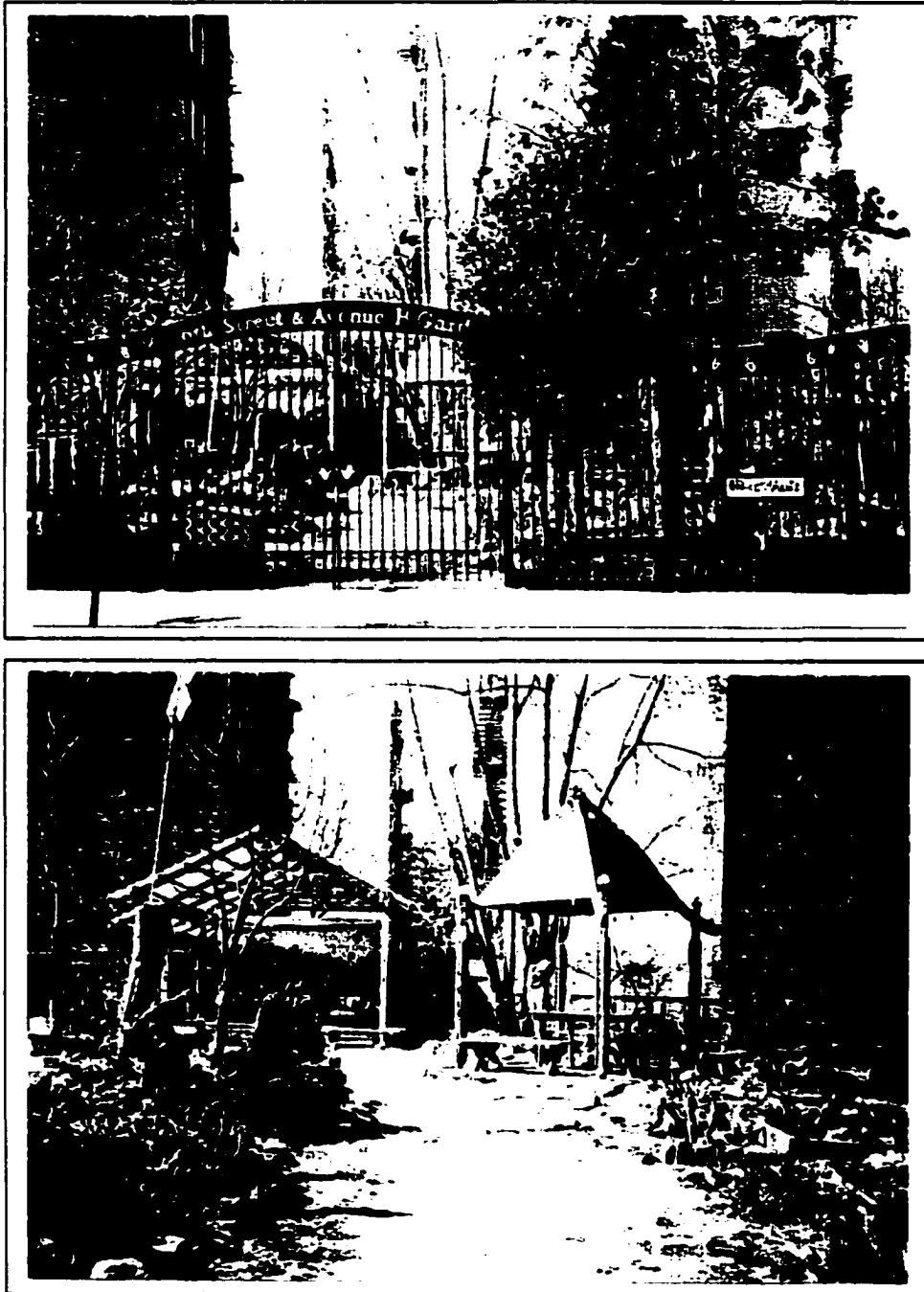


Figure 4.3. The fence, the stage, and the pavilion in the 6th & B Garden

controversial sculpture at the southeast corner. It was created by a longtime garden member. It contains New York City "street treasures" such as toy horses, toy cars, and so on (see Figure 4.4). A children's area is located at the northwest corner where bamboo trees had been growing before the construction. It contains a playhouse, water pump, sandpit, and some movable toys such as wheelbarrows, toy bulldozers, a toy horse, a small slide, a shovel, and a rake (see Figure 4.5). Also, there are two benches for sitting and adult supervision.

There are about a hundred members who each have a 4 by 8 plot in which they can grow whatever they want. There are also some additional members who do not have plots. To become a member of the garden, an applicant must live between Delancey and 14th Streets and Broadway and the East River. As a member, a person pays twelve dollar annual dues and must contribute four hours each month in helping take care of the entire garden. Each month a general membership meeting is held to handle and decide on the affairs of the garden. About twenty to fifty members routinely attend the meeting.

The members can join four different committees. The event committee arranges and monitors many kinds of free



Figure 4.4. The sculpture in the 6th & B Garden

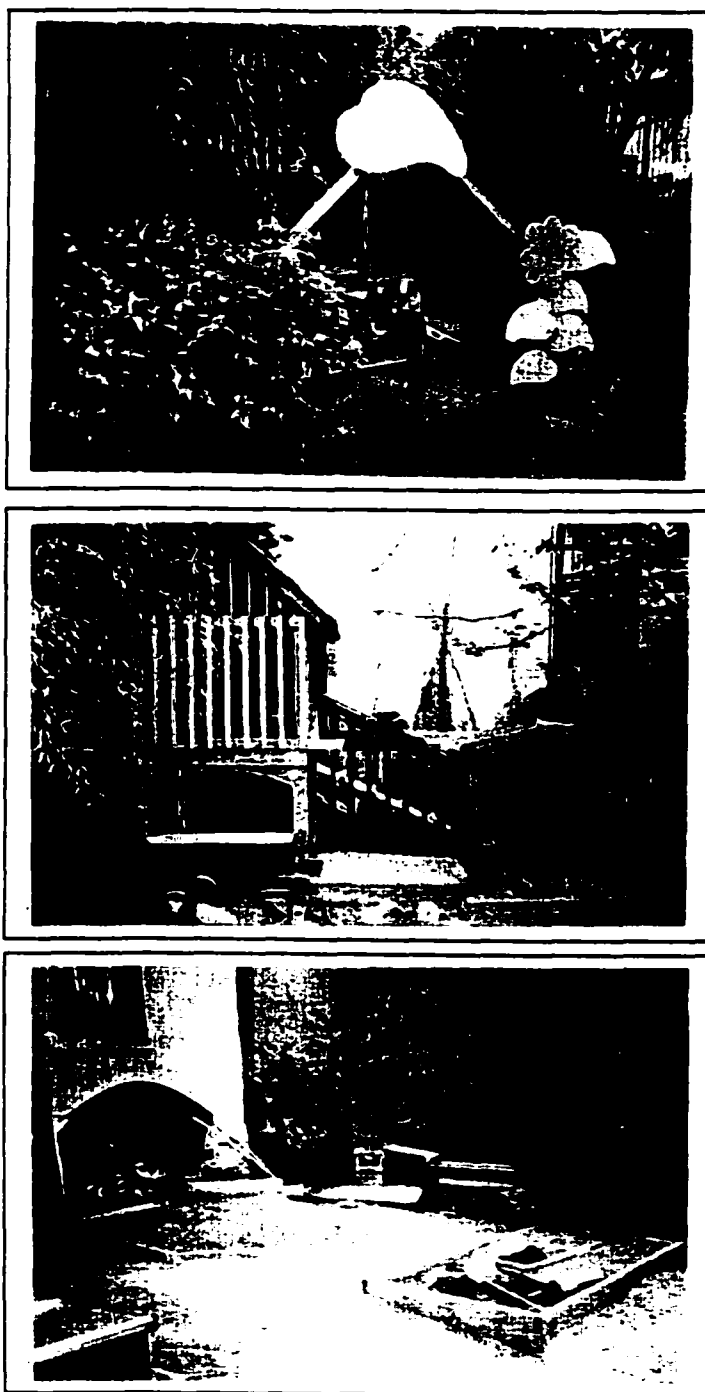


Figure 4.5. The children's area in the 6th & B Garden

cultural events such as music performances, poetry readings, art workshops, theater, and an annual harvest festival. The harvest festival is held for fund-raising. The garden members usually prepare hotdogs and sometimes corn and potatoes and ask donations for the food. But if a person does not have money, the food would be given free. Also, through the event program, benches and picnic tables were built. The other three committees are a history committee, maintenance committee, and children's committee. The children's committee is the one that was involved in the creation and subsequent maintenance of the children's area.

There were always many children in the garden. Garden members had been searching for solutions to find places for children to play and yet protect the garden from the children. Actually they had raised some money for the construction of a children's area. Initially a longtime neighborhood resident and schoolteacher was asked by the children's committee to come up with an appropriate project. What she had in mind was the idea of having two teepees, a stump table, chairs, and some local plants. In 1996, with the intention of preserving the 6 & B community garden, The Trust for Public Land (TPL) approached the organization and proposed a children's area which would be open to the public. By providing a space for the public, the garden

would gain permanent site status within New York City's open space system under the City of New York Parks and Recreation Department. In the same year, the organization was given a \$5000 grant for a children's area project by the Trust for Public Land.

The idea of creating a children's area received mixed reactions. Some garden members opposed the idea because they thought the area was being built in order to confine their children. The designer's following comments highlight the conflict.

They developed a board that oversaw the development of the site, space. It was problematic. We received as much negative as positive energy during the process. There were many garden members who didn't want children in the garden. Period! They didn't see it as a place of play or any of the kind of gross motor activities running around knocking things over. So only as the project started to take shape they realized that it was a sensitive and quiet play space, more of a discovery environment.

Eventually a committee of twelve people got involved and worked on that. There was consensus that they were designing something for pre-K children. The Children's Environments Research Group at the City University of New York was invited to join the design process since they had been known for their involvement in the creation of children's areas. A series of workshops were held and the children and their parents were given opportunities to

express their ideas. Methods included tours with instant photography by the children of their valued places in the garden. An architecture student then drew sketches of ideal component under considerations from small groups of children. Cardboard boxes carrying images of the design features were then moved around by children and adults as a way of exploring locations for the features.

A landscape architect from the Children's Environments Research Group then translated the ideas into something more solid. During the design process, he generated drawings that were presented to the parents in the evening. With their feedback, the drawings were modified. This process continued until the parents were satisfied with the design. The designer then carried out the construction of the play area. The intention had originally been that the designer would coordinate construction by the garden members. The involvement of members in the construction of the play structures was only partially successful. Some days ten people showed up and on other days the designer worked by himself. Finally, since there was a very specific deadline, the designer completed the job alone.

The current condition of the children's area shows some changes made after the initial design. Originally, the plywood walls of the playhouse were mainly closed with some

decorative cuttings in the sides. Because some adults broke into the garden and slept in the playhouse, the panels were removed and replaced by strips of wooden bars to make it visually accessible. Also, initially, three-inch deep wood chips were placed on the ground to prevent possible injuries should children fall out of the playhouse. The wood chips, however, were thrown away by some garden members who thought they were not aesthetically pleasing.

A member of the children's committee had tried to put sand on the ground but she was not successful because of the problem of transferring huge amounts of clean sand. The ground, thus, remains mainly dirt now. The children's area originally contained a 3 by 3 sandbox. Since the children kept taking the sand out of the box, not much sand was left in it. Therefore, the sandbox was replaced by a larger digging box. Although children seemed to enjoy digging there, they ended up taking the box apart. As a result, it has been rebuilt three times.

Although the garden is under New York City's open space system, garden members are responsible for the physical and financial management of the garden. Managing the garden has not been a simple thing. Since there is a very diverse and opinionated group of people in the area, there exist some internal conflicts. As mentioned earlier, there were some

conflicts when neighborhood residents were involved in the creation of the children's area. The process of designing the fence also included some conflicts. There were major fights over the fence before it was built. Members had different opinions about whether they should let anybody from the garden apply to build the fence. Another conflict occurred when three members got money from TPL for their design work. Although not explicitly stated, there was a kind of rule that, as a member of the garden, a person is not supposed to take money or things that were built in the garden.

Another old conflict exists over the sculpture. In 1987, a longtime garden member started to build a tower. Garden members had different judgments of the tower. On one occasion, a past president of the garden who hated the tower called the insurance company until they cancelled the insurance for the garden. Garden members discussed this problem and decided to give the tower builder three additional plots underneath the tower. In return he was supposed to clean the areas under the tower and stop building the tower. However, since then he filled up the underside and built the tower higher. Some garden members were unhappy about that.

The maintenance of the children's area placed an additional burden on the children's committee members. For financial reasons, things were not done as planned.

Acquiring sand was a big problem. One of the committee members said:

It would have been absolutely wonderful to have enough money to bring in a whole truck-load of playground sand which we could not do. We were moving it in people's cars and it was just too much. We were buying it out of like Home Depot and hauling it in and trips and cars. That just doesn't work. (45-year-old female)

Since tools are used constantly, the replacement of children's tools also requires some additional money. The children also left the tools all over the garden. The children's committee members wanted to build a tool storage and a wheelbarrow garage which required additional funding. Another task to be done is repainting the front area of children's area. But the volunteers could not devote the time needed to finish it in one session so it remains unpainted.

Cherry Tree Playground

This is an example of community participation in maintenance. The Cherry Tree Playground is located at East 99th Street and Third Avenue in East Harlem. It was renovated in 1996. Because the park had many cherry trees, it gained

its current name in 1997. It offers two composite play structures for toddlers and school-age children, two tire swings, a spray shower, a spring rocker, a comfort station, three basketball courts, and tables and benches (see Figure 4.6).

Community participation in the Cherry Tree Playground, although minor, extends back to the days when the playground was in dilapidated condition. In 1993, the park started falling apart. The park was infested with drug activities and was not safe. To make matters worse, an adjoining public school was closed in 1995, which made the Parks department pay less attention to the park. Still, it was an important park to the community and many people were using it although it was in ruins. Also, there were about five people cleaning it up and keeping it as clean as possible. However, there was no organized group and the cleaning was not conducted on a steady basis.

Dissatisfied with the park's condition, four or five volunteers started to send letters and contacted community board members. They did presentations to let the community board members and the councilman know about the dilapidated conditions of the park. Eventually, the design process started. The design for its renovation went through the

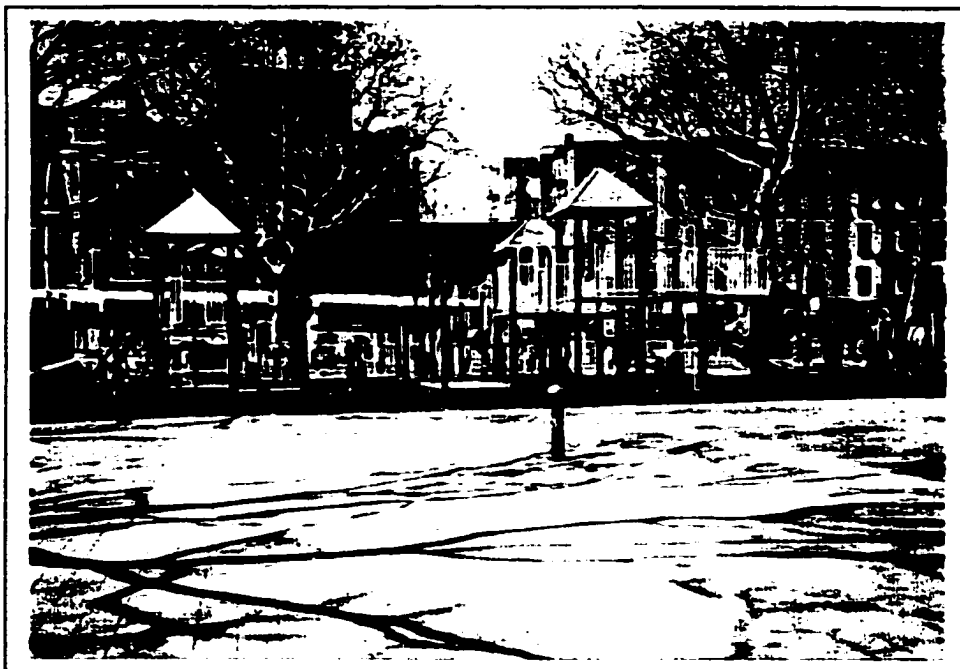


Figure 4.6. The composite play structure for school-age children and tire swings in the Cherry Tree Playground

typical park design process. The renovation cost one million dollars: four hundred thousand dollars from the Parks budget and six hundred thousand dollars from the councilman's budget.

After its renovation, a group of volunteers came together and formed a community group called Washington Community Improvement Council (WCIC) to take care of the playground. The group raises the money and takes care of over 500 children in the summer for seven weeks. The volunteers contribute seven weekends from the week after the 4th of July through August from 10 a.m. to 5 p.m. Neighborhood stores donate food and t-shirts.

The summer activities offered by the WCIC in partnership with the Parks Department include a basketball league, cultural education, youth involvement, conflict resolution, and park cleaning. The basketball league contains 18 teams ranging in age from 12 to 18. The cultural programs are offered every other week throughout the summer. The activities include dance, drama, art activities, and poetry. The volunteers set a stage with a microphone for children to dance, to sing a song, or to recite their poems. Also, the WCIC held its annual summer party at the end of summer. The day's events included face painting, music, free food, bands, and award presentations. One of the benefits of

the party is illustrated by the comments of a member of WCIC. He said:

One of the parents told me that 'you know I love you guys. You guys saved me a lot of money.' Why? Because there is a place where they can take their kids to get fed. We feed the people too. So he said that we have a lot of money. You can imagine when you live in a poor community, lots of parents have no money. When people come from large families, people are poor. So we fill a vacuum in the community. (45-year-old male)

The group closes the playground at nighttime. Users from the neighborhood know that they have to leave the playground at 10 o'clock during the summer and they cooperate. Closing the playground at night contributed to the reduction of vandalism. Also, the summer program has influenced children to take care of the playground. A WCIC member mentioned:

Some boys, the teenagers probably, that were throwing bottles or leaving soda bottles around or littering or putting graffiti on the walls three years ago are the same kids that are making sure that no one else is doing it. They do not do it any more. (45-year-old male)

The park is opened and cleaned mainly by a WEP (Work Experience Program) worker. Community group involvement in cleaning occurs whenever necessary. Currently, there are about ten to twelve active members.

Experience of the Volunteers

All the volunteers of the eleven participatory playgrounds (23 people) were positive about their involvement in the neighborhood playgrounds. When asked, "what is the best and worst thing that has come out of your participation?," the interviewees gave more than one answer for the best and worst. Results presented in Table 4.2 show that the creation/renovation of the space was the best feature of the involvement mentioned 8 times out of 31 responses. Changing dilapidated or vacant spaces into beautiful open spaces made the volunteers feel strongly positive about their involvement. The reasons cited next most often as the best features of participation involved social exchanges and educating children to acquire a proper civil behavior. Meeting many people and getting children to take care of the environment were the best things that came out of their involvement.

Proper or increased use of the space and enhancing self-confidence in the volunteers were cited three times each. People were pleased by the increased use of the space or the way the space is used. Building confidence in the volunteers was also a positive experience. Other things mentioned less frequently as best were: enhancing self-

Table 4.2

Best Thing That Has Come Out of the Participation

<u>Best things</u>	<u>Number of comments</u>	<u>Percentage</u>
The creation/renovation of the space	8	25.8%
Social exchanges	4	12.9%
Educating children to acquire a proper civil behavior	4	12.9%
Proper or increased use of the space	3	9.6%
Enhancing self-confidence in the volunteers	3	9.6%
Enhancing self-confidence in the children	2	6.4%
Provision of children's programs	2	6.4%
Children's hands-on experience with nature	1	3.2%
Enhancing beauty of the block	1	3.2%
Recognition of one's efforts	1	3.2%
Ongoing technical assistance from the outside	1	3.2%
Achieving permanent status for the space	1	3.2%
Total	31	99.6%

Note. N = 23

confidence in the children, provision of children's programs, children's hands-on experience with nature, enhancing the beauty of the block, recognition of one's efforts, ongoing technical assistance from the outside, and achieving permanent status for the space. A regrouping of the categories indicates that space and children-related issues were the major best things (approximately 42% and 29% respectively).

Except for one person who said that there was nothing "worst," the remaining twenty-two people mentioned one or two worst things (See Table 4.3). Lack of community participation and not enough caring for the space were items mentioned by four times each. People were lamenting the fact that it is hard to "pass the torch" to someone else. Also, rule breaking activities and disrespecting the space were regarded as the worst experiences. Lack of support from children/adults and "politics" were mentioned three times each. People were unhappy about both city politics and internal politics among members.

Other worst things reported by volunteers were: financial problems, maintenance problems, a decrease in privacy, threats of taking away the space by the city, poor communication between volunteers and the Parks Department,

Table 4.3

Worst Thing That Has Come Out of the Participation

<u>Worst things</u>	<u>Number of comments</u>	<u>Percentage</u>
Lack of community participation	4	15.3%
Not enough caring for the space	4	15.3%
Lack of support from children/adults	3	11.5%
City or internal politics	3	11.5%
Financial problems	2	7.6%
Maintenance problems	2	7.6%
Decrease in privacy	1	3.8%
Threats of taking away the space by the city	1	3.8%
Poor communication between volunteers and Parks Department	1	3.8%
Seeing children in need	1	3.8%
Possible displacement of existing residents	1	3.8%
Lack of space for teenagers	1	3.8%
Personal injury while involved in construction	1	3.8%
Nothing	1	3.8%
Total	26	99.2%

Note. N = 23

seeing children in need, possible displacement of existing residents, lack of space for teenagers, and personal injury while involved in construction.

A closer look at the comments for worst things by the participants seems to suggest that a majority of the comments (approximately 70%) did not involve "bad" things but the absence of things.

The Experience of Technical Assistance Groups

The representatives of four technical assistance groups had similar experiences. Like the volunteers, the creation of the spaces, which met a neighborhood need, was the best thing for all the representatives (4 people). Two people reported the difficulty of maintaining a site by the community as the worst thing. No spillover effects to the adjacent sidewalks was mentioned as the worst thing by one person. In one case, the project that was designed but never built, was the worst thing.

User Needs and Preferences

Research Question 2: Does the final product of participatory design reflect more user needs and preferences than that of non-participatory design?

It was hypothesized that users would be more satisfied when the design of the playground reflected more of their needs and preferences. To assess user satisfaction, several questions covering liked and disliked things and desired changes were asked of the interviewees (55 respondents in the participatory playgrounds and 35 in the non-participatory playgrounds). The users were also asked to select a number from a 1 to 5 scale that best described their feelings about a specific playground. For comparison purposes, the findings for all the participatory playgrounds were combined and as were the findings for the non-participatory playgrounds. The results for each playground are presented in appendix B.

Demographic Qualities of Users

There were no significant differences between the participatory and the non-participatory playgrounds regarding the demographic qualities of the users.

In most playgrounds women were the predominant caregivers. For the participatory playgrounds, 41 (74.5%) of

the 55 people interviewed were women. The age of the interviewees ranged from 16 to 55 with a median age of 36. The major group of persons interviewed was mothers (63.6%, N = 35), followed by fathers (23.6%, N = 13), family members other than parents (7.3%, N = 4), and babysitters (5.5%, N = 3).

The number of children brought by each caregiver was mainly one (38.2%, N = 21) or two (38.2%, N = 21) with a maximum of 8 children in one case. About a half of the children (52.2%, N = 57) were under the age of 5 and the other half were 5 and over (47.7%, N = 52) (see Figure 4.7 for age distribution). Approximately 56% of the children (55.9%, N = 61) were boys and the remaining 44% (N = 48) were girls.

For the non-participatory playgrounds, twenty-eight (80%) of the 35 users interviewed were women. The age of the respondents ranged from 16 to 73 with a median of 29. Approximately two-thirds of the interviewees were mothers (63%, N = 22), followed by fathers (17%, N = 6), and family members other than parents (20%, N = 7). Each caregiver brought mainly one (48.6%, N = 17) or two (31.4%, N = 11) children with a maximum of 4 children in one case. About 46% of the children (45.9%, N = 28) were under the age of 5 and 54% (N = 33) were 5 and over (see Figure 4.7). Also, about

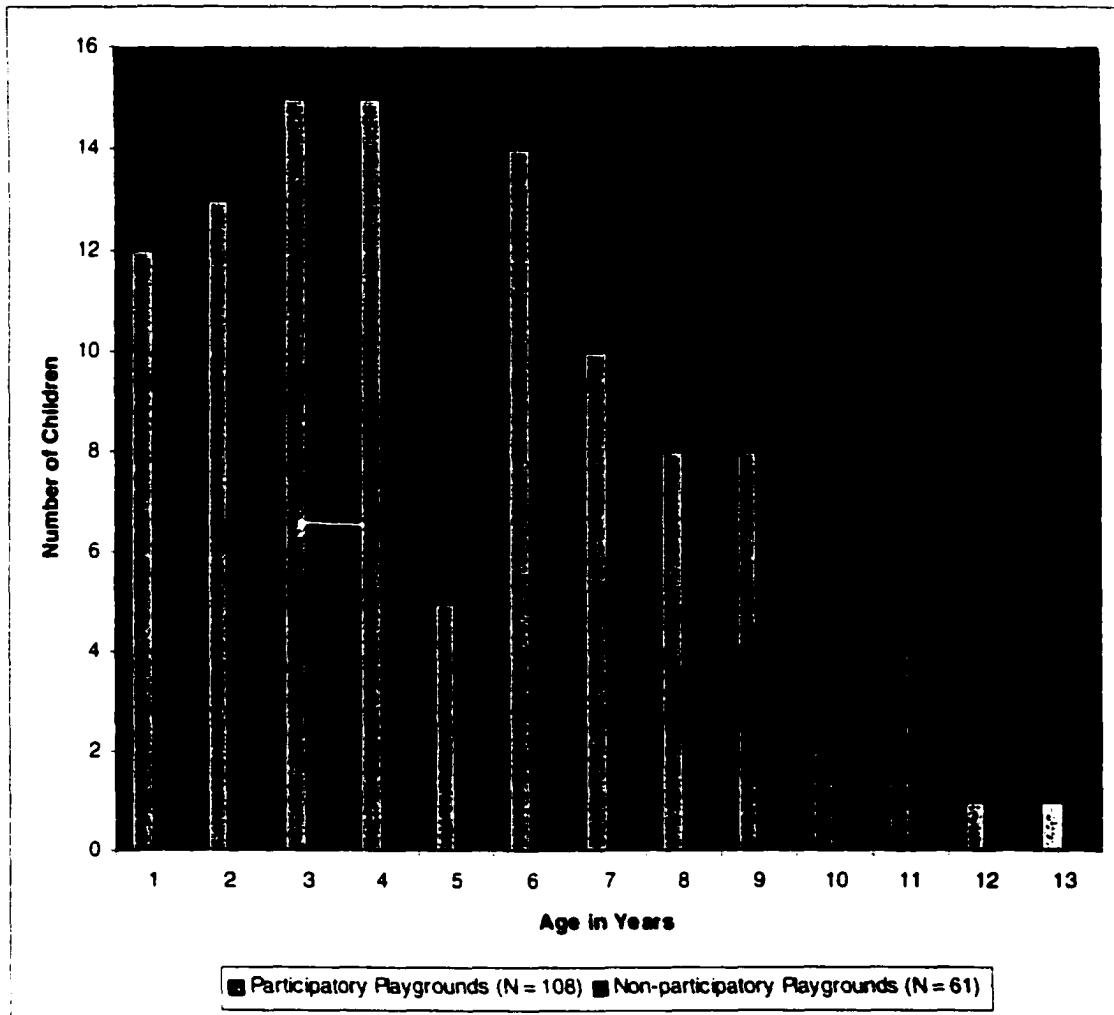


Figure 4.7. Age distribution of the children
Note. Age group "1" includes 1-23 months.

56% (55.7%, N = 34) were boys and the remaining 44% (44.2%, N = 27) were girls.

Playground Components Used Most by the Children

The frequencies of use of playground equipment, according to the caregivers, are given in Table 4.4. For the participatory playgrounds, the slide (28.7%, N = 25) was most frequently mentioned, followed by the composite play structure (19.5%, N = 17), and swings (14.9%, N = 13). Equipment or components cited less frequently were everything (5.7%, N = 5), natural elements (5.7%, N = 5), the bridge (4.5%, N = 4), a playhouse (3.4%, N = 3), and movable toys (3.4%, N = 3). Equipment or activities mentioned once or twice were basketball, climbing, running around, overhead rings (2.2%, N = 2 each), sliding pole, a fountain, spring rocker, and play ball (1.1%, N = 1 each).

For the non-participatory playgrounds, the slide (36.1%, N = 17) was most frequently cited, followed by the composite play structure (23.4%, N = 11), the swings (21.2%, N = 10), and everything (6.3%, N = 3). Equipment or activities mentioned once or twice were climbing (4.2%, N = 2), basketball, run around, firefighter's pole, and the wheel (2.1%, N = 1 each).

Table 4.4

Playground Components Used Most by the Children

Responses	<u>Participatory Playgrounds*</u>		<u>Non-participatory Playgrounds**</u>	
	Number of Comments	%	Number of Comments	%
Slides	25	28.7%	17	36.1%
Composite Play structure	17	19.5%	11	23.4%
Swings	13	14.9%	10	21.2%
Everything	5	5.7%	3	6.3%
Natural elements	5	5.7%	0	0%
Bridge	4	4.5%	0	0%
Playhouse	3	3.4%	0	0%
Movable toys	3	3.4%	0	0%
Basketball	2	2.2%	1	2.1%
Climbing	2	2.2%	2	4.2%
Running around	2	2.2%	1	2.1%
Overhead rings	2	2.2%	0	0%
Sliding pole	1	1.1%	1	2.1%
Fountain	1	1.1%	0	0%
Spring rocker	1	1.1%	0	0%
Play ball	1	1.1%	0	0%
Wheel	0	0%	1	2.1%
Total	87	99%	47	99.6%

Note. * N = 55, ** N = 35

Although no statistically significant differences between the two types of the playgrounds were found, a wider range of equipment and/or activities was mentioned by the participatory playgrounds users. Actually, a playhouse and movable toys were available only in the participatory playgrounds.

Children's Favorite Features

It should be noted that the playgrounds involved a very narrow range of features: the same characteristics were found on all public playgrounds in the city. Only one of the participatory playgrounds included components such as sand and loose materials. Two of them offered a playhouse.

Asked what playground equipment was liked most by their children, the following answers were given by the caregivers (see Table 4.5). For the participatory playgrounds, the slide (30.7%, N = 20) was most frequently mentioned, followed by swings (21.5%, N = 14) and the composite play structure (7.6%, N = 5). Some of the things cited less frequently were playhouse (6.1%, N = 4), natural elements (6.1%, N = 4), basketball (4.6%, N = 3), and everything (4.6%, N = 3). Other aspects mentioned once or twice were

Table 4.5

Children's Favorite Features

Responses	Participatory Playgrounds*		Non-participatory Playgrounds**	
	Number of Comments	%	Number of Comments	%
Slides	20	30.7%	16	41%
Swings	14	21.5%	12	30.7%
Composite play structure	5	7.6%	2	5.1%
Playhouse	4	6.1%	0	0%
Natural elements	4	6.1%	0	0%
Basketball	3	4.6%	1	2.5%
Everything	3	4.6%	1	2.5%
Bridge	2	3.0%	1	2.5%
Sliding pole	1	1.5%	1	2.5%
Fountain	1	1.5%	0	0%
Run around	1	1.5%	0	0%
Spring rocker	1	1.5%	0	0%
Overhead rings	1	1.5%	1	2.5%
Sprinkler	1	1.5%	0	0%
Decorative column	1	1.5%	0	0%
Ladder	1	1.5%	0	0%
Bell	1	1.5%	0	0%
Roller blading	1	1.5%	0	0%
Climbing	0	0%	4	10.2%
Total	65	99.2%	39	99.5%

Note. * N = 55, ** N = 35

a bridge (3.0%, N = 2), sliding pole, a fountain, spring rocker, overhead rings, sprinkler, decorative column, ladder, bell, roller blading (1.5%, N = 1 each).

For the non-participatory playgrounds, the slide (41%, N = 16) was most frequently cited, followed by swings (30.7%, N = 12), climbing (10.2%, N = 4), the composite play structure (5.1%, N = 2). Equipment or activities mentioned once were basketball, everything, the bridge, sliding pole, and overhead rings (2.5%, N = 1 each).

Among all the favorite things, "climbing" was the only variable that achieved statistical significance, $t(88) = -2.63$, $p < .01$. In other words, children at the non-participatory playgrounds were more likely to prefer climbing activities. It is hard to explain why a difference was found since most of the playgrounds contained similar equipment. One possible explanation can be that for the participatory playground users climbing was just one of the wider range of activities offered in playgrounds.

Playground Characteristics Liked by Adult Users

The most frequently cited favorite qualities or activities for the participatory playground users were "safety" (e.g., the rubber surface, no drug dealers, easy to watch kids, 21.6%, N = 43), followed by "design" (e.g., colorful, good equipment, 16.5%, N = 33), "social exchanges"

(e.g., adults that I can talk to, 12.5%, N = 25), and "peaceful atmosphere" (e.g., quiet, refuge, 10%, N = 20). "Convenient location" (8.5%, N = 17), "maintenance/cleanliness" (e.g., very well maintained, no garbage, 8.5%, N = 17), and "natural elements" (e.g., trees, 7%, N = 10) were other reasons often cited (see Table 4.6).

The users of non-participatory playgrounds mentioned similar favorites. Safety (32.5%, N = 26) was most frequently cited followed by design (20%, N = 16), maintenance/cleanliness (16.2%, N = 13), and convenient location (12.5%, N = 10) (see Table 4.6).

Although the frequency of responses was similar across the two types of playgrounds, some differences were found. A significantly higher percentage of the participatory playground users cited social exchanges, peaceful atmosphere, and "good for kids" as their favorite aspects, $t(88) = 2.45, p < .05$; $t(88) = 2.48, p < .05$; $t(88) = 2.23, p < .05$ respectively. In other words, the participatory playgrounds are more likely to draw users since they provide a setting for social exchanges and a peaceful atmosphere. Also, the total number of positive comments made by the participatory playgrounds users was significantly higher than that of the non-participatory playgrounds users, $t(88) = 3.03, p < .01$.

Table 4.6

Playground Characteristics Liked by Adult Users

Responses	Participatory Playgrounds*		Non-participatory Playgrounds**	
	Number of Comments	%	Number of Comments	%
Safety	43	21.6%	26	32.5%
Design	33	16.5%	16	20.0%
Social exchanges	25	12.5%	3	3.7%
Peaceful atmosphere	20	10.0%	3	3.7%
Convenient location	17	8.5%	10	12.5%
Maintenance/cleanliness	17	8.5%	13	16.2%
Natural elements	14	7.0%	2	2.5%
Good for kids	7	3.5%	0	0%
Programs	7	3.5%	0	0%
Community ownership	2	1.0%	0	0%
Accessibility	2	1.0%	1	1.2%
Feeling sense of care	2	1.0%	0	0%
Not crowded	2	1.0%	4	5.0%
Do not know	2	1.0%	0	0%
Able to change the design	1	0.5%	0	0%
Education	1	0.5%	0	0%
Substitute for a backyard	1	0.5%	0	0%
Being able to grow plants	1	0.5%	0	0%
Closing time	1	0.5%	0	0%
Nothing	1	0.5%	2	2.5%
Total	199	99.6%	80	99.8%

Note. * N = 55, ** N = 35

Playground Characteristics Disliked by Adult Users

Although about 25% of the participatory playground users said that they had nothing that they disliked, the majority of the users (75%) had some dislikes. They were: "lack of safety" (e.g., a lot of adults without children, mainly concrete paving, 20.9%, N = 18), "design" (e.g., no swings, not enough play equipment, 19.7%, N = 17), "lack of maintenance/cleanliness" (17.4%, N = 15), inaccessible bathroom (4.6%, N = 4), inaccessibility of the space (3.4%, N = 3), crowding, politics (2.3%, N = 2 each), closing time, lack of programs, lack of shade, and bad reputation (1.1%, N = 1 each) (see Table 4.7).

The majority of the non-participatory playground users (92.5%) also had some dislikes (see Table 4.7). The most frequently cited disliked aspects were lack of safety (35.4%, N = 28), followed by design issues (31.6%, N = 25), lack of maintenance/cleanliness (16.4%, N = 13), crowding (3.7%, N = 3), closing time (2.5%, N = 2), inaccessible bathroom, and lack of programs (1.2%, N = 1 each).

T tests show that "nothing," lack of safety, and design were the three variables having significant mean differences between the participatory and non-participatory playground, $t(88) = 2.15, p < .05$; $t(88) = -2.96, p < .01$; $t(88) =$

Table 4.7

Disliked Aspects of the playgrounds Reported by Adult Users

Responses	Participatory Playgrounds*		Non-participatory Playgrounds**	
	Number of Comments	%	Number of Comments	%
Nothing	21	24.4%	6	7.5%
Lack of safety	18	20.9%	28	35.4%
Design	17	19.7%	25	31.6%
Lack of maintenance/cleanliness	15	17.4%	13	16.4%
Inaccessible bathroom	4	4.6%	1	1.2%
Inaccessibility of the space	3	3.4%	0	0%
Crowding	2	2.3%	3	3.7%
Politics	2	2.3%	0	0%
Closing time	1	1.1%	2	2.5%
Lack of programs	1	1.1%	1	1.2%
Lack of shade	1	1.1%	0	0%
Bad reputation	1	1.1%	0	0%
Total	86	99.4%	79	99.5%

Note. * N = 55, ** N = 35

- 2.33, $p < .05$ respectively. In other words, lack of safety and design of the non-participatory playgrounds are more likely to decrease the level of user satisfaction with these settings. Also, a significantly higher percentage of the participatory playground users mentioned that they had nothing that they disliked about the playgrounds, $t(88) = 2.15$, $p < .05$. Furthermore, the total number of negative comments made by the participatory playgrounds users were significantly less than those of non-participatory playgrounds users, $t(88) = -2.74$, $p < .01$.

A Chi-square test was conducted to test whether the actual comments differ reliably from what could be expected by chance. It was found that participatory playgrounds users showed a trend toward less negative comments compared to the expected value, $\chi^2(1) = 3.73$, $p < .06$. Also, the non-participatory playgrounds users made significantly fewer positive comments and significantly more negative comments compared to the expected value, $\chi^2(1) = 3.96$, $p < .05$; $\chi^2(1) = 6.77$, $p < .01$ respectively.

Desired Changes by the Adult Users

Although about 18% (18.3%) of the participatory playground users seemed satisfied with the playground as it was, the majority of the users said that they desired some

changes (see Table 4.8). In order of importance, these were: design changes (47.9%, N = 47), improved maintenance and cleanliness (13.2%, N = 13), and safety (10.2%, N = 10). Some other less frequently cited changes were programs (4.0%, N = 4), natural elements (2.0%, N = 2), an attendant, closing time, a bathroom, and "no smoking" (1.0%, N = 1 each).

The majority of the non-participatory playground users (91.6%) suggested similar changes. They were: design changes (54.2%, N = 32), safety (13.5%, N = 8), improved maintenance and cleanliness (10.1%, N = 6), natural elements, an attendant (3.3%, N = 2 each), programs, and closing time (1.6%, N = 1 each) (see Table 4.8). It was found that a significantly higher percentage of the participatory playgrounds users desired no changes, $t(88) = 1.97, p < .05$.

Satisfaction with the Playgrounds

The users of the playgrounds were asked to choose a number, on a scale of 1 to 5 (where 1=strongly dissatisfied and 5=strongly satisfied), that best described the way that they felt about a specific playground. Users' experience of the playgrounds examined in this study was positive. The mean satisfaction ratings of each playground ranged from 3.0

Table 4.8

Desired Changes by the Adult Users

Responses	Participatory Playgrounds*		Non-participatory Playgrounds**	
	Number of Comments	%	Number of Comments	%
Design changes	47	47.9%	32	54.2%
No changes	18	18.3%	5	8.4%
Improved maintenance and cleanliness	13	13.2%	6	10.1%
Safety	10	10.2%	8	13.5%
Programs	4	4.0%	1	1.6%
Natural elements	2	2.0%	2	3.3%
An attendant	1	1.0%	2	3.3%
Closing time	1	1.0%	1	1.6%
A bathroom	1	1.0%	2	3.3%
No smoking	1	1.0%	0	0%
Total	98	99.6%	59	99.3%

Note. * N = 55, ** N = 35

to 4.8 (see Figure 4.8). For the participatory playgrounds, the mean rating was 4.18; for the non-participatory playgrounds, 3.60. The mean difference in the satisfaction ratings between the participatory playgrounds and the non-participatory playgrounds indicated that there was a statistically significant difference, $t(88) = 2.85$, $p < .005$. In other words, the users of the participatory playgrounds in all aspects were more satisfied than the non-participatory playground users. However, when the participation in design only playgrounds were compared with the non-participatory playgrounds regarding user satisfaction, there were no statistically significant differences, $t(58) = 1.70$, $p < .09$. Nonetheless, there was a trend suggesting that user participation in the design had some positive effects on user satisfaction with the final design product.

The finding should be interpreted with caution since all of the design participation playgrounds are also maintained by the community. The satisfaction scores may have been either decreased or increased by the quality of maintenance. It is important to note that the "City Spaces" projects and other design participation playgrounds contain more natural elements than regular city playgrounds. These

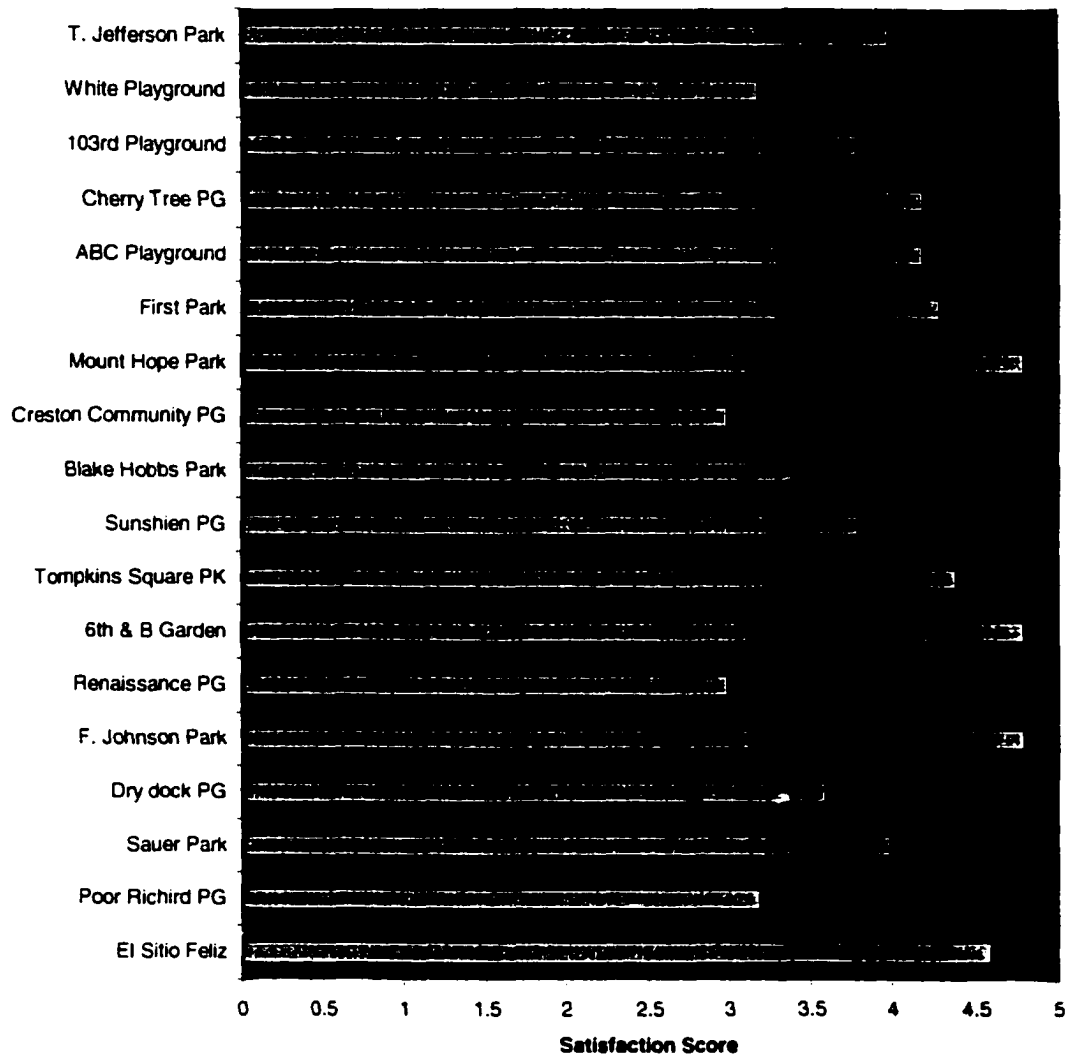


Figure 4.8. Satisfaction scores for each playground

require more maintenance than a traditional playground simply having play equipment resting on a flat macadamized or rubber surface. Therefore, there were, in two playgrounds, many neglected planters in which nothing grew. As one male user of the Creston Community Playground mentioned:

Even though it's a small park, you can manage. There are ways to put it in here. Just have to take out certain things like these boxes of dirt. They don't do anything. As you can see nothing grew over the summer.

Other Playgrounds Used

When asked about other playgrounds in the area which they use, 74.5% of the participatory playgrounds users mentioned other sites. Most frequently mentioned reason was design (40.9%, N = 42). Natural elements (9.3%, N = 10), convenient location (8.4%, N = 9), programs, social exchanges (6.5%, N = 7 each), safety (4.6%, N = 5), change location (3.7%, N = 4), maintenance/cleanliness (2.8%, N = 3), not crowded, peaceful atmosphere (1.8%, N = 2), available bathroom, and accessibility (0.9%, N = 1 each) were the other reasons for other playground use (see Table 4.9).

In the non-participatory playgrounds, 78.9% of the users replied that they used other playgrounds. Design (28%, n = 10) was the most frequently mentioned reason, followed

Table 4.9

Reasons for Other Playgrounds Use

Responses	Participatory Playgrounds*		Non-participatory Playgrounds**	
	Number of comments	%	Number of Comments	%
Design	42	39.2%	16	28.0%
Do not use other playgrounds	14	13.0%	12	21.0%
Natural elements	10	9.3%	2	3.5%
Convenient location	9	8.4%	7	12.2%
Programs	7	6.5%	3	5.2%
Social exchanges	7	6.5%	4	7.0%
Safety	5	4.6%	4	7.0%
Change location	4	3.7%	1	1.7%
Maintenance/cleanliness	3	2.8%	7	12.2%
Not crowded	2	1.8%	0	0%
Peaceful atmosphere	2	1.8%	0	0%
Available bathroom	1	0.9%	1	1.7%
Accessibility	1	0.9%	0	0%
Total	107	99.4%	57	99.5%

Note. * N = 55, ** N = 35

by convenient location and maintenance/cleanliness (12.2%, N = 7 each), social exchanges and safety (7.0%, N = 4 each), programs (5.2%, N = 3), natural elements (3.5%, N = 2), change location, and available bathroom (1.7%, N = 1 each).

There were no significant differences between the two types of playgrounds regarding other playground use.

However, there was a trend that the non-participatory playground users were more likely to use other playgrounds because of better maintenance and cleanliness, $t(88) = -1.78$, $p < .077$.

Playground Safety

Every two years, the New York Public Interest Research Group (NYPIRG) surveys random playgrounds in New York State and publishes a safety report. To determine the current safety conditions of New York State playgrounds, NYPIRG surveyed 151 randomly selected playgrounds at public parks, community centers and schools in the state in 2000. The surveyors, focusing on safety hazards that result in the most serious playground injuries (falls, impact with moving swings, entrapment, and entanglement), gave a rating based on the number of hazards that they identified. One point was given per hazard for inadequate fall zones for climbers and slides or swings, unsafe height for climbers and slides,

head entrapment, or entanglement. One and one-half points were added for an inadequate protective surface, up to 7 points for unsafe swings, up to 7 points for the presence of any hazardous equipment, and 0.5 point for chipped paint. On a scale of 0 - 22 (0 = safest and 22 = most dangerous), the playgrounds that received a rating of 7 or higher were regarded as dangerous playgrounds. Twenty-seven out of 151 playgrounds fall into the dangerous playground category.

The playgrounds that I studied were relatively safe (ratings ranged from 0 to 2.5) even though there were some safety hazards. These data came from checklists that I filled out. Table 4.10 shows that all the playgrounds except for the 6th & B Garden had protective surfacing under and around play equipment. Also, there were no sharp points, head entrapment hazards, entanglement hazards, and/or dangerous protrusions or projections. However, eight of eighteen playgrounds had play equipment higher than 6 feet. According to the Consumer Federation of America's (CFA) third edition of a report titled "Report and Model Law on Public Play Equipment and Areas," excessive height, which is over 6 feet, only increases the severity of injuries from falls without enhancing play value. Also, three sites had unsafe swings. According to CFA recommendations, limiting

Table 4.10
Playground Safety Check Results

NAME	PARTICI- PATION?	TYPE OF SURFACES FOUND	SEPARATE EQUIPMENT FOR DIFFERENT AGE GROUPS?	EQUIPMENT HEIGHT <=6 FT = SAFE	SWINGS	ANY DANGEROUS EQUIPMENT?	ANY CHIPPED PAINT?
EL SITIO FELIZ	YES	RUBBER TILES	YES	SAFE	UNSAFE*	NO	NO
POOR RICHARD PG	NO	RUBBER TILES	SCHOOL-AGE ONLY	SAFE	UNSAFE**	No	YES
SAUER PARK	YES	US***	YES	SAFE	SAFE	NO	YES
DRY DOCK PG	NO	RUBBER TILES	YES	6.4	MISSING	NO	YES
RENAISSANCE PG	YES	RUBBER TILES	YES	SAFE	MISSING	No	NO
F. JOHNSON PG	NO	RUBBER TILES	YES	SAFE	N/A	NO	NO
6 TH & B GARDEN	YES	DIRT (UNSAFE)	PRESCHOOL ONLY	SAFE	N/A	NO	NO
TOMPKINS SQ. PK	YES	US***	SCHOOL-AGE ONLY	SAFE	SAFE	NO	YES
SUNSHINE PG	YES	RUBBER TILES	PRESCHOOL ONLY	SAFE	N/A	NO	NO
BLAKE HOBBS PK	NO	RUBBER TILES	YES	6.7	N/A	NO	NO
CRESTON COMM. PG	YES	RUBBER TILES	YES	7.0 & 6.5	N/A	NO	NO
MOUNT HOPE PK	YES	RUBBER TILES	YES	6.5	SAFE	No	YES
FIRST PK	YES	RUBBER TILES	YES	6.6	SAFE	No	NO
ABC PG	NO	RUBBER TILES	YES	6.7	N/A	NO	NO
CHERRY TREE PG	YES	RUBBER TILES	YES	7.1	SAFE	NO	NO
103 RD ST. PG	NO	RUBBER TILES	YES	SAFE	SAFE	NO	YES
WHITE PARK	YES	RUBBER TILES	YES	6.11	UNSAFE**	NO	YES
T. JEFFERSON PK	NO	RUBBER TILES	YES	SAFE	SAFE	NO	NO
Note. *Rope Swing, **3 swings for each bay, ***Unitary Surface							

the swing structures to two seats per bay or section helps reduce the likelihood of children getting hit by a moving swing. Also, rope swings are not recommended for public playgrounds. El Sitio Feliz had a rope swing. The Poor Richard Playground and White Park had 3 swings in each bay. Half of the playgrounds studied had peeling paint.

Even though CFA's recommendations are important, none of the playground users mentioned the above safety hazards as issues about which they were concerned.

Sense of Community

Research Question 3: Does participation contribute to a greater sense of community among those engaged in the process?

To compare a sense of community between volunteers and users of the playgrounds, several questions covering expected length of residency, number of people they know by first name, the frequency of conversation, and satisfaction with the neighborhood for children were asked. Also, the volunteers were asked whether their participation had any effects on their sense of community.

Responses from twenty-three volunteers and fifty-six users (of the 90 playground users, 56 lived in the

neighborhood) from the neighborhood were included in the data analyses. Since open-ended questions were asked, it was necessary to convert the responses to scales. For the analyses, responses were converted to 3-point scales. When the respondents were asked about the expected length of residency, some of them did not have any clear plan. Therefore, a follow up question, asking whether they planned to move within five years, was asked. Since it was impossible to know exactly how many years that they would stay, I decided to group those responses into one category. Also, many respondents replied that they would live in the neighborhood until they die or forever. These responses were grouped into another category. Therefore, the responses for the expected length of residency were changed to a 3-point response scale (where 1 = 0-5 years, 2 = 6-19 years, and 3 = more than 20 years).

The responses for frequency of conversation and satisfaction were also coded into 3-point scales (1 = monthly, 2 = weekly, and 3 = daily; 0 = dissatisfied and 2 = satisfied respectively). Table 4.11 shows the means and standard deviation for the four variables, listed for participants and non-participants. T tests indicated differences between participants and non-participants for

Table 4.11

Means and Standard Deviations for the Expected Length of Residency, Number of People Known, Frequency of Conversation, and Satisfaction with the neighborhood

	<u>Participants</u> M (SD)	<u>Non-participants</u> M (SD)	<u>T value</u> (df)
Expected length of residency	2.23 (.88)	1.91 (.86)	1.40 (68)
Number of people known	128.8 (73.9)	57.3 (74.9)	3.74* (75)**
Frequency of conversation	2.59 (.40)	2.35 (.85)	1.22 (75)
Satisfaction with the neighborhood	1.48 (.87)	1.20 (.86)	1.26 (75)

Note. * $P < .001$, ** There were two participants who said that they knew 1000 people. These two people were deleted for the analysis since their responses could distort the outcome.

only one variable, the number of people they know by first name. In other words, participants are more likely to know more people by first name than non-participants.

When the volunteers were asked "Do you feel more involved in the community because of your participation in the project?," all (23 people) replied that they felt more involved in the community. To quote three participants:

Definitely, I think because the more you get involved, the more you have ownership. The more you feel that you get to know the people. So it's friends as well as just doing it. It's a way for the children to feel safe. I think it's very important for people to feel that they, not someone else, are doing it. Like for my children, I wouldn't want them to just think that they can throw the trash on the ground and that it's up to them to put it in the garbage can. It's up to us all to feel that we are part of it instead of thinking that someone else is gonna do something for you. (mother of two children)

Yes, I have a certain amount of respect or I have rapport with many of my neighbors that I wouldn't have, had I lived isolated life in my own apartment. I would probably know some people from the building but because I did involve myself at the community level, I have come across many of my older neighbors. Because I am an immigrant to America, I see myself very much in life in here for 20 years. I feel very deep roots here... I feel part of the community which I think for someone who comes from another country who had been come and adapt in America. You feel not only American but also from New York. But also from the Lower East Side not only that from my block. I feel very much rooted in this small area. (40-year-old female)

There is a real sense of community in our park. The older kids are oftentimes there without their parents and I am there because my kids are younger and I don't trust anybody. The older kids because of their involvement in cleaning it and because their involvement in the Halloween parties and whatever, they

recognize, they listen to the other adults that are there. So the kids are well supervised. There is a nice sense of community. (35-year-old female)

Cleanliness and Graffiti

Research Question 4: Does participation lead to less vandalism and abuse of the playground?

If participation leads to less vandalism and abuse, then the participatory playground should show less graffiti and trash. In fact, the total number of users in a playground can also affect the amount of trash and graffiti. Therefore, an analysis was done to find out whether there was any difference between participatory and non-participatory playgrounds regarding the number of users present. The results, presented in Table 4.12, show no difference. In addition, no statistically significant difference was found between the participatory playgrounds and non-participatory playgrounds regarding graffiti, nor was there any difference regarding trash.

Further analysis was conducted to determine whether participation had any influence on overall physical condition (including total number of tree branches, soda cans, bottles, glass, trash, overfilled trash receptacles, and graffiti). No difference was found in this analysis.

Table 4.12

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F value	Pr>
Participation	1	16	0.17	0.681
Graffiti	1	16	0.65	0.43
Trash	1	16	0.01	0.906
Overall	1	16	0.01	0.916

Summary

It was found that volunteers had been involved in the neighborhood playgrounds in many different ways.

Participants commented that positive results such as improving the space as a neighborhood asset, benefitting children, having social exchanges, empowering people, and other miscellaneous goods had come out of their involvement. Also, they experienced some negative consequences such as problems of participation, problems with the city, and problems of inadequate resources.

Comparisons of the users of the participatory and non-participatory playgrounds revealed both similarities and differences. They were similar in demographic qualities of the users. According to the caregivers, the most frequently used and most liked elements by their children were similar. However, there were interesting differences in the comments of the users of the two types of playgrounds.

Overall, participatory playground users expressed more positive and less negative comments than did non-participatory playground users. Participatory playground users made significantly more positive comments related to social exchanges, peaceful atmosphere, and being good for kids than the non-participatory users. Non-participatory playground users offered more negative comments regarding

the lack of safety and existing design than the participatory playground users. Also, a higher percentage of the participatory playground users desired no changes and said there was nothing disliked. Although not statistically significant, there was a trend suggesting that the non-participatory playground users seemed to use other playgrounds because they provided better maintenance and cleanliness. In short, the participatory playground users were more satisfied with the playgrounds than the non-participatory playground users.

The playground equipment in the 18 playgrounds was relatively safe. Also, it was found that participation enhanced some aspects of the sense of community among those engaged in the process. The results showed participants knew more neighborhood residents than non-participants. Also, when asked directly whether the involvement in the process enhanced the feeling of involvement in the community, all the participants replied it did. When the playgrounds were checked for the amount of trash and graffiti, no differences were found.

CHAPTER FIVE:**DISCUSSION**

Parks and playgrounds are a significant part of the urban experience. According to a survey, over eighty-two percent of New Yorkers replied that parks were important to the quality of their lives (Reiss, 1993). Another recent study shows that about 40 percent of the survey respondents used public parks and recreational facilities at least once a week (Muzzio & Van Ryzin, 2000). Moreover, residents of poor neighborhoods have a greater need for parks and playgrounds since they lack private green spaces. Nonetheless, public spending on parks has dwindled and, as a result, maintenance has become a critical problem in parks and playgrounds. The problem significantly affects small parks which lack private donations. While flagship parks such as Central Park are continuously refurbished, small parks in poor neighborhoods remain deteriorated.

One of the strategies introduced to protect parks and playgrounds from deteriorating is community participation in maintenance and programming. Private citizens' involvement in the playground is not a new phenomenon. Historically playgrounds were developed by local people who presumably

participated in their design and maintenance. This task is now controlled by governmental agencies. Historical changes in the United States during the 1960s and 1970s placed increased emphasis on participation. This movement toward greater democratic participation involved the built environment, including parks and playgrounds.

Proponents of participation have argued that participation would create an environment that fulfills the needs and preferences of the user (e.g., Alexander et al., 1975; Baldassari et al., 1980; Wates & Knevitt, 1987). They believe that participation would enhance a sense of community and can be beneficial for maintenance (e.g., Francis, 1982; Hart, 1987; Iltus & Hart, 1994; Sheat & Beer, 1989; Spivack, 1969). However, their claims have not been fully supported by empirical research and some conflicting evidence exists (e.g., Israel, 1988; Julian et al., 1997; Wooley, 1985). Participation can also fail (Kaplan, 1982). Unsuccessful examples of participation tend not to be reported and many impressive participatory examples contain very little user involvement when viewed at close range (Wooley, 1985). Furthermore, some participatory sites that looked magnificent in the literature often became underused and neglected a few years after construction.

User participation in design in this study roughly ranged from "dialogue" to "co-design" to use Wulz's (1986) typology. His typology is useful for categorizing user participation in playground design since it was derived from an architectural design model. However, it fails to take into account the legal, economic, political, and structural contexts surrounding park design and maintenance.

Ultimately, the Parks Department is legally responsible for the operation of city parks. This means that the Parks Department is responsible for any personal or property damage that may occur during park construction. The Parks Department is also responsible for any personal injuries that may occur on park grounds including the play equipment. As a consequence, while personnel in the Parks Department may, in principle, be amenable to citizen participation in the design, planning, construction, and maintenance of parks, they exercise control over final decisions because of their legal responsibility. When, for example, users wish to select play equipment, it is unlikely that the Parks Department would approve any choices that involved equipment that might increase the perceived likelihood of injury. However, these perceptions are no doubt guided by innate bureaucratic conservatism.

The Parks Department is a part of city government. City tax monies are used for the Parks Department's capital and operating budget. Ever since the fiscal crisis in New York City in 1974 there has been a steady decline in the amount of money the city provides for city parks both in terms of construction and maintenance. As a consequence, the Parks Department is typically reactive rather than proactive in initiating capital projects. Unless the construction or renovation of parks or playgrounds is one of the top priorities on the community boards' list, usually no action is taken by the Parks Department.

Community boards play an important advisory role in dealing with land use and zoning matters, the City budget, and many other matters. Although community boards have no power to order any city agencies or officials to perform any task, they are usually successful in resolving the problems they address. One of the important roles of community boards is that they make recommendations in the City's budget process to address needs of their own neighborhoods (Community Assistance Unit, n.d.). They also submit their list of priorities to the City Council. Each fiscal year, allocation of the City's budget is determined by a complex negotiation process between the Mayor, the City Council, the Borough Presidents, city agencies, and the community boards,

each of which brings its own list of priorities. Therefore, it is necessary to put park or playground projects on the lists of priorities to increase the possibility of securing funds for the projects. Also, at present, approximately 80 percent of capital spending in parks is allocated by City Council members and Borough Presidents (Partnership for Parks, 2001). Therefore, it is necessary to lobby them for the funds.

In addition, when different agencies like the Trust for Public Land (TPL) are involved in the creation of a playground, community participation is highly influenced by the agencies' budgets and their design approach. The TPL secures the tenure of lands and conducts the participatory design process with community input. When the construction of the playground is finished, it is added to the city's park system. The existing TPL sites were small vacant lots and funding allocated for construction was relatively small compared to that of typical city playground projects. Also, the degree of user participation in the several initial projects were not highly participatory although they contained more user involvement than the typical Parks Department design approach.

Overall, it seems that participants need to insist on the aid of local politicians to assist them in improving the

quality of neighborhood parks and playgrounds and to coordinate city services like the police to take care of drug dealing.

A structural barrier that must be mentioned is that the city does nothing to support on-going relationships between community-based organizations where participation happens regularly with the community planning board/Parks Department. In most instances, the local public has to struggle against the system to be involved. For example, the Parks Department has a volunteer office for coordinating maintenance but not one for technical assistance on participatory design.

Within this legal/economic/political/structural context it is sometimes difficult to apply Wulz's definition of participation since his categories focused on design itself without reflecting on the legal/economic/political/structural context. For the parks/playgrounds that I studied, the design process of the Parks Department fell into the "dialogue" category. The design process included possible users since it was mandated to consult community boards on land use issues. However, final design decisions were made by the Parks Department.

Sauer Park, a city operated park, is an example of more direct involvement. It contains more natural elements since

the block association was able to push the designers to listen to them. Without strong community inputs, the design would resemble typical city playgrounds which are often devoid of natural elements. The renovation process of the park shows the importance of political context. Constant letter writing and signing petitions to the Community Board were not sufficient to secure money to renovate the park since it was not one of the top priorities. The situation changed when two of the block association members became Community board members. They fought to place the renovation at the top of the priority list.

Participation in the Sunshine and the Creston Community Playgrounds seems to belong to what Wulz referred to as the "alternative" category. As a higher level of participation than dialogue, it involves giving people alternatives from which to choose. After discussions with the playground committees of the Sunshine and the Creston Community Playgrounds, designers generated three alternative plans and one of them was chosen by the volunteers. The Creston Community Playground is well utilized during the summer months while the Sunshine Playground is not because the Sunshine Playground provides less diverse play opportunities and there are several other bigger playgrounds in close proximity. Both playgrounds, however, experienced

maintenance problems which may be related to the absence of meaningful community input.

The children's area at the 6th & B Garden involved the highest degree of participation which could be categorized as "co-design." In this form of participation, both participants and designers influence design decisions in a balanced way. And the consequence was a setting that was very much liked by the users. One participant of the 6th and B Garden even claimed that the designers were the children who were involved. In a sense this was true because the designers purposely made their finished project open for future changes by the garden members and by the children themselves.

As seen above, there exist various degrees of user participation in neighborhood playground projects. One might wonder why some participatory playground projects were more successful than others in involving volunteers in the design and maintenance and in reflecting user needs. It seems that there are some pre-conditions for successful participation.

Kaplan's (1982) critical requirements for successful participation appear to be good criteria to measure the success of participation. She suggested that there are at least four requirements for successful participation. The first is the provision of the possibility of genuine impact.

It would seem that participation requires setting up conditions in which, if people are to participate, they recognize that their participation will result in a product in which they feel that their input has made a difference. In this study, although not all of the wishes of the participants were realized because of size and budget limitations, the participants felt very satisfied since they succeeded in renovating or constructing their neighborhood playgrounds. It should be noted that participation does not necessarily cost more so participation should not be thought of as increasing the budget.

The second requirement is adequate sampling of the user population. It appears that the involvement of a broad range of people in the project is a way of insuring adequate sampling of the user population. The renovation of Sauer Park and the construction of the children's area in the 6th & B Garden were initiated by neighborhood residents. Many of the people who were involved in the renovation of Sauer Park were the people who also had been involved in a garden project located right next to the park. Also, the 6th & B Garden was a result of grassroots efforts by many dedicated people. Before the children's area project began, the garden was well established and was one of the most successful gardens in New York City. Indeed, the children's area

project was a way of getting a permanent status which saved the garden from the threat of demolition by the city.

By contrast, although the Trust for Public Land (TPL) chose the Sunshine and Creston Community Playground sites because there were community based organizations that had some experience in the maintenance of public open space, the playground committees seemed to fail to include a broad range of neighborhood residents. Even though efforts to include many neighborhood residents were made by distributing flyers, the playground committees were not successful in involving many residents. Indeed, as Kaplan, Kaplan, and Ryan (1998) suggested, "genuine participation needs to start early and reach the diverse segments of the population" (p. 126). Unfortunately these authors do not provide guidelines concerning steps that might be taken to improve participation in a dense urban setting.

The third requirement is repression of designers' desire to build monuments and leave room for gradual changes. The initial design of Sauer Park included four plots for children's garden activities. After volunteers found that children were not interested in gardening, the plots were replaced by a lawn area which is well used by children. Also, the original playhouse at the 6th & B Garden offered limited visibility to the inside of the playhouse.

But when unintended uses of the playhouse such as sleeping at night by some adults were observed, the playhouse design was modified to provide more visual access. Volunteers at the Creston Community Playground were also planning to replace the unutilized planters with something else. Having an opportunity to change or correct design elements which were not functioning as planned appears to enhance user satisfaction.

The final requirement suggested by Kaplan is the use of a satisfactory medium that provides enough imagery to volunteers. All of the participatory playground projects that I studied utilized some form of graphic material during the design processes to help participants visualize end products.

Although not included in Kaplan's criteria, another important requirement for successful participation seems to be the provision of sufficient budgets for design and maintenance. The design processes of the Sunshine and the Creston Community Playgrounds were highly influenced by budgetary considerations. Although the participatory process brought decision-making closer to the participants, the decision-making process did not involve budget allocations. Budget-related decisions were made by the TPL. The idea of including water play equipment in the Sunshine Playground

was abandoned because it required the proper installation of drainage which would increase the budget. Without proper drainage, there would be slippery surfaces which could lead to accidents. It appears that both the Sunshine Playground and the Creston Community Playground might have been better utilized if the wishes of the community for water play were reflected in the design.

Informal observations of other playgrounds suggest that water features attract many children. Since the playgrounds contained planters and trees, water was needed anyway. The inconvenience of hooking up a hose to a nearby fire hydrant may have resulted in ill-maintained trees and planters. In fact, some dead trees and plants were replaced by the TPL which cost additional money. Trees and plants could be obtained from GreenThumb without charge but not water. It could have been better if the TPL had used part of the budget to provide water.

Also, it seems that the maintenance problems of the Sunshine and Creston Playgrounds were caused by both a shortage of volunteers and of funding for maintenance. Since the community-based organizations had many other services that they provided, the playground project did not get enough funding for maintenance.

While it is clear that participation in all aspects of playground design was rare, there was sufficient variation in levels of participation that allowed for a comparison of users' perceptions of playground quality.

Benefits of Participation

User Evaluations

Study results are consistent with earlier studies (e.g., Baldassari et al., 1980; Wates and Knevitt, 1987) suggesting that participation would result in an environment that fulfills the preferences and meets the needs of playground users. Those who actively participated reported that they achieved a major goal by creating or renovating a playground and expressed positive affect regarding the participation process. The consequences for those using these playgrounds involved many different components of playground use. At the most general level, compared to those interviewed in parks having had no participation, users of participatory playgrounds volunteered a larger total number of positive comments about the playground. More specifically, users of participatory playgrounds were significantly more likely to comment on the positive social exchanges they had with their fellow users. These kinds of social exchanges are important to the formation of positive

neighborhood social networks. They were also much more likely to offer comments on the playground's peaceful atmosphere and noted that the playground was especially good for children.

When asked about negative aspects of the playgrounds their children were using, those in playgrounds having had no participatory involvement provided a significantly wider range of negative comments than did users in participatory playgrounds. Their negative comments focused both on playground design and safety. The fact that there were significant differences in comments about design suggests that claims regarding the superiority of participatory design appear to translate into the assessments of those who use these settings.

Those who advocate participatory playground design have suggested that inclusion of the knowledge and experience of the users of an environment in the design or redesign of that setting should result in fewer complaints and suggestions for improvements. In this study, those interviewed about changes they would like and aspects they disliked in the participatory playgrounds were indeed more likely to say they desired no changes and there was nothing they disliked about the playground.

In some ways these positive results are surprising given that the legal and economic constraints mentioned earlier limited what the participants could do. Limitations on the range of activities possible within the playgrounds were also constrained by their physical size. Many of them were simply too small to accommodate all the design components people might have desired.

Despite these limitations, community participation contributed to the inclusion of more natural elements such as trees and flowers. Indeed, it was found that the participatory playground interviewees were more likely to come to the playground because of the peaceful atmosphere occasioned by the natural elements found there. Natural elements have not only aesthetic but also practical functions such as enhancing children's dramatic play. Vegetation functions as a major source of play props, including leaves, flowers, and sticks (Moore, Goltsman, & Iacofano, 1987). The positive effects of natural elements such as trees and flowers in play settings have been shown in previous research (e.g., Kirby, 1989; Moore, 1989). Also, it has been suggested that the presence of well-maintained natural elements enhances not only children's creative play (Kirby, 1989; Taylor, Wiley, Kuo, & Sullivan, 1998) but also a sense of safety (Brower, Dockett, & Taylor, 1983; Kuo,

Bacaicoa, & Sullivan, 1998). Vegetation also can enhance the experience for adults. People in general like natural elements. A drawback of including vegetation is that it requires a level of maintenance. However, unlike the display of ornaments which is a one-time-only affair, well-maintained plantings suggest continuing maintenance efforts and therefore implies that it will be protected (Kuo et al., 1998).

Benefits for Children

Participation not only has design benefits but also social-psychological benefits (Kaplan, 1982). The fact that the participatory playground users made significantly more positive comments concerning social exchanges implies that caregivers regarded participatory playgrounds as good places where their children could play with friends or children of their age. It is also reasonable to suggest that the caregivers came to the playgrounds for their children as well as for themselves. Actually, some of the users mentioned that what they liked about the park was the existence of many parents and not paid caregivers. It is known that children function as important information links among neighbors (Keller, 1968). People with children are more strongly connected to their neighborhoods in terms of local organizational and social ties (Fischer, 1977). It has

also been found that the number of children living at home was positively related to higher degrees of social integration (Riger & Lavrakas, 1981). Thus, meeting the parents of other children and exchanging information may be helpful in locating useful resources, building social networks, and enhancing community cohesion (Coley, Kuo, & Sullivan, 1997; Kweon, Sullivan, & Wiley, 1998).

Sense of Community

A sense of community involves many different aspects of neighborhood life - not just the use of parks and playgrounds. Therefore, participation in neighborhood playgrounds may not be sufficient to increase sense of community in any significant way. In fact, Israel (1988) found participation in a mural project did not increase participants' sense of community or belonging. However, in the present study, participation enhanced one aspect of sense of community and building a sense of community. When the participants were asked directly whether they felt more involved in the community because of participation, all of them indicated that they did. The results suggest that participation in the playground provided the volunteers more chances to meet neighborhood residents. Also, interactions with neighborhood residents may provide information about local voluntary

organizations. Eventually people may participate in neighborhood organizations thus enhancing a sense of community. Participation in a playground also offers a tangible indication that local people can change their local area.

Nonetheless, this study failed to fully support the claim that participation contributes to a greater sense of community among those engaged in the process (e.g., Francis, 1982). The analysis of the data indicates that when sense of community was measured by using four outcome measures, only one, the number of people known by the first name, was significant. There were no differences between volunteers and other playground users regarding the expected length of residency, the frequency of conversation, and satisfaction with the community for children. If the volunteers have a stronger sense of community then they might be expected to want to live longer in the neighborhood, converse with other residents more than would non-participants, and have a strong sense of satisfaction. These discrepancies may be explained by the fact that the volunteers lived in low- to moderate-income neighborhoods. In fact, many factors such as poor schools and drug-infested neighborhood conditions influence satisfaction. The desire to remain in an area is also influenced by factors such as housing costs, local resources, ages of children, and

so on. Therefore, even though the volunteers felt deeply involved in the playground, it was only one aspect of their community life.

Cleanliness/Maintenance

The claim that participation has environmental maintenance benefits also does not seem to be supported by the data from this study. This finding may seem surprising in light of investigations in which vandalism and graffiti were less likely to happen in participatory projects (e.g., Hart, 1987; Sheat & Beer, 1989). However, Israel (1988) also reported that participation did not prevent the appearance of graffiti.

There are two plausible explanations for this discrepant finding. The first is that the city playgrounds are already adequately cleaned. Indeed, the cleanliness and maintenance of the city parks have been improved. Parks Department records show 96 percent of the city playgrounds are acceptable regarding cleanliness (City of New York Parks & Recreation, 2000a). All the playgrounds that I studied were generally clean. There were no noticeable variations between the participatory and non-participatory playgrounds regarding the amount of trash and graffiti.

Another explanation may be that litter and graffiti are urban ills which cannot be easily cured by community participation. Illicit activities such as drug use and graffiti often occur after park hours. Playgrounds are often destroyed but not necessarily by the users. Since there is no informal surveillance, it is hard to prevent littering and graffiti. Also, since the playgrounds are not owned by the community and the volunteers have no authority to stop uncivil activities, the volunteers may not be able to keep the playgrounds free from litter and graffiti.

Safety

The physical safety conditions of playgrounds seem to be much improved in newly renovated or constructed playgrounds in New York City. Nonetheless, there were some unsafe pieces of playground equipment. Not many of the users, however, seemed to be aware of equipment safety other than the protective surface under or around play equipment. Therefore, more efforts should be made to educate the general public regarding equipment safety. It was also found that the non-participatory playground users were more likely to be dissatisfied with the playgrounds compared to the users of the participatory playgrounds because of a lack of safety. A closer look at the comments in the safety category

shows that many of the comments were related to "social dangers" rather than physical dangers. Some users such as adults without children, strangers, and people drinking and sleeping in the playgrounds were perceived as threatening safety. The findings reinforce previous research that suggested that the presence of so-called "undesirables" has negative effects on users' perceptions of safety (e.g., Francis, 1987; Whyte, 1980, 1988). As a result of participation this was less of a problem for those interviewed in participatory playgrounds.

Reflections on Participation

Limitations of "Alternative" and "Co-design" Types of Participation

Despite the benefits, user participation had some limitations. Although success stories in the participatory literature portray ideal images of participation, in this study, participation was often flawed by many constraints. Community participation was not an easy task because there always was a lack of community participation in the design and/or maintenance of playgrounds. It is not surprising to find a lack of participation. Indeed, several studies found that relatively few people participated when given the

opportunity (e.g., Peattie, 1968; Rohe & Gates, 1985) thus raising a challenge to Kaplar's (1982) claims.

The Political Problems of Participation

Limited funding for construction and operation constrained volunteers' choices. Some design ideas such as inclusion of water play equipment and basketball courts were not realized partly because of financial reasons. Volunteers wanted to provide more programs for children and keep the playgrounds in good condition but there were not enough funds.

The maintenance budget seems to have a significant effect on the playground's condition. Lack of funds for programs and maintenance after the construction caused many parks, regardless of the size or design, to become decayed or disused (Cooper Marcus & Greene, 1998). For example, inadequate maintenance in the Creston Community Playground and the Sunshine Playground resulted in many neglected planters in which nothing grew. Although planters could have been beneficial for children's education and for the enhancement of the aesthetic quality of the parks, this opportunity was wasted because of inadequate maintenance. Therefore, the planters decreased not only the aesthetic

quality of the space but also the chance to communicate a sense of caring.

Liability

Liability issues had significant effects on the selection of the play equipment. For example, a water sprinkler was not included in the Sunshine Playground partly because of potential liability claims. Also, the common practice of selecting play equipment from a catalog resulted in play equipment which met safety standards but which may not be the most interesting or challenging for children. Furthermore, the design of the Sunshine and the Creston Community Playgrounds was clearly constrained by the City of New York/Department of Parks & Recreation's review and regulations. The children's area in the 6th and B Garden resulted in designs that reflected more users' needs since the designers were willing to use custom-made structures. In addition, designers from the Children's Environments Research Group (CERG) purposely did not name the children's area a playground because they did not want to make the garden liable and to encourage active/gross motor play.

Implications

Design Issues

It seems that there is a resurgent trend of equipment duplication on city playgrounds. This is caused by the fact that playground equipment is often chosen from catalogs of a handful of play equipment manufacturers due to safety and maintenance issues. As a result, many playgrounds look identical regardless of location. Then, is it still possible to build challenging playgrounds that comply with the safety guidelines? The answer seems to be "yes" but only when there is sufficient financial support. The Rockefeller Park at Battery Park City is an example of a playground that is both challenging and safe (Scott, 2000). It contains features such as meandering wooden structures, hiding spaces, a child-powered merry-go-round, expanses of sand, and a giant net suspended high above the ground. However, the park is operated and maintained by a private, non-profit organization and not many municipalities or agencies have the budgets to maintain these kinds of playgrounds.

Sipes (2000) proposes that Robert Leathers' community-built playgrounds can be an alternative approach since they are less prone to liability claims because of community involvement. Similar to the old-fashioned barn raising, community-built playgrounds are mainly constructed by an

army of volunteers. Although not popular in big cities, there are many community-built playgrounds in suburban or rural areas.

Leathers and Associates, Inc. is the most famous playground design firm which espouses the community-built approach. The firm has built more than 1,000 playgrounds using participatory methods. The design process begins with a "Design Day", when a designer meets with local residents, especially children, to solicit their suggestions. For the playground design, usually a twelve-hour day meeting is scheduled. At the end of the Design Day a preliminary design that incorporates community suggestions is generated. Then, several months later, an "Organization Day" is held. This is the time when the final design, plans, responsibilities, and construction details are reviewed and discussed. Finally construction takes place. Over a period of a few days, volunteers erect posts, sand wood, pound nails, and build the playground (Leathers & Associates, Inc., n.d.).

It may be reasonable to expect a stronger sense of ownership for the volunteers of the community-built playgrounds because of their involvement. Community involvement, however, may not necessarily guarantee less liability claims. Therefore, Sipes' (2000) claim needs verification by further studies. Also, his suggestion does

not seem to be a suitable approach for urban playgrounds, especially in low-income neighborhoods, since they are constrained by lack of participation and maintenance problems. Furthermore, unless these community-built playgrounds are owned and/or maintained by the community, there may be liability claims since about 60 to 70 percent of the playground injury lawsuits are related to inadequate maintenance of play equipment (Kutska, 1995).

It appears that the practice of choosing play equipment from catalogues may not change and the budget for maintenance of city playgrounds may not dramatically increase in the near future.

A reasonable alternative may be the provision of play settings in the neighborhood that are not totally controlled by the city. Because of limited size and maintenance problems, any one playground may not satisfy all the activities desired for children. New York City is fortunate in this regard since there are many community gardens which could be utilized for children's play activities. However, whether children's play activities would be allowed in the garden depends on the volunteers of community gardens. Nonetheless, community gardens with a children's area, as seen in the 6th & B Garden, would be a good additional environment for children and their caregivers. They afford

some developmentally beneficial activities such as utilization of loose parts which are not usually accommodated in the city playgrounds. An effective play environment requires a combination of fixed features and loose parts. It is important for children to be able to change parts of their environment. Materials such as sand and water allow manipulation (Moore et al., 1987).

The finding that children vandalized flowers and trees on the Sunshine Playground seems to suggest the importance of adequate supervision by parents and caregivers. However, the vandalism may mean the lack of adequate equipment in the setting. Indeed, boredom and lack of parental supervision are factors associated with vandalism (Cooper Marcus, Watsky, Insley, & Francis, 1998). The Sunshine Playground contains a composite play structure for preschool-age children with a bridge and a slide. According to my informal observations, the playground was devoid of users in many cases, while the Blake Hobbs Playground, located two blocks away, was well-used by children. Sometimes, there were some unsupervised children riding roller blades on the Sunshine Playground. It appeared that roller blading was the most preferred activity on the playground. Also, a ramp, which was installed for baby carriages, offers a good surface for roller blading. In some cases, children used the play

equipment with their roller blades on. Ironically, like all the other city playgrounds, roller blading is prohibited on the playground. Since the playground provided limited play options, children may come up with their own play like hanging on a tree which might be a way of showing their boredom and frustration with the available equipment.

Furthermore, the findings seem to suggest that one of the most important factors that influenced user's preference of a playground was the diversity of play equipment. Actually, swings were mentioned most frequently as equipment that should be added. In contrast to the desires of playground users, equipment on playgrounds has become less and less diverse. Partly due to size limitations and difficulty of maintenance, some playground equipment like swings have diminished or been excluded from the playgrounds although they are liked very much by the users (Cooper Marcus & Greene, 1998; Naylor, 1985). Also, the fear of illicit use resulted in the removal of tunnels or similar places in spite of the importance of private or semi-private areas in a playground (White, Hargreaves, & Newbold, 1995). This trend of excluding play equipment which requires high maintenance has some negative effects on playgrounds. Often it results in playgrounds which lack challenge and complexity. Deprived of challenge, children sometimes make

up their own dangerous games to play on the equipment (Martin, 1996). Children, by nature, take risks. I have witnessed a child sliding down a slide while riding a bicycle. Some children invented their own wire swing attached on play equipment when swings were missing on the playground (see Figure 5.1). In other instance, some children were riding a toddler's swing while standing on it.

Policy Issues

Playground users felt unsafe because there were many so-called "undesirables" in the playgrounds. One of the solutions for this problem would be to make the place attractive to everyone else (Whyte, 1980). Then, it would be reasonable to suggest that the provision of more activities might increase positive uses and decrease the dominance of a specific group of people.

One way to increase positive uses involves the utilization of programs. The role of the playground is not confined to the provision of play equipment. Programming is another important aspect of playground life. By having programs, playgrounds attract a broad band of people. As seen in Sauer Park, volunteers were successful in keeping drug dealers out of the park by introducing multiple programs which resulted in an increase in positive park



Figure 5.1. A child on her own swing

activities.

The cultural programs offered at the 6th & B Garden also draw many people. In one case, poetry reading in the garden attracted approximately 50 adults. The Cherry Tree Playground is known both for its safety and programs and many people come to the park from a distance.

Although mentioned by a small number of people, the idea of providing an attendant needs some attention. Hart and Iltus (n.d.) claim that play area staffing should be a priority when creating safe spaces for children's development. They even argue that play leaders can possibly provide good programs without any play equipment. By supplying loose parts, play leaders can set the stage for children to create their own play. The necessity of play leaders was evident in the case of the Adventure Playground in Central Park. Tunnels in the playground were highly used until they were closed in the 1970s because neighborhood volunteers were no longer able to provide play leaders (In this case the title "supervisor" was used). During the summer, some city playgrounds have play leaders called playground associates. Hired by the Parks Department, they plan programs for youth. Also, there is the mobile unit program which brings arts and crafts and sports to many different locations throughout the city all summer. This

program should be extended to other playgrounds and if possible it should be offered throughout the year.

The renovation of a playground or the provision of programs may not, by themselves, guarantee the successful use of the playground since it is not an island free from neighborhood conditions. If uncivil activities such as drug dealing happen next to a playground, not many people would feel comfortable using it. Therefore, continuous efforts should be made to improve neighborhood conditions as well as the playground itself. These efforts should include coordination with other civil authorities like police.

Another important issue that should be considered is whether volunteers should continue to participate after the design process. Volunteers' interests, as seen in many participatory playgrounds, fade as they achieve their goals in the creation of the space. Although continuous involvement of volunteers is critical for the upkeep of the playgrounds, even well-maintained sites such as the 6th & B Garden and Sauer Park had difficulties involving committed volunteers. The Sunshine Playground and the Creston Community Playground were better maintained when there were paid keepers. The presence of a keeper communicated a strong message that the playground was guarded from illicit or destructive use. When the funds for hiring keepers were no

longer available, maintenance became an issue. Volunteers tried to raise money by having fund-raising events such as bake sales and applying for grants. But those activities represented a burden for the volunteers since they had to spend some extra time to prepare for the events and to secure grants without much success. This seems to suggest that it is very hard to maintain a playground solely by volunteers. The difficulty of park maintenance by volunteers in poor neighborhoods was pointed out by Shiffman (1969). He suggested that "a block association or similar neighborhood group cannot, nor should it be expected to, be responsible for park upkeep, and that some deterioration will result from lack of sustained proper maintenance" (p. 154). It seems that volunteers should be encouraged to participate not in maintenance but in programming events. Also, better co-ordination with local politicians is needed to gain financial support.

Furthermore, the results seem to suggest that it is very important to close the park at dusk. All playgrounds are supposed to be closed at night but, in some cases, they are left unlocked. Also, after-hours surveillance is critical for the prevention of some illicit activities conducted after the park is closed (Nevarez de Jesus, 1999). Therefore, the rule

has to be enforced and police surveillance should be increased.

Another policy implication is the provision of a temporary sign. Many parks have a sign which describes the history and neighborhood group's involvement, if any, in the park. Also, there is a sign saying that "to report a problem, to learn what we do, or to volunteer call 1-800-201-Park." However, if a person is new to the area and is interested in participating in volunteer activities, one cannot find the correct telephone number. One can possibly obtain the information by calling the 1-800 listing, but it would be better if there were a temporary sign which contains the volunteer outreach coordinator's number.

Playgrounds in wealthy neighborhoods seem to be better maintained because private groups such as Central Park Conservancy and Prospect Park Alliance allocate substantial amount of money for maintenance. Playgrounds in poor neighborhoods, however, remain deteriorated. The feeling of inequity may decrease a sense of caring in users. As a result, users' respect for the space may decrease. Therefore, broken equipment should be replaced or fixed promptly. It is unfair that poor people are expected to contribute more of their time because of the lack of

financial resources to donate money for the upkeep of their neighborhood playgrounds.

Research Issues

This study was not able to fully test the benefit of participation on design outcomes because examples involving participation in design also included participation in maintenance. Therefore, further studies comparing playgrounds having participation only in design with non-participatory playgrounds are needed. But this will be most unusual because when there is very good participation in design people also want to help maintain it.

The positive effects of participation seem to dissipate as time passes. Some of the sites that I studied showed some neglect. Also, wooden play equipment on a participatory playground that I intended to study had been replaced by new equipment because of splinter and rodent problems. The long-term endurance of participatory designs requires more empirical research. There may also be some subtle, but very important social impacts (e.g., sense of community in children and overall development of civic involvement).

The fact that my data were not able to fully support the contributions of participation to a sense of community deserves some attention. The outcome measures of community

that I used could have been too conservative to be able to test the hypothesis. If I had used more modest predictors (e.g., feeling a part of a group, working for a positive change to a neighborhood, feeling pride), I might have picked up more subtle changes in a sense of community.

Limitations of the Study

This study deals with only a portion of the participants who were/are involved in the neighborhood playgrounds. Only five users were interviewed for each of the eighteen sites. Therefore, the findings for each playground may not adequately represent the entire user population. Another limitation of this study is that it only deals with the adult perspective. Also, the present study only includes the users of the playgrounds. There are many persons with young children who are not using playgrounds for reasons that need to be identified. Knowing their reasons for not using the playgrounds could help in managing and modifying the playgrounds.

Conclusion

Findings of this study suggest that community participation in neighborhood playgrounds increased user satisfaction and some aspects of a sense of community.

Unfortunately, liability and maintenance issues seem to limit the use of diverse play equipment. A challenge for landscape architects and play equipment designers seems to be the provision of playgrounds that offer safe environments and a variety of experiences. One user's comments illustrate designers' responsibilities to the users. "It would be nice if they can be a little bit more creative because this is the same playground. It's everywhere. Once my kids have been to one, why go to another one?"

APPENDIX A

Interview Protocols
Playground safety Checklist
Playground Cleanliness Checklist

Appendix A.1

PLAYGROUND USER INTERVIEW

I am a Graduate student in environmental psychology at the City University of New York. I am interested in learning about your feelings about this playground. I would appreciate if you could give me approximately 5 minutes of your time. If you allow me, I would like to record our conversation. I would like to have a clear record of what you say. You don't have to tell me your name.

1. What is your relationship to the child(ren) that you bring to the playground?

1a. How many children do you have with you?

(probe) How many boys and how many girls?

1b. What are their ages?

2. What kind of playground equipment do your child(ren) use the most? Why?

3. Which parts or features of this playground equipment are the child(ren)'s favorite?

4. What things do you like most about this playground? Why?

5. What things do you dislike most about this playground? Why?

6. As you think about this place, how satisfied or dissatisfied are you? On a scale of 1 to 5 with 1 being strongly dissatisfied and 5 being strongly satisfied, what number would best describe the way you feel about this playground? Can you explain your rating?

STRONGLY DISSATISFIED 1 2 3 4 5 STRONGLY SATISFIED

7. Do you use any other playgrounds in other areas? Yes ___
 No___ (If yes) Which one(s)? Why?

8. Can you think of any changes which would improve the playground?

(probe) What about the layout of the playground? What about the the equipment in the playground?

9. (for participatory design playground) Did you know that this playground was built with community participation? Yes___
 No ___

(If yes) go to 10a

(If No) go to 11

9a. What do you know about it?

(probe) Do you know who built this playground?

How was it built? When was it built?

9b. Were you involved?

9c. What happened?

9d. Can you tell me what you did?

9e. Do you do anything for this playground?

9f. Do you know anyone who was involved in the community participation?

10. Is there anything you would like to add about the playground?

11. I am interested in how far people walk or travel in order to get here. Where did you come here from?

(probe) Can you give me the location by cross streets?

(If the person lives in the neighborhood) go to 13

(If Not) end the interview

12. How long have you lived in this neighborhood?

13. How long do you expect to live in this neighborhood?
(Probe) Are you planning to move within 5 years?

14. How many people in your neighborhood can you identify by first name?

15. How often do you talk with the residents in the neighborhood?
(probe) daily, weekly, or monthly?

16. How do you feel about your neighborhood for children?
Are you satisfied or dissatisfied?

Interviewee No.: _____

Sex: _____ **Age:** _____

Time of interviews: **date:** _____ **day:** _____ **time begun:** _____

completed: _____

Weather: _____

Appendix A.2

PARTICIPANT INTERVIEW

1. Could you tell me about the community's involvement in the project?
 - 1a. What do you know about it?
(probe) Do you know who built this playground?
How was it built? When was it built?
 - 1b. Were you involved?
 - 1c. What happened?
 - 1d. Can you tell me what you did?
 - 1e. Do you do anything for this playground?
 - 1f. Do you know anyone who was involved in the community participation?
2. Do you feel more involved in the community because of your participation in the project? Yes ____ No ____
(If yes) In what ways?
3. What was the best and worst thing that has come out of your involvement in the project?
4. Given the chance to be involved in a similar project, would you do so? Why or Why not?

5. How long have you lived in this neighborhood?
6. How long do you expect to live in this neighborhood?
(Probe) Are you planning to move within 5 years?
7. How many people in your neighborhood can you identify by first name?
8. How often do you talk with the residents in the neighborhood?
(probe) daily, weekly, or monthly?
- 8a. Where does this take place?
9. How do you feel about your neighborhood for children? Are you satisfied or dissatisfied?

Interviewee No.: _____

Sex: _____ **Age:** _____

Time of interviews: **date:** _____ **day:** _____ **time begun:** _____

completed: _____

Weather: _____

Appendix A.3

INTERVIEW - PLAYGROUND CONSTRUCTION COMMITTEE MEMBERS

1. Could you tell me about the background of the playground project:
 - a. Who initiated the project?
 - b. Who was involved in the project
 - c. How did they become involved?
2. What did you see as your role regarding the playground project?
3. What was the role of community regarding this project?
4. What level of community participation would you say had been achieved in terms of the project?
(probe)
5. In what way(s), if any, do you think the project was successful?
6. In what way(s), if any, do you think the project could have been more successful?
7. What difference, if any, do you think the project made to the neighborhood/community?
8. What impact, if any, do you think the playground project had on you?
9. Do you feel more involved in the community because of the project? Yes ____ No ____
(If yes) In what ways?
10. Given the chance to support/fund a similar project in the future, would you do so? Why or Why not?
11. Do you see any differences between this playground and others in the area? Yes ____ No ____
(If yes) What are the differences?

12. Do you feel the designer(s) was responsive to the community's needs and the needs of the children?

13. What was the best and worst thing that has come out of the project?

14. Any other comments about the project?

Appendix A.4

INTERVIEW - DESIGNERS

1. Could you tell me about the background of the playground project:
 - a. Who initiated the project?
 - b. Who was involved in the project
 - c. How did they become involved?
2. What did you see as your role regarding the playground project?
3. What was the role of the community regarding this project?
4. Could you tell me about the design process?
(probe) What was it like?
5. What level of community participation would you say had been achieved in terms of the project?
6. In what way(s), if any, do you think the project was successful?
7. In what way(s), if any, do you think the project could have been more successful?
8. Any other comments about the project?

Appendix A.5

INTERVIEW - TECHNICAL ASSISTANCE ORGANIZATION

1. Could you tell me about the background of the playground project:
 - a. Who initiated the project?
 - b. Who was involved in the project and how did they become involved?
 - c. How did you provide assistance to the group?
 - d. What problems, if any, did you encounter?
2. What did you see as your organization's role regarding the playground/community garden project?
3. What was the role of community regarding this project?
4. What level of community participation would you say had been achieved in terms of the project?
5. In what way(s), if any, do you think the project was successful?
6. In what way(s), if any, do you think the project could have been more successful?
7. What difference, if any, do you think the project made to the neighborhood?
8. What was the best and worst thing that has come out of the project?
9. Do you feel the designer(s) was responsive to the community's needs and the needs of the children?
10. Any other comments about the project?

Appendix A.6

PLAYGROUND SAFETY CHECKLIST**SURFACING**

_____ The equipment has adequate protective surfacing under it. (LOOSE-FILL SURFACING - MINIMUM 9-12 INCHES)

Loose-fill surfacing materials (wood chips, sand, pea gravels, or shredded tires) have no foreign objects or debris.

_____ glass

_____ trash

_____ Loose fill surfacing materials are not compacted.

_____ The surfacing materials have not deteriorated.

_____ The equipment has adequate protective surfacing around it. (MINIMUM 6 FEET IN ALL DIRECTIONS)

GENERAL HAZARDS

There are protective fences or barriers next to dangerous areas.

_____ streets

_____ swings

_____ There are no sharp points, corners, or edges on the equipment.

_____ There are no missing or damaged protective caps or plugs.

_____ There are no hazardous protrusions and projections.

There are no potential clothing entanglement hazards.

_____ open S-hooks _____ protruding bolts

There are no hazards for tripping.

_____ exposed footings _____ anchoring devices _____

rocks _____ roots

_____ There is no opening - except those where the ground is the lower boundary - with an interior dimension between 3.5 and 9 inches which may cause head entrapment.

EQUIPMENT HEIGHT

_____ The height of the equipment is less than 4 feet above the protective surfacing when designed for preschool-age children.

_____ The height of the equipment is less than 6 feet above the protective surfacing when designed for school-age children.

DETERIORATION OF EQUIPMENT

_____ There is no peeling, chipping, or cracking paint on any

equipment surface.

_____ The equipment has no rust, rot, cracks or splinters especially where it comes in contact with the ground.

_____ There are no broken or missing components on the equipment.

_____ handrails _____ guardrails _____ protective barriers _____ steps _____ rungs on ladders

_____ There are no damaged fences.

_____ There are no damaged benches.

_____ There are no damaged signs on the playground.

_____ All equipment is securely anchored.

SECURITY OF HARDWARE

_____ There are no loose fastening devices or worn connections, such as S-hooks.

_____ Moving components are not worn.

_____ Swing hangers _____ merry-go-round bearings

DRAINAGE

_____ The entire play area has satisfactory drainage, especially under swings and at slide exits.

AGE SEPARATION OF EQUIPMENT

_____ There are separate areas for preschool and school age children.

SWINGS

_____ Swing seats are not constructed of heavy, rigid material such as wood or metal.

_____ There are no more than two swings in any one section of the swing structure.

_____ The horizontal distance between adjacent swings is at least 24 inches.

_____ The horizontal distance between the swing and any adjacent support structure is at least 30 inches.

DANGEROUS EQUIPMENT

_____ track rides (NOT FOR PRESCHOOL-AGE CHILDREN)

_____ chain or cable walks (NOT FOR PRESCHOOL-AGE CHILDREN)

_____ rotating/swinging gates (NOT FOR PRESCHOOL-AGE CHILDREN)

_____ multiple occupancy swings (EXCEPT TIRE SWINGS)

_____ animal figure swings

_____ swinging dual exercise rings/ trapeze bars

_____ rope swings

_____ individual climbing ropes

* Adapted from Frost, 1979; U.S. Consumer Product Safety Commission, 1997; CFA/PIRG/NYPIRG, 1998

Appendix A.7

PLAYGROUND CLEANLINESS CHECKLIST

The entire playground is free from miscellaneous debris or litter.

_____ tree branches _____ soda cans _____ bottles
_____ glass _____ trash

- _____ Trash receptacles are not full.
- _____ The playground is free from graffiti.
- _____ There are no overgrown weeds.
- _____ There are no overgrown lawns.

APPENDIX B
Summary of Results

Appendix B.1

El Sitio Feliz (The Happy Place): Summary of Results

Participation Category: Participation in design and maintenance
<p>Site Description</p> <p>The playground/community garden is located at 103rd Street between Lexington and Third Avenues in East Harlem. The community garden was established in 1986 under the sponsorship of Operation GreenThumb. Although the garden thrived for many years, the rest of the lots were not utilized. In 1992, the Council on the Environment proposed to add a playground to the site. It became a reality by many players including Union Settlement organization, the Lots for Tots program of the City's Council on the Environment, and residents of neighboring tenements and projects. It contains garden plots, two composite play structures, an amphitheater, a picnic area, a pond, a mini-orchard, a barbecue pit, a mural, and a gazebo. It is not a city owned park, rather it is a private space with controlled access and locked at night.</p>
<p>Users (N = 5)</p> <p><u>Relationship to children:</u> mother (5 people)</p> <p><u>Number of children:</u> 1 (1 person), 2(1 person), 3(3 people)</p> <p><u>Children's age:</u> under 5 (5 children), 5 and over (7 children)</p>
<p>Use</p> <p><u>Used most by the children:</u> the slide (3), the composite play structure for school-age children (1), playhouse (1)</p> <p><u>Children's favorites:</u> the slide (3), playhouse (2), the composite play structure for school-age children (1)</p>
<p>Liked things</p> <p><u>Design</u> (6: the slide, swings, the color of the equipment, sprinkler, beautiful, nice), <u>Safety</u> (5: everybody is friendly, no fights, It's not dangerous, very safe for the kids, all the soft tiles), <u>Peaceful Atmosphere</u> (5: quiet (3), peaceful, a paradise in a city), <u>Programs</u> (4: a lot of activities for children, a harvest feast, end of the summer thing, gave out ice cream) <u>Maintenance/Cleanliness</u> (3: no garbage, very clean, very well maintained), <u>Natural elements</u> (3: all the trees, the greenery, so much green), <u>Social exchanges</u> (1: most of the kids they know are here), <u>Not crowded</u> (1)</p>
<p>Disliked things</p> <p><u>Nothing</u> (4), <u>Design</u> (1: need some swings), <u>Inaccessibility</u> (1: sometimes it's closed)</p>
<p>Desired changes</p> <p><u>None</u> (3), <u>Design</u> (2: more swings), <u>Programs</u> (1: more parent involvement)</p>
Mean satisfaction score: 4.6/5.0

Appendix B.2

Poor Richard Playground: Summary of Results

Participation Category: No participation
<p>Site Description</p> <p>This playground is located at the corner of E. 109th Street and Third Avenue. Located next to Junior High School 117, it is jointly operated by the Parks Department and the Board of Education. It contains a composite play structure for school-age children, a comfort station, swings for toddlers and school-age children, game tables and benches, and basketball courts. It occupies 1.58 acres.</p>
<p>Users (N = 5)</p> <p><u>Relationship to children:</u> Mother (2 people), Father (1 person), Aunt (1 person), sister (1 person)</p> <p><u>Number of children:</u> 1 (2 people), 2 (2 people), 4 (1 person)</p> <p><u>Children's age:</u> under 5 (6 children), 5 and over (4 children)</p>
<p>Use</p> <p><u>Used most by the children:</u> swings (3), the composite play structure (3), the slide (2)</p> <p><u>Children's favorites:</u> swings (4), the slide (1)</p>
<p>Liked things</p> <p><u>Convenient location</u> (3), <u>Design</u> (2: swings, more room), <u>Maintenance/cleanliness</u> (2: The equipment is not broken, For the most part, it's always clean.), <u>Social exchanges</u> (1: a lot of parents with kids), <u>Not crowded</u> (1)</p>
<p>Disliked things</p> <p><u>Lack of safety</u> (6: a lot of adult without children, people hanging out drinking and smoking, Grownups come here to drink, A lot of strangers in the park. Bums sleeping at night. Need closing time), <u>Lack of Maintenance</u> (4: better cleaning, better water fountains, didn't clean it up, dirty), <u>Design</u> (1: touch of color), <u>Need closing time</u> (1)</p>
<p>Desired changes</p> <p><u>Safety</u> (3: security guards, more police around the park, get the bums out of here), <u>Design</u> (3: better swings, another slide, more equipment), <u>Maintenance/cleanliness</u> (2: clean up, can be cleaner)</p>
Mean satisfaction score: 3.2/5.0

Appendix B.3
Sauer Park: Summary of Results

Participation Category: Participation in design and maintenance
Site Description See Chapter Four
Users (N = 5) <u>Relationship to children:</u> mother (3 people), Father (1 person), Babysitter (1 person) <u>Number of children:</u> 2(4 people), 3(1 person) <u>Children's age:</u> under 5 (4 children), 5 and over (7 children)
Use <u>Used most by the children:</u> the slide (3), everything (2), the composite play structure (1), natural elements (1), play ball (1) <u>Children's favorites:</u> the slide (3), everything (1), and the sprinkler (1)
Liked things <u>Safety</u> (7: safe, one entrance and one exit, not big so you can watch easily, green spongy surface, gates that close the door, isn't too much traffic outside, the design of the park discourages teenagers), <u>Peaceful atmosphere</u> (3), <u>Maintenance/cleanliness</u> (2: clean, well-cared park), <u>Convenient Location</u> (2), <u>Design</u> (2: not big, lovely), <u>Social exchanges</u> (1: a lot of parents than babysitters), <u>Sense of care</u> (1: People care about it)
Disliked things <u>Design</u> (1: no big kids swings), <u>Programs</u> (1: not enough activities for older children), <u>Nothing</u> (1), <u>Closing time</u> (1: summer time open it little later), <u>Lack of safety</u> (1: sometimes too big kids are playing here), <u>Lack of bathroom</u> (1)
Desired changes <u>Design</u> (4: the door - many time fingers got stuck, something that could take care of older boys energy, bigger swings for school children, a sandbox), <u>Maintenance/cleanliness</u> (1: organize clean up crew by city), <u>Attendant</u> (1: during the summer we had a woman from the Parks Department), <u>None</u> (1)
Mean satisfaction score: 4.0/5.0

Appendix B.4

Dry Dock Playground: Summary of Results

Participation Category: No participation
<p>Site Description</p> <p>The playground opened in June 1975 and underwent a \$500,000 renovation in 1991 to replace deteriorating play equipment. It contains two composite play structures for preschool-age and school-age children, benches, game tables, and basketball backboards. It occupies 1.47 acres and jointly operated by the Parks Department and a Public School (P.S. 34).</p>
<p>Users (N = 5)</p> <p><u>Relationship to children:</u> mother (4 people), great grandmother (1 person)</p> <p><u>Number of children:</u> 1 (1 person), 2 (1 person), 3 (3 people)</p> <p><u>Children's age:</u> under 5 (4 children), 5 and over (8 children)</p>
<p>Use</p> <p><u>Used most by the children:</u> the slide (2), everything (1), the composite play structure for school-age children (1), platforms (1)</p> <p><u>Children's favorites:</u> the slide (3), the composite play structure for preschool-age children (1)</p>
<p>Liked things</p> <p><u>Convenient location</u> (3), <u>Maintenance/cleanliness</u> (2: clean, gotten cleaner), <u>Design</u> (1: big), <u>Safety</u> (1: rubber mats), <u>Natural elements</u> (1: trees), <u>Not crowded</u> (1), <u>Nothing</u> (1)</p>
<p>Disliked things</p> <p><u>Design</u> (4: no swings (3), no seesaws), <u>Lack of safety</u> (3: lack of supervision of many of the children, Kids are here alone, homeless people sleep inside), <u>Maintenance/cleanliness</u> (2: dirty, broken glass), <u>Nothing</u> (1)</p>
<p>Desired changes</p> <p><u>Design</u> (3: add swings (2), nicer garbage cans), <u>Maintenance/cleanliness</u> (2: clean it more often, either put up the swings or take down the swing support), <u>Safety</u> (1: parks or police patrolling the area), <u>Attendant</u> (1: park workers lend materials like board games), <u>Bathroom</u> (1), <u>None</u> (1)</p>
Mean satisfaction score: 3.6/5.0

Appendix B.5

Renaissance Playground: Summary of Results

Participation Category: Participation in assembly
<p>Site Description Located next to a public school, this playground includes two composite play structures for preschool-age and school-age children, a comfort station, a concrete seal, and a basketball court. In 1999, a new composite play structure for school-age children was installed and approximately 20 volunteers were involved in the installation of the equipment. This playground is jointly operated by the Parks Department and the Board of Education.</p>
<p>Users (N = 5) <u>Relationship to children:</u> Father (2 people), Mother (2 people), Sister (1 person) <u>Number of children:</u> 1 (3 people), 2 (2 people), 4 (1 person) <u>Children's age:</u> under 5 (7 children), 5 and over (2 children)</p>
<p>Use <u>Used most by the children:</u> the composite play structures (5), the slide (2), overhead hanger (1), basketball (1) <u>Children's favorites:</u> the slide (3), overhead hanger (1), basketball (1)</p>
<p>Liked things <u>Safety</u> (4: Everybody is friendly, not dangerous, no fighting, no drug dealers), <u>Convenient location</u> (3), <u>Maintenance/cleanliness</u> (2: clean), <u>Good for kids</u> (2: somewhere the kids can go, somewhere for kids to come), <u>Design</u> (2: a lot of stuff to play with, for her to run around), <u>Social exchanges</u> (1: other children for them to play with), <u>Peaceful atmosphere</u> (1: got a peace of mind)</p>
<p>Disliked things <u>Design</u> (3: no swings (2), not level), <u>Lack of safety</u> (1: more those rubber pieces down), <u>Nothing</u> (2), <u>Inaccessible bathroom</u> (1: bathrooms should be open)</p>
<p>Desired changes <u>Design</u> (4: more swings (3), sprinkler), <u>None</u> (2), <u>Safety</u> (1: should be more rubber)</p>
Mean satisfaction score: 4.8/5.0

Appendix B.6

Frederick Johnson Park: Summary of Results

Participation Category: No participation
<p>Site Description This park is located in Harlem. Named after a Harlem native tennis player, it contains tennis courts, two composite play structures for preschool-age and school-age children, a concrete camel, benches, and chess and checker tables.</p>
<p>Users (N = 5) <u>Relationship to children:</u> mother (2 people), father (1 person), grandmother (1 person), father/uncle (1 person) <u>Number of children:</u> 1 (1 person), 2 (3 people), 3 (1 person) <u>Children's age:</u> under 5 (3 children), 5 and over (7 children)</p>
<p>Use <u>Used most by the children:</u> the slide (3), the composite play structure for preschool-age children (2), everything (1) <u>Children's favorites:</u> the slide (2), everything (1), climbing (1)</p>
<p>Liked things <u>Safety</u> (3: rubber mats, safe neighborhood, nice people), <u>Design</u> (3: a lot of space, they can ride bikes, monument), <u>Not crowded</u> (1)</p>
<p>Disliked things <u>Lack of safety</u> (7: they bring dogs, near the street, people sleeping in the park, allow drugs, people come in at night and drink beer, mainly concrete paving, near the street), <u>Design</u> (5: no swings (2), not enough play equipment for older kids, needs variety of things for kids, not for older kids), <u>Lack of maintenance/cleanliness</u> (1: should be cleaner), <u>Lack of programs</u> (1)</p>
<p>Desired changes <u>Design</u> (9: add swings (2), add a sprinkler, add monkey bars, add tire swings, add a sandbox, more equipment, redesign the playground equipment), <u>Programs</u> (1: educational programs for children), <u>Safety</u> (1: there are kids by themselves at night), <u>Natural elements</u> (1: need flowers)</p>
Mean satisfaction score: 3.0/5.0

Appendix B.7
6th & B Garden: Summary of Results

<p>Participation Category: Participation in design, construction, and maintenance</p>
<p>Site Description See Chapter Four</p>
<p>Users (N = 5) <u>Relationship to children:</u> mother (4), babysitter (1) <u>Number of children:</u> 1 (3 person), 2(1 person), 3(1 people) <u>Children's age:</u> under 5 (3 children), 5 and over (5 children)</p>
<p>Use <u>Used most by the children:</u> playhouse (2), soil (2), shovel (1), little cart (1), bulldozer (1) <u>Children's favorites:</u> dirt or soil (3), playhouse (2), the column (1, there is a column that is covered with broken china and stones), collect flowers or seeds (1)</p>
<p>Liked things <u>Natural elements</u> (7: plants (3), green (2), dirt, nature), <u>Social exchanges</u> (3: other kids, a lot of children meets here, play together), <u>Community ownership</u> (2: community owned), <u>Peaceful atmosphere</u> (5: quiet (2), refuge (2), relax), <u>Programs</u> (3: shows at night, programs for kids, lectures), <u>Design</u> (2: lots of space, They can walk), <u>Safety</u> (1: safe), <u>Education</u> (1: he wouldn't know plants), <u>Able to change</u> (1: able to adapt), <u>Good for kids</u> (1: comfortable for children), <u>Being able to grow</u> (1), <u>Sense of care</u> (1: You feel they are taking care of the plants), <u>Backyard</u> (1: like having your backyard)</p>
<p>Disliked things <u>Nothing</u> (3), <u>Internal Politics</u> (2: infighting, the politics), <u>Maintenance/cleanliness</u> (1: little pieces of glass)</p>
<p>Desired changes <u>Design</u> (2: more equipment for kids, aesthetically little bit better), <u>Maintenance/cleanliness</u> (1: keep a little bit cleaner), <u>None</u> (2)</p>
<p>Mean satisfaction score: 4.8/5.0</p>

Appendix B.8
Tompkins Square Park: Summary of Results

Participation Category: Participation in maintenance
<p>Site Description This park is located on Avenues A and B and between 7th and 10th Streets. There are three playgrounds in the park. The playground located southeast corner of the park was studied. This playground contains a composite play structure for school-age children, a tire swing, a drinking fountain, and benches.</p>
<p>Users (N = 5) <u>Relationship to children:</u> mother (5 people) <u>Number of children:</u> 1 (2 people), 2 (3 people) <u>Children's age:</u> under 5 (2 children), 5 and over (6 children)</p>
<p>Use <u>Used most by the children:</u> tire swing (2), the slide (1), everything (1), the composite play structure (1), run around (1), firefighter's pole (1) <u>Children's favorites:</u> tire swing (2), the slide (1), the bridge (1), sliding pole (1)</p>
<p>Liked things <u>Design</u> (12: nice (2), colorful (2), nice size, big, more than one play thing for them, convenient to kids to play, a nice design, good equipment, a lot of benches, the variation of the equipment), <u>Safety</u> (6: not so big that I lose track of them, the rubber surface (2), the children won't gonna wonder away, people who come here), <u>Social exchanges</u> (8: children from their school, kids from the neighborhood, adults that I can talk to, get along with everybody, don't fight, other children, parents, play with), <u>Maintenance/cleanliness</u> (2: well-maintained, painted recently), <u>Peaceful atmosphere</u> (1), <u>Convenient location</u> (3)</p>
<p>Disliked things <u>Lack of maintenance/cleanliness</u> (7: dirty (2), forgot to open it, not clean, garbage, plastic bags, The water fountain doesn't drain properly), <u>Lack of shade</u> (1: In summer time it gets very hot. It lost a tree.), <u>Nothing</u> (1)</p>
<p>Desired changes <u>Design</u> (4: more tire swings (3), rubber of mats on the floor instead of rubber cement), <u>Maintenance/cleanliness</u> (3: water fountain (2), turn the sprinkler on), <u>Safety</u> (3: Tire swings are dangerous in a way, rubber mats, Kids get hurt on the tire swings)</p>
Mean satisfaction score: 4.4/5.0

Appendix B.9
Sunshine Playground: Summary of Results

<p>Participation Category: Participation in design, construction, and maintenance</p>
<p>Site Description See Chapter Four</p>
<p>Users (N = 5) <u>Relationship to children:</u> Mother (3 people), Father (2 people) <u>Number of children:</u> 1 (2 people), 2 (2 people), 4 (1 person) <u>Children's age:</u> under 5 (5 children), 5 and over (6 children)</p>
<p>Use <u>Used most by the children:</u> the composite play structure (2), the slide (2), everything (1), play games (1), the bridge on the composite play structure (1), and smell the flowers (1) <u>Children's favorites:</u> the slide (3), bridge (1), the composite play structure (1), run around (1), roller blading (1), play with basketball (1)</p>
<p>Liked things <u>Maintenance/cleanliness</u> (2: cleanliness, well maintained), <u>Safety</u> (2: no drinking, no drugs), <u>Convenient Location</u> (2), <u>Natural elements</u> (2: so many trees, kind of rural), <u>Peaceful atmosphere</u> (1: relax), <u>Good for kids</u> (1)</p>
<p>Disliked things <u>Design</u> (5: They can put swings, more space for kids, no sandbox, no sprinkler, more equipment for kids), <u>Inaccessibility</u> (2: don't open sometimes, close early), <u>Absence of bathroom</u> (1), <u>Crowding</u> (1: over-populated), <u>Nothing</u> (1)</p>
<p>Desired changes <u>Design</u> (6: sprinkler (2), swings (2), seesaws, some equipment for big kids), <u>Maintenance/cleanliness</u> (1: clean up), <u>None</u> (1)</p>
<p>Mean satisfaction score: 3.8/5.0</p>

Appendix B.10

Blake Hobbs Park: Summary of Results

Participation Category: No participation
Site Description This park is located at East 102 nd to East 104 th Streets and Second Avenue. Renovate in 1994, it contains two composite play structures for preschool-age and school-age children, a volleyball court, and basketball courts.
Users (N = 5) <u>Relationship to children:</u> mother (5 People) <u>Number of children:</u> 1 (4 people), 3(1 person) <u>Children's age:</u> under 5 (4 children), 5 and over (3 children)
Use <u>Used most by the children:</u> the slide (5), climbing (2), running (1) <u>Children's favorites:</u> the slide (4), climbing (1)
Liked things <u>Safety</u> (4: closed in, gate over there is locked, Benches are right in front of the play equipment, Once get inside it's descent.), <u>Convenient location</u> (2), <u>Design</u> (2: a lot of space, more room for them), <u>Accessibility</u> (1: open late hours), <u>Not crowded</u> (1)
Disliked things <u>Design</u> (7: should have more play equipment, not big enough, big, have more stuff, swings, seesaws, other things), <u>Crowding</u> (3: really crowded, many kids, crowded), <u>Lack of safety</u> (2: Garbage area is right next to the playground. It's not safe-rats, some drugs around), <u>Nothing</u> (1)
Desired changes <u>Design</u> (5: more things for kids, swings, more equipment, sprinkler, make it bigger), <u>None</u> (2), <u>Natural elements</u> (1: add grass)
Mean satisfaction score: 3.4/5.0

Appendix B.11

Creston Community Playground: Summary of Results

Participation Category: Participation in design, construction, and maintenance
Site Description The playground is located in the Mount Hope neighborhood in the South Bronx. It is mainly for children under the age of twelve and their caregivers. A community group has been maintaining the playground. It contains two composite play structures for preschool-age and school-age children, picnic tables and benches, planters, and a mural.
Users (N = 5) <u>Relationship to children:</u> father (2 people), mother (1 person), uncle (1 person), babysitter (1 person) <u>Number of children:</u> 1 (1 person), 2 (1 person), 3 (3 people) <u>Children's age:</u> under 5 (8 children), 5 and over (4 children)
Use <u>Used most by the children:</u> the slide (3), the composite play structures (4), the bridge (2) <u>Children's favorites:</u> everything (2), the slide (2), the composite play structures (1)
Liked things <u>Convenient location</u> (3), <u>Design</u> (3: the slide, climbers, small), <u>Safety</u> (1: it's separated), <u>Closing time</u> (1: opens at a certain time and closes at a certain time), <u>Social exchanges</u> (1: children from the neighborhood), <u>Peaceful atmosphere</u> (1: peace of mind)
Disliked things <u>Lack of Safety</u> (7: certain strangers, the dope beans, crack addicts, not really safe, teenagers, close to the street, elements of people), <u>Lack of maintenance/cleanliness</u> (2: don't clean it, all these paper and garbage), <u>Design</u> (2: too small, sand)
Desired changes <u>Design</u> (8: add swings (3), add a sandbox, grass, seesaws, more equipment, game on black tar, take out certain things like those boxes of dirt), <u>Maintenance/cleanliness</u> (4: maintain it, better maintenance, nothing grew over the summer, People make a mess), <u>Safety</u> (4: keep those people who come here to drink and smoke out, everybody is playing but nobody watching, can break their feet over here, not safe for kids), <u>Programs</u> (1: a celebration of the park's anniversary), <u>Natural elements</u> (1), <u>None</u> (1)
Mean satisfaction score: 3.0/5.0

Appendix B.12

Mount Hope Park: Summary of Results

Participation Category: Participation in maintenance
Site Description Located in the South Bronx, this playground includes two composite play structures for preschool-age and school-age children, swings for toddlers and school-age children, a spray shower, a basketball court, and a mural.
Users (N = 5) <u>Relationship to children:</u> mother (3 people), father (1 person), aunt (1 person) <u>Number of children:</u> 1 (4 people), 3 (1 person) <u>Children's age:</u> under 5 (5 children), 5 and over (2 children)
Use <u>Used most by the children:</u> the slide (4), swings (1), the composite play structure for school-age children (1), the bridge (1) <u>Children's favorites:</u> swings (3), the slide (2)
Liked things <u>Maintenance/cleanliness</u> (4: clean), <u>Safety</u> (4: pretty safe, no people doing drugs, no fights, no drugs), <u>Accessibility</u> (1: It's available), <u>Social exchanges</u> (1: My son has a lot of friends here.), <u>Good for kids</u> (1), <u>Do not know</u> (1)
Disliked things <u>Nothing</u> (5)
Desired changes <u>None</u> (4), <u>Design</u> (2: get some stuff for toddlers)
Mean satisfaction score: 4.8/5.0

Appendix B.13

First Park: Summary of Results

Participation Category: Participation in maintenance
<p>Site Description This Park is located on 1st Avenue and Houston Street. It contains two composite play structures for preschool-age and school-age children, swings for toddlers and school-age children, a handball court, a garden, a fountain, two spring rockers, and benches.</p>
<p>Users (N = 5) <u>Relationship to children:</u> mother (3 people), father (2 people) <u>Number of children:</u> 1 (4 people), 2(1 person) <u>Children's age:</u> under 5 (6 children), 5 and over (0 children)</p>
<p>Use <u>Used most by the children:</u> the slide (3), swings (2), climbing stuff (1), the fountain (1) <u>Children's favorites:</u> swings (1), the slide (1), ladder (1), musical bell (1), the wheel (1), fountain (1)</p>
<p>Liked things <u>Safety</u> (7: black tiles, benches-watch the children from a distance, the only way in and out, a lot of people around, safe, the space is fenced around), <u>Design</u> (4: sprinkler, variety of equipment, designed with different age groups of children in mind, accommodates small and old children), <u>Social exchanges</u> (3: a lot of other kids, parents and grandparents bring their kids not nannies, kids' own age), <u>Convenient location</u> (3), <u>Natural elements</u> (2: trees), <u>Maintenance/cleanliness</u> (1), <u>Not crowded</u> (1), <u>Good for kids</u> (1)</p>
<p>Disliked things <u>Lack of safety</u> (5: next to Houston Street (3), fumes from the street, homeless people), <u>Design</u> (3: need more space, congested, little bigger), <u>Lack of maintenance/cleanliness</u> (1: little bit dirty), <u>Nothing</u> (1)</p>
<p>Desired changes <u>Design</u> (4: a sandbox (2), more space, lower the height of the drinking fountain), <u>No smoking</u> (1: babies eat cigarette butts on the floor), <u>Natural elements</u> (1: more trees), <u>None</u> (1)</p>
Mean satisfaction score: 4.3/5.0

Appendix B.14
ABC Playground: Summary of Results

Participation Category: No participation
<p>Site Description This playground is located at the northern edge of Alphabet City and next to a public school (P.S. 20). It contains two composite play structures for preschool-age and school-age children, a concrete elephant, a spray shower, basketball hoops, and benches. It was improved in 1998.</p>
<p>Users (N = 5) <u>Relationship to children:</u> mother (3 people), aunt (1 person), grandfather (1 person) <u>Number of children:</u> 1 (4 people), 2 (1 person) <u>Children's age:</u> under 5 (3 children), 5 and over (3 children)</p>
<p>Use <u>Used most by the children:</u> the composite play structures (3), the slide (2), sliding pole (1), basketball (1) <u>Children's favorites:</u> basketball (1), the slide (2), climbing bars (1), sliding pole (1), the composite play structure (1)</p>
<p>Liked things <u>Safety</u> (7: one exit, child safety, safety, in a good neighborhood, easy to keep an eye on them, closed, don't see bad people), <u>Design</u> (5: big, colorful, attractive, recently built, beautiful), <u>Maintenance/cleanliness</u> (2: clean, usually clean), <u>Convenient location</u> (2)</p>
<p>Disliked things <u>Design</u> (3: don't have swings (2), Basketball courts are too close to younger children area) <u>Lack of safety</u> (2: cross the Houston Street, so close to the street), <u>Nothing</u> (2)</p>
<p>Desired changes <u>Design</u> (7: add swings (3), separate the basketball court, another water fountain, new garbage cans, stationery horse or frog), <u>Safety</u> (1: need walk bridge to cross the street)</p>
<p>Mean satisfaction score: 4.2/5.0</p>

Appendix B.15

Cherry Tree Playground: Summary of Results

Participation Category: Participation in maintenance
Site Description See Chapter Four
Users (N = 5) <u>Relationship to children:</u> mother (3), father (1), grandmother (1) <u>Number of children:</u> 2 (5 people) <u>Children's age:</u> under 5 (5 children), 5 and over (6 children)
Use <u>Used most by the children:</u> swings (2), the slides (2), the composite play structure for school-age children (2), spring rocker (1) <u>Children's favorites:</u> tire swings (2), the composite play structure for school-age children (2), spring rocker (1)
Liked things <u>Safety</u> (5: no drug dealers (2), friendly, have safety mats, family park), <u>Design</u> (3: a lot of things to climb on, swing, a lot of things that kids can have fun), <u>Social exchanges</u> (3: make new friends, see their friends from school, siblings play together), <u>Peaceful atmosphere</u> (3: peaceful, tranquility, feel happy), <u>Convenient location</u> (1), <u>Good for kids</u> (1)
Disliked things <u>Lack of maintenance/cleanliness</u> (1: garbage), <u>Lack of safety</u> (1: often kids collide when they ride the slide), <u>crowding</u> (1), <u>Inaccessible bathroom</u> (1: bathroom is not always open), <u>Nothing</u> (1)
Desired changes <u>None</u> (3), <u>Maintenance/cleanliness</u> (1: clean it up), <u>Safety</u> (1: a security guard), <u>Bathroom</u> (1)
Mean satisfaction score: 4.2/5.0

Appendix B.16
103rd Playground: Summary of Results

Participation Category: No participation
<p>Site Description This playground is located at the 103rd Street and FDR Drive in East Harlem. Located behind a public housing complex, it contains two composite play structures for preschool-age and school-age children, swings for toddlers and school-age children, and a basketball court. Also, a footbridge which connects to Randall's Island exists next to the playground.</p>
<p>Users (N = 5) <u>Relationship to children:</u> mother (3 people), father (1 person), aunt (1 person) <u>Number of children:</u> 1 (2 people), 2 (3 people) <u>Children's age:</u> under 5 (5 children), 5 and over (3 children)</p>
<p>Use <u>Used most by the children:</u> swings (3), the slide (1), a wheel (1) <u>Children's favorites:</u> swings (5), the slide (2), climb (1)</p>
<p>Liked things <u>Maintenance/cleanliness</u> (5: clean (3), new, the equipment works), <u>Safety</u> (4: feel safe, no drugs except at night, safe, haven't seen anything getting out of control), <u>Design</u> (1: enough room), <u>Social exchanges</u> (2: many kids, other kids come here), <u>Peaceful atmosphere</u> (1: quiet), <u>Nothing</u> (1)</p>
<p>Disliked things <u>Lack of safety</u> (5: not safe, not enough lighting, people doing drugs sometime, all kind of strangers cross the bridge, unsupervised children), <u>Lack of maintenance/cleanliness</u> (4: needs to be redone, painted, garbage, more garbage cans), <u>Design</u> (1: don't have softer benches), <u>Closing time</u> (1)</p>
<p>Desired changes <u>Design</u> (5: need another equipment, sprinklers, monkey bars, make fences higher, a sandbox), <u>Maintenance/cleanliness</u> (2: need painting, need working on the water fountain), <u>Safety</u> (1: need public phone), <u>Closing time</u> (1: close the park at certain time), <u>None</u> (1)</p>
Mean satisfaction score: 3.8/5.0

Appendix B.17

White Playground: Summary of Results

Participation Category: Participation in maintenance (programming)
Site Description Located on East 105 th and 106 th Streets and Lexington Avenue, this playground provides two composite play structures for preschool-age and school-age children, swings for toddlers and school-age children, a concrete turtle, two basketball courts, and handball courts.
Users (N = 5) <u>Relationship to children:</u> mother (3 people), father (2 people) <u>Number of children:</u> 1 (1 person), 2 (2 people), 3 (1 person), 8 (1 person) <u>Children's age:</u> under 5 (4 children), 5 and over (12 children)
Use <u>Used most by the children:</u> swings (3), the slide (2), the composite play structure for school-age children (1), bars (1) <u>Children's favorites:</u> swings (3), the composite play structure for school-age children (1)
Liked things <u>Social exchanges</u> (3: a lot of kids; a lot of friends, kids play nicely together), <u>Maintenance/cleanliness</u> (1: sometimes it's clean), <u>Convenient location</u> (1), <u>Safety</u> (1: easy to watch the kids), <u>Nothing</u> (1)
Disliked things <u>Lack of Safety</u> (4: sometimes there's a lot of glass, people drink beer, ride their bikes in full speed, some type of people that frequent here), <u>Nothing</u> (2), <u>Lack of maintenance/cleanliness</u> (2: not very clean, lots of glass), <u>Design</u> (1: there isn't much here), <u>Bad Reputation</u> (1: reputation they had at one point)
Desired changes <u>Design</u> (11: need sprinklers (3), seesaws (2), monkey bars (2), sandbox, more equipment, swimming pool, The old one was better than the new one), <u>Programs</u> (2: recreation, PAL) <u>Maintenance/cleanliness</u> (2: a lot more cleaning, fix the swings), <u>Safety</u> (1: more padding), <u>Attendant</u> (1: play assistant) <u>Closing time</u> (1: have a curfew)
Mean satisfaction score: 3.2/5.0

Appendix B.18

Thomas Jefferson Park: Summary of Results

Participation Category: No participation
Site Description As part of a large park, this playground contains two composite play structures for preschool-age and school-age children, swings for toddlers, a spray shower, and a concrete frog.
Users (N = 5) <u>Relationship to children:</u> mother (3 people), father (1 person), father /uncle (1 person) <u>Number of children:</u> 1 (3 people), 2 (1 person), 3 (1 person) <u>Children's age:</u> under 5 (3 children), 5 and over (5 children)
Use <u>Used most by the children:</u> the slide (2), swings (1), everything (1), the composite play structure for school-age children (1) <u>Children's favorites:</u> swings (2), the slide (1), the bridge (1), overhead hanger (1)
Liked things <u>Safety</u> (6: not too many teenagers (2), not too many adults bothering, not many people smoking, feel safe, usually kids with mom), <u>Design</u> (2: have different play equipment for toddlers and school children, adequate equipment for small children), <u>Maintenance/cleanliness</u> (2: clean, no glass on the floor), <u>Peaceful atmosphere</u> (2: quiet, forget about all the buildings and problems), <u>Natural elements</u> (1: have lots of trees)
Disliked things <u>Design</u> (3: more equipment for small children, monkey bars, The middle thing interrupts children's play), <u>Lack of maintenance/cleanliness</u> (2: sometimes a lot of garbage, not always so clean), <u>Lack of Safety</u> (2: uneven pavement around water play area, trip over), <u>Nothing</u> (2)
Desired changes <u>None</u> (1), <u>Design</u> (1: swings for big children), <u>Bathroom</u> (1), <u>Attendant</u> (1: should have some kind of attendant), <u>Safety</u> (1: leveling the surface so kids don't fall over)
Mean satisfaction score: 4.0/5.0

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