Importance of Play Areas in Child Development and Design Guidelines for Play Areas

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ABSTRACT

Play is the basic requirement of a child. It is important for his physical, psychological and social development. Today, especially children between the ages 2-12 cannot use outdoor spaces of the urban environment as effective as they should. This problem is related with technological development, changes in life styles and social and physical environment. Play areas provided in modern urban environment are also in adequate to meet their demands.

Limiting the activities of children especially at exterior spaces cause problems in their social development. A child who is forced to live in interior spaces grows up as a consuming individual, without experiencing sharing, social supporting and production.

By considering the development of the child and his relation with space; the study aims to define the play areas of preschool and school age children from house entrance to playgrounds, and to determine design criteria to provide effective use of play areas in existing and developing housing area.

ÖZ

Oyun çocuğun en temel ihtiyacıdır. Onun fiziksel, psikolojik ve sosyal gelişimi için önemlidir. Bugün özellikle 2-12 yaş grubu çocuklar kentsel çevrede dış mekanı oyunları için etkin biçimde kullanamamaktadırlar. Bu sorunun teknolojinin gelişimine, yaşam biçiminin değişimine, sosyal ve fiziksel çevreye bağlı nedenleri vardır. Modern kentsel yapının sunduğu oyun alanları da onların ihtiyacına cevap verememektedir.

Çocuğun dış mekandaki aktivitelerin kısıtlanması, özellikle sosyal gelişimlerinde problemlere neden olmakta, iç mekanda yaşamaya zorlanan çocuk modern dünyanın tüketici, paylaşımdan, sosyal dayanışmadan ve üretkenlikten uzak bireyleri olarak yetişmektedirler.

Çalışmanın temel amacı; çocuğun gelişimi ve mekanla kuracağı ilişki dikkate alınarak, okul öncesi ve okul çağı çocukların ev girişinden, çocuk oyun alanlarına kadar uzanan oyun yerlerinin tariflenmesi, mevcut ve gelişme konut bölgelerinde oyun alanlarının etkin kullanımını sağlayacak tasarım kriterlerinin geliştirilmesidir.

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Chapter 1

INTRODUCTION

The value of the environment for a person can be evaluated by its meeting the basic requirements of that person. Existence of a child in the urban environment has been a subject intensely discussed for three past decades. In order to be able to determine the value of the environment for a child, his characteristics, actions and his mutual interaction with the environment should be examined carefully.

Childhood is the period when a person is very close to natural qualities. He does not recognise the social limits. When he gets older he begins to recognise the limits, but does not accept them. When these limits are accepted by him, childhood period is already become over. Scientifically and legitimately, 0-18 age group is accepted as childhood stage. However, in general, the cultural and socio-economic structure of the society determine the age limits. The most important activity of the childhood stage is "the play". While play is an entertainment tool for adults, it is the basic activity of a child's life course. With the help of plays children learn and get to know about their physical and social environment. It is a tool to express themselves. They are prepared to adulthood by these plays.

Child usually tries to realise one of his basic requirements; play, with comfort and with no limits. The realisation of this activity within an urban space is especially important for its social dimension.

The scientific and technological developments of the last two centuries have also been important in the changes of the life styles of people. The interior and exterior spaces shaped by life styles have begun to loose their meaning, too. It can be observed that people gradually began to live their lives in interior and private spaces. The development of technology has increased the personal life comfort, however it has decreased the social lives of people. The 20th century person is alone in the urban environment, and alienated to the fact of being human. Just like anybody in the society, child is affected by those negative influences. Modern urban life puts limits to the child's usage of exterior space. During the childhood when social limits have not known yet, they are limited by their parents. Children, whose physical activities are scattered, changeable and fluid, are forced into narrow and similar types of spaces. As Freud has mentioned before, the practices and constrains that contradict the nature of children, result in physical, social and psychological problems in their future

lives. Rousseau in his philosophy has given great importance to the children's spontaneity, and indicated that their freedom should be respected.

The negative influences of modern lifestyle on the child - urban space interrelation can be listed as;

With the invention of cars, urban space was torn into pieces, and as the number of cars increased in time the exterior space has begun to be used and occupied as roads and car parking areas. Relatedly, children's activity areas narrowed because of traffic safety and limited as school grounds and playgrounds. However scientific observations till today, indicate that the play areas designed for children have not been accepted by children. The most important fact, disregarded by the planners and designers is that children have a great inclination towards playing at anywhere and with anything. However, schools, recreational places are only located away from houses or the neighbourhood areas, but also at places where it can be only reached by cars. So, pedestrian accessibility in urban environment has been abolished.

Another negative fact is the continuously adult control over children's lives as the parent's fears. These fears include physical accidents like falling or being injured, traffic accidents, and harms that would be caused by strangers and by older children. It is observed that in time those fears have increased. Especially the social insecurity restricts narrows the environment of children. Extreme protection, like the unresistancy of a person who lives in a very hygienic atmosphere, to microbes, can cause children to become unprotected, passive and fragile people in social life. Meanwhile, because they could not get over their egoism, their responsibilities to other people could not develop, too.

The game industry which aims at leisure times presents new products to the children such as new games, TV programmes and computer games. By those ready-made products children are forced to the consuming; their compulsion to own is encouraged and their ability to produce by using their imagination diminishes. Children in those conditions do not know anything about sharing, because they are alone in their play and with their toys. The physical activities of children are pacified because of the time spent at home. Only their intellectual development is encouraged. However, as that development occurs on isolated way, it has not completed and renewed. Children do not encounter physical and social difficulties, when they enter into social life; they are maladjusted. Children grow up in a society which is very individualistic and based on consumption.

Because of the above mentioned reasons; especially the preschool and school-age children (2-12 age group) can not realise their basic play activities at outdoor spaces in the neighbourhood.

Aims of the Study; to redefine the play areas within the boundaries of housing areas which are the main daily life spaces of children in the age group of 2 - 12; by professing that children should exist at every part of the urban space and that they can play anywhere within that space, to research the methods of the problems based on the space and to develop the design criteria to increase the quality and quantity of the play areas in children's lives.

In that context;

Play Area: describes any place where a child plays. It includes all the area - arranged or disarranged- used for that purpose.

Unprogrammed Play Space; are areas which are not especially designed as play area but which are used by children for that purpose.

Playground; is the play area designed for that purpose, both in location and equipment.

Types of playground environments in modern planning approach.

- Traditional (play equipment area with swings, slide, jungle gymnastic, typical schoolyard)
- Contemporary (Professionally designed, supposedly with children's needs in mind)
- Adventure (no adult -provided- permeant play structures, but instead loose materials and simple tools for children to build their own play settings) (Moore- in Altman, 1989, p.90)

Play lots; are the play areas designed for preschool children. They can be located in a park or in a residential area.

Method of the Study; Within the constitution of the child - play - space; data about child, play and space perception of child forms the base of the study. Accordingly, the physical, cognitive and social development of preschool children (2-6 age group) and school-age children (7-12 age group) are studied and the importance of play in child development is tried to be explained thoroughly. In the study of play, conceptual structure and theoretical development gained importance. Child's space perception, which is an important determinant of child-space relation, is defined in the light of different theories. Based on environmental psychology and developmental psychology, the relation between child and space is studied.

While examining the usage form of outdoor space in the residential ares, play is regarded as the main activity. Realisation of play according to time, place and type; and the factors which affects the space selection of children, such as; age, gender, accessibility and permission, are studied. In the description of play areas, two main groups are; "Play Areas Selected by Children" and "Play Areas Designed for Children".

Design guidelines are developed within the scope of housing area in order to form an appropriate environment for child development and for activities of children. For the formation of those criteria; observations of child's behaviour, child's development and preferences, and researches and applications are studied. Design guidelines are; safety, security, privacy, physical comfort, density, scale, proportion etc. Those guidelines are applied to house entrances, gardens, streets, playgrounds and school grounds. In the context of the study those guidelines are tested in the selected areas at Çankaya District Area in İzmir.

Chapter 2

CHILD'S DEVELOPMENT AND PLAY

While examining the problems of the child with the urban space, childhood, child's development and the importance of play should be explained. It is important to see the relationships between the child and space. Initially it is necessary to determine the society's point of view about child and childhood.

2.1. The Concept of Childhood

It is significant how the society sees the child for them the child is a vulnerable, passive being who is unable to exist by himself. Child has no chance to determine his own target, his own life style and his own ideologies. Those considered facts are coded to the child by each every association of society consciously or unconsciously.

According to Mine Tan, the paradigm of child dominant in 20th century is based on three main hypothesis:

1. Children are different from adults, or children form a special biologic category.
2. The children must be brought up to the adulthood, or to be an adult is a gain.
3. The responsibility of training children is adults' duty.

Psychologists like Piaget, Horney, Bruner, Sullivan and Kohlberg and the pedogogists like Frobel, Mentessori, Gresell and Neill were also effected by these paradigms. The effect of J.J. Rousseau, who was an intellectual of Enlightenment Period, has been great on that paradigm. Rousseau mentioned that a child is essential on his own, and possesses original and valuable physiological properties different from an adult, and childhood is the closest life period of the human being to the nature. A child is a violent flower. His naturalness, his joy and his purity are the properties which must be exalted. Education must be given without ruining child's organic and natural development.

Freud also demonstrated that, the intellect of child has a structure and content, and the gender of child is loaded with confusions and instinctive impulses. In the process of passing to the adulthood, child is in an effort to overcome, to pass over

and appease those confusions and impulses. Like Rousseau Freud thought that, intellect is not tabula rasa from birth. Unless the natural realities has not talent into consideration some psychological problems may occur.

Dewey mentioned that the child's mental needs must be deal with presently, not referring to the future. According to Dewey, if childhood's needs are determined by his real instincts and if it those are tried to be revealed and developed, the life of adulthood will come true by itself. In 20th century, by having an agreement with the demands arise from the social change and the developments the child's education training without ruining his natural structure has become one of the most essential consideration. (Tan, 1993, p.11,12)

The economical, political and social organisation of the society determines the society's ways of bringing up a child. (Kağıtçıbaşı, 1990) The studies made about the history of childhood, reveals that it cannot be said that one comprehension of childhood peculiar to a certain time or a certain society. In the same period of time, different and contradictory comprehensions of childhood can be seen together within the same society. Consistency, even similarity may not be found, in the comprehensions of child in different social associations (the social security, the systems of law, the mass media, the education, family and religious practices). (Tan,1993, p.26)

By the society, the essence of the existence of a child must be interrogated. Before seeing as an adult of the future, he must be seen as a child of today. Childhood must be seen as an important period of life which must be lived as a child, instead of being seen as a period of preparing for the adulthood.

2.2. Child's Development

Childhood period is generally examined in four main groups:

Infancy (0-2 age)

Preschool (2-6 age)

School Age (7-12 age)

Teenage (13-18 or 20 age) (Yavuzer, 1996)

In the context of the thesis, preschool and school age is studied, as the user group of the outdoor space in residential areas are generally includes those age groups. Children start to walk at the age of two and start to play in the garden at the same time. After the age of the twelve his activity space widens and spreads out of

neighbourhood area and the usage of mass transit becomes affective on that fact.

The development process in different age groups are studied in the content of the motor, cognitive and social development.

2.2.1. Preschool

In that period of preschool, the motor development of a child is important.

Motor Development; Children start to walk after the age of two. So, in that period an intense motor development is seen in children. To gain the ability of using his own body becomes essential for him. Motor development can be examined as:

2 - 3 Years: Moves backwards. Runs and stops whilst running. Walks up stair. Walks sidewards. Kicks a ball. Jumps with both feet together.

4 - 5 Years: Jumps a long distance (25 - 30 cm.) Runs well. Walks in a relaxed gait, with arms swinging. Balances along a thickly drawn line. Walks up and down steps without holding anything. Gets up from its back like an adult. Runs and hits a ball.

6 Years : Jumps high spring-board hops. Jumps a long distance (75 cm) Well developed movements and motor activity, moves body freely. Child can coordinate all his movements. (Ellneby, 1990; Yavuzer, 1996)

Cognitive Development ;

Piaget describes that period as a pre-operational age. That period affects the ego-centric perception of the child. He is mentally intensified on himself. He cannot comprehend other's view points. He cannot invert operations. According to Piaget a logical thought does not exist. He is influenced by the sight of the objects. The conservation of the substance is deprived from the ability of logical thought which is necessary for the process of reversibility. As a result of ego-centric thought, he can not distinguish subjective from objective. For example, he believes that natural events are for humans and they are controlled by humans. (Yavuzer, 1996, p.)

During pre-operational phase, children start to use the objects as if they symbolise other things. He can ride a stick just like a horse. Their conception of numbers, time and size are very primitive. That period can be accepted as a preparation period for concrete operational processes. Children develop symbols in

their mind, individually. They may generate some similarities, however, those may not be logical.

They perceive things wholly and generally. They do not recognise the details. They unite even the unrelated objects and concepts. They cannot do intellectual comparisons and cannot state their opinions. Their perceptions are very sudden. As a result their opinions are very changeable. (Yavuzer, 1996, p.88 -91)

Social Developments;

Most of the behaviours in that stage have anti-social identities. However, step by step, they are prepared for socialisation process. They want to be independent, to attract the adults attention and to be loved. During the first years of that stage children can be very stubborn, negative and undecided. They are mostly naughty and want to make their own work by themselves.

In that period children want to be with their peers. In ages of 3-4 they form groups of two or three children. The most observed behaviour is talking and watching one another. Generally, whether they sit side by side, they play with their own toys.

At the age of four, they start to ask questions, and try to know their environment. They should have the opportunity for experiencing because they are curious about the objects and people around them. The relation of a small child with the others is closely related with the stipulation's and impressions he gets fro the adults. They start to be in harmony with the surrounding. They want to take responsibility and rewards. (Yavuzer, 1996, p.107-111)

2.2.2. School-Age

Children enter that period by completing their development of body, motor and language abilities. The development of their muscles and coordination, of their organs are finished. Their hand and arm skills are developed. However, their muscles need to be strengthened, by exercises. Besides these, their ability of talking and language develop, too. In this period children's cognitive and social development are important.

Cognitive Development;

In concrete operational stage, logical thought and conceptions of number, time, space, dimension, distance begin to settle. They can think of reverse processes. They develop an ability of grouping, classifying, limiting and making series of

objects. They comprehend that by other means they can reach to the same solution. With the language development, the ability of thinking and expressing ideas develop, too. They can describe an object with its many identities. They can distinguish the similarities and differences of the objects.

A balance occurs in sensory lives of children as logical thought starts. They try to realise the things they think are curious of and if they do, they feel great happiness. To the end of the school-age it can be seen that an ability to solve the problems with their own abilities develop. (Yavuzer, 1996, p.115-118)

Social Development;

That is the stage when they are affected by the events around them. They are in very close relation with peers. While they agree with the opinions and thoughts of their peers they resist against the thoughts of adults. Negativism is seen in that period, too. Friends from the same age group and competition among groups are important social facts. Especially, boys are directed toward team games and they race all the time. (Yavuzer, 1996, p.119)

In that period, sensual identity begins to be evident. Ability to distinguish between good and bad, right and wrong, in other words "superego" develops. Their dependency on mother and home lessens. Playing begins to occur on the street and in the environment. They want to play more active games. They continuously want to learn, experiment new things and to be superior.

Friendship gains much importance in the school-age: Being without any friends can cause psychological problems. An extremely controlled or limited child can not easily form friendship and be passive in his relations. Positive relations provide social harmony. It is possible only with the independency of the child at the outdoor space. In that period being accepted by friends is more important than being considered by the adults. Friendship teaches children the necessary harmonious relations and cooperation required in the social life and to achieve the ability to race without oppressing or without being oppressed. Leadership, taking responsibilities and team work and other abilities can be obtained by the friendship relations.

By friendship child has the possibility to evaluate himself. He compares himself with the others and sees similar and different aspects with his friends. Egoism diminishes and self-sacrifice is learned. (Yörükoğlu, 1996, p.76-92)

2.3. Play

2.3.1. The Concept of Play

"The play" is a concept which has a content as rich as the concept of culture. So, to consider it in a narrow and specialised scientific category won't be sufficient to define it's full extent. Huizinga, while starting to define the concept of "play", said; "Play (even in its most primitive form) is something more than a physiological fact. Play is an activity which is rich meaning. The play has an independent component that exceeds the direct needs of life, and adds a meaning to the activity." (Huizinga,1995, p.17)

Researchers have tried to explain the functionality of the play and the way it happens, but they failed to explain the origin of it.

The first theorists who tried to explain the concept of "play" based upon the biological functionality of it.

- On the bases of "play" there exists an instinct to get relieved from surplus energy of life.
- When a living creature starts to play, it has natural talent of imitation.
- It's training for the real activities of the future life.
- "Play" is a way of claiming one's personality.
- On the roots of "play", there exists a wish to do or to determine something with the need of both establishing a dominance and competing with other.
- Play is a way to getting rid of from the harmful drives innocently. That is to say, it is soothing of desires which are impossible to be experienced in real life. By that way it helps the security of self respect.

The explanations above, including the biological contents are agreeable but not satisfactory. As man gets older the biological importance of play decreases and it starts to gain a sociological meaning. Those explanations don't deal with the concept of play and the meaning for the players. So the joyful side of the concept, its excitement and passion is overlooked. That joyful, emotional aspect of the play eliminates all the systematic analyses and logical interpretations. "Play", continuously reveals the over logical character of our existence in cosmos. (Huizinga,1995). By that way, play has become a subject of philosophy, and has provided the existence of art. Most of the time it is kept out of great contradictions, like sagacity-foulness, right-

wrong, good-bad; therefore its away from the ethical questioning of life. However the play is an inclination towards aesthetics in that way it can be examined within the content of aesthetic. For example the beauty, of a human body in motion finds its most elegant expression in the play. "Play" is full of rhythm and harmony which are the major components of ability of aesthetical perception.

The play can be defined as an activity of freedom and fiction (easily differentiating from the motives of the real life) and at the same time, of having an ability of embracing the player. It's an activity purified from all material benefits and it's done in a limited time and space with distinct rules. (Huizinga,1995)

In order to understand the concept of play clearly, the characteristics of the play should be looked upon in detail. The first characteristics is the principle of willingness. All plays are volunteered activities and depend on the mood. Play can be postponed or cancelled at any time. It doesn't have a physical urgency or an ethical instance. It's not a duty.

Play is a fiction, out of the ordinary world. It's neither daily nor real life. It provides an excuse to enter a zone of temporary activity which has it own inclinations. Seriousness is extremely important during the realisation of the roles in the activities. Therefore, the level of the seriousness can change in any time. Play is expected to be unique. It belongs to the players at that particular time. The things that are done by the ones who are not included in the play is never important. The rules of the daily life have no validity. It has an unusual character.

Play takes place in a limited time. Play is separated from the ordinary life by the space and time it occurs. It has it own time and flow between its starting and ending point. Once played, it leaves its mark in the memory and can easily be repeated.

Play takes place in a limited space. Each "play", no matter if its a material or a imaginary one, takes place within the boundaries of its own pre-determined space. Play areas are assigned, separated, restricted, sanctified places and within its boundaries it can be defined by particular rules. All the plays have a defined space. The stage for the theatre play, the court for a tennis game, the board for a chess game, a corner of a room represents the play area.

Each "play" has its own rules and those rules are definite and non controversial. The one who doesn't obey the rules is punished. In most cases there is more tolerance for cheating in real life than "play". The cheater is usually excluded from the "play". Because he or she threatens the existence of the play by going out of

the rules. To keep that temporary and fragile existence of the fiction based structure, some strict rules are required.

Besides the above characteristics which form the "play", some additional aspects must be also stated. In that case, besides its biological qualities, play includes the anxieties of giving meaning, understanding and controlling of the life. The power of fantasy has a unique role in the existence and keeping that existence of human being. Play does form a bridge between the fantasy and the real life. Therefore, the play is more than fancying time or having amusement. It carries an importance as "being must".

Continuity is another important matter. Play shows a tendency for continuity although has finished for the players. That desire motives people for gathering around clubs.

Play is an abstraction made from the real life. Play is the transformation or the imagination of the reality: it is an attempt to understand the reality by means of reforming it. Just like the myths, the worldly matters are taken to another dimension and tried to be re-determined. Events are products of the creative mind and consist of fiction, but they are accepted as "real". That fact not only provides on the explanation of things, but also produces a unique form and order of itself. "That's the way man created his own culture" (Huizinga, 1995, p.21)

That attitude taking place in the formation of the culture, has actually happened in the phases of a child's learning the life. The child also constitutes a "play" in order to understand the events and the people around him. While playing, he takes the roles of "father", "mother", "teacher", "doctor". He plays those roles in his or her own set up: determined space, time and script. Play is the rehearsal, the preparation of the real life.

2.3.2. The Theories of Play

Thoughts about "play" has existed since the Antiquity. Platon and Aristotales had brought suggestions about the usage of play in education. But, the play theories had begun to develop in the eighteenth century. (Cohen, 1993) The changes in social life caused by the inventions and the progress in industry of the 18th century had been effective. The social changes and the new human needs appeared at that period had caused some concepts to be requestioned, and brought new thought into agenda.

Besides the social problems, the industrial revolution in the west had caused

health problems within the settlements due to the lack of sufficient infrastructure. After the early nineteenth century, it had been begun to search for new solutions for the problems of the industrial city occurred by the result of the progress of the capitalism.

Utopians had begun to develop models on how a better environment could be constituted in new conditions without refusing the progress of industry. Having the target of creating the ideal society, the utopians like Robert Owen, St. Simon, Fourier, Cabet had tried to describe the convenient environment which could help the formation of that society. Each model has included the searches of new life styles of new economic developments.

On the other hand, there are political solutions constituted with the oppression of the bourgeoisie and brought by the government. Firstly, the epidemic diseases gave start to search for solutions. The diseases had begun to spread over the city, and slowed down the production. In 1832, in England, the report, prepared by the commission of Kingdom had brought statements related with the health of the environment. There had been also further statements about the establishment of park areas in industrial cities. After that report, in 1848 the Health Law in detail were prepared.

The reason of seeking for new solutions had not only been the existing physical factors, but also the formation of new urban life styles. The new production process was programming time and forming a "leisure time" out of working time. The appearance of the activities related with the use of leisure time had begun in that period. (Tekeli, 1980, p.8-16)

Besides all of those developments, there had been also progress that would directly affect the children life. That new social searches were including the examination of the pace of child in the society as full of expectations, the child was the adult of tomorrows.

"Children were separated from the adult world as a result of combination of social changes: the passage of child labor laws; the growth of public education, with the later extension the school year from four or five months to nine months in the nineteenth century. Instead of working of wages, children were given the 'job' of getting on education. Eventually, they were given more of the leisure time. Thus, the need for a place for children to play developed only after the freeing of children from labor." (Eriksen, 1985,p.9)

Economical and social developments had caused to examine the importance of child, the concept of childhood, the development and education of child etc. in the

thought medium. The scientific studies of sociology, psychology and biology had begun to examine the "child" and its related concepts frequently. Accordingly, the concept of "play" was included in the studies on child. Firstly, how the play could be used in the education of child was dwelled on the concept of play. Further studies were made on how the "play" appeared and the facts on the roots of "play". In general the theories related with "play" was influenced by the progress of sciences of psychology and biology.

The play has been thought since eighteenth century. Ruosseau, who was the philosopher of enlightenment age, argued the importance of the play. He explained the childhood and described the ideal education for the young man. Rousseau recommended in his novel "Emile"; "Let Emile run about bare foot all year round, upstairs, downstairs and in the garden. Let him learn to perform every exercise which encourages ability of the body... Children will always do anything that keeps them moving freely". The thought of Rousseau has influenced the other researchers. "Rousseau had argued that children ought to play as a right. But the Victorians seem to have seen it differently. Enlightenment laws had given children a kind of freedom which they had never had before. If they used some of that freedom to play; then play had to have some purpose. This is one considers the growth of leisure activities in Victorian England. If people had free time, they were meant to use it to improve themselves." (Cohen, 1993, p.27)

The scientific study of "play" began in the mid-nineteenth century by the writers like Herbert Spencer in Victorian Age. "Spencer was influenced by Schiller. According to Schiller; reality was the problem, but man had to break the physical and moral constraints of reality. Main points of his theory were; men play to expend excess energy; the transformation of toil into play and transformation of repressive productivity into display; Schiller had a vision of a society in which playing changed adults." (Cohen,1993,p.23)

According to Spencer (1873), play as an activity that uses up the surplus energy left over after the life supporting activities are completed. Play is considered as an uncontrollable desire during childhood. Lazarus (1883) and Patrick(1926) suggest that, play is either a recreational activity or behaviour stemming from the need relaxation. (Hart, 1993,p.15)

Groos was one of the person who tried to explain the origin of "play". Beginning with theories of Darwin, Gross tried to bring a biological explanation to the cause of "play". "Both Darwin and Gross helped establish the tradition of studying

animal play for itself and for the light can shed on human play." (Cohen, 1993, p.30). Gross firstly examined play on animals, than on human. The living creatures that continue their existence are the ones who defend their existence in the process of "natural selection". For him, if animals play, play is a positive struggle for continuing of life. As a species get more intelligent and has an ability of adaptation, its youngsters need more protection, and in that youngster period it should exercise by playing and imitating. (Uluğ,1997, p.32). "Childhood existed so the person could play and develop further. During this play oriented period of childhood, children practiced skills to take their places as adults." (Hart, 1993,p.15) Being significant the theory of Gross says that, though the activity of "play" seems to be aimless, it has biological and more of that it has an essence as being related with human existence.

"While Gross saw childhood play as practice for adulthood, Hall (1920) see childhood play as a period to play out evolutionary development as the link from animal to human... The existence of iron and steel ladders, swing sets, and monkey bars on school grounds and parks shadow Hall's theory of play." The classical playground have been structured after the theories of Spencer, Lazarus, Gross and Hall. (Hart,1993, p.15)

At the same time, Froebel, Pestallozi and Montessori, who were influenced by Rousseau's ideas, were educational theorists. They used the concept of play for children's development. "Frobel decided set up a **Kindergarten** children could 'blossom' as flowers did. Children were to be allowed to play and were to be encouraged by interested adults rather than have facts forced on them.... Froebel opened his first Kindergarten in 1837, in Germany." (Cohen,1993,p.27). According to Froebel, play is not only important for motor-skill development, but also important for cognitive, social and emotional development. And outdoor environment facility is the best fields for whole development of the children. The natural elements, such as wood, water, sands were used in his Kindergarten. (Hart, 1993, p.16)

Maria Montessory who was a tutor and a founder of the method known as "Montessori Method" in educational sciences, mentioned that child had a strong ability of learning and perceiving and his intelligence was so open minded and had a curious sense. For Montessori, the child's discovering of himself and his surrounding should be provided by giving him some keys and without pressing on him. It is not expected from child to gain successes. Each child begins to classify and organise the expressions that his intelligence perceived before, by suiting to his own ability and rhythm. He creates his own self discipline. Child's duty is to be a convenient person in

his time, place and culture; and to create an adult who is in harmony with his environment. (Montessori, 1995)

At schools , first established in 1907 in Italy, children learn to concentrate and create. Montessori certainly had an almost revolutionary faith in children and turned the teacher into an observer who guided children to choose for themselves. Children can learn themselves in play. Play is creative force and child's skills can be observed while playing. "Montessori was particularly keen that children should be thought to be moral, playing together, under the eagle eye of teacher, was a means to the useful end." (Cohen, 1993,p.29) Montessori had seen "play" a propellant in learning and had used it as a means in education of child, because play is the most natural type of action that child behave in freedom.

Freud tried to explain the cause of play. Freud's explanation about "play" is based on the Theory of Psychoanalysis. The behaviours of child are always under the social control. Those oppressions towards the behaviours of child can create negative results in his psychological structure. Child tries to rescue from those oppressions by the help way of "play". In play, there is the repetition of the things are lived. These repetitions reduce the strength of the negative and positive feelings. Thus psychological balance is obtained. According to Freud's opinion, "play" is somehow a therapy. The child can realise the forbidden behaviours in the limits of "play". He can show his own dreams on the stage of "play" and he acts as the fiction he made in the medium of "play".

The theory of Freud is used much more in the diagnosis and the therapy of children's psychological problems. The researches, who adapt the psychoanalytic method of Freud, use the method of "free play" instead of " free association" in the therapy of children. Child expresses his anxiety while playing, with the roles he undertakes, with his behaviours to his toys or the pictures he has drawn. (Uluğ, 1997, p.36-37)

"Piaget(1962) incorporated earlier notions of qualitative differences in play and believed that these reflected stages that parallel cognitive development." (Hart,1993, p.17) The concept of accommodation and assimilation shouldn't be forgotten in the understanding of the play theory.

"Assimilation and accommodation are in a relationship of constant reciprocity and striving towards equilibrium. When accommodation outer reality has precedence over assimilation, the resulting behaviour is known as imitation. When, assimilation has precedence over accommodation, the resulting behaviour is PLAY... Play is thus

the most characteristic type of egocentric thought, which is thought for which the external universe ceases to have any objective importance, thus becoming wholly malleable to the interests of the self and merely serving as an instrument for its development." (Piaget, 1977, p.177)

According to Piaget, developing of play is parallel with physical and cognitive developing. He classified play in three groups; practice game, symbolic games and games with rules. Practice games appear first in the child's life. That period is characterised as the sensory - motor period, between 0-2 ages. The goal of activity is the activity itself. In symbolic games the child pretend to perform his own actions or imagines that objects pretend to do things. That period include the ages group, between 2-7 . The child begins to observe his surrounding and may use models for imitation, or identify himself from other persons and objects. In those cases there is much imitation as assimilation, something that is characteristic of symbolic games as distinct from mere motor games. The images are important to develop the thought of child. The child relates symbols or images with reality in the course of time. Any important event is reflected by way of play. The play is a tool to assimilate the emotional life and experiments of child. (Uluğ,1997, p.53)

"As the child becomes increasingly socialised through the acquisition of language, symbolic games change their character, the symbol becomes more closely adapted to reality and play becomes less distorted by the child fantasy." (Björklid, 1982, p.57)

"Games with rules, are games with sensory-motor combinations or intellectual combinations, in which there is competition between individuals and which are regulated either a code handed down from earlier generation, or by temporary agreement." (Björklid, 1982, p.58)

"The development of games appears to be closely related to the process of socialisation. During the first stage the rules are concerned purely with motor activities, and are individual rather than collective in character. In the next stage, when the child begins to imitate and corporate with others, the rules regarded as sacred and alterable. Finally, when the child is able to cooperate successfully with others, the rules are applied for their own scale...this third stage in the sequence of game-development is also compatible with the idea of the assimilation of reality to fit the demand of the ego." (Björklid, 1982, p.58)

2.4. The Importance of Play for Children

Play is the base activity of the child. Play is their most serious business. Child is thought with play. The importance of child's play are evaluated in broad perspective. Firstly, child can be recognised with play and than child can learn themselves and the world with play. "Children's play is not just an activity through which entertainment and pleasures may be gained but also, and much more significantly, a medium for the development of a child as an individual and a means of assimilation into an adult world" (Williams,1995, p.129)

When it is thought where is play into developing of child, kinds of play can be classified as below;

Functional play in which children are exercising their muscles and practicing the components of a skill.

Constructive play which is the act of constructing something.

Dramatic play which is directed or spontaneous pretending.

Games with rules in which children agree on prearranged rules.

Those kinds of plays can be change according to the development of the child. (Hart, 1993,p.29)

Coffin classified the play as followed; creative, physical, intellectual.

Creative play consist of these activities; acting real or imagined characters, making up plays, drawing and painting, building with a variety of materials, model making, water play, word games.

Social play; dramatic play, role play, talking, telling stores, music, dancing etc.

Physical play; involve physical risk and muscular control such as running, jumping, skipping, swinging, balancing, climbing etc.

Intellectual play; exploring the environment, experimenting, collecting, games like droughts and chess etc.

Coffin emphasised that "Different types of play are not mutually exclusive but overlap: for example, building a den may involve construction (creative play), but also planning (intellectual), climbing, balancing, and sawing (physical), co-operation and discussion (social)." (Coffin, 1989, p.4)

Play especially has been evaluated in developmental psychology. According to that studies, play obtain physical, social, cognitive and psychological developments. The opportunities of play should be take into consideration as an organisation of children's environment.

Exercise is necessary for healthy physical development. " certain outdoor play apparatus has been shown too benefit upper body muscular strength and endurance... A range of opportunities for active participation should be available accommodate for the diversity of children's skill and activity level. During the preschool and elementary years physical fitness and motor development can be facilitated during free play an a comprehensive outdoor play environment with considerations for development opportunities for motor challenge, balancing, eye-hand-foot coordination and all locomotor skills and non locomotor skills." (Hart, 1993, p.27)

Child can feel freedom in play medium. He escape from all the pressure, so he can be relaxed. Play is a language of child to explain himself. He can explain his fear, worry and liking. "Children learn to experience and cope with basic emotion's: excitement, fear, tension, curiosity, pleasure and annoyance, for example."(Williams, 1995,p.130) The emotion of child can develop with play. Child's absorption of worldly experience produces a feeling of competence, a sense of mastery and control over the environment (Moore,1990, p.12).

He can communicate with the world by play. It is a tool to recognise the child. Especially the problems of child are identified and treated with play. (Yörükoğlu,1996). "Adventurous, exploratory and fantasy play are necessary for healthy ego development and the promotion of self esteem." (Marcus and Francis, 1995, p.58) Pleasure activity is significant to be psychological healthy. Child can afford him surplus energy.

Playing with one's peers, particularly from the age of three years on, is essential for healthy social development. "Children acquire, through play, experience in how to relate to others; to co-operate to accept rules and to maintain networks of social contacts." (Williams, 1995,p.130)

"The context provided by play allows for the acquisition of many social skills such as sharing , cooperating, turn taking and the most fundamental social ability- the ability to understand the rules of play. Children's play in outdoor environment is usually less structured by specific directions from adults and can take advantage of the expanded physical space for more vigorous interactions and social decision making or solitude from activity." (Hart, 1993, p.27) Social relationships have been developed with growing. Therefore team play and dramatic play are observed among old children.

Play experience has been seen as central to cognitive, social and emotional

development in children. According to Piajet , children explore in occurrence and then learn that theory (the practical knowledge comes before theoretical knowledge). That is learning process of child . Play medium is an experience field. They expert roles, concepts, behaviour in play environment so can understand. That behaviour is repeated seriously by children. And than this action or knowledge are assimilated.

Child can learn their own skill with playing. And his or her skill develop in play medium. "Opportunities for learning functional, constructive or dramatic play should include children's direct involvement discovering the outdoor environment. Play under certain conditions has been associated with improved planning skills, memory and problem solving ability." (Hart, 1993, p.30) The child imitates the role of his father, mother, doctor or teacher etc. so that he can learn social role to get ready for the real life. Briefly child can learn everything about himself and the world.

Chapter 3

THE CHILD'S PERCEPTION OF SPACE

3.1. The Perception of Space

Environment is all the external factors which has an effect on the life and behaviour of an organism. It has changeable, variable and complex characteristics. Environment has two main components; the physical environment and social environment. Since 1950's the psychologist have emphasised the environment as an important determinant of human behaviour. Kurt Lewin was the first psychologist who emphasised the ecological approach. "Lewin's concept is that of the **life-space,** which refers to the total field of forces governing human behaviour. He defines life-space as a function of the interaction between the person and his environment" (Björklid,1982, p.35)

The perception of space is an importance factor in the determination of the relationships between the human behaviour and his environment. Rapoport emphasised that important fact because "environmental perception introduces variability (cultural and personal) and modifies the notion of a single environment with invariant properties. Once it is accepted that the user's perceived environment and its positive and negative qualities may be different to the planner's or designer's, and that different groups of users may have different perceived environments, then one's approach to understanding the city and the criteria used for design must be different. As we shall see, there is much evidence for this proposition, and the concept of environmental perception helps to relate all this evidence." (Rapoport, 1977, p.27)

The process of perception is the interpretation and reacting the stimulations coming from the environment. The terms which can be defined in that process are perception, cognition and evaluation. Perception is the process in which or to know is taken intentional. The stimulant effect is comprehended through the sense organs and mental operation. Perception describes the direct sensory experience of the environment for those who are in it at a given time. Environmental cognition is the way in which people understand, rebuild and learn the environment and use mental maps to negotiate it. It is a process of understanding. The process is completed with evaluation or preference. (Fig. 3.1)

"It could be argued that a different order of discussion would be more logical since, in effect, **perception** deals with how information is gathered and obtained, **cognition** with how it is organised and **preference** deals with how it is ranked and evaluated." (Rapoport, 1977, p.31)

Figure 3.1. The process of environment perception

Which characteristics of the environment are important for environment perception?

"Seven broad categories of information related to any environmental situation and relevant to environment perception are:

1. environments have no fixed or given boundaries in space or time.
2. environments provide information through all the senses,
3. environments include peripheral as well as central information,
4. environments include far more information than can adequately be handled,
5. environments are defined by and experienced through action,
6. environments have symbolic meanings,
7. environmental experience always takes on the systemic quality of a coherent and predictable whole." (Ittelson et al., 1974, p. 105)

There are different theories to explain how the perception takes form. According to Gestalt Theoreticians, the person has capacity to perceive the world as organised. Gestalt is explained as a meaningful integrity of parts which have dynamic integrations among each other. It is not the parts that give a meaning to the integrity. The importance is, how do the parts come together. " The environment was conceptualised as a complex stimulus field whose properties emerge from and are determined by the organisation and interrelationships of its components parts... It was only in these terms that the behaviour and experience of the individual in response to his environment could be understood." (Ittelson et al., 1974, p.80)

According to the transactional theory, the interrelation between the person and environment is main determinant to understand the environment. The relationships between the experience of the person and his built environment have been emphasised in environmental psychology. This transactional or interactional view of human - environment relation is reflected by a lot of approaches. According to Ittelson, man is not a passive product of his environment, but as a being directed to a distinct goal who acts upon his environment and he is influenced by it. The field has been called the dynamic interchange between man and his milieu. Stokols said that, people are oriented to the environment in terms of existing information, goals, and expectations; they operate on the environment in an effort to achieve their goals and maintain desired levels of satisfaction; they are directly affected by environmental forces; and they evaluate the quality of the environment as a context for future activity and goal attainment. (Björklid,1982 , p.45 - 47) (Fig. 3.2.)

Environment → Human	**Human → Environment**
The effect of environment	The effect of human needs
on human behaviour.	On built environment

Environment **Human**

Figure 3.2. The relation between human and environment is interactional.

Ecological theory accepts the sense organs in perceptional system. These are smelling, touching, tasting, hearing, seeing systems. According to Gibson, personal senses only work when stimulated and all source of stimulant are the environment of person. The perceiving of events of the environment indicates a result of physiological maturity of the people. On the other hand, Neisse said that, cognitive structure is important for perception. Humans expectations and needs determine the perception. The interests of a person is orientated by expectational scheme. Gibson explains the sensory experience of the environment as follows; "most people experience more or less the same things and can agree that there is a tree. These is needed for the

survival of the human race." (Rapoport, 1977, p.30). Man perceives his environment with his personal activity and his role in social milieu.

The main peculiarities of perception are;

1. The perception changes with the person. It is individualistic.
2. The action and experiences play importance role in perception fact.
3. Person take a known which fit on his needs from environment.

"Perceiving in these sense is carried on by an individual from his own position in space and time and in terms of his own combination of past experiences and needs. It is just this way that transectionalists define perception: the process by which a particular person, from his particular behavioural center, attributes significance's to his immediate environmental situation." (Ittelson et al., 1974, p.105)

"People construct systems for handling the world they form hypotheses based on past experience, knowledge and expectations and predict the future accordingly. These constructs vary among people who don't react to stimuli but what they expect stimuli to be and can be seen as part of the perceived environment as well as being given physical expression in built environments." (Rapoport, 1977, p.29)

Perception has some different characteristics in child than an adult. Because the experiences of a child are rather new and few in the environment. It has limited social and cultural attribution's. But one must never forget that child's mind is not a tabula rasa. He interprets his environment with a complex imagination and has different needs and expectations than an adult. In addition to those the limitless ambition and wide capacity of perceiving forms the unique perception of a child.

3.2. The Theories of Child's Perception

The child's perception of space is different than adults, because he is in the process of development. The theories of the development of space perception have been studied in order to understand how the child perceives the space in different age periods; how he feels himself in the space. The first study of the development of space perception belongs to Piaget.

3.2.1. Piaget's Theory

Piaget's theory is based on the cognitive development and therefore, the equilibrium and the ego-centrism are the basic concepts of his theory. He wants to

explain how man learns the knowledge. Child tries to adapt himself to his environment. But the child is not in a passive position in the process of adaptation. Though Piaget's theory is interactional with nature, the influence of the physical environment upon the child is not single-sided. Rather the child's has an active role in this process. Piaget emphasised that children should be able to do their own experiments and their own research. He must construct something himself, he must re-invent it in order to understand it. (Björklid, 1982)

The process of adaptation should be explained to understand Piaget's theory. "Piaget considers intelligent adaptation to be a result of a state of equilibrium between a forces of assimilation and accommodation. **Assimilation** implies that the individual adapts himself to the environment by using his earlier "psychological structures" or the experiences he already has; in other words, the child adapts reality to himself. **Accommodation** implies that the individual changes or develops a new psychological structure in order to adapt himself to the environment." (Björklid,1982, p.55) Child changes his behaviour, or a new behaviour appears in that process of learning or adaptation.

"Piaget and his followers suggest that knowledge of the world included two aspects: One of which is **figurative,** related to the precepts one images of successive states or momentary configurations of the world by direct immediate contact, and a second which is **operative**, related to the operations which intervene between successive states and by which the subject transforms parts of the world into reconstractable patterns." (Hart, 1979, p.376) In the early ages of the childhood the communication with the environment is determined by the instincts. Throughout that period the perception with the senses is of most importance so it's naturally formal. The behaviours are also instinctive and plain.

It has a knowledge of object mean that this object is reconstructed. Also child must reconstruct the space in cognitive structure to perceive it. This is operational space. The transformation from sensorimotor space to operational space is very slow. Piaget identifies four major periods in the development of cognition. The perception of space and just besides, the notion of space is changed in those periods, they are; sensorimotor, pre-operational, concrete operational and formal operational.

Piaget define three classes of specific cognition: Topological, projective and euclidian or metric properties. Those properties should be explained to understand development of the notion of space during the periods. "**Topological** properties are simple qualitative relations like proximity and separation, open and closed, which

remain invariant under continuous deformations excluding tears or overlaps. **Projective** properties are relations in terms of a particular perspective or a point of view, eg., a straight line, a triangle, or parallel lines, which remain invariant under projective or perspective transformation. **Euclidean or metric** properties of space are relations in a system of axes or coordinates whose equivalence depends on mathematical geometric quality, as an angle and equal interval or distance." (Hart,1979,p.384) (Figure 3.3.)The studies of Piaget and Inhelder seem that the topological space occur before projective and Euclidean space in child's mentality. That process is opposite of the development of history of mathematic. (Akarsu, 1984, p.32) (Fig. 3.3.)

Those developments begin with the child's first experiences space of the sensorimotor space.

Sensorymotor Space (0 - 2 years)

"During this period, an infant moves in a space of action. This sensorimotor space is pre-representational, lacking the symbolic function which facilitates imagination and reconstruction. Orientation to the environment is entirely egocentric." (Hart, 1979, p.388) Child thinks that he is the origin in space(single coordinated space) All objects are interrelated with that space. Action plays main role to understand that his space. During that period the child develops from an organism capable only of reflex activity to an individual capable of coordinated actions and internalised thoughts. (Hart,1979)

Pre-operational Space (2-7 years)

Towards the end of sensorimotor period, the child becomes who is able to evoke mentally. He begins to be interested in external world in terms of symbols. Another main peculiarity of that period is the thinking in terms of egocentric. The activity is the basic factor to perceive his environment. They mention landmarks, but when it is part of his activity. The relation must be directly with object, to be mentioned it by child. He can coordinate a route between one landmark to next on paper. But they can not mentally reverse their knowledge of that route. "Consequently, children of even the pre-operational period can represent pairs of neighbouring objects topologically, but they

can not organise three or more objects successfully into a coordinate system." (Hart, 1979, p.390)

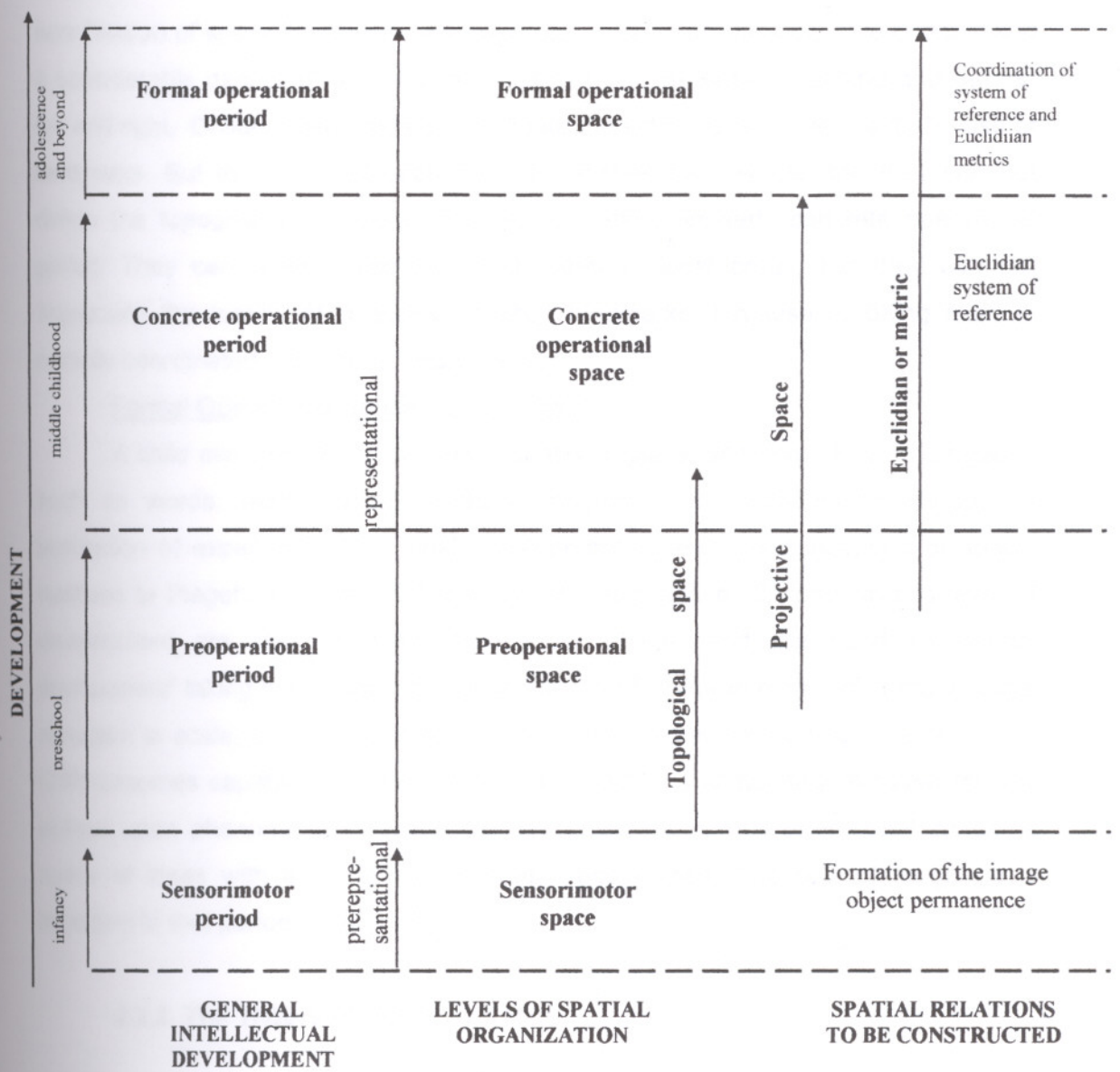

Figure 3.3. Schematic Representation of Piaget's Theory of the Development of Spatial Understanding in Relation to Overall Intellectual Development (Hart, 1979, p.382)

Concrete Operational Space (7-12 years)

Egocentric viewpoint becomes broken down. The view is not in the static structure. Child becomes to understand from different viewpoints. He can differentiate and coordinate different points of view independent of himself. He realises that the elements and relations are compassable, associative and reversible. The spatial structures become fully mobile, flexible, and reversible. Through a logical coordination of space from multiple viewpoints, children are now capable of achieving a considerable degree of abstraction. Child can be differentiated behind and before, left and right. Children can partially coordinate the school environment with the use of landmarks. But they can not coordinate the system as a whole and they can not define the topographical relation between landmarks in early concrete operational period. They can relate objects to each other in local areas, but they can not appreciate the totality of relations between landmarks, because of being fixed in partially coordinated subgroups. (Hart, 1979)

Formal Operational Space (12 - + years)

A child can operate on a strictly ideational place with some kind of language such as words, mathematical symbols, diagrams etc., without the support of perception of experience. "The final development in a child's conception of spatial relations in Piaget's scheme, is Euclidean or metric space. Children at this level of development are able to build the "model village" and the sand-box school environment" taking into account the projective and Euclidean relations of proportional reduction to scale, accuracy of distance, and metric coordinates."(Hart, 1979, p.391) Child becomes capable of operating on spatial relations completely removed for any actions upon phenomena in space, he can enter into formal operational space- a space of ideas with a multitude of spatial possibilities. The role of language is important in that period. (Hart,1979)

3.2.2. The Theory of Moore and Hart

Moore and Hart defined three reference systems which develop sequentially in the child. Egocentric, fixed and coordinated are the three systems of orientation. (Fig. 3.4) The three system of orientation develop sequentially in the child. Hart and Moore were influenced by Freeman and Piaget.

Egocentric System of Reference: Geographical orientation is action centred and egocentric. That system could be named as 'polysensorial system'. "Some of this

large body of literature demonstrates how a child first orients to the physical environment using axes or planes defined entirely with respect to his or her body." That system is based on a sense of localisation through bodily movements. Children build up notion of the direction of buildings or streets in the immediate vicinity of his home in 4 - 5 years old. The objects being imagined and the actions internalised. Piaget found that children could only anticipate the spatial relations between one landmark and the next. They could not arrange three or more objects successfully into a system. (Hart, 1979, p. 395)

Fixed System of Reference: For orientation in large-scale environments, child should be free from the limitations of the early egocentric orientation system. Child becomes to be in a different position with a reference that some fixed objects except himself to learn and define the space. That situation increases as the activity space expands and the relation is grows with different spaces. Those reference points are child's home, school, and other enjoyed places. The fixed points are the spaces that belongs to the child. Social relations of child is important to determine those points. The reference points can be differentiated but uncoordinated, representations of the environment begin to be coordinated with the onset of the concrete operations. (Hart,1979, p. 397,398)

Coordinated System of Reference: A child is finally able to produce a fully coordinated topographical representation when he can decentre from each of the partially coordinated fixed system of reference. Those are then intercoordinated, through the process of "reciprocal assimilation" and "reflective abstraction". "Children group together the elements of the plan in terms of relations between local areas, or they select one or more common starting points and reconstruct routes which redate from them. They are then able to relate them all to each other through the advanced logical abilities found at this level of development. Through 'associatively', each point can be reached mentally by any one of a variety of routes, and through 'reversibility', each route can be represented in the reverse direction to that experienced. A child is finally able to produce a fully coordinated topographical representation when he or she can decentre from each of the partially coordinated fixed systems of reference.

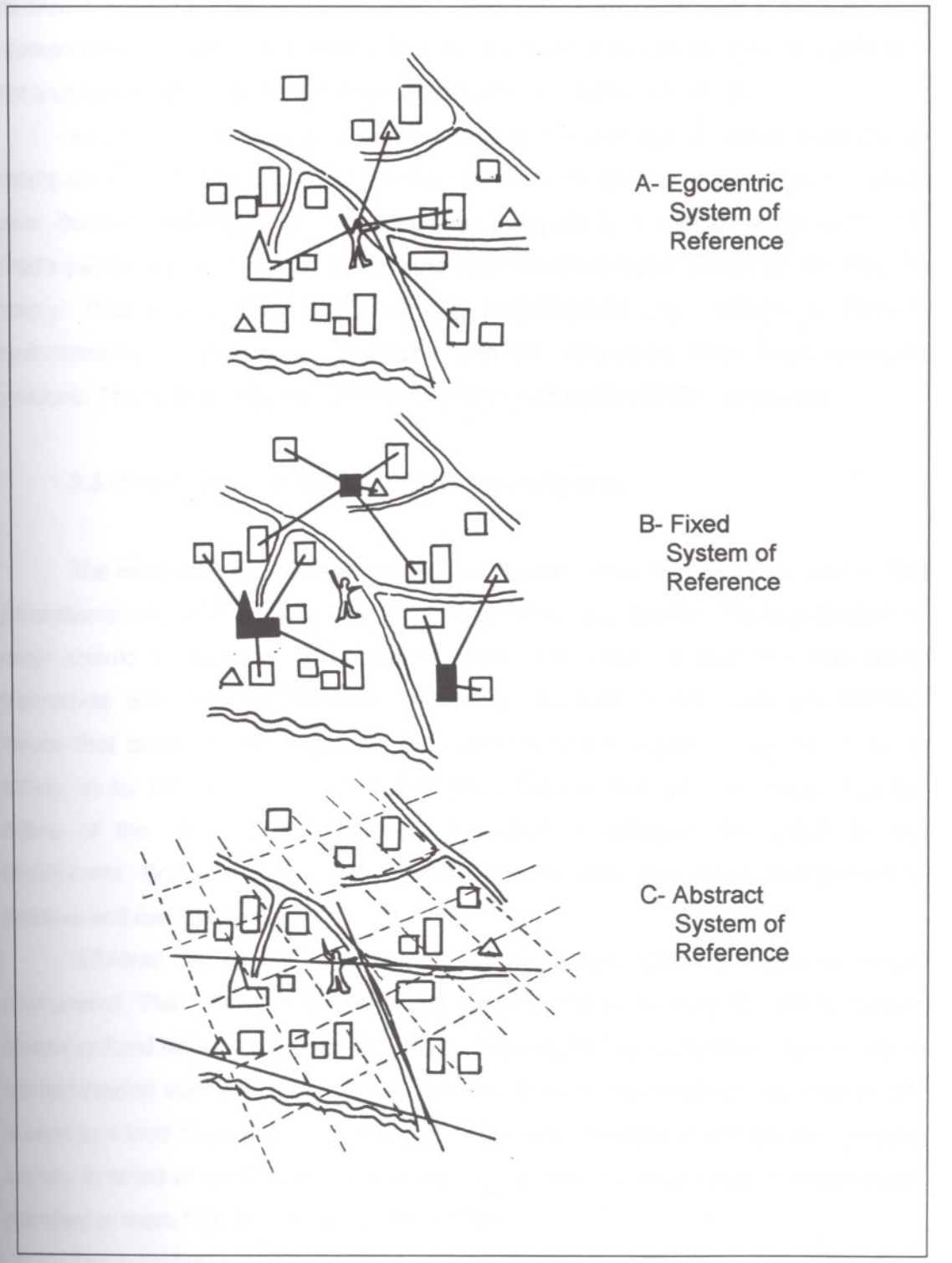

Figure 3.4. Children's Orientation in the Landscape (Hart, 1979, p.394)

Those are the inter-coordinated, through the processes of 'reciprocal assimilation' and 'reflective abstraction'. A child's individual route-type topographical representations become coordinated into a comprehensive survey-type representation." (Hart, 1979, p.399) The development of reference system is probably not a universal phenomenon. It depends on socio-economic structure.

According to Piaget, the development of the concept of space depends on child's development periods. The same characteristics can be observed in the same peer. But that generalisation is not true for every child. It should be carried to the child's period, not to his age. Moore and Hart criticised some points of the Piaget's theory. That theory doas not take into consideration the children's different environmental experiences. Children's can be influenced from socio-economic structure. The spatial cognition of girls and boys can be in different peculiarity.

3.3. The Child's Perception of The Urban Space

The interrelation between children and space is more different than adults. The perceptional sense of children and their imagination are spatial. The explanation of range should be suitable to the child's scale and power so that they can relate themselves with their environment effectually. Suitable relation with environment means that ability to recognise the environment, to go around in space, to be in activity, to be present in social contact. The speed of that growth should fit to the nature of the child. The needs are the main determined perception of the environment. Scale, security, action, social opportunities are importance factors to perceive and use the space.

"Children learn their environment in two ways. One of these is simply orientational. The individual learns to get around, first by relating himself to certain objects or fixed reference points, then by relating objects to each other, and finally by conceptualising space as a coordinated system of reference in which the town or city is seen as a kind of geometric abstraction. Secondly, the child learns his environment socially, in terms of what spaces are accessible to him and what kinds of activities are permitted in them." (Ittelson et al., 1974, p.194)

The knowledge has been learned with five senses. The fundamental tools of children are five senses to perceive the environment. Especially, infants recognise with tasting, smelling, touche and seeing. The space where persisted by children is

polysensorial space, in that period. The experience of child provides the learning. Child plays with objects and than give new meanings to that object in mind. So he can claim the space and object. Child should have the ability of relating those five sense so that he can perceive the space. In that reason, the space should be prepared and the enough time should be given for the experience of child. "Feeling for place is influenced by knowledge, by knowing such basic facts as whether the place is natural or man-made and whether it is relatively large or small." Child can compare different environments with that knowledge. (Tuan,1987,.p.32)

"The child, in his perception of the world, has a more varied experience, just because it is not focused through to lens of existing mental associations, just because it is indiscriminate. Yi-Fu Tuan suggests that, growing older, we substitute appreciation for direct sensory experience, the most important element of appreciation being remembrance. But the child has little to remember, because the child's world is so full of miracles, the world miracle can have no precise meaning for him. Moreover, lacking social awareness, his perception of the environment is not "tainted" by social considerations. Yi-Fu Tuan stresses (in Topophilia) that 'a child, from about seven or eight years old to his early teens, live in this vivid world most of the time. "(Ward,1990, p.22). The imagination of child is very wide and changeable, because the cognitive capacity of child is not influenced by social coding.

We might ask, since ordinary observation suggest that for much of the time many children seem oblivious to their surroundings, being involved in some personal or social activity which is even more absorbing, what the child actually does with that wealth of vivid environmental impressions. How does he assemble it into an image of the city?

"The environmental experience of the child must be different simply because of difference of scale. Obviously, the younger the child the closer his eye-level is to the ground, and this is one of the reasons why the floor scape the texture and subdivisions of flooring and paving, as well as changes of level in steps and curves (small enough to step over for an adult, big enough to sit on for a child) is very much more significant for the young." (Williams,1995,p.133)

"As the child gets older, an understanding of measurement, perspective, and proportions helps him realise that the visible world exists for other pretty much as is exist for him. When this happens, space becomes an abstract concept, or idea, capable of being understood apart from one's experience. However, it is not until

adolescence or beyond that the child wholly grasps this notion of formal operational space." (Ittelson et al.,1974,p191)

Scale provides to feel secure. "At first, large things have less meaning for him than small ones because, unlike portable toys or security blankets, they can not easily, they may not be available for comfort and support at moments of crisis." (Tuan, 1987, p.29) Young children have less to say and are less enthusiastic about such places than the older children. Because public spaces are not made suitable to the scale of child, except some playgrounds. They don't feel to be in places that comform in their own size. Child is more interested in the geographical notion of space, as he grows. Child looks for a space which is suitable to his own scale. Therefore they prefer places such as under stairs, under balcony, on narrow street, at the corner of garden to play. They try to make special places for themselves and for their friends as most of the world around them is 'adult's space' and they are trying to carve out a place that is at kid size.

According to some studies, older children can describe geographical context of place. He not only describes what the people shown in the picture are doing, but also attempts to explain how the place functions. On the other hand the younger child, tends to say little about the social and economic significance of the place. Their interests are not to the physical environment but to the people in it. In general the first grader is less enthusiastic about places than the older child (Ittelson et al., 1974) "The geographical horizon of a child expands as he grows, but of necessarily step by step toward the larger scale. His interest and knowledge focus first on the small local community, then the city, skipping the neighbourhood; and from the city interest may jump to the notion and foreign places, skipping the region. At age five or six a child is capable of curiosity about the geography of remote places" (Tuan, 1987, p.31). "Buildings, roads and roadside objects were seen by the infants especially in relation to human activities, particularly pupils' own homes, friends and neighbours houses..." (Ward,1990, p.26) For the child, the, social content is more important to perceive the space. They perceive people as more meaningful than the physical.

Children's aims and needs affect their perception of space. Physical and psychological comfort is important for child. "Objects or places in the environment take on a different meaning for a child compared to those espoused by an adult, partly because of the different scale at which they are viewed, but partly because they derive a significance through use in play. For example, adults typically view urban trees and vegetation as part of landscaping and visual amenity. The child at

play, however may view a tree as a resource -something that is to be climbed, or employed as a surrogate set of cricket stumps, or as a reference point etc. Sometimes the most nondescript of objects in the adult world become empowered with a significance as landmarks in the child's environment." (Williams, 1995, p.133) "Jeff Bishop's work in Harwich was the comparison of the children maps with those of adults. In the middle of the port there is a light house which featured as a significant landmark in all the maps drawn by adults. But none of the children showed the lighthouse on their maps, though many showed the public lavatory which stands at is base. Things which were important to them included kiosks, hoardings and other bits of unconsidered clutter in the street." (Ward, 1990, p.27). The use of street and the demand of child are important factor for their perception.

"According to Piaget's theory, the child's activity is an important aspect of his spontaneous investigation of the world. Piaget claims that the individual shapes or constructs his outer world by means of his own activity. Reality as it exists for the individual is a reconstruction of the environment. The child himself must construct or rediscover facts in order to understand them. If the child is given the opportunity to explore and actively manipulate his environment, he will develop greater understanding of outside world functions. Environmental experience there fore plays a crucial role in the development of both motor and cognitive skills." (Björklid, 1982, p.286)

"Representational space is not simply a mirror image of what the child sees, a picture recorded on the mind, but a child's picture of the world produced by the view he has of if he were actually acting in relation to it, although in fact he is not." Children used an action- centred reference system in the preoperational stage. "Unable to organise details into a whole, they had to think out rotes in terms of their own movements. The child, for example, thinks out its way to school and adds on landmarks later." (Ittelson, 1974, p. 191)

"An object or a corner of the room, valueless to the child one moment, suddenly becomes valuable when another child threatens to take possession. Once the first child has regained indisputable control, his interest in the toy or place quickly wanes. This is not to deny that people, young and old, feel a need to anchor their personality in objects and places. All human beings appear to have personal belongings and perhaps all have need of a personal place, whether this be a particular chair in a room or a particular corner in a moving carriage." (Tuan, 1987, p.32)

According to the study of Brian Goodey; "The map established the very simple and fundamental truth that people's conception of the central city differed according to their age, social status and life-style." (Ward,1990, p.25) Paul Shephard said that; "Space in juvenile life is structured differently than at later ages; it is much more critically defined. It is intensely concerned with paths and boundaries, with hiding places and other special places for particular things." (Ward, 1990,p.23)

Motivation is an important factor in the perception of the environment. Opportunities and suitable medium should be given to child to obtain variation of perception and cognitive development. The creation of outdoor space is an importance motivation for perception of the space. Children should be able to do their own experimenting and their own research. The child can be guided, however he must construct something to understand by himself, he must re-invent it. They should learn something or understand about his environments while live in there. Discovery, production, reconstruction are important activity as learning.

Considering all of these determinants Hart has classified the range of the child as follows:

- Free Range; the area within which children may play without asking or telling the caretaker, usually the mother, each time.
- Range with permission; the area allowed to go alone, but saying where and asking permission first.
- Range with permission with other children; as above, but with other children. (Hart, 1979, p.329)

In this classification Hart has determined the restrictions that a child faces while extending his activity are. This classification provides an easier understanding of child's use of space and it's frequency.

"Range development; with every visit to the same place, with every repeated 'play episode', new possibilities are discovered, tested and verified, and provide an accumulation of experience, knowledge and understanding of the environment (accommodation) that builds with time" (Moore, 1990, p.18)

Evolution of the territorial range is categorised as three levels by Moore; habitual, frequented and occasional range. (Fig. 4.1)

Habitual Range : More or less contiguous space right around the child's home, highly accessible for daily use; bounded by temporal, rather than distance and age constraints. A daily bases for short periods of time - the use of the streets for instance, wedged between homework and suppertime.

Frequented Range: Less accessible extensions of habitual range; bounded by physical constraints (particularly busy roads) and parental prohibitions; expands with age, use of bicycles, availability of traffic-free routes and the presence of older children to travel with. Places are used on weekends and holidays, especially during the summer.

Occasional Range: Highly variable extensions of frequented range by foot, bicycle and public and public transport dependent on child's personality, the degree of freedom and training offered by parents, the availability of travelling companions and the presence of arresting destinations . There is the occasional range of more distant places, visited once in a while, perhaps as part of a special expedition. Although it expands with age, at any point in time occasional range defines the child's ultimate territorial frontier." (Moore, 1990, p.18)

" As the child grows older, moves around more rapidly, and develops a more adequate and elaborate mental image of the environment (cognitive map), former occasional places become frequented, and some are eventually absorbed into the everyday habitual range." (Moore, 1990, p.18)

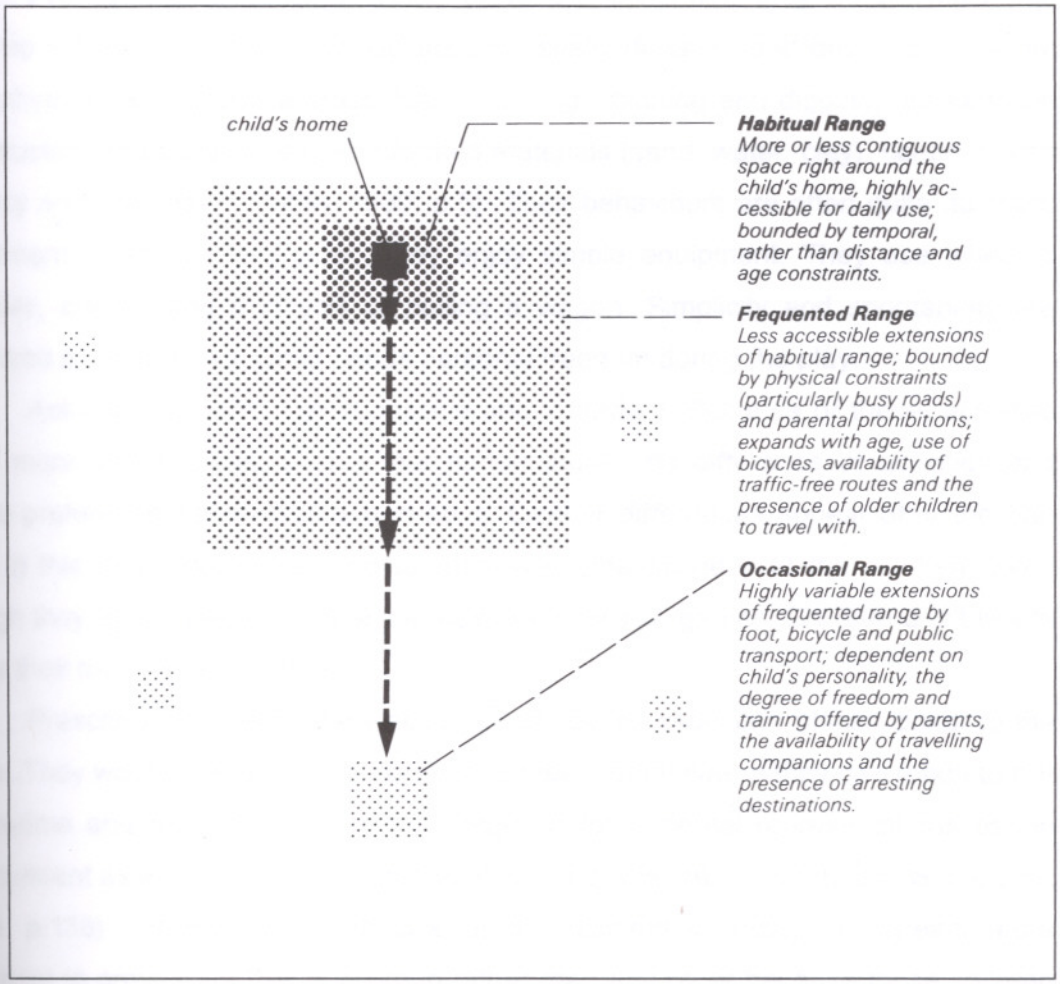

Figure 4.1. Territorial Range Development (Moore, 1990, p.17)

4.2. Gender and Age Differences:

Play of the children differs with age.

Toddlers, two and tree years, usually play alongside, try out new abilities, enjoy fantasy and role play.

Pre-School children; Physical plays are dominant, they do activities that develop motor-skills abilities. These actions usually doesn't need any rule. "Try out new physical skills, move a great deal - running, climbing and digging, are keep on construction and building, enjoy unformed materials (sand, water, clay), continue with fantasy and role play." (Coffin, 1989, p.5) Their behaviours are often quite abstract, movements comparatively slow. They enjoy simple equipment. They use wheeled vehicles, enjoy riding a tricycle or pulling a wagon. Simplicity and spontaneity are observed in those plays. Child needs personal freedom during the play.

Actions are more slower, passive and individual. Because of these, activities need more stable areas. During that period there's no difference of activities and space preference between girls and boys. Gender differences appear after the fifth age. In this preschool period ego-centrism rules the attitudes of the children. Even though they do not prefer to be alone they like individual games. Children don't like to share their toys with each other.

Preschool children prefer well enclosed spaces especially places closer to the home. They want to be at a short distance to their mother where they can reach to her at anytime and feel secure. "Children begin to form mental representations of the environment as a fixed spatial system centred on the home." (Marcus and Sarcissian, 1986, p.138) "Within the microscale of the residential setting, it appears more important to provide for that age group rather than any other because those children have to remain in the proximity of the dwelling. This is the stage in which 'doorstep' play is most prominent as their area of free movement increases gradually; it is the period in which visibility and accessibility the home base are a necessity."(Pollowy, 1977, p.41) (fig. 4.2) From and over five years old they start to go out the street, to a nearby neighbour or to a shop in their street. Also after that age they start to gather in small groups and play simple cooperative play.

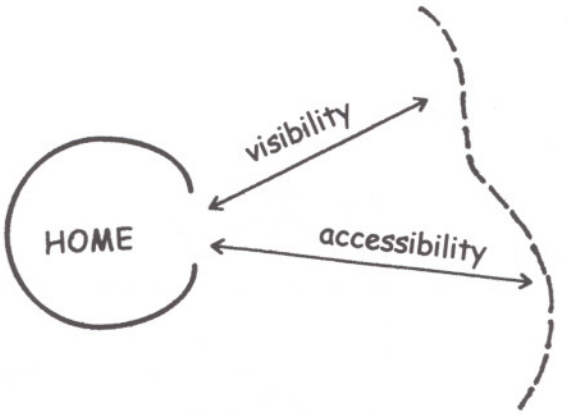

Figure 4.2. Pre-schoolers' limited range. (Pollowy, 1977, p.40)

School years; With the formal knowledge he learns, child begins to leave his fantasies and perceive his environment more realistically. The physical and mental skill of the child improves. He has the capacity to use many different tools and that increases the variety of activity. In that period children wants to experiment, improve and show their skills. They are in an effort of learning more. So they are curious about things happening around. With the effort to be socialised there begins an effort of learning and adopting the rules.

In seven to ten years, they take an interest in animals and plants, are able to go further from home, start explore the environment, do construction play, movement play (running, climbing, jumping, balancing, ball play), wheeled toys and the peer group is very important. About 10 to 12 years, they are more competitive in their play, different genders usually play apart, enjoy rough and tumble games, conversation and social activity, more participation in organised activities. (Coffin, 1989, p.5) "This age group is more independent than preschool age groups. Children under ten are the major users of the outdoor spaces in a housing development. Until the end of that period, most children will stay within five minutes from home, and in terms of distance, they will really go beyond a radius of 320 meters on a regular basis, although a substantial proportion may be permitted to travel more than 800 meters from home." (Pollowy, 1977, p.42) (Fig. 4.3)

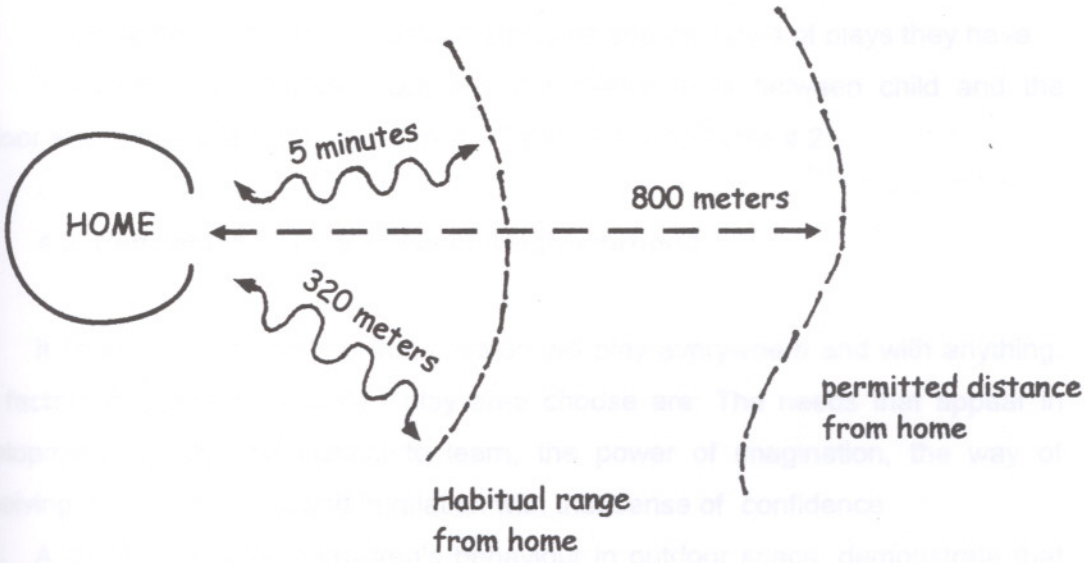

Figure 4.3. School ages' limited range. (Pollowy, 1977, p.42)

Gender differences appear both in types of play and usage of space in that group of age. Differences are seen in the physical development of the different genders. Those differences are also reflected by the activities they do. Social determinants also supports that differenciation and decomposements. Even though girls and boys gather and act together in certain occasions, the decomposition is clearly seen in team plays. The basic differences observed can be listed as follows:

- Boys prefer more active and though plays. Girls activities are smoother and slower.
- The most important determinant of the differentiation of behaviours in the outdoor space between the opposite genders is the different parental restrictions applied. Parents are more conservative to girls. They are more restricted than boys in the outdoor space in both size of the activity are and time spend. Eventually girls have less change to develop certain types of activities.
- Boys can play more organised and within bigger groups. Especially from ten years old they begin to prefer team plays with rules. While girls like to play more local plays within smaller groups.

- The team plays of the boys and their being more active helps them to expand their playgrounds. On the other hands girls play in smaller areas because of both the parental restrictions and the types of plays they have.

The children's characteristics and the relationships between child and the outdoor environment is summarised in the Table 4.1. and Table 4.2.

4.3. Behaviours in Play Areas of Neighbourhood

It shouldn't be forgotten that children will play everywhere and with anything. The factors that effect the child's play area choose are: The needs that appear in development period, and instinct to learn, the power of imagination, the way of perceiving the environment and in relation with that sense of confidence.

A lot of study, about children's behaviour in outdoor space, demonstrate that children prefer unprogrammed space to play. The planning play-space is refused by children with persistence. The researches that Aiello did in 1974 in San Francisco have shown that more than 50 % of the children played on the streets or in the front yards. The need to be close to the home, the appropriateness of the environment for line bicycle roller scats and such, children's wish to be in a more attractive and lively space are the reasons of that preference. In another research done for the lower and middle income groups by Becker in 1976 in New York shows that preschool children prefer to play close to their residence. The cause is that parents wish to watch for them. According to the interviews of California, children found the streets more interesting although they had many playgrounds around and the streets are full of risks.(Sivre, 1993). According to Moore's study school grounds and playgrounds were mentioned as favoried places to go to in only 9 % of the replies by 8 to 12 year olds interviewed in the San Francisco Bay Area. In Holme and Massie's study (1970), only 5% of Stevenage New Town mothers reported that their children played in the public playgrounds. 64 % who reported garden play and 21 % who reported street play. (Moore,1989, p.86)

As for the research done in Sweden by Björklid shows that traditional playgrounds are not used by children (Björklid, 1982). Another research is done by Chilton in 1991; he has done a survey with children around 7 - 15 years old who lived in three different cities of England. In London 79% of the children played in forbidden

Table 4.1 The Pre-school Child's Characteristics and Preferences.

	Preschool Child (2-6 years)
Child Development	In the ages of 2-3 (toddlers), they are in autonomy phase. They can hardly be friendly with the other children. Curiosity is at high levels. Muscle development is very rapid. It is the period when large muscle develop. They have no worries in controlling themselves. They become aware of their sexuality in the ages 3-6. They cannot distinguish reality and fantasy. They shelter into their fantasy world as a response to outer stimulations. They are egocentric. No distinguish between living and unliving things exist. According to them everything that moves is alive and each living creature is a human being.
Child's Activity	There is no differences among the games of girls and boys. Girls and boys can altogether play. They do activities like walking, running, jumping and hopping which exercise their large muscles. In the progressing ages climbing and balance play start. They like to play with sand, water and with other natural materials. Tricycle and ball games become very common at the end of these ages. Personal play is dominant. They depend on adults. In order for the child to feel secure, he has to see or feel his parents nearby. Needs and imagination's are determined child's perception of space. By the help of fantasy plays and roles they try to understand the events and their environments.
Parental Controls on Child	Mother can leave the child free within the visual contact or can give permission to play with her older children, outdoor. Smaller children spent less time at the outdoor than the older ones. This time related with the leisure time of the mother.
Children's Preferences of Play Areas	As a play area close environment is selected. They play at the entrance of home, garden or on the sidewalk. Horizontal and vertical, visual and physical accessibility are important in the selection of play area. Children younger than five years old can only play on the streets under the guidance of their mothers or older children. They can also go to a park with their adults. The usage of play area depends on the parents.

Table 4.2 The School-age Child's Characteristics and Preferences.

SCHOOLAGE CHILD (7 - 12 age)		
	GIRLS	**BOYS**
Child Development	Child's physical and intellectual abilities increase. They can use all muscles in harmony. Capacity to use tools develops. They need to exercise continuously. Visual distance reaches to the same level as adults. Fantasy world is left behind. Information from the environment shapes their perception. Receding from egocentrism is seen. Socialisation starts by adjusting to the rules and by sharing. They are in need of love and assimilation. They need to be motivated continuously.	
Child's Activity	They prefer quieter and more gentle plays. They more careful with the details, and play in smaller groups than boys. They accept smaller children into their play groups. Girls play generally local plays.	They are more active. They prefer tougher and more energetic games. They like to play team games. Acting in groups is very common. Interested in the structural games. They want to be with peers.
Parental Controls on Child	They have to get permission for going out. Their activity areas are limited by the visual contact.	They only get permission to go out, but they do not have to tell where they are going. Activity area is larger for them. By riding bicycle it widens even more.
Children's Preferences of Play Areas	They can play near the houses, at the home entrances or on the streets. They can go to a nearby park only by taking permission from the parents or cannot even go there. They have limited area for playing.	They tends to use the whole site area for play activities. They can go to school ground, to a playground. They prefer wide and hard surface areas to play ball games. Streets are preferred for these reason, too. Their activity area are wider and used more frequently.

areas. While only 12% chose to play in equipped playground and 72% liked to play in the adventure playground. (Sivri, 1993, p.95-106)

The researches done around 1990's in Europe, about that topic shows that the interest for playgrounds decreased even more. According to Hüttenmoser; "It is the living surroundings which exclusively offer children the opportunity for independent activities... Usually, public playgrounds are not to be visited by young children on their own. In the city of Zurich, only 8,6% of the children had visited a public playground on their own before entering kindergarten at 5 years old, even though the availability of playgrounds in the city is quite good." (Hüttenmoser,1995, p.409). In the study of Wheway and Millward, (that realised during the school summer holidays of 1996, over 3500 observations were made of children (under 18 years of age) at play on 12 housing estates in England), street and pavements have been the most frequently used locations for play (46% of all observation). Other favourite places are front gardens (14 %), Play areas (12%), public open spaces(9%). (Wheway, 1997, p.3, 32) That observation is the reason for thinking about unprogrammed space for play such as street, garden, and another open space.

4.3.1. Unprogramed Space to Play

Child would like to play at any place that confronts his needs. Especially in the early ages, the spaces close to the home, the spaces that he can interact both with his equals and people from different group of ages in which there's social and physical variety attract the attention of child.

"Several new forms of open spaces have been developed during the past decade. With awareness that traditional types of spaces do not satisfy all recreational needs; community open spaces, neighbourhood play streets, and transit mall are increasingly becoming part of the urban landscapes... Some researches (Brower, Moore, Hart) have suggested that children's access to nearby places such as stoops, front yards, and sidewalk's is often more important for child development than use of neighbourhood parks and playgrounds." (Francis, 1987, p.81-83) The children's tendency is an important factor to criticise the modern planning approach about play areas. "We have an enormous expertise and a mountain of research on the appropriate provision of parks and play-spaces for use by children of different ages,

but the ultimate truth is that children are anywhere. Because some bit of the city designed as a play-space on a plan, there is no guarantee that will be used as such, nor that other areas will not be." (Ward, 1990, p.180)

4.3.1.1. Home-Based Play Areas

Home entrances, stairs are the densely used places. Many researches and observations proves that factor. Entrances with stairs are good places to sit and gather. Children can chat and do passive play here. (Fig. 4.4) They can have shelter from sun and rain. Those entrances are well defined and secure places especially for young children who are dependent to the home. They can play here as long as they want. The stairs and sheltered porticoes of old houses are places that children like the most. (Fig. 4.5)

Figure 4.4. The children chatting on the steps by their house. (Moore,1990)

Figure 4.5. The children are sitting on the steps of a traditional house (in İzmir).

Garden is the first place that the house inhabitants meet the outdoor space. They make a smooth transpassing from home to street, from private space to public space. That gradual passing forms a healthy environment for both the child and the parents who are sensitive for secureness. The garden was defined by Stephen Williams as followed; "Gardens may be viewed as places and by extensions as resources to be used for productive purposes, as aesthetic zones which enhance the environment of the home and street, as venues for a range of activities and recreations, as extensions of the indoor living space, as a refuge to which people may resort for enjoyment repose, restoration or personal recreation." (Williams, 1995, p.76)

The physical state of the garden, being open or closed and it's relation with the street, defines the usage. "Private gardens thus provide a kind of bridges zone. If they open to the outside, they gradually merge into public space; if they are closed to the outside, they are to be considered private" (Hüttenmoser, 1995, p.403) Pollowy categorised the gardens as 'accessible' and 'inaccessible'. "The accessible gardens form a series of linked spaces indoor, private outdoor and communal outdoor spaces

which encourages free movement between them." (Pollowy, 1977, p.55) Especially "in the high-rise setting, it is the first public space reached from access areas, and therefore represents the child's first contact with the larger physical and social environment. This condition in itself creates certain conflicts, and white notes that while some adults appreciate the relative safety of courtyards for the unsupervised play of young children, others are anxious when their children are out of sight in the spaces below." (Pollowy, 1977, p.88)

The usage of the gardens in the urban pattern has changed by time in Turkey. In the traditional residential areas the garden is an interverded space. It's integrated with the inner space. It's separated from the street both physically and visually. However in those gardens there's a strong relation of open, semi open and closed space and every little space it's function in the daily life. When traditional gardens are considered from the point of child's use, those positive characteristics can be listed:

- Child can easily find a place for himself in these traditional gardens because most of the activities at the everyday life already happens here.
- Child can find a sunny of a shady place cording to his wish in the garden where there is possibilities of open, semiopen and closed spaces.
- Child can observe and join the productive and recreational activities happening in the garden.
- Child can play with natural elements like earth and water and he can take care of the flowers, trees and all kinds of vegetation growing in the garden.

Turgut Cansever emphasises those facts while quoting on the use of the garden in the traditional pattern; the garden is an important space in the house which is a part of an urban context, is used by all the inhabitants. Especially older and youngsters are in an intensive relation with the nature by the help of those gardens. Cansever has an importance critic; "Today the gardens which is named as "passive green areas" in Western planning has served their users better than "active green areas" and at the same time it's known that they help the municipalities to save money from the creation and maintenance of green areas." (Cansever, 1990, p.125)

While examining the garden in the traditional settlement organisation where it has an active usage we must look for the location of the house in the plot. Especially in the traditional Ottoman residential settlement with gardens, houses never sit in the middle of the garden. In order to obtain a unity of the house and the garden, the house is located around the garden. The garden was not the empty space around the

house. The location of the building mass or masses here designed freely to obtain the best lightening and viewing conditions. Actually that free design approach were based on two main rules; The location of the building masses on the borders of the plot area obtain the unity and the continuity of the garden and keep a relation of the urban and house life by the help of the by windows. Even in the biggest plots the house situated adjacent to the street. While the facades looking the garden where the every day life passes enriched by loca's, köşk's and hayat's. (Cerasi, 1999, p.155-156)

In Turkey, the traditional of garden usage has mostly disappeared in the urban environment. There's a standardisation of garden dimensions in the planned area where parcellation and detatchment is introduced. Particularly the order of front and side gardens are the same in all the urban environments. That standardisation abolishes the spatial richness. The building masses are located at the center of the plot. The garden is divided into parts like front, side and back and it's physically determined by the spaces left over from the building mass. That fragmentation abolishes the meaningful and integrated use of the garden. Above all, there's the common use of garden rather than the private use in the system introduced by the apartmantation. That causes difficulties in the organisation and maintenance of the gardens.

In the residential areas which were organised by development plans these negativeness have been observed in the child's use of gardens:

- The annexes of apartment in habitants are build on the back gardens. Related with the density of the settlement back gardens are mostly places where there's cold, over humidity and no sun light. Because of those reasons back gardens can not be used by children.
- If there's enough space, the back gardens are mostly used as the parking area of the inhabitants. Again there's no arrangement for the use of the child, even no trees.
- In the attached ordered residential areas the apartment inhabitants cannot use the back garden although there's a common right to use for all.

The child's use of the gardens is connected with the location of the garden, the relation with the house with the street and child' having enough space to play freely, not limited. Child especially like to play at the front or side gardens where the entrance of the house is located. They can interact with other friends on the street when they

play at the front garden. The garden which are well defined and safeguarded although child can feel secure here. The arrangement, cleanliness and lightening are factors effecting the preference of a garden.

4.3.1.2. Street and Sidewalk's

As the automobiles started to enter the urban life in the 19th century there emerged works to develop solutions to the vehicle transportation. In the beginning of the 20th century great wide avenues started to be established. From the 1920 the increase of traffic density and the importance of the automobile use in the urban life have emphasised and roads only for vehicle as are started to be proposed. They thought that city should be designed through those traffic roads and the urban functions should be redefined as so. City should be a system working like a machine. Those thoughts considered as modern were developed until the World War II and after the war they brought out the construction of highways in the USA As a result of those developments supported by the capital of the automobile industry, the streets started to be a property of man with automobile but not pedestrians. (Berman,1999)

The change of street like in modern urban formation has effected the life of the child. After the end of the 19th century parks and playgrounds started to be shown as urban space. For the child who were playing on the street with confidence in the traditional environment. That reality of modern urban formation has been criticised first by Jane Jacobs in 1960.

According to Jane Jacobs, residences shouldn't be segregated from work and commerce. The segregation is the reason that residences are isolated from other parts of life. Children are influenced negatively by that situation. "The opportunity of playing and growing up in a daily world composed of both men and women is possible and usual for children who play on lively, diversified city sidewalk." And Jacobs added that, "Playgrounds and parks are automatically O.K. places for children, and streets are automatically not O.K. places for children."(Jacobs, 1994,p. 95). That approach is conservative to protect children from some negative effects, such as social and physical corruption. The other reason is that, children shouldn't be incarcerate the traffic circulation. The roads (and the city) should work as a machine, but the children who play on the streets have great difficulty.

Fowler has the same opinion; "the segregation of land uses means that parents with young children are seldom able to walk with them to stores and institutions during the normal week day. Although not a form of play in the usual sense of the word, non-residential land uses offer the chance for variety and learning to children, where they see different people carrying on different activities." (Fowler, 1992, p.102).

"Children were the principal users of the streets for leisure. An important part of the day time population of a residential neighbourhood, children spend most of their time playing. Preschoolers are especially dependent on the quality of the environment near their home to fulfil their needs for movement and exploration." (Moudon, 1987,p.70)

To understand the importance of streets for children the street should be defined firstly. Street is a linear space. Access is the main function of street. It represent the action. Rapoport defined the street as fallows: "The principal activity with which we are concerned is walking, for which street is commonly the accepted unit in many cultures" and secondly "street is a well known and accepted setting and that this definition, which we all commonly use, is morphological... Streets are the more or less narrow, linear spaces lined by buildings found in settlements and used for circulation and, sometimes, other activities." (Moudon, 1987, p.81) The concept of street reminds variety and dynamism. That variety consist of user groups, activity and space uses. Another peculiarity of street is its being a space that links the private space to public space. The streets in traditional urban pattern are very attractive for children than modern streets. Because they have a variation of space and suitable scale. (Fig. 4.6.)

Why is the street an attractive space for children?

Firstly, street is an extension space of child's home. While the activity range expanses from private space to public space, children is meeting with streets firstly. Each time mother and home are at the center of child's range every time. When child doesn't loose the center of range area, he feels himself in secure. "Home is the center of family life and a child's ultimate a heaven of security and comfort." (Moore, 1991, p.82)

It is possible that, the child can feel himself secure on the street because he can control his environment. On the other hand, accessibility is the main factor to prefer the play area. Physical and visual access can be provided on the street.

Children can go home easily, when they have some needs and adults can access to child directly.

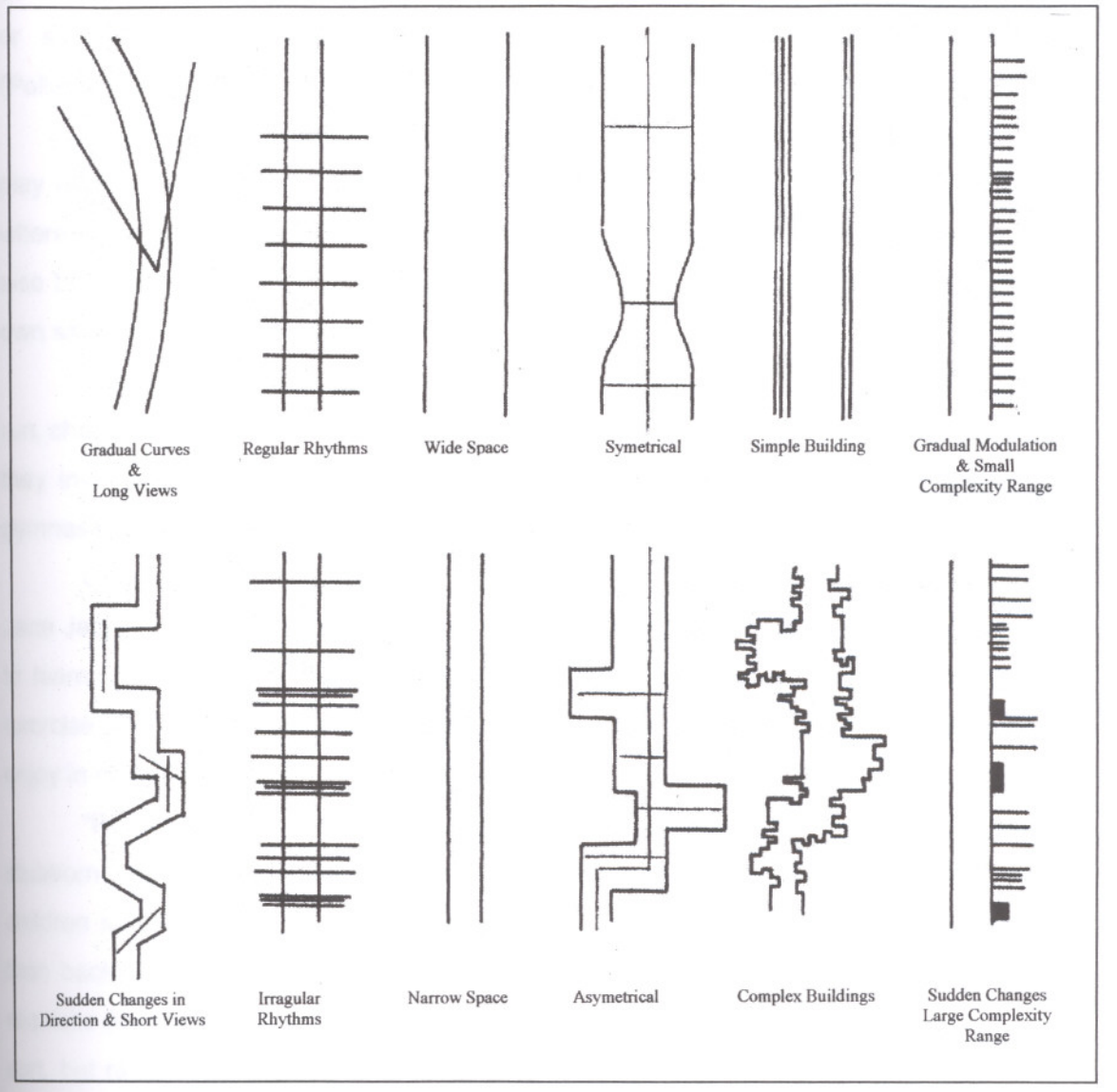

Figure 4.6. Perceptual characteristics for a. motorist and b.pedestrian space. (Redrawn from Rapoport, 1977, p. 244)

The linear peculiarity of streets gives a possibility for linear play to children, such as running, roller skating, tricycle and bicycle riding. "Many of the children's play are suited to the street, sidewalk and alleys, can not played adequately in the playgrounds that have been provided... Those plays can be played without elaborate

equipment." (Jacobs, 1994, p.92). Paving is an important factor of the preference of the streets for play by children. Smooth surface as asphalt and concrete surface is comfortable for wheeled toys, bike and roller skates. Many differing patterns and textures gives variety and interest to different plays. The very nature of the hard, flat or sloped surfaces makes them suitable and popular for many activities. (Pollowy,1977 - Moudon,1987)

In study of Wheway & Millward, children prefer the streets and pavements to play (46% of all observed)."The reasons for that are partly choice, because that is where the children can most easily meet up with friends in a spontaneous way, and also because a significant amount of play involves moving around the estate for its own sake, or to call on friends." (Wheway, 1997, p.3)

"Children can hop, skip, jump, climb, crawl, leap frog, balance, skate, slide, run, chase, sit , lean, twirl on the street. They play along the way to any destination as they investigate with mind and body every opportunity presented by the street as gymnasium."(Moudon,1987, p.48). (Fig. 4.7)

Children want to choose the space and activity without commands or direction. Jane Jacobs said that: "Children in cities need a variety of places in which to play and to learn. They need, among other things, opportunities for all kinds of sports and exercise and physical skills, more opportunities, more easily obtained, than they now enjoy in most cases" (Jacobs, 1994, p.91)

"Recognised games" were suggest instead of incidental play. But children's stubborn preference for fooling around on city streets. Jacobs added that "Why children so frequently find that roaming the lively city sidewalk's is more interesting than backyards or playgrounds? Because the sidewalk are more interesting... The requisite for any of the variety on incidental play is not pretentious equipment of any sort, but rather space at an immediately convenient and interesting place." (Jacobs, 1994, p.96)

The interest of children can change quickly and they may look for new activities or things. They want to learn everything and have great curiosity. Street is consist of variety of people and activity. Those variety satisfy the learning needs of children and also every children can meet every age groups and different social rolls in public life. According to Moore, streets are the social hub of neighbourhood, where children meet, learn about each other and their adult neighbours. "Streets will be the spaces where first steps toward new friendship, socialisation and multicultural

integration take place through play" (Moudon, 1987, p.53). Children can watch from home their friends, who are on the street. They are meeting easily on the street.

Figure 4.7. The streets elements can be used for play. (Moore,1990, p.73)

Teenagers characteristically spent most of time with their peers. Streets and streets corners are important meeting points. Gehl said that, "..we can see that children prefer to be where there are adults or where are other children, instead of where there are only toys." (Gehl, 1987, p.27). These attractive position of streets is depend on density of child.

Fowler said that; "It is important to provide children with unprogrammed space for two reasons. First is that it gives them places where they can socialise away from the scrutiny of adults. The second is that, it meets the need of children to belong to a

neighbourhood; a sense of belonging is acquired through exploration and control over some space a vacant lot, or the sidewalk or a sparsely travelled street." (Fowler, 1992, p.102)

4.3.2. Playgrounds

The modern planning comprehension have segregated the child's area from the other usages. That attitude of zoning have limited the action area of the child in the city, more over it only gave chance to live in this kind of spaces. That situation, in a sense, has a conservative manner; It's aim is to provide a secure space for the child in the city. The outcome may seem as an advantage for the child. But on the other hand the aim to ease the life of the adults lies under that. Anyhow the scientific researches done up to now have shown us that "The Play Areas Designed for the Child" are not welcomed by the child.

Playground is described by children as boring, harmful and antisocial. There are different reasons of the miss-interest for the playgrounds. At the beginning there comes the location of the playgrounds. When we investigate the distribution of the playgrounds in the city, it is realised that they are located out side the activity areas of the child. One of the main worries of the parents is that those playgrounds are mostly adjacent to a dense traffic road.

Another reason for the miss-interest for the playgrounds is the play equipment's. The classic play equipment's used widespread in Turkey are used only children of 5-6 years old under their parents supervision. In a research done in Zurich "For 36% of the children, the nearest playground is no more than 5 minutes away, while for another 29%, it is within 6-10 minutes reach. In this age group, the unaccompanied play in public playgrounds is rather the exception." (Hüttenmoser,1995, p.409).

The maintenance of the play areas are among the factors effecting the usage. Especially in the rainy days if the playgrounds miss drainage the field get muddy and wet. The broken play equipment increases the risk of accidents and injuries. The cleaning of the playgrounds are another great problem. The existence of suitable comfort conditions, clean water, toilets, telephone and shady spaces are important for the basic needs of the child. The suitable artificial lighting of the playgrounds will improve the usage in especially in summer.

4.3.3. School Ground

School grounds are frequently used in the weekends and vacations especially by the boys of the school-age. The sports fields in the school grounds are suitable for team plays. An important reason of the preference of the school grounds is that the children are adopted, used to those places. The sense of belonging is an important factor of that preference. They can be noisy here as much as they want. Besides children can use the school ground as a meeting place. Parents are peaceful with allowing their children to play on the school grounds. On the other hand girls can not use those spaces as much as boys. The most important reason is that the school age children of different genders like to play with same gender groups and those school grounds are designed to comfort the needs of the male children.

4.4. Time Factor of Outdoor Use

The time that children spent outdoors determines how efficient they use the outdoor space. There are many factors determining that time; age, gender of the child, secureness of the environment, attraction of the environment, mothers employment, time of the school, season, weather conditions etc. Even play hours can differ from city to city. Children can play outdoors with parental supervision even at night in coastal towns or in cities where the summer nights are hot enough. According to Hüttenmoser, the duration of the time spent outside correlate with the quality of the living surroundings. "If a child has to be accompanied by an adult within the living surroundings, apart from the fact that half of the these children don't actually play there the adult reaches the limits of his/her possibilities within 1-2 hours. Children, on the other hand, who have the opportunity to spent time alone outside to a large extent play more than 2 hours per day in there living surroundings" (Hüttenmoser, 1995, p.405).

4.5. The Problems of Children's Outdoor Space Use

There are many factors determining the relation of the child with his physical environment. The quality of child's life in his environment is connected with the socio-economic structure of the society he lives in, the level of education, the identity of the

child in the society, social goals projected to the future, the level of technological development besides the physical condition of the environment.

The ability of child's finding a place for himself in the physical environment is related with the importance given to him. That importance shows it's self from home to school, from the street to playgrounds and to the cultural and urban centers. The actions of the child are limited in the outdoor environment, he can not exist in the urban environment and he is closed in the walls of his house. We can handle the sources of that problem in two ways: First the attractive and binding factors of the inner space, second propulsive factors of the outdare space.

4.5.1. Attractive and Binding Factors of The Inner Space

The meaning and the form of the "Public Space" has changed in the process of economic and politic improvement of the world and lost its contents in the social life. Especially in the so called information age that we are living in with all the changes the usage of the outdoor space has changed too. Improvements of the technology and encouragement of the consumption, have changed the reaction and entertainment habits. People are secluding themselves to their houses with the environment objects they bought.

Today the everyday life is directed by the relations of consumption which the capitalist economic order determines. The society which is forced to consumption have come to prefer an individual life with its new habits of consumption. The increase in the variety of entertainment media like video, cd, cassette, computer games etc. have increased the time spent alone in the house. But to improve oneself is possible in the social life with dialogue. Children are also effected by that life style. Thus child is the most easily effected mass of the market. Even from the earliest ages he is trained to be an ideal individual of the consumption society. The man who is made to fit the personal life style in the private space is less familiar with production and sharing in the social grounds. While that situation increases, the effort of self-sufficientness causes alienation and isolation of man and decreases the sense of social confidence.

With the improvement of the electronic technology, mass communication media's like television and computers have self captiuated the man in his private space. Postman in his book of "Disappearance of Childhood" have investigated the

condition of the child in the 20th century. Basically he points out the fact that the difference between child and adult is diminishing and the meaning of childhood is disappearing. Pedagogist are dwelling on the fact of vanishing of the child. By the help of social changes and especially the technological improvements today we are at a point to see the birth of "adultified" child and "childified" adult. Nowadays education is not the only way to be cultured and adequate which it is bellowed that adults have. In the information age where TV and electric, nonprint media's are powerful, adult and child sensitivities are changing places without questioning and they are mixing in the same idea. (Postman, 1983)

According to Postman decreasement of the difference between the child and adult is connected with the electronic mass communication which started with the invention of the telegraph in 1850. Especially with the television, the quality, quantity, flow and receiving of the information has changed, it turned the communication from local to global. It look over the control of the symbolic environment from school and home. The media has put the basic perceptions to the place of the analytic skills, it maintained the collapsing of the social hierarchy and abolished the category differences between child and adults. In that environment of communication has revealed every personal secret, it exhibited and make shred all the violence, trouble, forgery and distrustfulness It provided an environment where the satisfaction of any kind of consumption is transferred directly to the child. (Postman, 1983, p.67-80)

While Mendel points out that child(preserved especially during the education) is abstracted to see the reality of life; Postman says that the communication environment today has put all the negativity's infront of the child's eyes. Those two opinions may seem contradictory but in own century the chance of child having role in the life is abstracted. Child is made to be a spectator, not an actor. In other words he's passificated in the life. Child can see anything in the communication environment but the actions that he does and his self experiences are limited.

Child has started to be seen as being destined to do what his parents wants him to do or what they desired to do not as a free individual who will develop his character in his own way. The government sees the child as the "guaranty of the tomorrow". For that reason the aim of the education is: "... to perceive child as an object to be reshaped for the sake of society and to make him a perfect human resource." (Yazgan, 1997, p.81) There are increasing efforts of making more self-confident, economically, powerful, successful and well-adjusted individuals out of

children. Being successful and well-adjusted individuals out of children. Being successful in the competitive society and continuous effort to be informed to cope with the fast changing technology is expected from the child. In the 20th century the educationists show a more reconciling manner; "The raising of the child to meet the demands of the social changes without damaging the natural character." (Tan, 1993, p.12) That is a complicated problem that they are going to deal with for more.

On the other hand in a world where there's fast changes there's a comfortable living model presented, and that ideal is forced to the individual. That constrainment is resulting with a deadly competition between individuals. And the starting age of that competition is decreasing each day. To reach the ideal of universal model of living, programmed life starts from the early ages of the childhood, that gives the child no chance to spend his time as he wants to do. Especially most of the time of the school-age children is taken up with school, private lessons, music courses etc. Children do most of their activities in indoor spaces. The transportation between those considered closed spaces is usually done by vehicles by which it makes the outdoor usage even less.

Child is dependent to the indoor space by the increasement of the wealth of the family, being more tied to conformist life conditions and the change of the consumption habits.

4.5.2. The Propulsive Factors of Outdoor Space

Another reason of the child's obligance to the indoor space is the negativity's of the outdoor space. Above those comes the problem of security. In the researches done on that topic, parents have revelled their anxiety about sending their children to outdoor play. According to CUULS Studies (1976-in six An Francisco Bay Area communities-USA and in three City-UK), the reasons of environment fears were; traffic danger, 27%, social apprehension/ fear of attack ,25; Get lost/too far, 17%; Physical dangers 17%. (Moore, in Altman, 1980,p.102) "Fear of traffic(33%), fear of strancers (23%), and fear of physical hazards (24 %) were the principal reasons given by children when asked about places their parents did not allow them to visit."(Moore,1990, p.201) The resign anxiety about outdoor space is limiting the activity area of the child. The most importance causes of that anxiety is traffic and social security.

As a result of the increasing dimensions of the transportation, the number of vehicles on traffic and determination of city scale by reference to the automobile is making children to face bigger danger when they are on street. Because of the enormous density of the vehicles on traffic the outdoor space is divided into traffic roads and parking lots. Urban space is turned into automobile space.

Another problem of accessibility is observed by the increase in the number of storeys. Many researches have been done since the 1970's about the outdoor space usage of the children living in high-rise buildings, their play activities and social relations. The results of those researches can be summarised as follows:

- The children who live in high-rise buildings have a tendency to do more passive actions. They spend most of their time with these actions.
- The parents revealing the fact that they are unable to control their children, are limiting their outdoor plays.
- The children's who lives in high-rise buildings have less chance to make friendship with other children because their outdoor activities are limited. Loneliness, lack of ability to form relations, asocialisation have been observed among these children.
- Lack of physical security in the form of elevator and stair accidents are always possible. (Sivri,1993)

These difficulties of the vertical transportation not only causes parents to apply restrictions but also draws back the child from going out to play. Especially the small children have difficulties in frequent reaching to the house to drink water, go to the toilet, bring out or carry in toys etc.

Another important problem about the outdoor space is the demising of the feeling of social secureness. Researchers in North America and Europe began to learn on the problem of social security of children in the public space during 1980's and 1990's. Especially in great cities the anxiety for social dangers have surpassed the other problems. According to the research done in Los Angeles with 115 children, "The children describe the social dynamics which make the physical ecology of urban Los Angeles inhospitable to them. They often see the city as a dangerous, violent and unpredictable place...They say they are unable to freely occupy or explore their yards, their streets, their neighbourhoods. In many ways, their worlds are contracting rather than expanding" Children have stated that the feel more secure in closed spaces like their home, school and class and in crowding malls with their parents. (Buss, 1995,

p.340-351) Social unsecureness developing in the public have become the main factor of parents not permitting their children to go outdoors. Urbanisation has diminished the neighbourhood relations and alienation to public life has been observed. By the time the confidence between people in public decreases and a fear have sprung for the "stranger". Especially the fear of people so called "normal against people so called "marginal" have resulted with the desertion of public space. The insensitiveness of the media while reporting events have increased this lack of confidence in the public. (Valentine, 1996) Those anxieties have caused the formation of separate regions for different age groups and gender to use with confidence. By that separation the acting space for women and children in public space have narrowed by the time. The public space becomes a space for the adults especially male adults.

In the conditions parents begins to show an extremely conservative attitude. Those anxieties of parents have penetrated the child's mind, the formation of social confidence is blocked. When child becomes a youngster and enters the period of puberty that lack of confidence causes aggression. That aggressive puberty character of youngster can even make him to enter a gang. Lack of confidence causes the youngster to form an area of defence and he does that by forming gangs with his friends. In that way a new danger (teenage gangs) is born for the "normal" adult in public space. As we see a problem causes another problem and that is a complete paradox. The excessive conservative attitudes of families can not solve that problem. (Valentine, 1996)

4.6. The Needs of Children

As a result of surveys, it can be summarised the needs of children about the at outdoor environment as fallows:

- For the children's physical health the environment should have enough hygienic condition and should be protected from physical dangers, pollution, traffic and noise. Besides proper, lightening conditions should be provided.
- Proper expedients should be taken to improve the social confidence of both the parents and the children. Certain environment where mother can watch her child playing at a distance should be proposed.

- Child should have easy contact with other children and neighbouring adults. There should be proper spaces to provide that around the house or on the street.
- Besides programmed, formal playgrounds, there should be areas where spontaneous play can take place. Those areas will help the child to develop their own character, go beyond the limits of ordinary programmed life and free will.
- Child learns his environment with his physical actions (by walking, running, climbing, jumping, smelling, seeing etc.). There should be spatial variety to increase his spatial experience. There should be different textures on the ground, different highest and an animated topography in the playgrounds.
- Child's getting to know the nature is possible by one to one interaction with it. The playground should have enough greenery.
- Besides protected spaces where they can be alone and spaces for active and passive play, there should be places where they can act as a group. Plus linear spaces where they can act as a group. Plus linear spaces where they can do their linear plays.

Chapter 5

DESIGN GUIDELINES OF PLAY AREAS

It is an important point to decide on the design approach for the play areas of children. The design and application processes differ from the existing residential areas, where rehabilitation or redesign projects are developed, aiming to increase the number of play areas, to the developing residential areas. However, in both of these processes user, location and time factors should be regarded most carefully.

To known about the socio-economic structure of the environment in which children live and their way of life are important in the determination of the problems and requirements caused by these facts. The age and gender identities, requirements and attitudes of the user groups should be considered during design process. The development process of children are needed to be considered also because the user group of play areas consist of children. That development process involves physical, cognitive and social development and child perceptions. Childhood is the period when people are very close to their nature. So it is not a proper attitude to try to steer him during that period. All the knowledge about children can be important just to provide children with an environment where they can live their childhood in better conditions.

Designers should never forget that the child must exist everywhere that is within the limits of neighbourhood and that the child should be free to choose his own play area and should expand a surrounding that consist of home-garden-street-school and playground by his own senses. The place where the children should not be apart from the urban environment but should form a hierarchical chain following one another.

Time is another dimension in the design process. The changes in the life styles of people causes changes in their requirements and expectations from the spaces they live. Especially the changes in the requests, requirements and interests of children steer their expectations from their environment (especially from the playgrounds). For that reason, it is not proper to do statical and stable designs. Dimension of dynamism also affects the design process. Consequently it is necessary to observe the results of the design, afterwards, and to reform and renew the design according to the tendencies and requests of the users.

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There are certain criteria that should be considered in the design of the play areas of children.

5.1. General Design Guidelines

Accessibility; is the initial factor that affect the children's usage of the space. Accessibility of children from the place they are to home (to mother) and accessibility of mother to the children are two basic subjects. While for children physical accessibility gains importance, for mother both visual and auditory accessibility gains importance as well as physical accessibility, in controlling the child. The possibility of mother's control on the child while he is at the outdoors, also increases the child's outdoor activities. Marcus, while she summarises the ways to widen the living environment that is appropriate for children also discusses the following issues: "direct access to private open space for easily supervised outdoor play by small children" and "direct, safe access to an area for communal outdoor play for school-age and older children" (Marcus and Sarkissian, 1986, p.109) (Fig. 5.1)

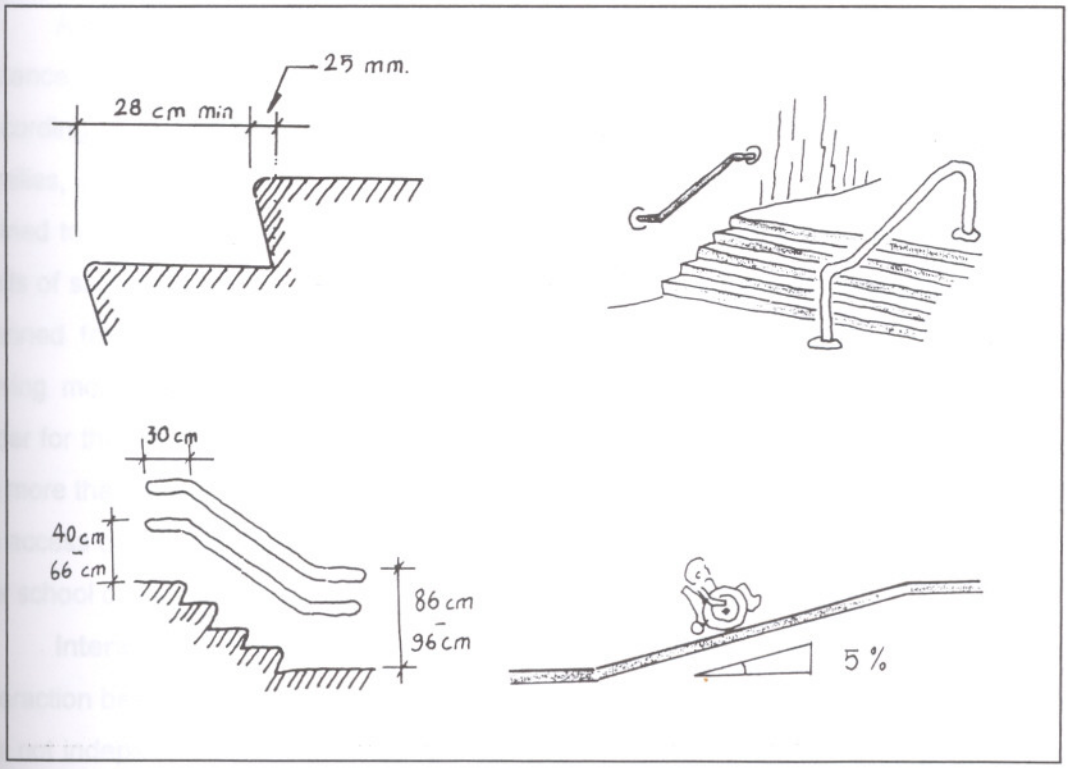


Figure 5.1. Standards for accessibility in play areas.

Physical comfort, physical and social security are concepts that increases the accessibility of children. The factors that determine the child's accessibility are:

- traffic density and speed
- social security(strangers, older children, street children, kidnapping)
- accidents (falling, bumping)
- weather conditions(rain and hot days)
- age and gender
- height of the building (accessibility related with the stairs and elevator)

The above mentioned factors form the fear of the parents and those fears limit the outdoor activities of the children, the time they spent outdoors and the usage area.

" It is important that; providing of minimise potential contact between children and traffic. Children will always be attracted to streets. The traffic and pedestrian circulation can not be segregated, especially in high density house area. Traffic management (slowing speed and reducing volume) is crucial for children's safety. In neighbourhoods that limit traffic access, children may start to be careless and need to be shielded from the heavier traffic flows of peripheral distributor roads." (Marcus and Sarkissian,1986, p.114)

As the height of the building increases and if the play area is located at a distance where it is impossible to have visual control, the accessibility decreases. According to the researches of Littlewood and Thinker; due to the usage difficulties of families, in most European countries housing policies started to change. In Finland it is tried to increase the rate of high-rise buildings; in Nederland they are trying to put limits of six storeys to housing buildings; in Hungary, Belgium and Holland low storey planned for families; The government of Switzerland does not think that houses having more than four storeys are convenient for families.(Sivri,1993, p.68-69) In order for the children to be able to have a vertical accessibility the houses should not be more than five storeys. Horizontally the pre-school children should be provided with an access of 200 meters while school children with an access of 400 meters of radius. For school children this can go up to 800 meters. (Fig 5.2)

Interaction; During the childhood period when dynamism is so dense, the interaction between space, society and activities are very important. All these relations are not independent from each other. The place in which the child lives should have the possibilities of interactions of various social groups. Children generally have an inclination toward forming a team and social interactions. For those reason, they

should be able to have access to places where they can meet with their friends, find new friends and do all kinds of passive ar active facilities. Connections between spaces with different characteristics, the fluency of crossing from one place to another are two factors that ease the transition from one activity to the other. (Fig 5.3)

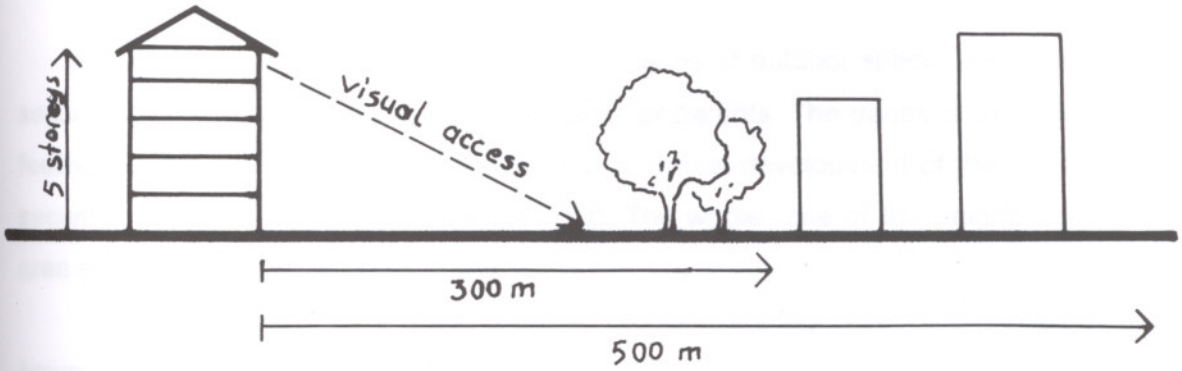
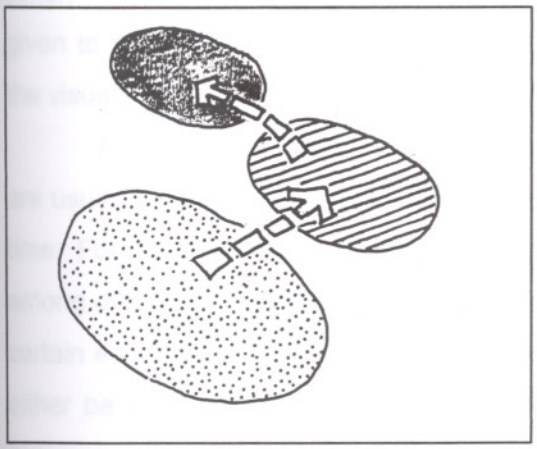
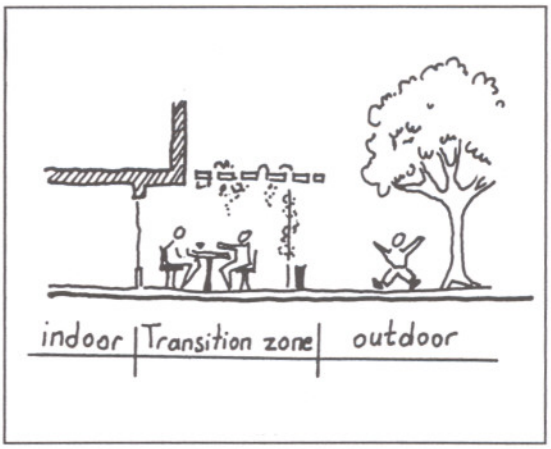


Figure 5.2. Vertical and horizontal accessibility.





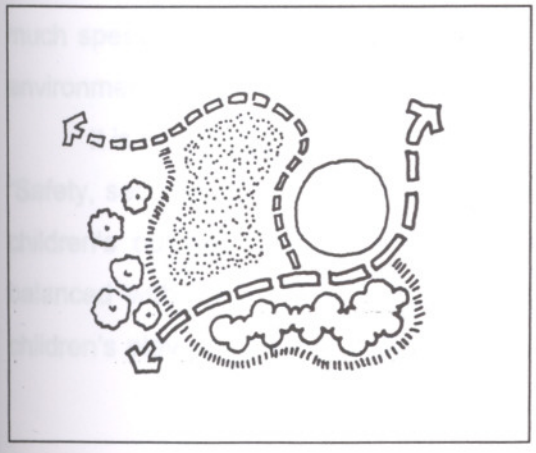


Figure 5.3. Transition spaces allow children to move comfortably. (Moore, 1992)

Physical interaction can be expressed as:

closed space ↔ semi-open space ↔ open space

private space ↔ semi private ↔ semi public ↔ public

"A semi private transition space between the privacy of the home and the publicness of the street, footpath or access way provides an extremely important locale for casual socialising" (Pallowy, 1977, p.53)

Security and Safety; In the children's usage of outdoor space, the feeling of security is important both for children and also for parents. The traces of this security feeling can be seen easily at the space. For a natural development of the feeling of security some conditions should be provided. The whole site of the neighbourhood area should be safe.

The play areas that have different properties should be determined well, however among those places a very strong visual and physical accessibility in a place, he should also be able to have a contact with the other places, as well. He should have a visual and audial access to the other places and interact with these places. Such as the visual interaction of a child, who plays at the garden, with the street. When constituting a border to the play area of a child a special attention should be given to the heights and densities of the separator elements in order not to obstruct the visual and audial accessibility of the mother.

As mentioned above, security from traffic flow should be achieved. Children are usually very active, excited and imprudent. A falling or a bump may occur at any time. For such accidents presentations should be taken. The height differences among different levels shouldn't be very much; at the places where falls are possible certain equipment's should exist for holding or for protection; and the surface should either be grass or sand. Moreover, children are very curious about the dangerous occurrences such as playing with fire, dangerously driving the bicycles, or making too much speed. That curiosity of them can be eliminated by providing more controlled environment.

It is critical point for child development that ;

"Safety, security and liability have become major factors in determining the quality of children's outdoor play environments. The goals of safety and security must be balanced with the goal of providing, stimulating and challenging environments for children's play and development. Without taking risks, children cannot learn their full

potential. Settings must challenge them to take risks without being hazardous." (Moore, 1992, p.xiii)

It is not a correct approach to protect children from the risks, entirely. Some risks can be taken for children to develop abilities, methods and reactions for problems they may face. "Do not relate challenges to heights, hazards and danger, but to increasingly more difficult mastery of the body" (Moore et.all, 1992, p.11)

Privacy; For children the meaning of privacy is:

- being alone without any interruptions or interferences from the outside
- secrecy of any in formation about themselves
- not bothered or disturbed by someone else
- control of accessibility to the place they are present

Children wish to try the actions, information and games, that they saw, in a place where nobody can see them. They may not want the others to see the possible faults. Besides just like adults they also need a place where they can be alone by themselves or alone with a few friends (Fig. 5.4). "Private spaces supporting quiet exploration, that children can get into but adults can not, such as under low platforms, spaces on different levels, and access areas screened by vegetation"(Moore et.all, 1992, p.16)

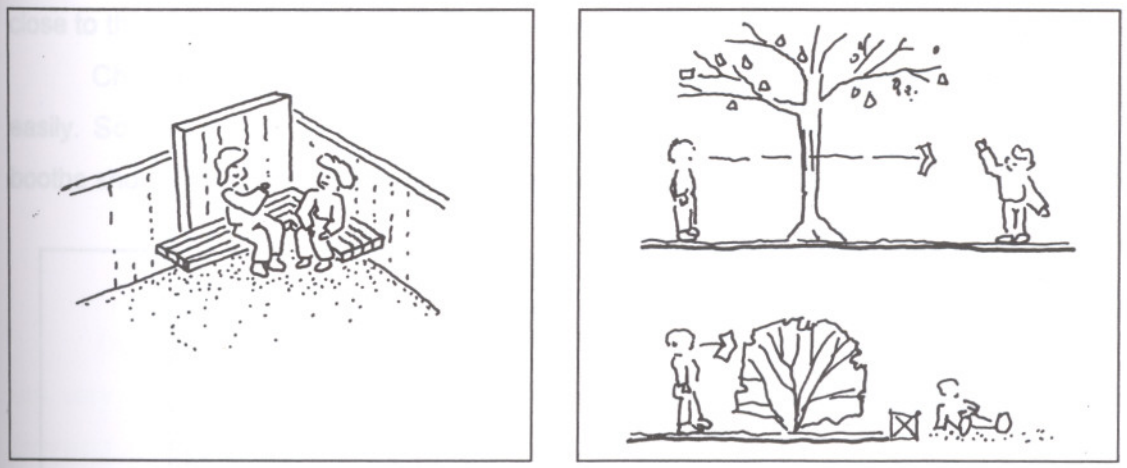


Figure 5.4. Barriers can define different degrees of privacy. (Moore, 1992)

However, in the formation of private places certain sensitivity is necessary. Especially, for preschool child, mother should have easy access to reach their child, should be able to control him from a distance. So, the play areas shouldn't entirely form a closed spaces. It should have the sense of privacy, not isolation.

Scale; Dimensions of the place where the child takes place and the dimensions of the child himself should be harmony. That identity provides the child to perceive the place more easily, to feel secure and so the child owns the place. The scale of the space has different effects on a child and on an adult. Children perceive the place from their own eye level.

In play areas the scales should be in accordance with the age groups of children and with the activities. The preschool children prefer more passive activities and play in groups of two or three children. As a result, smaller scale play areas should be designed for them. That age group especially prefer places such as under staircase or under balconies, because they have the most appropriate scales. Some places can be used by children for those kinds of purposes or the children should have appropriate materials and space to constitute a space of their own. School children, on the other hand, need larger spaces because their activities are more dynamic and also group games increase at that age. Their range of vision is also close to the adults'.

Children use the elements that are proportioned according to their size, more easily. So, the street furniture such as: banks, billboard, garbage cans, telephone booths should be designed according to the children scale. (Fig. 5.5.)

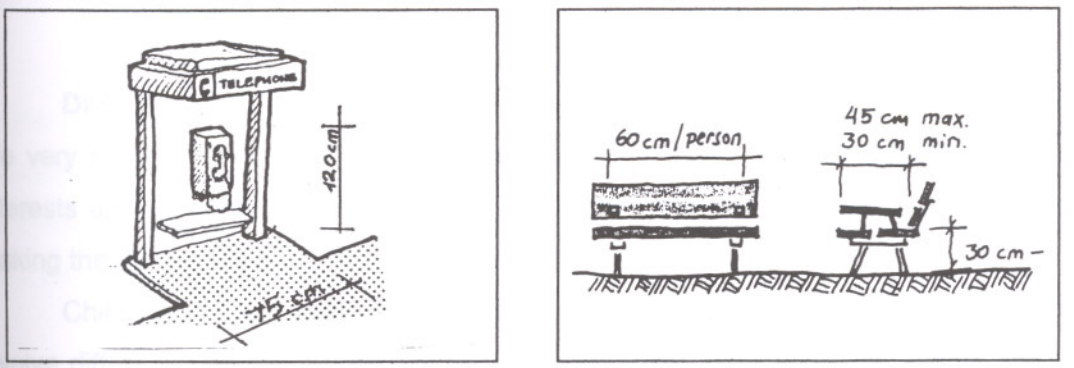


Figure 5.5. The standards of telephone box and bench for children.

Identity; There are certain reference elements for children to distinguish their way and define the place. Children choose those landmarks in relation with their interests and requirements. A play element, a tree, a pool or a street lamp can be one of those landmarks. With their imagination children can constitute connections with the elements in various ways, can give different meanings to them and can personify them. If a play area has those kinds of elements it becomes a special place for children. "Landmarks can very effective in helping children... acquire clear memories of their environment. These are valuable means for children to develop psychological independence" (Moore et. all, 1992, p.19)

Physical Comfort is the most important factor that increases the attractiveness of the place in the realisation of the activities. A comfortable place should have the properties that are listed below:

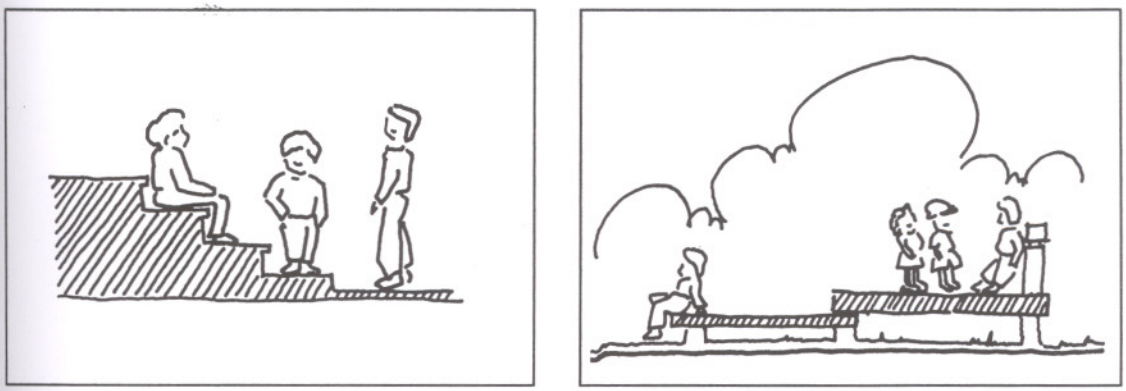
- Should be away from the elements that threatens the physical health of children (noise, pollution, etc.)
- Should not allow physical accidents,
- Should not be very crowded,
- Should have the identity to involve various (hard surface for riding bicycles, grass surface for playing ball etc.)
- Should be protected from the seasonal conditions, semi-open space for protection from the rain, shady places to protect from sun, and places protected from wind.
- Toilet, drinking fountain, telephone should be available,
- Both the play equipment and street furniture's should not be broken or corrupted.

Diversity; Because the children are full of energy, because their imagination are very rich and because they are curious about everything their perception and interests are different. For those reasons, diversification and variety are the factors making the places attractive for children.

Child may wish to do different activities in a given time. So, the spaces that involve different activities should be together and with easy contacts. Active spaces are appropriate for the scale and dynamism of children. The existence of both passive and active plays in a play are can bring many children together. Diversity of activities should give a chance of different experiences. Children have to learn their abilities of

activity, to try activities such as climbing, sliding, jumping and to learn the risk limitations. Children learn about the facts of up-down, right-left, deep-shallow, soft-hard by experimenting in the best way. Therefore, different ground levels (Fig. 5.6), different surfaces such as grass, sand and hard surfaces (Fig. 5.7), different materials like wood, stone should exist. Besides existence of various play elements in a playground is a factor to increase the activities of children. Plants, street furniture, play equipment's, walls, stairs and other structural elements enriches the quality of the space.

It should involve people and groups of people that do different activities and belong to different age groups whom children can contact with. Repairmen of a car on the street can draw children's interest.



a. b.

Figure 5.6. a. Multilevel structures, support different body positions and variety of social interaction. b. Play settings should provide opportunities to play above the ground level. (Moore, 1992)

Flexibility; In playgrounds children's interest diminish in response to passive elements. Because the interest and requirements of children are flexible, the play elements should be also flexible and active. "With careful planning, a space can allow for continual "tailoring" without requiring costly or time-consuming renovations. Care must be taken to design flexible structure." (Moore et.all ,1992, p.12)

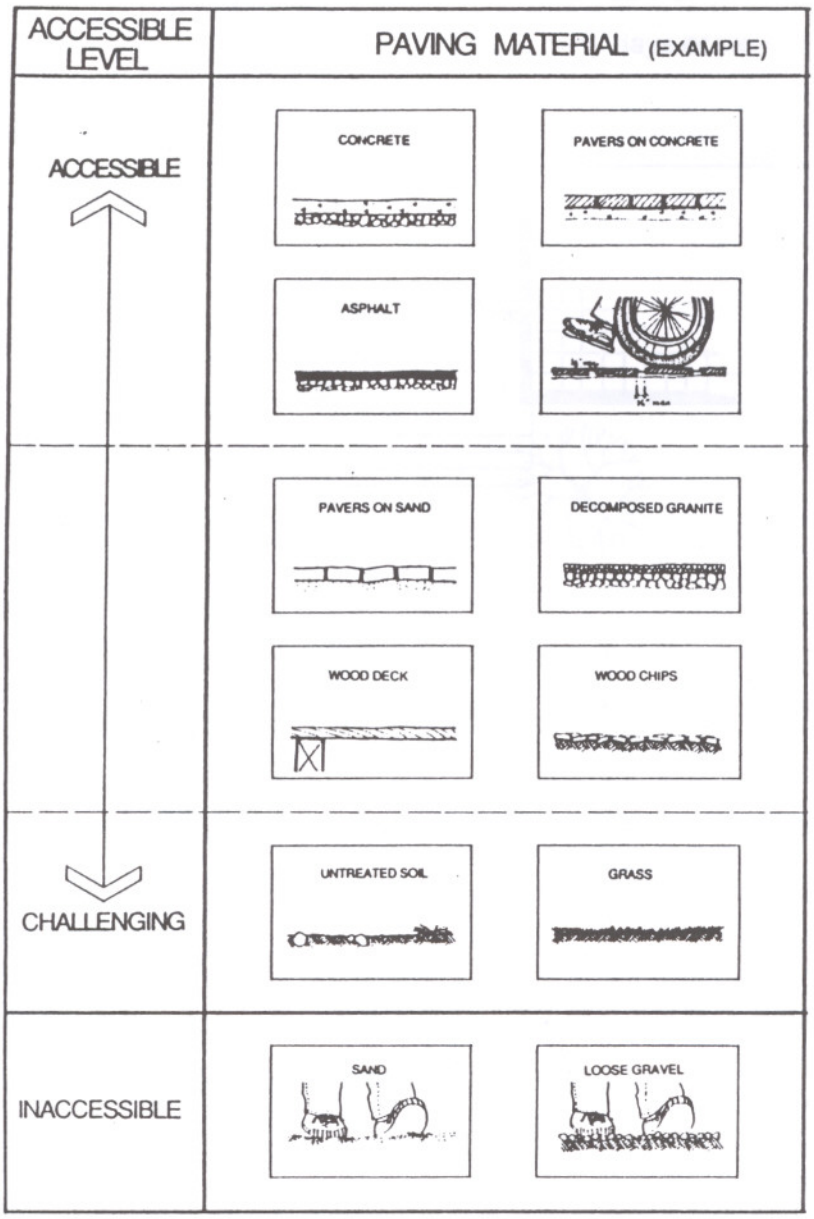


Figure 5.7. Different paving materials. (Moore, 1992)

5.2. Design Guidelines of Home Based Places

5.2.1. Home Entrance and Doorstep

Home entrances are frequently used by children for the purposes of gathering together, playing passive games or just watching the street. Home entrances should be defined very well. In front of the door there should be a stair with 3-4 steps and a

vacant space. It should be protected from rain and sun. (Fig. 5.8) A semi-open spaces of about 15 sq meters can be designed at the garden on the ground floor of the building for children to play games, especially in rainy days or vary hot days.

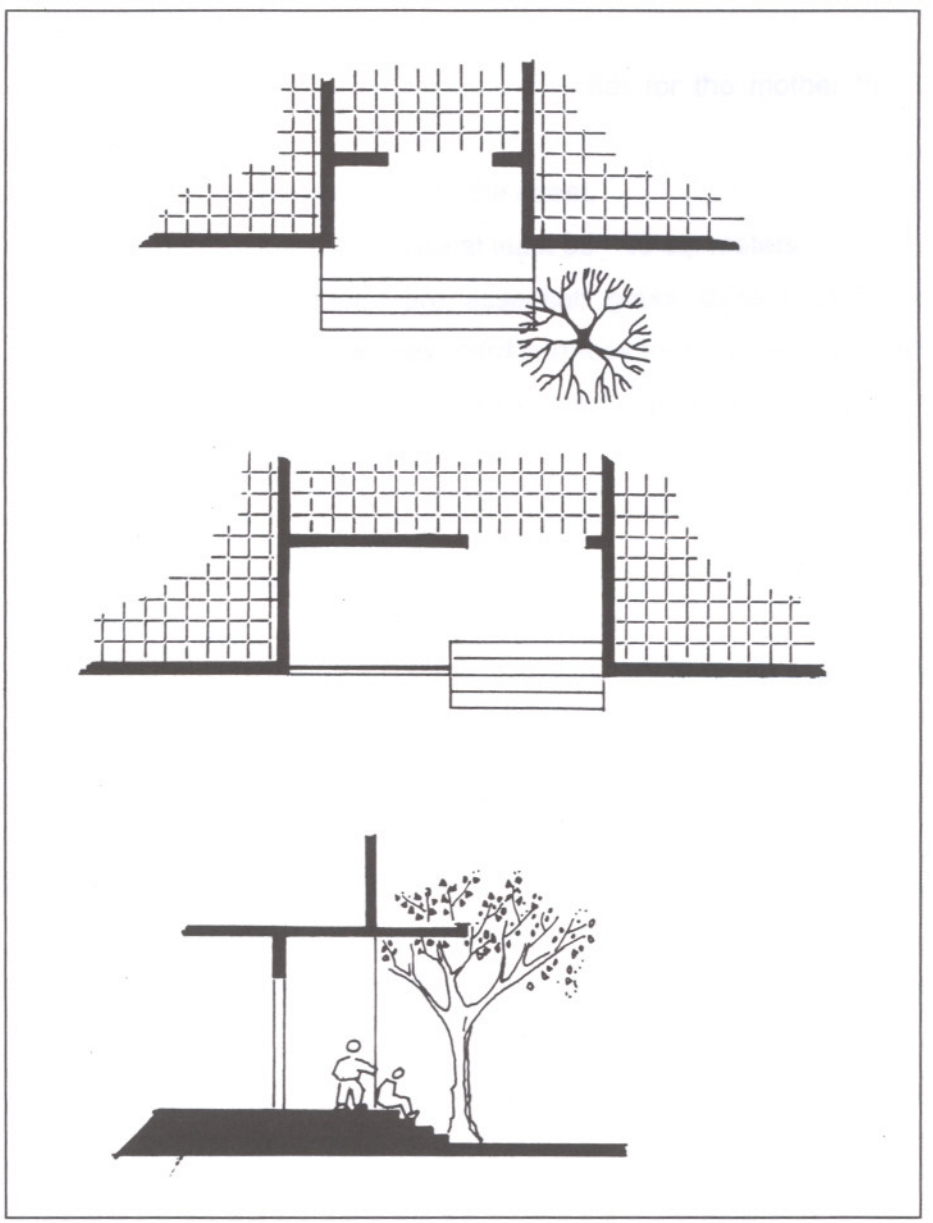


Figure 5.8. Home entrances.

5.2.2. Gardens

The garden is a continuation of the home environment. Gardens are mostly preferred by preschool children as a play area, because they can be in close relation with the mother and home. In order for the children to use the yard effectively.

Within the developing housing areas

- Visual access should be provided in order for the mother to be able to control the child.
- Yard should be accessible from the street,
- Back or front garden should be at least 35 - 40 sq. meters.
- Three kinds of surfaces are essential; grass surface to roll on, sand surfaces for manipulative play, hard surfaces for tricycles or model car.
- Multi level buildings there should be a wc and lavatory in relation with the entrance hall.
- There should be a drinking fountain at the garden.
- In multi level row houses, the back garden should be accessible for residents.
- Outbuildings should be solved at the basement floor not at the back garden.
- In the areas where multi level buildings exist, the garden should not be used as parking areas. Car parking should be planned either on the streets or on public lands.
- To get sufficient sun light the length of the back yards of each building a common play areas for small children can be acquired.
- Side gardens should be planned so that children can use this area as a plant flowers.
- Walls of gardens are important in defining a space. Walls should be have a height so that small children cannot escape from the yard (45- 50 cm). At the same time older children can walk, sit on the walls and jump over the walls. (Fig. 5.9)
- In the housing areas private - semi private - semi public - public space relations should be formed, which means that there should be home entrance - yards - street relations. Open spaces in between buildings should be defined, have hierarchical order, and the crossings between the places should be strong.

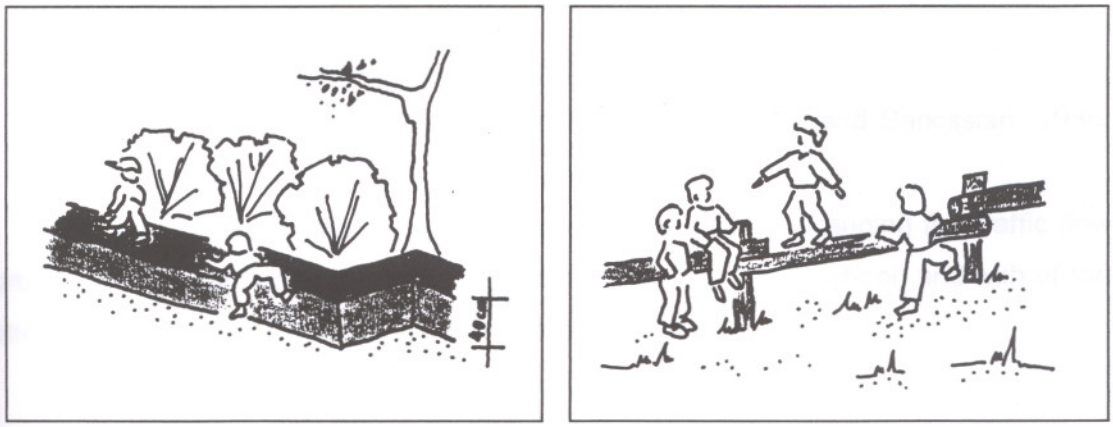


Figure 5.9. Barriers can be designed as play elements.. (Moore, 1992)

In Developed Housing Area;

- Criteria suggested for the developing housing areas should be applied in the developed housing areas as much as possible.
- If there is insufficient car parking possibilities, that problem can be solved at the back garden. However, certain arrangements should be done for children to play during hours when it is empty.
- In developed housing areas the adjacent side gardens can be joined to form more useful spaces. "The ownership on a lot should be determined horizontally not vertically." (Ergin, 1982b, p.437)

5.3. Street as Playground

Streets always draw children's attention for there exist many different activities and people belonging to different age groups. Streets are important in the sense that they form a base for public life and therefore are important in the social development of children. Streets that form an environment for children should be designed so that they can form a suitable place for their usage. That can be achieved in two ways; by the rearrangement of the present streets or by planning streets that can be easily used by pedestrians and especially by children.

There are many methods to make the streets convenient for the pedestrians:

- "Narrowing roadways,
- Limiting the length of straight stretches,
- Creating cul-de sac,

- Closing of streets,
- Placing speed bumps at intervals in the roadway,
- Erecting barriers to eliminate through traffic." (Marcus and Sarkissian, 1986, p.114) (Fig. 5.10)

Those methods can be used under the conditions of arranging the traffic flow properly and according to the location (distance to the park or school) and with of the streets, to usage density, to getting sufficient sun light, to winds.

5.3.1. Sidewalk

If it has adequate width and if the maximum speed rates 40 km per hour, broad sidewalk's should be planned. According to Jacobs and Marcus, in street sections sidewalk width should be at least six meters. (Jacobs, 1994; Marcus and Sarkissian, 1986) (Fig. 5.11)

In the design arrangements of sidewalk's (Marcus and Sarkissian, 1986) :

- Street furniture on the sidewalk's should have dimensions so that children can sit on, jump from and climb on.
- Sidewalk's should have connections with the yards or house entrances, a continuity should be established in between the spaces by pavement and level arrangements.
- To provide shadow, trees should be planted the sidewalk's. (Fig. 5.12)
- There should be niches on the sidewalk's as meeting places for teenagers and children. (Fig. 5.13)
- For driving bicycles, roller skating, smooth, hard or asphalt surface should be formed. Again on these axes there should be niches where children can rest or meet.

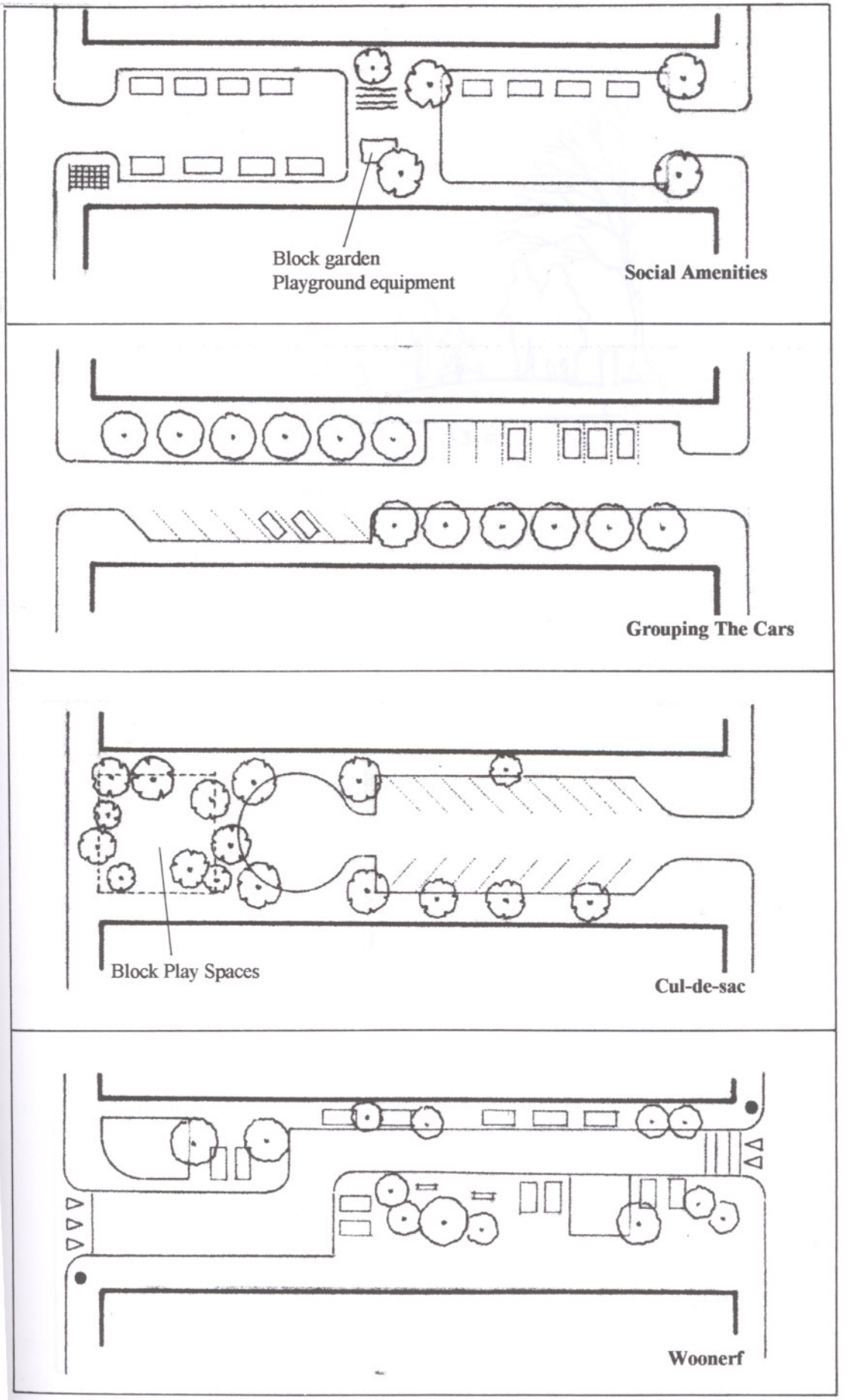


Figure 5.10. Streets made more livable for children. (Appleyard, p.208)

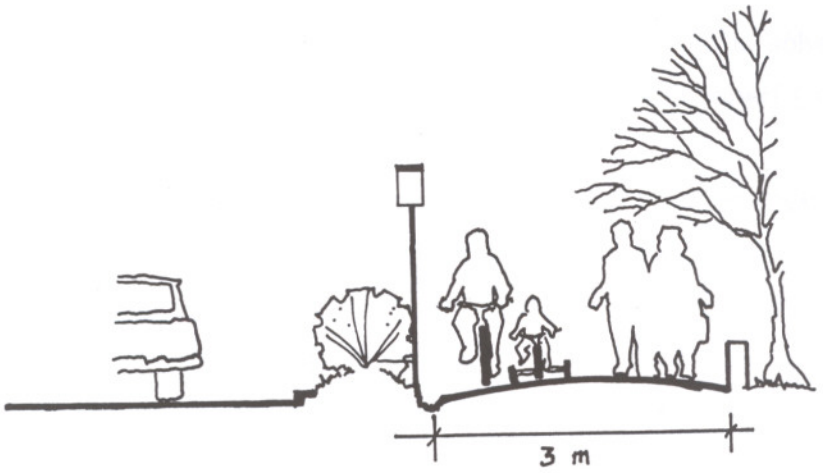


Figure 5.11. With of pathway.

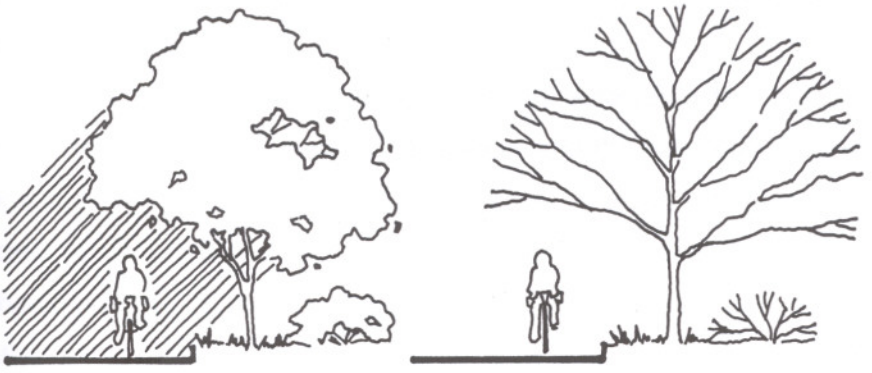


Figure 5.12. Climate modification on sidewalk.

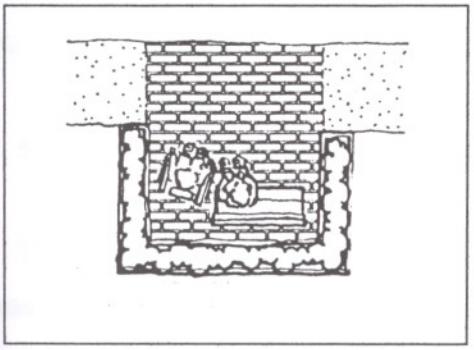


Figure 5.13. The niche on the street.

(Moore, 1992, p.184)

5.3.2. Woonerf

In the systems where vehicle and pedestrian traffic is solved together and where the rights of pedestrians have priority, called as **Woonerf** (or mixer court in England), there are some principles:

It has been mentioned in the previous chapters that the streets are among the spaces that child uses most frequently. However there are numerous dangers that they face while playing on the streets. Traffic accidents comes first among them. Making streets more livable spaces is an important method of increasing the usage of public spaces. Neighbourhood streets have been rehabilitated or revitalised since 1960's especially in the European countries. The aim is more useable and accessible streets for pedestrian. "Traffic management, combined with increased open space for play, socialisation and leisure, are seen as two essential components of the livability of existing neighbourhoods. Traffic plans are developed for entire residential precincts to eliminate through traffic and to reduce driving speeds." (Moudon,1987, p.47) Those projects have been important for child users. They are affected by them more than adults.

Woonerf is the earliest implementation. According to Appleyard, the Streets become a space shared between pedestrian and the automobiles. Pedestrians have the legal right of way over motorised vehicles. (Appleyard , 1981, p.250) "It is a traffic-restricted section of a residential area with street furniture emphasising its functions as a home setting." (Carr et.a,1992,p.140) That implementation has been developed in Netherlands since 1960's and then has spread to many other countries such as Britain, Denmark, Sweden and Germany since 1977. The woonerf concept has been extensively developed and tested.

" The most recent concept, the Dutch woonerf, or residential yard, represent the latest stage in the evolution of the protected neighbourhood. In addition to the design of such areas it contains a new and powerful area. It legally changes the rules of traffic behaviour within the protected area." (Appleyard , 1981,p.243)

5.3.2.1. The Result of Implementations of Woonerf

The Woonerf Implementation in Hannover was observed by Brenda Eubank. She was choosen two streets in Linden -Süd (Fig. 5.14). The streets were analysed before and after the redesign. "The Hannover Planning Department viewed the

neighbourhood as assenting for play and was in the process of developing a network of Woonerven and other open space throughout the neighbourhood to invite use by all ages" (Moudon, 1987, p.65).

Figure 5.14. The map of the Linden-Süd show the open space improvements completed by 1983 (Moudon, 1987, p.74)

The results of the observations are;

The actual number of stationary users are increased after redesign by increasing the time that individuals spent in the Woonerf.

Children were the principal users of the streets. Children perceive the woonerf as a new setting for play: The number of children's use the streets increased substantially after redesign. But number of adults did not increase. The Figure 5.15 shows that the activities and proportions after and before redesign.

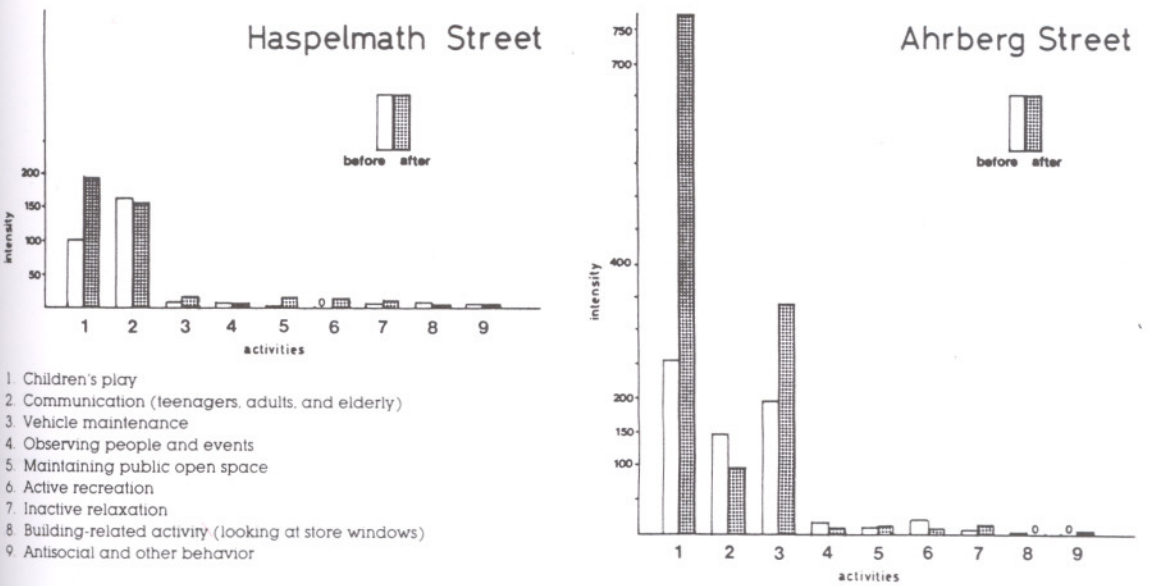


Figure 5.15. Activities observed before and after redesign in Haspelmath and Ahrberg Street (in Hannover) (Moudon, 1987, p.72)

Children's Play, become more complex after the redesign. "Increases were noted in games requiring more space and good playing surface (such as ball games), in other physical motor, large muscle play (jumping, climbing, running and so forth) and in the use of bicycle and the toy vehicles." Children used the streets in the entire width, including the former traffic lane. The play activity expand in the streets space. (Fig. 5.16 ; Fig. 5.17) The physical elements used by children were related to the type and location of play. Children's play in woonerf demonstrated more interaction with the physical environment, particularly with street furnishings. The furnishings can be

used for different purposes by children. (Moudon,1987, p.71) According to Appleyard, children can play over all the street space and there are more behavioural contacts. (Appleyard,198, p.251)

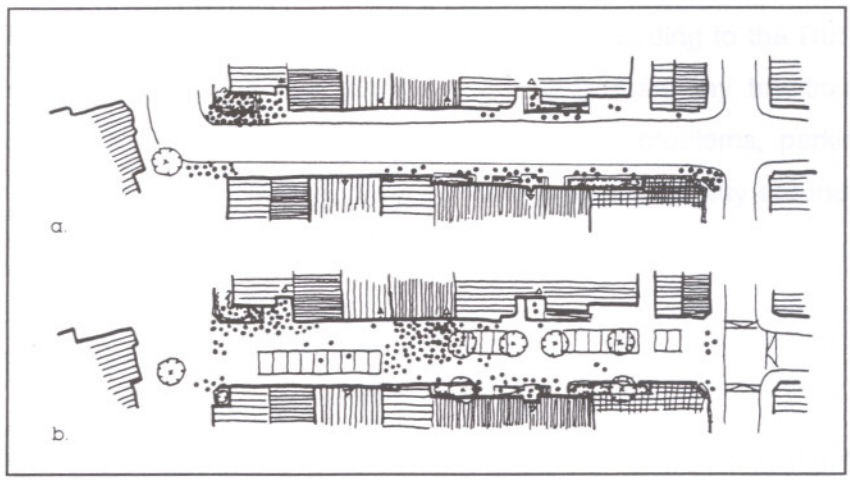


Figure 5.16. Behaviour map of children playing in Haspelmath street a. before, and b. after physical changes were made. (Moudon, 1987, p.74)

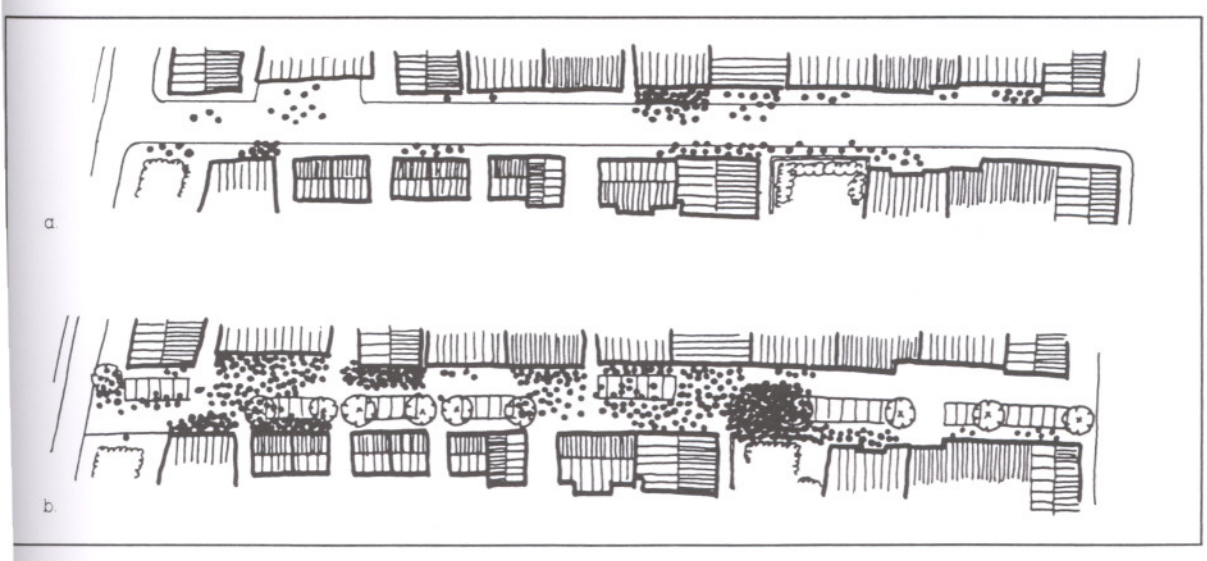


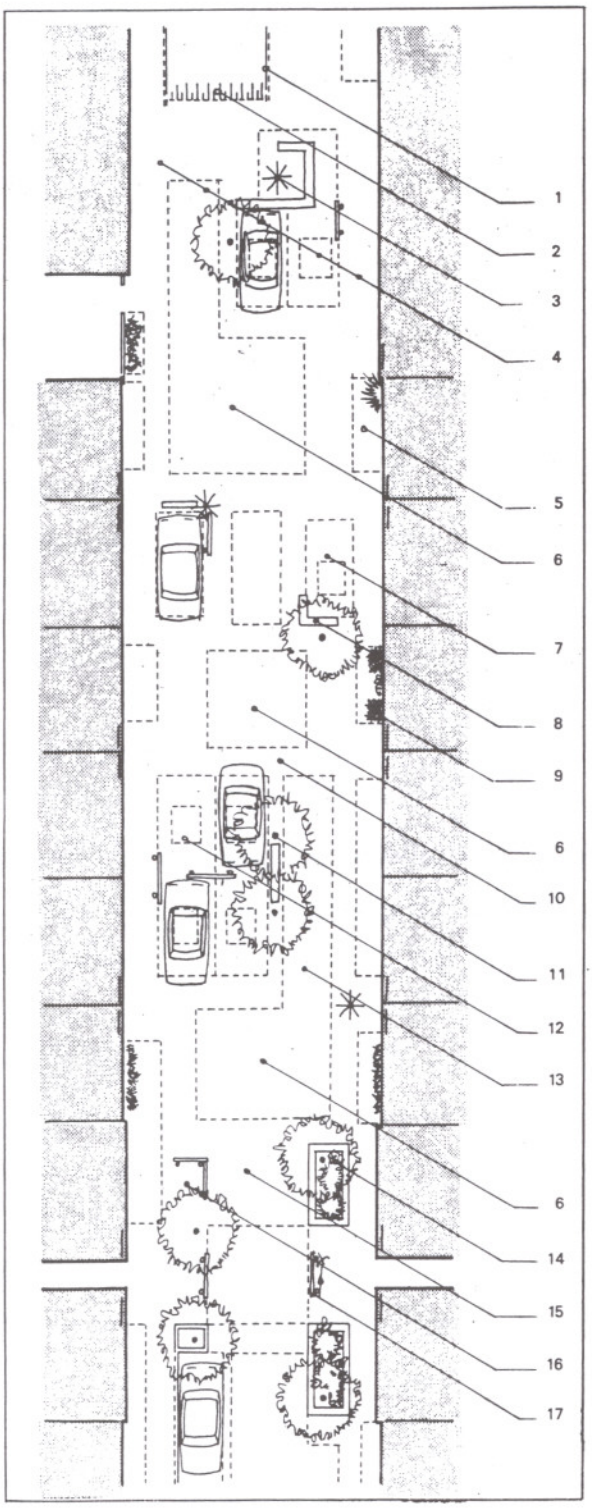
Figure 5.17. Behaviour map of children playing in Ahrberg street. a. before and b. after physical changes were made. (Moudon, 1987, p.74)

It's observed that with the woonerf system the social life of the streets became more active. The woonerf is seen as a successful implementation for the children to develop healthy social interrelations, better possession of the living space and feeling of social security. Besides many advantages of the woonerf the problematic sides of it has also been reported. In comparisons with the traditional streets those have extra construction and maintenance costs. According to the Dutch Planners the woonerf implementation has 150% more costs than any traditional street. Other problems reported by Poulton: "overall circulation problems, parking problems for service vans, and the difficulty strangers have finding their way around a woonerf. " (Carr et. al , 1992, p.142)

5.3.2.2. The Design Criteria of Woonerf

- The automobile speed is limited (12 to 30 km per hours). Vertical elements, humps, sharp bends and signs are located on the streets to slow down of vehicles.
- The number of vehicles are limited (100 to 300 vehicles per hour during the peak period). The passing vehicles are not permitted to enter the traffic.
- The whole of the street is the pedestrian's domain. Paving, planting, street furniture, play equipment made the place pleasant for pedestrians .
- Limited parking to location is to cause no inconvenience to other street users. Parking facilities should be developed in the nearby settlements to decrease the need of parking place in woonerf.
- Parking spaces have distinctive paving.
- Suitable lighting so that speed reducing features are clearly visible at night.
- Do not restrict visibility with vertical elements.
- The vehicular portion of the street is constricted in sections where children are allowed to play over the full width of the street.
- Clear designation of the entrances and exists of a woonerf by a change in a paving or a sign (Fig.5.18). (Marcus, 1986, p.117)

In order to develop that kind of practise, where traffic flow parking area and pedestrian traffic exist at the same time on existing streets, they should be at least 15 meters wide. If the width of the street is not enough, then the front yards can be included into the arrangement. For that reason in Turkey a nationalisation can be



1. no continuous kerb
2. private access
3. bench around low lighting column.
4. use of varied paving materials
5. private footway
6. bend in the roadway
7. empty parking lot place to sit or play in
8. bench/ play object
9. on request plot with plants in front of facade
10. no continuous roadway marking on the pavement
11. tree
12. clearly marked parking on the pavement
13. bottleneck
14. plant tub
15. space for playing from facade
16. parking prevented by obstacles
17. fence for parking bicycles etc.

Figure 5.18. Woonerf Design Criteria (Lynch and Hack, 1994, p.204)

realised, or according to the item 18 of Urban Development Act, No.3194, the front yards can be abandoned by the owner without any revenue. The last solution is to plan a limited number of car parking areas on the sidewalk's in front of the houses however without blocking the entrances and with the acceptance that the possession of the property would be on the owner and the ownership boundary would be determined, properly. Those areas can be used by children as play areas during the daytime.

All those applications need public participation for realisation. Public benefit that would be gained by the project should be explained to people, solutions should be found together for their problems and agreements should be achieved by arguing on the methods. That process is a must for the acceptance and application of the design. Otherwise, in developed housing areas it would not be possible to apply that kind of projects.

5.4. Designed Play Areas

5.4.1.Play Lots

A play lot, for preschool children, should be located in every court or subspace.

Size; When the standards of play lots of various countries are examined, sizes differs between 100 sq meters and 500 sq meters however, idealised size is 200 sq meters. Area per children varies as: 3 sq meters per child in England, 0.75 sq meters per child in Germany, 4.6 sq meters per child for UN. Number of houses that each playlot services varies between 30 and 100. The ideal distance between playlot and houses is recommended to be 200 meters. (Sivri, 1993; Eker and Ersoy, 1981) Marcus recommends ; the play lot should be every twenty to one hundred dwellings and the size should be between about 100 sq meters and 400 sq meters. In smaller settlements sandboxes of 10 sq meters can be acceptable. (Marcus and Sarkissian, 1986, p.145) (Fig. 5.19)

Criteria that should be regarded during design period are:

- They should have the characteristics of being adapted to different climatic conditions. Should get sunlight during winter. Sand should be shaded by trees to protect from direct sunshine at midday in hot summer and these areas should be protected from prevailing winds.
- Provide a variety of graded challenges (blocks, ramps, steps, platforms)

- Provide a sand area with a water tap or drinking fountain,
- Drainage system should be completed.
- Provide hard surfaced paths around equipment areas for tricycles, and grassy area for rolling on.
- Provide shaded comfortable benches with a view for supervising adults. (Marcus and Surcissian, 1986, p.147)

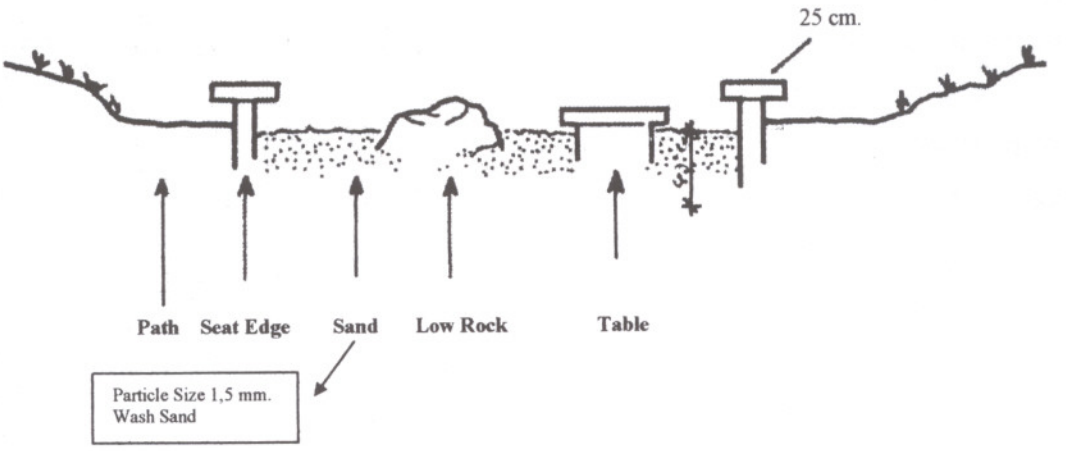


Figure 5.19. An ideal sequence of surfaces in and around a tot lot. (Marcus, 1986, p.146)

5.4.2. Playgrounds

Process; Pollowy indicates that the design of playgrounds have three steps; They consist of a process for children, a process with children and a process by children.

A process for children ; The design and management of the area is done entirely by adults. This is a very traditional approach. In that process the ideas of children are completely disregarded. The usage of the place by children is directed by the specialists.

A process with children; Children, parents and other community adults involved in the neighbourhood user group also participate in the design and application processes. Information about their requirements and their opinion on design are taken. However that process ends when the design of the area is realised.

A process by children; That process consists of the idea that children know whatever is best for themselves. Specialists help children in motivation, in giving information and in developing their thoughts and ideas. (Pollowy, 1977, p.110) Coffin expresses the benefit of that process as: "The participation of children could be vital to the future success of plans. Children may best be involved through project work in schools, carried out using the facts and figures assembled by the planning team, as a way of ensuring that the end results are realistic. There should also be opportunities for children to meet and discuss in informal and relaxed settings." (Coffin, 1989, p.17) Those applications are not used very much because of difficulties that occur during organisation. Moore explains the realisation of Thousand Oaks Project as: " It is more process-oriented, initiated by a school community-university group in 1971... For many students, teachers and parents the redevelopment of the yard is becoming the basis for the day to day curriculum, and is providing the stimulus for autonomous activity. Thus the physical environment is evolving hand in hand with a set of reforming environmental values. It is an incremental, step by step process involving both large and small scale changes, from ripping up asphalt to planting flowers." (Pallowy, 1977, p.110)

The play areas designed entirely by the designers are not used by children for a long time. Children should be let to form the place and they should see their influence on the place. That may cause them to know about their own abilities and also about their environment better. Urban spaces do not give children that possibility. Flexibility in playground should be one of the most important design criteria. Design of the grounds should not be made by permanent materials and structures. The play equipment should be flexible or movable. Besides those facts, natural or semi-produced materials (inheels, woods) would be used by children. Sand can help children to shape different forms.

Designers and applicators should observe the behaviours of children at the playgrounds and do the necessary rearrangements from time to time by creating new sceneries according to the wishes and tendencies of children. For such a process the playgrounds should be located near schools so that the children's behaviour can be observed by the teachers too. Moreover, that may make it possible to work with children. More productive solutions can be obtained by the cooperation of the planning departments of local governments and the administrators of schools.

Location and Size; In order for the playgrounds to exist, those grounds should become a part of the children's environment. Playgrounds should not be only place where children play but one of the many rings of play area chains that formed within the neighbourhood area. They should not be passive areas and they should combine with the circulation system of neighbourhood.

Quantity of the playgrounds is not the only subject that should be considered. For those areas to be used appropriately with their proposes, their distribution within the housing area should be planned in relation with the usage rate, population density, habitual range of the children. In other words they should be in close interrelation with the child's home, school and the street he lives on. Playgrounds should never have a direct access to the main roads.

When standards all over the world are examined it can be concluded that the sizes of playground varies from one country to another. The size of a playground recommended by Ankara Nazım Plan Bureau, in Turkey is 10000 sq meters, and 100.000 sq meters within a neighbourhood area. The Chamber of Architecture recommends: for a neighbourhood area with a population of 15.000 people, the area required for playground and sports area is 4 sq meters per person. United Nations standards are 2-3 sq meters for every child between ages 5 - 15, in each neighbourhood unit, and Ideal size is 20.000 sq meters, and minimum size is 12.000 sq meters. (Eker and Ersoy, 1981, p.131-148).

In other European countries accepted standards are; 600 sq meters for every 60 housing units in Denmark; o.75 sq meters for every child belonging to age group 6-12 years and an area of 675-1200 sq meters in Germany; in England it is recommended that an area of 10 sq meters for each child and a minimum area of 1000 sq meters, are necessary and also at least 600 sq meters of hard surface is needed for playing ball. According to standards the ideal service area is determined as 400 meters of radius. Maximum radius is to be 800 meters. (Sivri, 1993)

Design; Rather than directing the plays and games of the children by the play equipment's, certain empty spaces should be formed for children to constitute their own plays. Grass surface to play ball, and hard surface for roller skating are necessary. Especially for bicycle riding and roller skating special circulation areas should be designed. There should be trees and rocks for climbing. Empty spaces are necessary for different purposes. "Multipurpose game areas should contain rectangular ball playing pitches, but may also have an irregular outer boundary of "ball

walls" and places to sit and watch the game, meet friends." (Moore et. all,1992, p.112) That place is important for irregular ball play. If the play area has sufficient size, then a basketball field can be located but by providing isolation for sound. Otherwise a basketball basket can be located in an area of 20 sq meters few children can play.

Michael Ende, in its story called Momo tells a small girl named as Momo and group of children become friends in an area of ancient theatre and how they played. Children frequently gather at that place, talk and become friends, in time. While first they were bored of loneliness, as they become friends. One day they plan a play. The theatre becomes a ship. Each child takes a role according to their characters: a captain, a steersman, a scientist and crewmen. They start voyaging. The ship is a research ship. While on going a storm starts... And the game goes on. That game had no scenario written previously. Events occur in time, spontaneously just like life itself. Children forgot that they were playing a game. They lived the feelings of fear, anxiety, happiness, responsibility all together. (Ende, 1996). An atmosphere should be formed for games such as the one stated above, where games and real life interact. For such an atmosphere a safe, clean and shady areas are necessary where children can gather without the control of parents.

Within the boundaries of play area, the interaction of open, semi-open and closed spaces should be provided. For playing during winter time, prefabricated close places should exist where equipment's used by children can be put also. With the help of vegetation and pergolas semi-open spaces can be formed. The spaces that belong to different age groups should be distinguished but not isolated. Connection to the areas that belong to adults should be maintained and some entering to their areas should exist.

Topography; Sloping areas can be helpful in encouraging various other games. Especially, if the topography of the area has a natural sloping it is very convenient for such purposes. Climbing, sliding, hiding and other activities can be possible. Combination of play equipment's with the topography can make the play areas very attractive. (Fig. 5.20) At the sloping areas prevention should be taken for the danger of erosion.

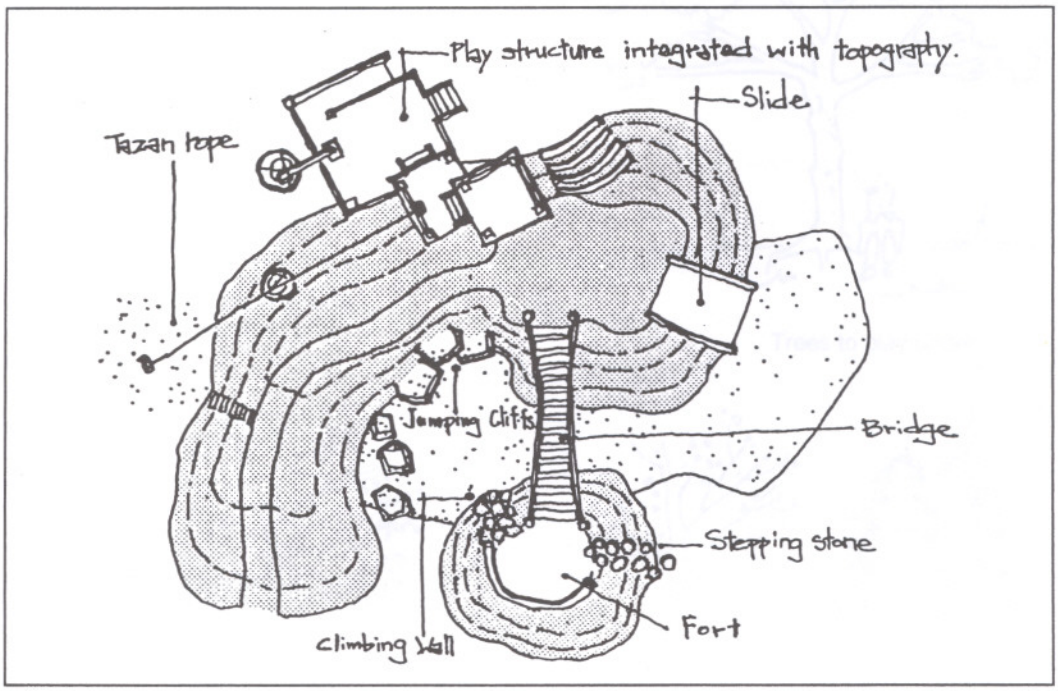


Figure 5.20. Topography form used as a design elements to connect and unity fixed features of the site. (Moore, 1993, p.131)

Landscaping provide a lot of advantage in playgrounds; (Fig. 5.21)

Enclosure; A space can be defined with the help of various vegetation which have different sizes and with the combination of these plants.

Climate modification; In hot climate shady areas gain great importance during summer. To obtain shady places, especially trees that have wide petals should be used. Deciduous species don't block sun shine in winter. Evergreen trees and shrubs protect the area from prevailing wind. Meanwhile, erosion caused by rain and wind can be prevented by vegetation. It also helps the drainage of the area.

Identity; Distinctive planting provide visual identity. Deciduous trees, flowering shrubs, great or imaginative formed trees are very attractive. That helps children and the general community retain strong positive memories of their experiences. Especially a great and distinctive tree can be landmark for children. Plants stimulate all of the senses; touch, sight, smell, taste and hearing. To get stimulations that addresses the basic senses from the surrounding environment, make it easier for the child to perceive and so assimilate his environment.

Plants for play activity; Different types of plants can extent the range of play activity, such as collecting plant parts, climbing and playing on trees, hide and seek

Planting adds soft, ambiguous enclosure

Trees to play under.

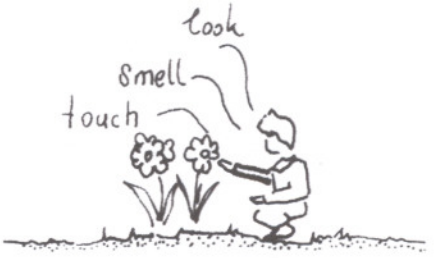
Tree climbing gives children a sense of achivement .

Vegetation provides a great diversity of texture children can learn.

Play settings should provide ideal wildlife niches.

Play areas need shade in summer and sun in winter. They should be sheltered from cold winter.

Rocks and logs provide ideal wildlife niches.



Impact of vegetation on users.

Figure 5.21. Landscaping in play areas. (Moore, 1992)

games. A special attention should be payed in planting such as climbing, sliding and sitting on the branches. It is not proper to forbidden the children to play in the vegetated areas and climb to the trees to protect the plants from children. On the contrary children should be encouraged to be in close relation with plants. When childhood memories are asked, adults mostly tell about how they had climbed the trees, how they had spent most of their time on the trees, how they had collected fruits. Naturally vegetated areas form a basis for the fantasies of children.

Education - seasonal change-wildlife; Vegetated areas make it possible for many small creatures to live in the same environment. Children get the chance to observe and know about the bugs, birds together with the plants. Especially planting native plants make it easer to grow and children learn about those plants. Child can notice the changing of seasons. Select plants that emphasise seasonal change; deciduous, seasonal colour, early leaves, late flowers.

When plants that will be used in play areas are chosen they should be native plants. Native plants grow more easily, their maintenance is easier, so their cost is very low. They cannot be harmed by children easily. Moreover, children can learn about the native plants. Another important point is that harmful plants should not be used. Those are thorny, toxic (such as nerium oleander) and allergenic plants. (Moore, 1993, p.3-9)

5.4.2.1. Adventure Playgrounds

Adventure Playgrounds have been established in Scandinavia; the first adventure playground was set up in Copenhagen in 1943. That became widespread later on in other European countries like England and Germany. "The success of the Copenhagen venture led to international imitations and the setting up of an International Playground Association (IPA). Its publications stress the therapeutic value of freedom for it defines an adventure playground as a place where children are free to do many things that they can not do elsewhere in our crowded urban society." (Cohen, 1993, p.33)

"Adventure Playgrounds are generally created on undeveloped lots, where loose spare are deposited. What makes such sites adventure playground is the presence of a play leader to encourage and supervise children as they activities." (Marcus,1986,p.172) In the playgrounds children can build any structure they want, even a hut, by the materials they selected. They can build sheds for theirs pets and

look after them here. They can light fire. Their activities are dependent on the possibilities of the fields, play leaders ability for building, good communication with children and the children's own interests. (Fig. 5. 22)

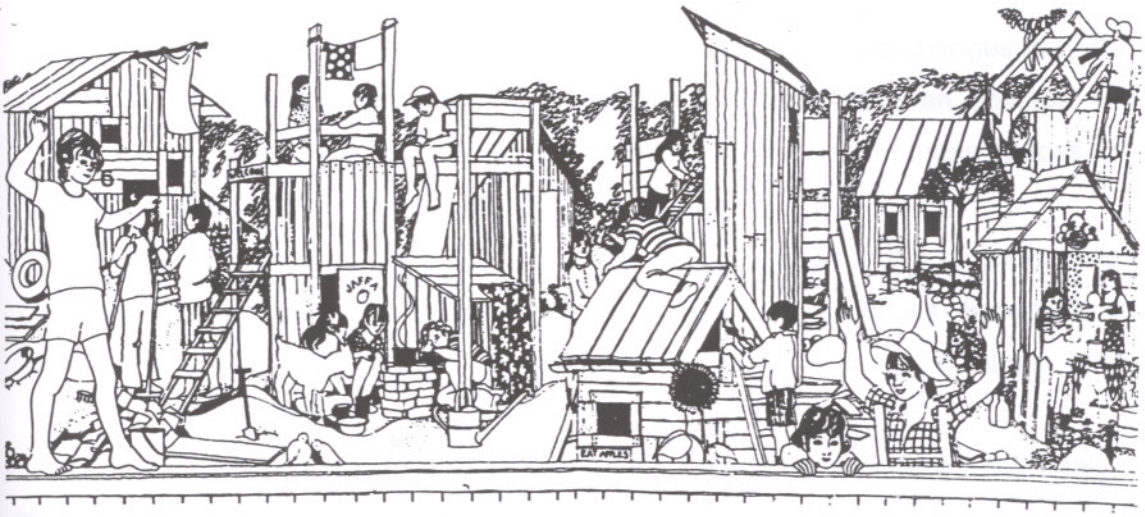


Figure 5.22. Adventure Playground (Pollowy, 1977, 124)

It's possible to determine the advantages of the adventure playgrounds over other playgrounds such as:

- Supporting the Interactional Theory, it makes the interaction of the environment with the child and his reinterpreting it by rebuilding possible.
- It gives a chance of learning with discovering by his own. Here children are free to do what ever they want to do (in determined limits). This freedom is important in their self formation, experiencing the life and putting themselves forward.
- Children can produce things by using their physical and mental skill and imagination. They can make use of materials like sand, wood, stone and brick as well as some basic elements like water, earth and fire. They improve their abilities of using tools.
- The activities done here have a continuity. Children builds a hut first than organised the interior later on plays here by taking different roles. They can grow plants or feed pets here. The continuity of the usage improves the sense of possession.

- Especially the children who don't have the chance to grow plants or feed pets at home can satisfy these needs here and get to know about these, more over they gain the responsibility of taking care of another creature.
- Because they produce here with solidarity, they learn the conditions of living and producing together. The senses of collective consciousness and social secureness improve here.
- Children have changeable interest. Connected with those changes they can redevelop that environment and make additions. They can observe self changes in the space. The flexibility and the dynamism of those spaces are suitable with the mental being of the children.
- There are more mixed-age and mixed-gender groups in the neighbourhood settings. They can activate with elder children and adults. Especially its observed that fathers spent more time with there children here. (Marcus,1986; Moore, 1989)

A comparative study of three New York City Playgrounds(a traditional, a contemporary, an adventure) found that; Children prefer to spend more time in the adventure playground. "Despite initial fears of accidents and being sued, playground facilitators have had little trouble obtaining insurance, and accident rates have proved to be no different from those on conventional playgrounds." (Marcus, 1986, p.173)

An Implementation of Adventure Playgrounds

Traneyhytten Adventure Playground is an example of how that concept has become a permanent public place for children in many Danish neighbourhoods. That playground is obtained by revaluating the area around the warehouse buildings near the old train station of Ballerup, one of the suburbs of Copenhagen. The management of that area which started to be used in 1968 is done by the Ballerup City Government and it's size is approximately two acres. (Fig. 5.23)

"The playground is run like a school with fixed hours and paid teachers. Children enter from one gate passing a new building that serves as a day care center, classroom, and shop. Most of the site is devoted to a play yard where children build, remodel, and tear down houses. Also included in the play yard is a common area for animals such as the playground horse, rabbits, and pigs. A pottery studio, tool room, and even a tennis court are resources in this diverse playground." The management of this kind of playgrounds is different from others. The fiction of the

ground is related to the children as the management of the ground. "The child must become a member of the playground, paying a fee of thirty, five crowns (about four dollars) a month. A child needs to take a carpentry class from one of six paid play leaders. After gaining basic building skills, children are free to apply their skills to remodel or build on one of approximately thirty building sites in the playground. There is a complex system of passing building sites from child to child and generation to generation... Extra space is set aside for garden plots, which are tended by members of the playground. Children are provided numerous opportunities to manipulate and control many types of natural elements including animals, fire, plants and wood." (Caar et al., 1992, p.173)

Figure 5.23. Site plan of Tranehytten Adventure Playground outside Copenhagen, Denmark. (Carr et al., 1992,p.172)

Adventure playgrounds can be established in the areas that are ruined, burned and out of use. The old buildings on the area can be renewed suitable with the aim of playground, too. So that, its cost is low in the state of establishment. But there is difficulty in management. The participation of the surrounding society, the interest are important. It can be seen as a disadvantage of the use of those areas are bound to membership. In Turkey, it has not seen a project and practise of adventure playgrounds yet. Those lands of practises can be tried firstly in suburban. The organisation and management can be done by municipality. The determination of the leader of the playing area can be realised by municipality. Or in the sense of more participation, in every residential district, headmanship, municipality and school-family association come into cooperation and can realise that kind of organisation. After the establishment of the area, the living and maintenance of the playground will be related to the children.

5.5. School ground

School ground are frequently used by school age children. The fact that children are used to the school and school ground is very effective in that preference. In the design of school ground athleticism, basketball and volleyball fields should be planned too. In formal education field experiments should be possible if necessary. Besides, it should be designed so that informal education would be possible, too. "Informal learning is more likely to happen in social situations outside of lesson time, when pupils are hanging around, forming social groups, organising each other, eating, talking, observing, investigating. Something that takes interest, planning, interacting with people and place. The need is the consideration how best to shape the environment to provide focus for such activities which will encourage and support positive social interaction." (Adams, 1993, p.181)

Besides the basic aims, listed above, school ground could also be used after school-time. The critical point here is the relation of school ground and other areas. Whether the school ground would be an open place or a completely controlled area is an important problem. "The layout of the site should respect existing landscape features, facilitate good access and circulation, achieve fluid linkage of internal and external spaces" (Adams, 1993, p.183)

The design of the school ground should have different qualities and should be used for different purposes when necessary. The ratio of those different functions

may change from one school to another. That occurs due to the facts of location of each school, structure of the land, and to the requirements and preferences of pupil. Areas both for sports facilities and for free usages should be designed. Design criteria of playgrounds are also valid for the design of school grounds.

Chapter 6

CASE STUDY

Design guidelines are developed within the scope of housing area in order to form an appropriate environment for child development and for activities of children. For the formation of those criteria; observations of child's behaviour, child's development and preferences, and researches and applications are studied. Design guidelines aim house entrances, gardens, streets, playgrounds and school grounds. Those guidelines are tested in the selected areas at Çankaya District Area in İzmir.

Çankaya District Area that takes place in İzmir, at Konak, was chosen as a design area.(Fig. 6.1.) That neighbourhood area is between Mithatpaşa Road and İnönü Road and involves the area known as Köprü Region. (Fig. 6.2) However, observation area was widened; Murat Reis, Kemal Reis, Kılıç Reis Neighbourhood which have the same location characteristics with Çankaya were also included in the study area.

The reason of the choice is that the area consist mostly of middle and mid-high income groups. Building density is rather high and most of all it is a good sample of housing pattern of the city of İzmir. This housing pattern which can be accepted as planned area and which was developed in accordance with development plans has limited opportunities for children. Goal of this study is to increase the efficient usage of the outdoor space that take place in problematic areas and to determine the spatial solutions for that problem.

Another reason of the selection of Çankaya District as a design area is that it carries traces of housing and settlement patterns belonging to different periods and different forms of structures can be seen.

6.1. The Characteristics of The Study Area

6.1.1. Development of Physical Environment

Çankaya District started to develop by the opening of Mithatpaşa Road in 1884. In that district zone also known as Köprü, two storeys houses in large gardens were the first housing types. In that period, mostly, high-income groups were located

in that region. Within the boundaries of the area there still exist buildings that belong to that era.

Starting with 1900's, two storey row-houses began to be built. Those types of buildings continued to be structured till 1920's. In 1930's, as trams were put into use, demands to that area increased too. Increase of land rents and selling the treasure lands caused increase in the number of buildings. After 1950's apartment blocks with 3-4 storeys started to be constructed.

Figure 6.1. Study Area in İzmir. (Greater Municipality of İzmir, scale: 1/100000)

Figure 6.2. Çankaya District

Increase of housing densities in the area was the result of developments after 1960's. Maximum building height was increased to 15.80 meters and with Act No 684 "Floor Ownership Law", the rents increased, too and apartments started to increase in number. As floor numbers increased, construction permission was given to the plots defined as green areas on the plans. As a result, a very dense house pattern was formed. On some of the streets of Çankaya District apartments belonging to that period can still be seen.

After 1970, a permission of 21.80 meters building height was given to the plots and the area started to gain today's situation. (Çaylan and Pöğün, 1998)

There exist many buildings reflecting the characteristics of the above mentioned periods at the area. However, as a result of high demands and pressures, a housing area that has inadequate social services like parking areas, green areas, school etc formed. Open areas are occupied with cars, completely. Because of those reasons children's environment was reduced, in high rates. (Fig. 6.3.) At Köprü, average building density is determined as 3. (Net population density is 1044 people/h). At Hakimevleri average building density is around 2. (Net population density is 700 people/h). (Fig.6.4)

6.1.2. Demographic Structure

Mithatpaşa and Hatay zones are the regions where population densities are highest in İzmir. According to the population data taken from Hatay District Clinics, the population of Çankaya was 12616 in June, 1998. Data about age groups is given in Table 6.1. According to that data, there are 493 people in 2-6 age groups, 776 children in 7-12 age group. Childrens population rate constitute the 10% of the total population. (Fig. 6.5.)

6.2. Children's Behaviour in Outdoor Space

While examining the behaviour of children observation were done on, which child played where, when and how. Children were grouped as pre-school and school-age children and behaviours of girls and boys were studied separately. In the housing

Figure 6.3. Land Use of Study Area

STOREY ANALYSIS

0 10 50 100 200

LEJAND

1 & 2 STOREY BUILDINGS

5 & 6 STOREY BUILDINGS

3 & 4 STOREY BUILDINGS

7 & + STOREY BUILDINGS

1999

Figure 6.4. Storey Analyses of Study Areas

Table 6.1. Distribution of Population of Çankaya District according to ages.

Age	M	F	Total	Age	M	F	Total
0	53	40	93	**45-49**	421	503	924
1-4	203	165	368	**50-54**	368	483	851
5-9	247	250	497	**55-59**	346	421	767
10-14	399	397	796	**60-64**	322	386	708
15-19	476	524	1000	**65-69**	284	398	682
20-24	489	503	992	**70-74**	259	301	560
25-29	487	516	1003	**75-79**	113	163	276
30-34	441	470	881	**80-84**	53	72	125
35-39	444	507	951	**85+**	28	65	93
40-44	486	563	1049	**TOTAL**	5889	6727	12616

(Source: Hatay 1 ve 2 Nolu Sağlık Ocağı)

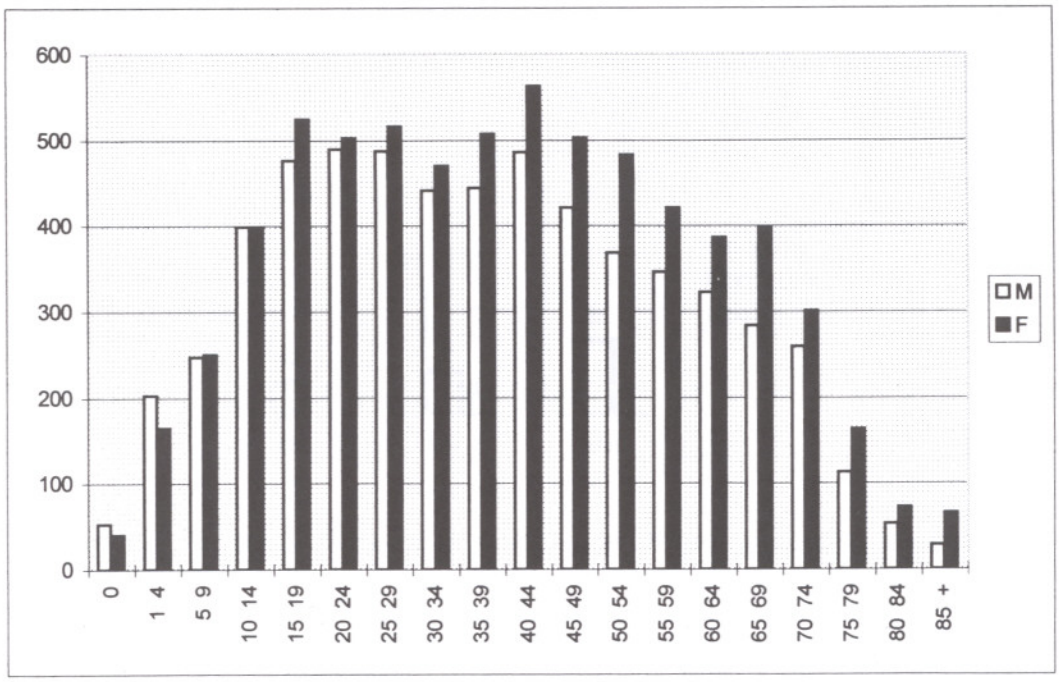


Figure 6.5. Population of Çankaya District. (Hatay 1 ve 2 Nolu Sağlık Ocağı)

area, home entrances, gardens, streets, parks were considered as the play areas of children and observations were made in those spaces.

During researches behaviours were observed firstly, those observations were documented by photographs and interviews with children were done during observations. Moreover, a survey was done with 120 mothers who had school age children, in order to support the observations. Their opinions about children's use of outdoor space problems and expectations were determined.

In the light of these researches below mentioned results were achieved.

6.2.1. Outdoor Space Usage

According to the results of surveys done with parents, it was mentioned that preschool children were not permitted to go out without an observer. Among school-age children 87% of girls and 92% of boys can play outdoor. Answers to the question "how far can your child go?" indicate that the size of the area used by children is very limited. 77% of these children can go as far as 300 meters from their home. Many of them told that visual accessibility is required, too. Only 23% of children can go as far as 500 meters from there home. Range distance being more than 500 meters is a very rare situation.(Fig. 6.6) The important point here is boys and girls range distances do not differ too much according to the interviews done with school-age children, it can be concluded that boys' activity range is wider than the girls.

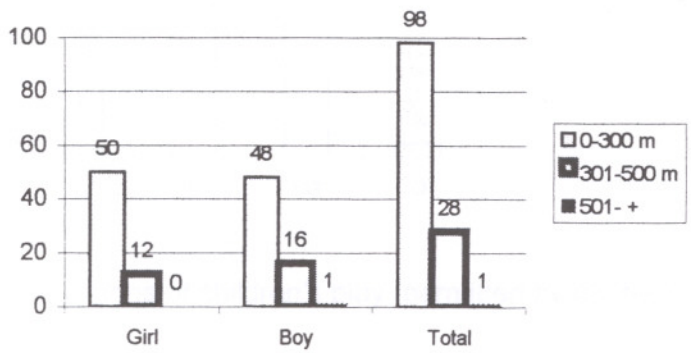


Figure 6.6. The range distance of school- age children according to gender.

The researches indicated that school age children's range distance is between 500-800 meters low range-distance indicates that there is a fear toward the

surrounding environment.

The answers of parents to the question "Where does your child plays mostly?" are home entrances. Besides this, girls can play at the park and boys at the school grounds (Fig. 6.7). Mothers' answers to "Where does your child wishes to play?" are girls at the park and boys at the park and school grounds(Fig.6.8). Mothers are influential in the selection of play areas. However, observations done at the area should be regarded, too.

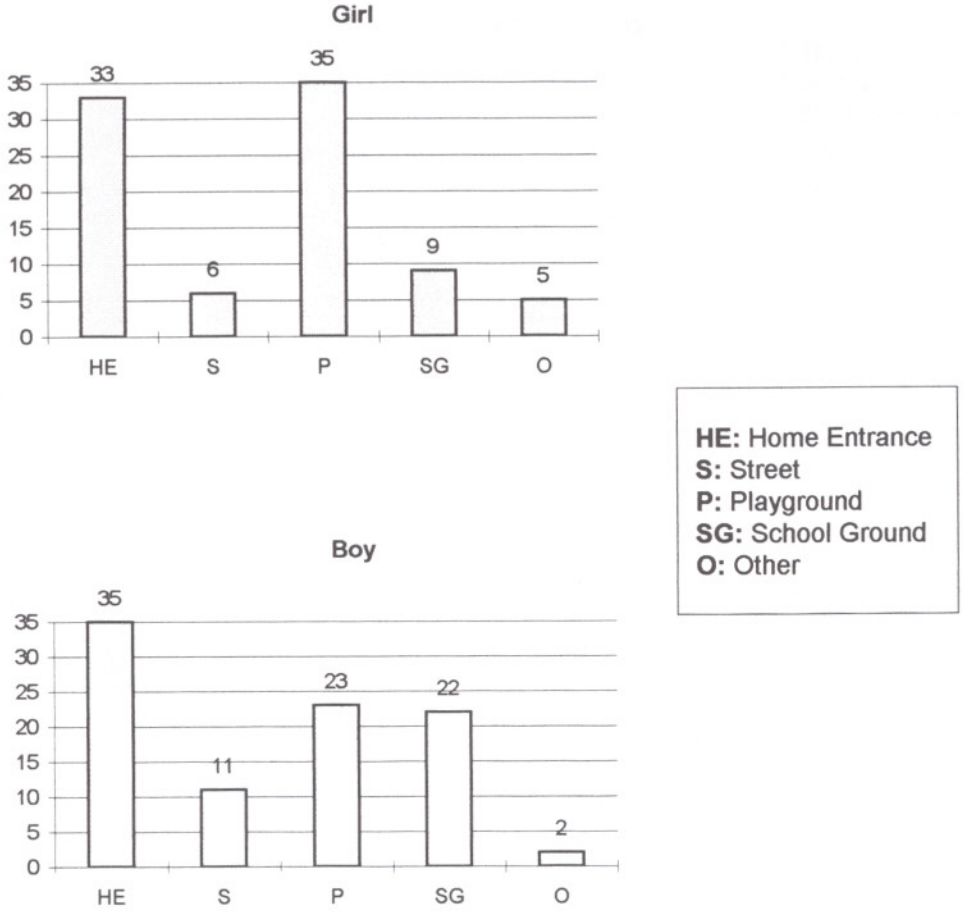


Figure 6.7. Locations of children's play (permitted by mother)

Home Entrances And Street: At the areas where housing structure mostly consist of row-houses entrances have direct connection with the street. There exist no transition space between streets and home entrances. Therefore, home entrances and street should be considered together. Most of school-age girls and all of preschool children use streets and home entrances, within visual accessibility of

mothers, as play areas (Fig. 6.9). Especially entrances with stairs are frequently preferred by children as meeting places and for passive games.

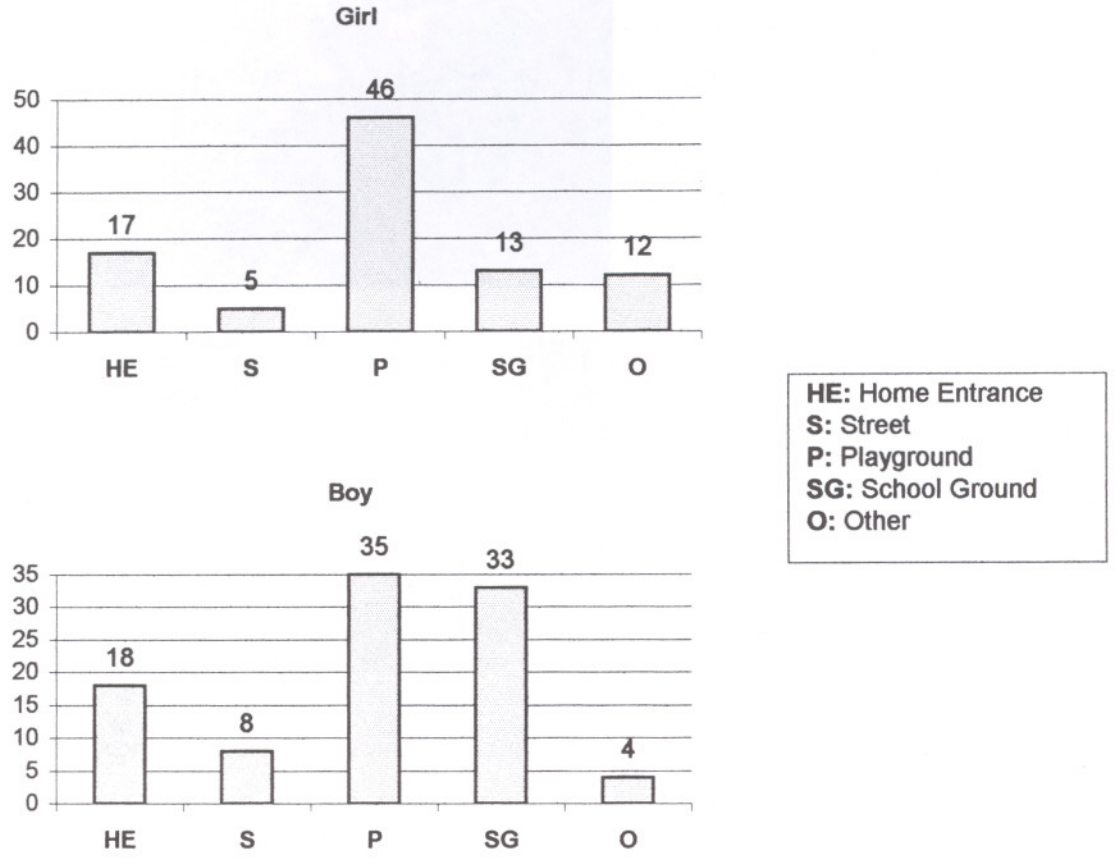


Figure 6.8 The play areas preferred by children.

School-age boys indicated that they can play at other streets, too. Boys generally play football on the streets (Fig.6.10). At these corners boys can control whole street easily, observe the events and contact with their friends from other streets. (Fig. 6.11)

At the streets formed of stairs, children feel safer, because cars can not enter these streets and they meet and play passive games, there (Fig. 6.12). Street furniture can inspire their activities and children use them as play equipment's. (Fig.6.13)

Figure 6.9. Preschool children and school-age girls generally play home entrances.

Figure 6.10 Boys generally play football on the street.

Figure 6.11. Boys meet on the street corner.

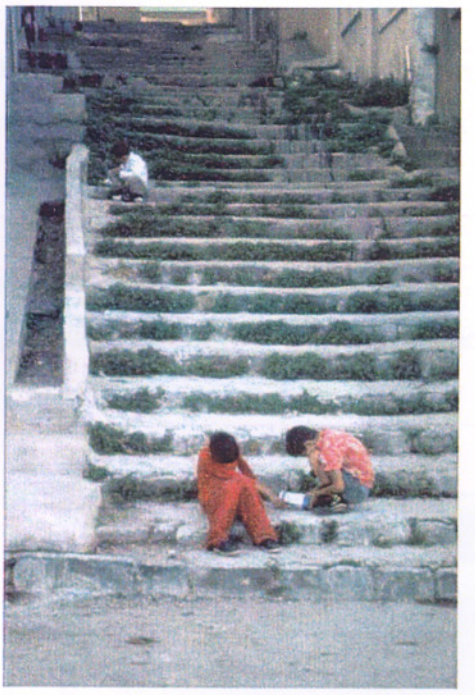


Figure 6.12. Children are on the street formed of stairs.

Figure 6.13. Street furniture are like the play equipment.

There are some reasons for children to prefer streets:

- Streets are close to home and mothers can easily control their children.
- They like the street and surrounding environment where their houses take place.
- Children can easily meet with their friends on the streets.
- For boys there exist no adequate areas to play ball, close their home.
- Asphalt surface of streets are appropriate for playing ball, riding bicycle and roller skating. (Fig. 6.14)

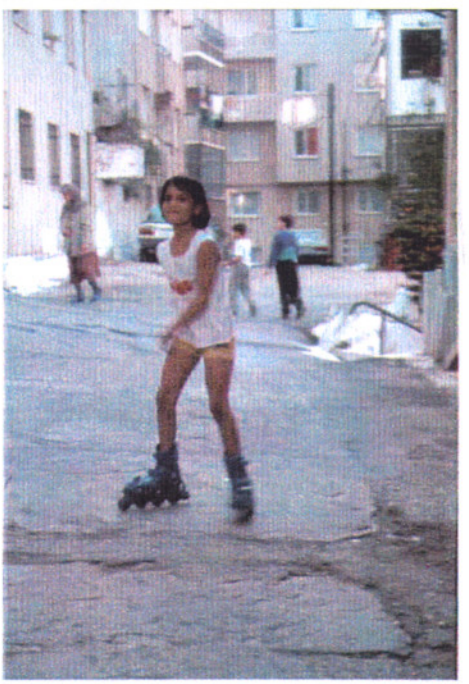


Figure 6.14. Asphalt surface of streets are appropriate for roller skating.

At the research area land is sloping and there exist many streets with stairs. So, traffic circulation is done at certain roads. Therefore, most of the streets are secondary roads.(Fig. 6.15) However, besides these facts, because of high building density roads and car parking areas are insufficient and cars park on the streets. Consequently this obstructs the plays of children. (Fig. 6.16)

Gardens; On the lots with detached house, back yards are used for car parking and as annex. Back yards are generally neglected, do not get enough sunlight and are away from the streets, and so are not used by children frequently. Few children can use side gardens but do not have the adequate spatial structure. Pre-school children can gather at the garden and ride bicycle and play ball at the front yard.

Figure 6.15 Traffic circulation scheme in study area.

Figure 6.16. The children are playing among the cars.

School grounds; are frequently used especially by boys during holidays and weekends (Fig.6.17). They can play team games like basketball and football at the school grounds. Mothers think that school-grounds are safer than other areas. The most inadequate shady areas. Sizes of school grounds are insufficient within the research area. And only hard surface covers the school grounds.

Figure 6.17. Boys play in the school ground at the weekends. (Namık Kemal Primary School)

Park and Playground; Green area ratio is very low in the research area. Quantity of green areas Per person is 0.48 sq meters.

Park that takes place at Köprü addresses every age group. Preschool children come to the park with parents. Preschool children like to play with sand and water. They want to climb, jump, run and such actions. For these reasons more natural areas are needed to cover these wishes. (Fig. 6.18)

Figure 6.18. The children's behaviour in the playgrounds. (Hatay-Köprü Park)

On the other hand school children likes to play in wide areas on hard surfaced ground, grass or compressed earth. These areas are suitable for ball plays, skating and biking. On the compressed earth they can play grounds plays like marble. The loose areas are preferred for equipment areas in the playgrounds. Their usage frequency of the park (Fig. 6.19) indicate that the park is generally used during weekends. Besides, the rate of children who don't use the park is also high (27%). Usage of the park during the week is rather low (89%).

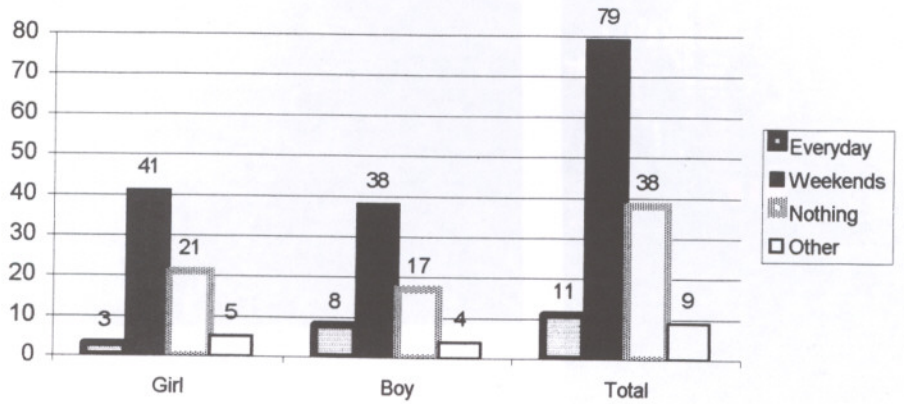


Figure 6.19. The frequency of school-age children's usage of the playground according to gender.

The opinion of the parents about the park can be grouped as:

Location ; The area has no traffic safety, while going to the park children have to pass traffic roads, and the area is distant from the homes.

Problem about maintenance; Inadequate cleanliness, there exist some wastes that may cause accidents like broken glasses, dogs pollute the area.

Drainage problems; during rainy days, area is full of mud and cannot be used.

Social Security; there is no control at the park, drunk people come to the park, street children who use drugs come to the park, older children and gangs create discomfort. (Fig. 6.20)

Inadequate play equipment; play equipment are inadequate and broken, especially for school-age children inappropriate conditions exist.

They also indicated that, there should be drinking fountains, illumination during night hours are needed, more benches should be put. They want football field and roller-skating area, too.

Only few parents thought that the park is safe, clean and sufficient.

Figure 6.20. The maintenance problem of the playgrounds.

6.2.2. Fears of Outdoors

Most of the mothers indicated that they feel anxious when their children are outdoor. Reasons of anxiety are listed as social insecurity, traffic accidents, physical accidents and hygiene. The most important of them are traffic and social insecurity. (Fig. 6.21)

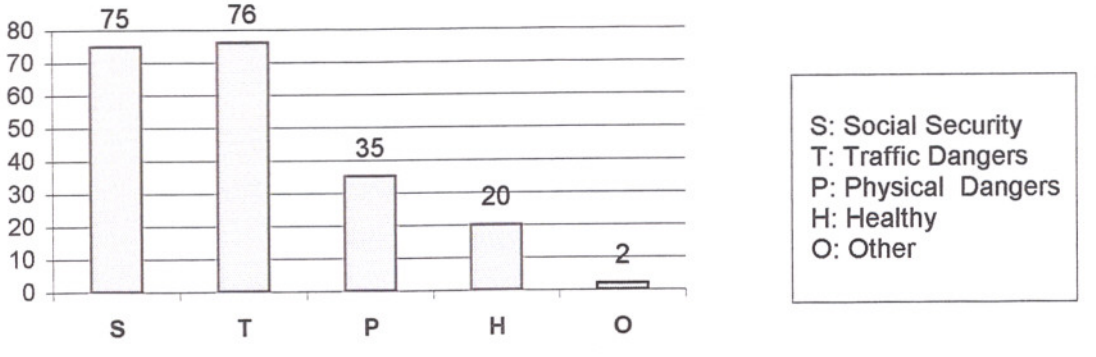


Figure 6.21. The cause of mother's worried during their children outdoor.

Appearance of social insecurity as an anxiety reason shows that social problems constitute a large portion of spatial problems. Parents expressed their anxieties with following statements:

" I'm afraid of strangers to give harm."

"I'm worried about him to be harmed by bad people"

"There are all kinds of people outside"

"The times are bad"

"I have no faith left to anybody"

"I'm afraid of kidnapping"

"I'm worried about teenage gangs"

"Strangers and drug user child may be harmful."

"Abnormal people are everywhere."

"Street children"

"My child may face bad people"

6.3. Expectations of Children and Parents

Parents used adjectives like silent, clean and secure to define the housing area appropriate for their children. Most of the parents told that they wish to live in detached houses with gardens. Number of parents who want to live in mass house areas is also high because they think that these housing areas are secure and controlled and their children can play in a secure area. Existence of green areas, play areas and sports areas are other factors that are preferred in housing areas.

The 9 and 10 years old children from Namık Kemal Primary school have expressed the kind of environment they want to live in with these words:

> "...There should be more cute houses instead of adjacent buildings to make nature beautiful. We all want to live in beautiful, sunny and green area..." (Alp ÖZGEDİK)
>
> "I want to make friends in good environment. I want to talk with plants and animals. I want no houses and cars. I want to read books in greens. I want to climb trees and pick fruits and listen to birds... I want to watch the bluest river running." (Serenay ABALI)
>
> "I want to live in a clean, tidy and healthful environment. I want an environment where every neighbour gets on well, every body can

make friends with each other, children can play, where it's quiet." (Kübra AÇIKYOL)

"I want to be in an environment where it's clean, healthy, where there's big playgrounds, with trees, flowers, singing birds, blue sky and sea. I want children loving each other and adults too, more humanity drivers, quite peddlers, sunny and clean streets, houses with gardens, more playgrounds." (Gizem BİRSÖZ)

"I want green forests with clean air. I will run and play there. I will fill my lungs with clean air. I want everywhere to be clean playgrounds. I hate concrete buildings. I will demolish the concrete buildings and plant tree in there place. I will have the pleasure of living peaceful, friendly forests." (Alp AKDOĞAN)

The children are complaining about the density of the build up environment, traffic and the lack of playgrounds in this environment. Their desire for living in houses with gardens and to be among flowers, trees and animals shows their interest for a natural environment. They have great longing for open, green areas. Their ambition for cleanness and health shows their consciousness about the ecology. It's remarkable that what they understand out of environmental consciousness is not only physical but also social. This shows that they are also aware of and effected from the diminishing neighbouring relations.

"I, as a child, want playgrounds with clean air, an environment with parks, sports fields, picnic areas, theatres, cinemas and in short words an environment where children can live without getting bored and being afraid. I want a clean environment and secure streets. I want people to obey the traffic rules... I want people to be good hearted and trustable. I want bad discompassionate people to be good, loving and helpful. I want streets and playground to be well cared." (Reha Can KÖFÜNCÜ)

"I want to live in environment where it is rich of natural beauties. I don't want to live in an environment with animals where every creature is happy... In the environment that I'm looking for, I want tidy playgrounds where children can play freely... I want to live in the environment without being afraid." (Orkun GÜRCAN)

They want to act in the outdoor environment with comfort and confidence. We can see that they have fear and distress about there environment. As Reha stated

above they want to act with comfort without fear not only in their neighbouring districts but also in the other parts of the urban context. Traffic and "bad people" are the main motives of their anxiety.

6.4. Design of Area

According to the research results regarding the children's points of view, the main problems in the area can be grouped below:

1. Considering the existing population, it is observed that the case area has inadequate social service area. The outer spaces in which children are to be in activity, such as parks, sport areas, and school grounds are not sufficient in size and quality.
2. The hierarchical space order has vanished at locations, especially where the attached housing (row houses) is the dominant building. That situation eliminates the safety transition between spaces, and causes difficulties in child's accommodation to the space. When he gets out of the home, the child directly meets the street, and the traffic security on streets, especcially where the traffic is heavy has disappeared.
3. Proportional to the building density, the roads and car parking areas are inadequate. As the existing voids are occupied by the cars, children's playing close to housing environment has been impeded.
4. The loss of the attractiveness of outdoor spaces and the traffic question have removed the parents and the children from public spaces. Referring that considered situation, alienation to the unlivable public spaces has been observed. While the fear towards outside has been growing, the social confidence has been diminishing day by day.

In order to make that area more livable for children, the rehabilitation is required. Providing that, each open space in the housing environment that the children can play in -back and front gardens, streets, parks and school grounds- is included in the study of rehabilitation.

6.4.1. The Common Use of the Yards

In detached housing blocks, it is aimed that by connecting the back and side gardens, more dense use of those spaces by the adults and the children can be

provided. That connection is provided by removing the separator walls between gardens , and by using stairs and ramps at the places for growing plants, for feeding some animals can be arranged. Tree plantation is also required. By placing hard surface cover, places for different activities such as cycling, skating etc. can be provided. In addition, a fountain should be existed in the garden for the purpose of drinking and using water in the play. (Fig. 6.22)

Including about consideration, such an arrangement can change the garden into a playground which is suitable especially for pre-school age children.

In the plots of private land ownership, the common use of the yard and its maintenance and application of the above considered arrangements are difficult. However, the pressure of requirements, and the development of the consciousness of common-use in neighbours can make the implementation process easy. Without requiring legal procedures, the common-use can be provided by keeping the ownership prints at horizon instead of at vertical. However that situation has required the agreement of all the owners. The increase in the number of owner in the block has made the implementation process more difficult. The common ownership can be provided not only in the plots but also in the whole block by the renewal of the "Kat Mülkiyeti Law".

6.4.2. Redesign of the Street

The re-arrangement of the streets is another important tool in attaining the aim of the project. The main principle is to provide the pedestrian use of the streets by decreasing the speed of the vehicle traffic. In that case, children can confidently use more wide area on the street.

Some techniques used in traffic calming are :

1. The automobile speed is limited (20 km. Per hour). Vertical elements, ramps, sharp bends and signs are located on the streets to slow down of vehicles.
2. Limited parking to location is to cause no inconvenience to other streets users. Parking spaces have distinctive paving.
3. The vehicular portion of the street is constricted in sections

Moreover, the comfort of the street is improved and enhanced by street furniture. The street furniture are required to be in the dimensions and strength that appropriate to children's usage. The trees that serve for different activities of children

Figure 6.22. Redesign Project of Hakimevleri

are increased in number. Places having adequate size for gathering of children are also designed. (Fig. 6.22 - Fig. 6.23)

Having narrow streets and front gardens, the front gardens of the houses in Hakimevleri region required to be arranged in the content of above considerations.

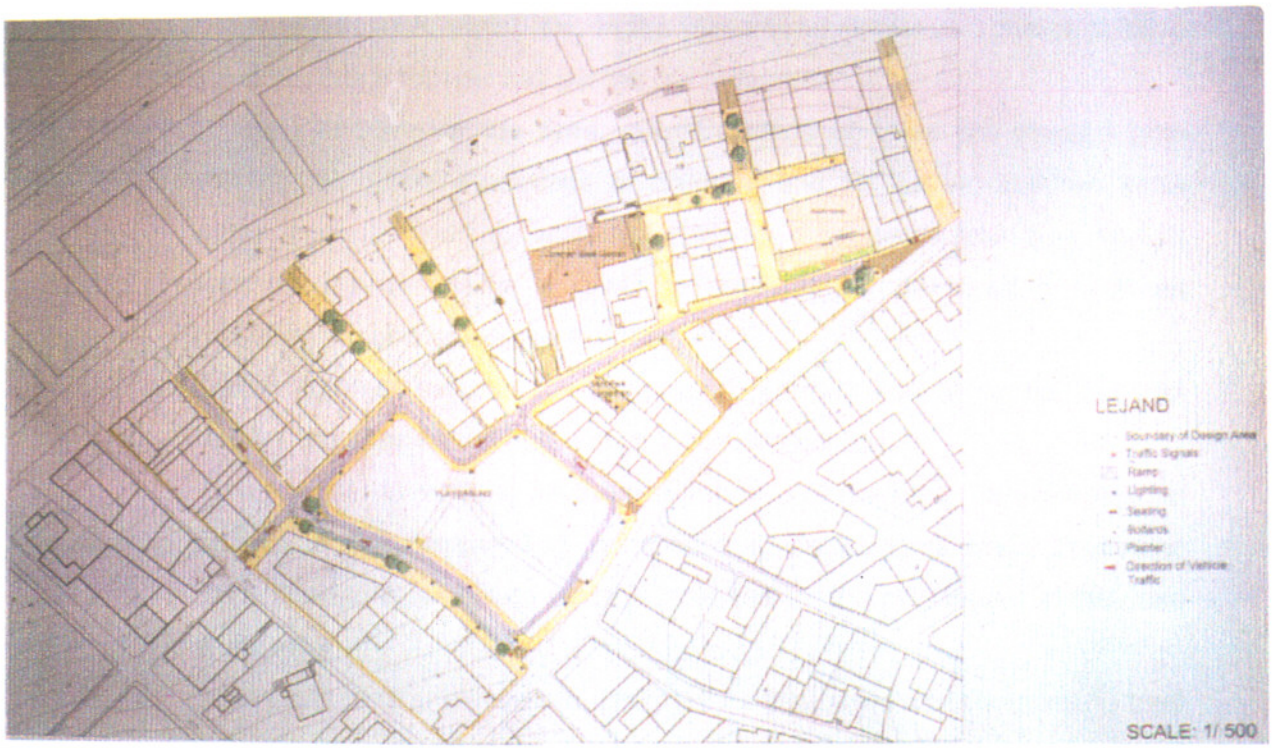


Figure 6.23. Redesign Project of Köprü Ragion

6.4.3. Redesign of the Playground

The re-arrangement of the existing park has been done in a way evaluating its present use and requirements. The connection of the playground with school is provided by reserving the street between the playground and the school for pedestrian and bicycle usage.

In the design of the playground, the criteria mentioned in the previous chapter are taken into consideration;

1. By taking the flexibility of the playground into account, instead of stable constructions, replaceable, recoverable materials and techniques are used.

2. Within the playground, the play areas are designed with respect to different age groups, and physical and visual accessibility between those areas are considered in design process.
3. The priority has been given to natural materials, as they are more attractive for children. Instead of produced play products, by using natural elements the productivity of the children with their imagination can be enhanced. For that reason, the importance is given to the use of natural elements such as sand, water, rock, wood, etc. in the playground. Moreover, places suitable for skating and for free ball games are reserved.
4. In the plantation of the area, different kinds of trees are planted both serving for different activities of children, and for getting children know about them. In addition, while selecting the appropriate tree type and its location, the emphasis is given to microclimate modification such as providing shaded areas, wind protection.
5. During summer season, the playground is used also at nights. For that reason, the illumination of the area is considered, too.
6. A play leader is required for the maintenance of the area, for providing the security and for responding the children's requirements when they need help. Therefore, a defined place is reserved for the play leader in the case study area.
7. Sitting and resting places are designed for the parents accompanying their children, and the other adults. A buffet in the playground has an effect of increasing the use of the area. The establishment of telephone booth and toilet are also included in the rehabilitation study. (Fig. 6. 24)

For the attractiveness and the dense use of the arranged play areas, it is required to make observations on the way the children use the area and on children's behaviour and tendencies in a determined time period, and to change the conditions with respect to children's desires.

The user participation is extremely necessary in the design and implementation processes of all arrangements; the common-use of backyards, street and playground arrangements. An organization for providing the user participation will be constituted by the municipality, headman, school administration and the inhabitants of the neighbourhood. Such organization would be affirmative in the name of defining the user requirements and evaluating the existing possibilities.

Figure 6.24. Redesign Project of the Playground of Çankaya District

Chapter 7

CONCLUSION

A child can be happy when he lives his childhood. The condition in which he lives his childhood is when he can play without any time and space limitations. The value of a living environment can be measured by its rate of meeting the requirements of a child.

Play may seem in contrast with the reality of the world (and with the seriousness of its reality). However, individuals can see the difficult realities of the world more easily on the stage and perhaps tolerate these realities easier by plays. A child, also, tries to understand the real world by plays. He tries to interpret and express the world he perceives and puts forth his reactions to his environment. He relates with his environment and tries to define his place in this world.

A child can play at anywhere. He does not look for a specially designed area. He has the ability to determine his own play area anywhere. However, modern planning approach is in worry to design play areas for children. Urban land began to be divided into parts with the formation of modern cities in other words with the formation of traffic roads. The most important determinant of living environment is the road system. Each sector, almost all land uses selected a place among this system. For children playgrounds were reserved. And in time the only public land reserved for children in cities have been these playgrounds besides their schools. Whereas, in traditional cities a child had been able to live securely everywhere in the city. Studies done after 1970's indicate that, the areas reserved for children were not preferred by children.

Children are human beings with wide imaginary and perception. Every child mean different world. Because their perception are not met in same level and are not shaped by social determinants. So, it is a difficult process to understand them, understand their play and design the spaces accordingly with these facts. It is not suitable to constitute play areas in one format for those different worlds and expect them to play as adults determine, without paying any attention to their imaginary world. Children tried to show that these facts are not true for about a century.

To know about the socio-economic conditions in which children live is

important in order to know about their life styles, problems and requirements. User groups' age and gender characteristics, requirements and behaviours should be regarded. Because the user is a child, his development process; physical, cognitive and social development and child perceptions should be studied. Preschool and school-age children have different behaviours. Accordingly, their use of space differs, too. During preschool years generally close environment and for individual and passive plays, small areas are selected. In order for mothers to be able to control their children physical, visual and auditory accessibility in necessary. School - age children on the other hand prefer more active group plays. Plays gain a social content. Play areas spread on to the streets, school grounds and playgrounds.

In defining children's play area, it should not be forgotten that they have to share the surrounding housing area. They should not be obliged to a limited area. Play area should be part of their daily life. Within housing pattern there should be a hierarchical organisation from enclosed to open areas, from private to public. As children grow up they cross a chain consisting of house-garden-street-school-playground and widen their living environment accordingly with their own power and requirements. This is a natural process. To remove a ring from this spatial chain would result some problems.

Basic criteria that should be considered in forming play areas for children are:

- Surrounding environment should have adequate health conditions and should be protected from physical dangers, pollution, traffic, noise. Additionally enough sun-light and shade should be provided when needed.
- Some predictions should be taken for the development of feeling of social security both for children and parents. Mothers should be able to permit children to play outdoors within a visual contact.
- Child should be in close relation with other children and with adults on the streets and around the houses, spaces with these opportunities should be provided.
- Play areas for spontaneous plays should be provided. Then, children can feel unrestricted by the programmed lives and can decide on the places and events to direct their own activities.
- Children know about their surrounding environment by their physical activities(walking, running, climbing, jumping, smelling, seeing etc.). spatial varieties should be constituted in order to increase their spatial

experiences. Within the boundaries of play areas various ground patterns, heights topography should exist.

- Children can only know about nature by forming a close interrelation with it. Adequate vegetation, natural play materials like water, sand, etc. are needed for this purpose.
- Besides protected spaces where they can be alone or where they can realise both active and passive activities, spaces for group activities and linear areas should be provided.

The practices that can be used in the formation of play areas in the existing housing areas appropriate with the above mentioned criteria are listed below.

- Gardens should be designed so that they can be used for this purpose and back yards should be planned as common places.
- With the street calming projects, streets should gain a security.
- School grounds should be used after school too and should be designed to meet the requirements of children.
- Vacant lots within the housing area should be used as play areas for children even for a temporary time.

To determine an area as a playground on its own, prevents the existence of the areas for a long time. Playgrounds should either be in relation with school grounds or should be located within the parks. Spaces, where different age groups and activities exist always attract children's attention.

Time is another important design dimension. Diversity in the life styles of people, also changes their expectations from the space and their requirements. Especially changes in children's wishes, requirements and interests orient their expectations from the playgrounds. Playgrounds with standardised play equipment's may not be competent for its endurance. The statical and stable properties of them cause decrease in the interest of children, in a short period. Flexibility is one of the most important criteria in the design of playgrounds.

Dynamic structure of the area also affects the design process. Designed area should be observed and re-designed according with the inclinations and wishes of the users. During design process children should be included in the process so the playground can be owned and used by children. Playgrounds being in close relation with school grounds would make it easier for children to participate in the process.

A team work, with the contribution of teachers-children-parents- designers, is the best solution in the design and application processes.

Efficient fulfilment of play activities of children at the outdoor space is important for children's social development as well as their physical and cognitive development. Relationships they have with their friends through plays will make them participative, productive and their individual and social confidence would be obtained. However, children's use of outdoor space can not be gained just by solving the problems in physical space. It also depends on everyone and every foundation surrounding them, in other words on their parents, educators, the politics of central and local governments, media.

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