

Child Friendly Environments in the City
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City living is as old as history - and playing in cities has occurred throughout the whole of civilisation. However purpose-made places for children to play are relatively new. The playground movement has just a little more than 170 years behind it. The idea of playgrounds grew out of the social movement to improve the quality of life in 19th century industrial cities.

At that time playgrounds were literally life-savers for children in the crowded housing with unsanitary conditions where disease like tuberculosis spread quickly. Playgrounds offered fresh air and an opportunity for exercise and for playing - the best prescription to prevent illness known at the time - and still a good one as in this way one strengthens ones immune system as well as one's muscles. It could be said that playgrounds were invented as an alternative to a prescription for medicine. Playgrounds however only came to be a required public facility with the increase in the number of automobiles on the streets. In order that automobiles could move freely and fast through the streets it was necessary to take the children's play off the streets - yet we continue even today to have that conflict of uses in streets -between people and vehicles.

Today's children however are the most "medicined" generation yet - and the list of illnesses and life style diseases grows longer each year- The problems are very worrying - many children in schools must take medicine so they can concentrate, a large percentage of young children in western cities have allergies or asthma, there is increasing number of young children with diabetes and obesity is a growing problem. Children are fed a diet that is increasing made up of fast foods, manufactured foods and coca cola. This is not so prevalent fortunately in Italy as in some other lands. Such a diet results in poor nutrition, weight gain and a frequent in take of soda water results in the weakening of bones with a consequent greater likelihood of bone fractures

Recent research on children in Denmark and the UK reports that lower back pain, poor posture, tension in shoulders are now frequent complaints

from children as young as 10 years old. This problem will stay with these children throughout their lifetime- as it is known that this kind of pain will only get more painful in adulthood -and now there are as many as 50% of the population of young teens with this problem.

These problems are related to today's life style in cities -children experience limited mobility around the city - in fact this generation of children today are known as the "suitcase" generation - because they are always being packed up and set in something with wheels and packed off to somewhere else. They rarely are permitted to walk freely around their neighbourhood- and fewer and fewer children are allowed to walk or cycle to school. Instead these children spend long periods of time in front of television or computer screens, sitting still or nearly still, in postures not good for the development of a strong skeleton.

The health and well being of our children is directly related to the issue of sustainable cities -as we may be facing a problem even greater than the epidemics that spread through the polluted industrial cities of the 19th century. We are facing the possibility of nearly half of the next generations having serious health problems to such a degree that they will not be able to fully participate in the adult economic and social life.

In my opinion we are now facing a serious potential threat to sustainability and the health of children -and we must set some emergency measures in place to turn this situation around as quickly as possible. More medicine is not a solution. Rather the answers to these concerns lies in children from a very young age spending more time outdoors and moving their bodies. Human bodies are made for movement -we have it best when we are moving -and movement is just as necessary for the development of healthy young bodies as is nourishing food, clean water and air. Outdoor spaces in cities where the children can play and engage in the society they live in are better medicine than any pill.

So again now in the 21st century we come to understand that outdoor play and playgrounds are an essential ingredient in a healthy childhood and a healthy city. Providing well for playing in the city is the best we can give our children in preparing them for their future responsibilities - it is more important that formal education, it can replace much of health care and reduces problems with the law

Not only is the issue related to the physical health of children but the mental and social health of the children is also of concern. Young children who have not had much opportunity to move freely about their neighbourhood and to play with other children without adult interference often lack self-confidence and do not develop good body language, nor do they have a good understanding of social norms and find it difficult to form

social bonds and friendships. Parental fears for dangers to children in cities -traffic, strangers, fears that the children will be injured at play -all result in a new childhood that is controlled and limited -nearly to the point of oppression. One of the big concerns of child psychologists is that today's children are starved for experiences - they are just too limited in where they go and what they experience.

This is no way to begin a life for one who as an adult must deal with some very complex challenges. Humans have a long childhood-and we have it because the human brain needs that time to develop and make sufficient connections between what we experience and what we know. Childhood is a time for experiences -many of them and as varied as possible.

Movements like "Child Friendly Cities" and your work in this programme of studies are very critical to the future of mankind and this planet. Child Friendly cities must not be seen as some new idea of "bleeding heart socialists" as those who tried to reform cities in the past were called - but must be understood to be a part of the prescription to cure the ills of city living to ensure the health of the city and to ensure a sustainable city life.

This introduction is not intended to be sensational or to scare you but I want to set in perspective how very essentially important consideration for children's spaces in the cities are - as we all too often only hear about the economics of adult needs. However I am not going to go into great detail - as I have made the assumption that all those who give time to participate in a study course call The Sustainable City for Children already have a good understanding of just how vital the subject is to the future direction of city life. Therefore I will go now directly into the issue of creating child friendly environments in the city.

What is a child friendly environment ? and how do physical environments communicate to people?

I have given a lot of consideration to these questions-and I am still working on them - but now at this stage in my profession I would say that a child friendly environment is one which permits children to interact with the environment in a childlike way and which signals that it is okay to behave as a child in the space. Children are very immediate in their response to spaces and places -they want to see all, discover, explore and try out what they can do with the things and spaces. If we want to put all these activities into one group- we can say children want to play with the environment in order to come to know it and a child friendly environment permits all kinds of playful behaviours but it need not be a playground. But it is not just the physical environment that is to be considered-also the social environment - children want to be where people are -and to interact with people -so a truly child friendly environment is not a place where children are segregated out

from people of other ages but one where they can interact with people of all ages.

For adults to be able to understand what is required to make child friendly environment I think we need to know a lot about how children interact with their environment -that is about children's play. Therefore I have divided this lecture into three parts -the first is an overview of children's play, the second addresses specific kinds of spaces for children in the city and in the third section I want to share with you some design ideas that can make spaces more welcoming to children and more playful.

1.About Children's Play

One of the most obvious characteristics of a healthy child is that they play. In fact when a child ceases to play -it is a symptom of illness. Play is a very strong urge -and the urge to play is one of the things that makes us human. Play however is a very complex thing- in fact it is many complex things. While academic studies of play is quite recent we now have a considerable body of knowledge -but most of this knowledge is confined to specialists at universities. Unfortunately play is not taken so seriously by adults - it is often seen as something children do to use up time and excess energy. This is not so - play is the most important activity children can engage in- it is much more important in the first 6 to 8 years of life than any kind of formal education and in later childhood it is equally important and serves to reinforce the formal learning system. Children have a built in enthusiasm for learning -and a strong curiosity to find out about things and people.

When we can maintain throughout childhood a positive attitude towards trying new things, meeting new challenges, learning things, adapting to new situations and in general have an enquiring and optimistic approach to life then we are better equipped to deal with all the situations we encounter in adulthood. On the other hand lack of sufficient experience results in rigidity in thinking and behaviour and fear of the unfamiliar.

This leads to an understanding that it is the real life experiences and variety that are the key elements that should be promoted in play to give children the best conditions for development and to meet their play needs.

Playing - especially playing outside at the playground - is one of the few times and places in childhood where much of this very important experiencing can occur. Playgrounds in modern society have a tremendously important role in the life of the child and children's culture - but they can only do this if they are designed and constructed to offer the necessary play experiences.

Variability in play experiences is vital to young children-

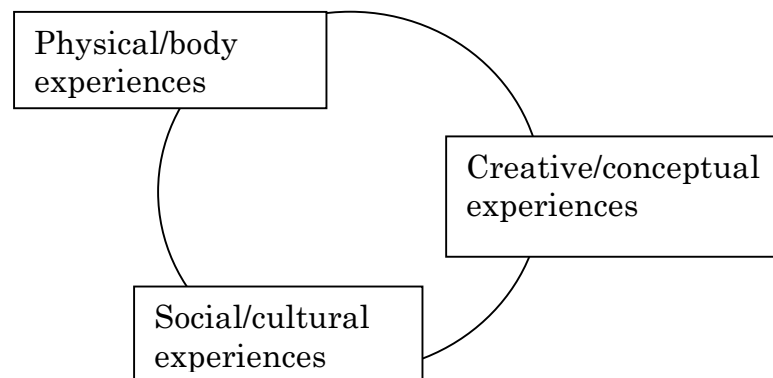
Experience is important -but children need lots of experiences- and many positive responses from the environment it gives them the necessary feedback to their behaviour that inspires and encourages them to again try something new, play at something again and again until they find a new way of moving, a new skill is developed, a new idea or understanding is created. Variability means not only that the space or object can be modified by the children's behaviour -it also means that the space or object supports a whole variety of different behaviours.

About experiences

For my work with play I have developed what I call **the experience circle** - based in the type of experience with the world. I have used this for some years now and while I am still adjusting the content as I come to understand more about play - I am sharing it with you and I hope you will find it useful in your work

I have chosen to use the image of a circle because these experiences are very much inter related and interdependent - in reality they can not be separated out - every experience has a little bit of each category in it. But as adults we need to find some way of coming to grips with the idea of play - and therefore we need to make a framework for understanding and for informing on good provision for play. By approaching play on the playgrounds from an experience approach we adults can begin to develop a new concept for playgrounds.

We can begin the circle with the **physical/ body experiences** -these we know about through our physical and body senses -and it is these senses we know most about. These are the experiences that tell about the physical world and our bodies.



Then we have the whole group of **creative- conceptual experiences** that we experience through a combination of all our senses plus the accumulated experiences we have already had. These experiences are the "what can I do with it experiences"

The third group of experiences are the **social/cultural experiences** that inform something about who we are as individuals and as members of culture we live in.

Now I would like to take some time to discuss these experiences briefly.

1.The physical body experiences

The senses are the entry point to our brain -we know what we know through sensing -however our understanding of the senses is somewhat unclear and can vary depending on which profession is looking at the human.

Lets review what these senses are:

The five physical senses:

Visual

Auditory

Smell

Taste

Tactile/skin

The body senses:

Vestibular/ gravity/balance

Kinesthetic/ muscle-joint

While these are listed on separate lines please always keep in the back of your mind that these are all united in our brain and cannot be isolated. This is called **sensory integration**- and is an important process in the development of the human competence and can only happen through experiences.

These senses have been described as the pathway into the brain - this is how we come to know about the world we live in and about our body.

Sensory variability can be achieved in many ways in the playground with an emphasis on visual, auditory and tactile senses. Smell has some importance in this environment but we are not skilled at designing with smells and the fifth -taste - really can not be integrated into the playground. Play outdoors has a predominant physical character so nearly always the body sense are also part of the experience.

There are a wide variety of movements that children can engage in -see this list here (see attachment) - and there are more that I have overseen. Again I want to go back to a comment in my introduction -our bodies are made to move -and in fact it could be said that the most important loose part on a playground is the child's body.

While I have shown a few examples of how sensory stimulations and physical movement can occur in a playground or in other child friendly spaces - remember the emphasis is on increasing the variety of experiences and it is the experiences to be emphasized - not the variety of objects or colours on an object.

This means that a playground which offers a large variety of different movement and sensory possibilities is a better playground than one which has one large combination structure where all the play is concentrated in a small space and where the major variation is a series of different slides. When designing to maximize physical body experiences keep in mind that much of the play takes place on the ground and has to do with large body movements with plenty of room to swing their arms and legs.

Movement play is a very dominant aspect of children's play-and much of the way we adults categorize play is based in the kind of movements engaged in. The disadvantage of this approach is that we over simplify what is happening when children play by just focussing on the kind of movement. The advantage of this approach is that we can use it to ensure that children have the possibility for a wide variety of movement experiences on the playground.

When providing for play it is vital to keep in mind that not all children play the same way - children at two or three have very different interests than 10 year olds, and the minds and skills of a 14 year old are worlds apart from the young child. Play areas must offer something of interest for the different ages - which mean that one large combination play structure is a bad solution. It is impossible in one structure to offer sufficient challenge and motivation for all ages and all play interests.

Not only is it necessary to distinguish between the playing interests and skills of different ages, after around 7 or 8 years of age it is also necessary to understand and provide for the difference in the way boys and girls play. Today on the playground where there is so little choice in play structures it is always the boys who take over - partly because of the way boys and girls approach playing or any other new challenge. Boys tend to throw themselves immediately into the activity and are very physical in their way of researching what they can do with it. Girls however are more likely to observe and think about it first for sometime before they are ready for

action. By that time the boys have taken over - so they girls move away - as they don't wish to take up the conflict of demanding their turn.

To be sure girls have a chance to play also it is necessary to offer a number of choices of places to play in the playground - and perhaps to schedule play periods where only girls are present on the playground.

When providing for physical body experiences we must not only keep in mind that children's bodies change and grow over the years -and therefore their interests and skills also change--we must also remember to provide for children with disabilities and with special needs. Children using wheelchairs and walking aids need more room to move and may need some special designs to help them gain access into the play area or play item.

2. The second element in the experience circle is the **Creative conceptual** experiences.

This is playing with materials, with the elements of the earth, making things, discovering things, and taking things apart. This is also the urge behind that very prevalent "Why" questioning phase that all young children pass through. They want to understand. A good playground design encourages these young scientists to ask other questions about the world and make observations that help answer their questions. **As one researcher described it - children at play are building up a bank account of experiences that serves as a link between what they already understand and all those things they will come to learn.**

In this way children develop ideas about the world, come to understand about concepts like: up-down, left- right, close - far away, heavy- light, big- little and so forth. In fact young children's creative conceptual play is very much a fine form of young science. Not only do they develop theories, the children are also developing an enthusiasm for learning and researching about life while developing skills in observing and drawing conclusions. These creative - conceptual experiences are not so easy to provide well for in unsupervised public playgrounds in parks as they require that children can touch and move things and need access to loose parts and tools; but sand, water and snow/ice can be materials children can play with. Also the landscape elements should be integrated into the play area with their selection based on children becoming familiar with nature - plants, rocks - shady places, sunny places, places where rain water collect.

And with the wisdom of looking back- we should never have taken the play leader off the playground - some countries still have them.

There should be a wealth of creative conceptual experiences in kindergarten, day care and schoolyards. Playing with loose parts, sorting,

matching, making sets, building things and using tools, craft such as painting, weaving, preparing food and cooking, playing with mud and soil, playing in gardens, making Daisy chains, exploring the characteristics of plants and trees and also animals.

Elements like water and fire are exceptionally fascinating to human- also child humans and should be part of these experiences. Our cultural history of attitudes towards children has influenced in what kinds of creative/ manipulative experience children are permitted on a playground- and none is more marked than the way different cultures look upon the issue of fires on the playground.

The creative conceptual kinds of play offered should vary with the kind of playground - and I will come back to this in the next section on the different kinds of child friendly spaces.

3. The social cultural experiences

Social cultural experiences have perhaps been the most ignored elements in the experience cycle in terms of design consideration for playgrounds - we have taken the attitude that somehow children will find a way to fill their social needs. A look at the problems of childhood -stress symptoms in very young children, bullying, lack of understanding of social norms, and the fact that children feel left out of society tells us that children need more opportunities for social and cultural experiences at the playground.

Social cultural experiences change form with the ages of the children and as they develop social skills and understanding of the culture that they live in. Experiences include organising and engaging in role play, and I say organising because discussion around agreeing who will play Mother, who will be baby and so forth is central to the role play.

In Denmark researchers have observed that when three young children played house - one was mother, the second was baby and the third was... the dog. When there is a fourth to play the father role in the play the father is sent off to work and has no more involvement in the play. This player quickly gets bored with the role-and when possible moves on to another play routine with other children. This observation led to the realisation that fathers were too often invisible in the lives of the young children.

Social cultural experiences also include playing with symbols, playing with sounds and language.

Dramatic play becomes interesting to children after they have developed verbal language skills and is one of the ways they improve their non-verbal language. In dramatic play, like role play the negotiations about how and

what will happen is just as important as the actual play routine. Dramatic play needs time to develop - and therefore dramatic play possibilities are wasted in places where children only come for 15-20 minutes at a time.

Another requirement for dramatic play is that there be several children to play together. Play spaces and gardens that attract people and encourage them to stay for long periods-like an hour or more are the places where dramatic play will happen.

There is a myth among some play providers that children stop being interested in dramatic play when they enter school -this is not so- children up to 12-13 years enjoy and need opportunities for dramatic play- but if there is no space or time for it - it won't happen. Girls often go into their bedrooms and engage in dramatic play -but for school age boys it is important they have possibilities outside- probably at the playground - and preferably without too many controlling adult eyes on them.

Not so long ago I was taking a walk one Saturday afternoon in a large forest where the undergrowth was quite thick so it was not easy to see into the forest. I heard a rustling in the bushes and suddenly four boys around 11-13 jumped out of the bushes -they were dressed in blankets and old furs and had pieces of wood crudely shaped as shields and swords. They had no idea I was on the path and they were so taken up in their play they did not see me as they raced down the path in the other direction. A little later we heard sounds of wood being hit together and shouts and could see that they had come in contact with another group of boys and were engaging in a play battle. This was something they had organised themselves -and obviously had taken time to prepare for.

In fact if we look at what adults do in their leisure we can see that some people never stop engaging in dramatic play -whether it be through membership in some of the various Lodges like Free Masons and so forth or engaging in the various war games, paint ball and the like.

Social play seems to be more difficult than physical play for adults to appreciate because it is difficult for us to see the social content. We can see when a child moves or builds something - and therefore in the past the emphasis has been on active/physical and creative play on playgrounds.

When we begin to look at play with more skilled observers eyes it becomes apparent that a great deal of what happens on a playground has a social content and that play of even very young children can be filled with highly sophisticated understanding of social norms and behaviours. This happens however only when the physical and social environment of the playground permits children to form play groups and choose various places to play.

Fantasy and fantasy play is difficult for me to place in one particular point in the experience circle -it has an element of creative play and an element of social cultural play while often being very physical.

The issue of stimulating the fantasy of children is one discussion topic between adult play providers that results in a great many disagreements. This situation occurs because many of the various theories held by adults are based in adult beliefs about play and not in actual research on how children respond to the environment - it is what could be called fictional knowledge or myth.

For example there are many early childhood experts in many lands who firmly believe that play objects that are representational stifle the child's fantasy and imagination - and that all play objects out on the playground should be abstract and non-representational in order to permit the child's imagination to work freely. This is what they have been taught in their training and they continue to accept it as a unquestionable truth.

I know of no research that supports this - instead I know of research both in USA and in Europe that shows that young children's fantasy play outside and inside is supported by representational objects and that representational objects do not hinder a child from pretending that the object is something else. A horse can and does quickly become an airplane it suits the play.

Yet we have adults who insist on not having play objects boats, trains, play cows or horses on the playground - and instead demand abstract objects - which the children ignore in droves. Objects that suggest fantasy on the playground serve like a sign to tell the children that it is okay to engage in fantasy play there in fact they are one of the best ways to signal a child friendly environment.

This then has been a brief overview of the **experience circle** - a way of looking at play outdoors that can be used as a guide to design playgrounds with the widest variety of play experiences. Not only should there be a wide variety of experiences at each playground -every playground should be unique and offer differing experiences to the children who come there. Good playgrounds cannot be made following the same formula all places in the city instead they must reflect the character of the neighbourhood they are placed in.

There are far too many places set up by adults with swings slides and carousels and not much more- they are what I would call the McDonaldisation of playgrounds - they are same around the world, they are fast to construct, and they don't cost very much. Like a McDonald's meal - They are okay every once in a while but do not have enough good things in them to supply children's everyday needs.

Good playgrounds should offer the widest variety of experiences and should offer the possibility for the children's behaviour to vary the experiences.

This then has been a quick overview about children's play experiences. Now I want to move on to talk about making specific kinds of spaces for children in the city

B. Children's Spaces

First though I want to stress that it is important that the play happen outdoors.

To understand this let us look at what happens when children play outdoors with other children. Research in the last five years has proven that the longer time children play out of doors the more positive the results of the child. Here is what they have found:

In comparison to traditional day care programmes with an emphasis on adult determined indoor activities it has been shown that when young children play out of doors for a longer period of time - that is more than two hours every day in all weather -in a garden like play environment with sufficient space for lots of movement and different kinds of play spaces, then these children will:

- have more strength in their hands, arms, legs and a better balance
- be sick less often
- have less stress
- have better concentration abilities
- be not so easily frustrated
- be better at co-ordination and more graceful in moving their bodies
- be more ready to learn
- be more helpful and considerate.

In addition it has been shown that playing outdoors for long periods of time with other children - preferably mixed age and gender groups-motivates children to try to do more things and to learn new skills. Through interaction with other children they invent new possibilities, new fantasies and new physical games. They learn about making friends and develop language - both verbal and body language.

The younger children learn traditional childhood games and ways of playing from the older ones and the older ones learn about the importance of consideration for others. On the playground children learn some very vital life-skills that cannot be taught in school. This only happens however when there is enough time and space for good play to happen.

The outdoors aspect is essential here as it is outdoors where children feel more free of adult rules and restrictions and come to rely more on themselves - they come to be more confident in what they can do. They in fact invent knowledge and new ways of doing things.

Break

Outdoor spaces in the city where children should be able to find good play opportunities.

1. Playgrounds in public parks
2. Schoolyards -early childhood
- for Children 6 to15
3. Beyond the playground -playing in the city
 - Public spaces/open spaces
 - Play streets/walking streets
 - Historic city centres
 - Playing on wheels

While all of these spaces should be child friendly and welcoming each one has some special qualities and constraints that affect the way the environment can be designed.

1. Playgrounds in public parks

The most striking characteristic of public park playgrounds is that there are no adult play supervisors -and while parents accompany young children to the park and should supervise them-there are no friendly adults with the task of ensuring the children have access to loose parts, balls or who can help organise group games. Originally the public play ground concept included play leaders -and still does in some lands but in many lands the cost cutting on all things that have to do with services for children has meant that play leaders disappeared in the 1970s . And it is not a coincidence that it was in the late 70's that concerns began to rise about the safety of children on public playgrounds.

The lack of play supervisors means that playgrounds in public parks will be very limited in the kinds of conceptual-creative experiences for the children. On the other hand there is great possibility to offer a very wide range of sensory and movement play experiences -not only supported by play structures but also movement play that is based on the ground -running and

chase games hide and seek. Playgrounds in public parks also have great potential to give children many positive experiences in nature - playing around trees and shrubs, native landscapes of the region.

Playgrounds in public parks should serve as meeting places for the neighbourhood -and should be places where children can meet other children. This means that the design of these playgrounds should be such that there are some things and spaces that are of interest to different age groups and different interests and skills. Public playgrounds are best when they consist of a variety of different play sub areas each catering to a different interest and skill level. Avoid designs which focus all the play on one large structure -this is not child friendly -but a lazy design.

Here we also must face a situation many professional designers come across-that is where the politicians want some large eye-catching structure that will serve as a billboard for their election campaign. It may catch votes but it is not child friendly.

The provision of dramatic and social play experiences in public park playgrounds is linked to the use pattern of the specific playground. If the playground is such that people come to the place and stay for only a short period of time then there is no sense in providing for social and dramatic play for young children -it takes time for such kinds of play to be developed and negotiated. It may however be a good place to offer dramatic play for older children who want to play out of sight of adults. This can happen if the park is large and well landscaped - and portions of the park are not so visible to all adults.

Such play provision also sets up the question of where are the boundaries of a playground in a public park? All too often we still work with that model-that the playground is where there are fixed play structures. Not so -the playground in a children friendly city is where the children want to play. A playground can extend to the whole park perhaps - and it is possible to design playgrounds without traditional play structures -especially when the play focus is on the ground itself.

Designing playgrounds in a child friendly way includes some extra considerations -such as consulting the children on how they use the spaces and what they like to do. This means that the development process takes a bit longer. The consultation process works best when carried out by people trained in consulting children. In Belgium and Holland there are now many fine working examples of how trained, thoughtful adults can consult with children in meaningful ways. Avoid by all means showing children catalogues from play equipment manufacturers and asking them what they want -this is not what I mean by consultation - and most child friendly manufacturers will agree with me on this. Instead observe the use patterns and interview children on what they like to do when they can play freely -

and where they like to play. Use this information to inform your design work -but as I believe design is a profession requiring special skills and training as well as a lot of artistic intuition -do not permit the playground to be designed by committee.

2. Schoolyards

Here I see two very distinct kinds of yards -those for young children up to the age of six and those for children over six years of age. The age of six is an important milestone in the life of a young child -it is a time when children's minds and bodies go through major changes - and while all the years of childhood are filled with changes, new skill development and the acquisition of knowledge and ideas -6 years seems to be a very important marker in the skills of young children. Between the ages of 6 and 7 most children begin to develop good conceptual skills and can think abstractly - which means that they are able to deal with a formal education curriculum. They have enough experience to be able to connect what they have experienced with the ideas and concepts they are being told about. Now they can take in information through words and can begin to understand systems of symbols such as written language and numbers. Before the age of 6 most of children's learning is what I would call "Hands-on" in that they need to experience something with their whole body before they can understand it. Before 6 is what is known as the age of concrete learning while after 6 the emphasis is on abstract ideas.

By the age of 6 or 7 children also have enough experience to understand about systems and rules in games-and become fascinated with what is called rule play -that is sports and other small group games with rules-traditional games like four square(a ball game played in a rectangle) and tag(a game of chase).

Schoolyards have the potential advantage over public parks in that there are adults to supervise the play. This can be an advantage or a disadvantage depending on how the teachers see their role on the playground. If the teachers see their role as play police then the play will be stifled. However in a child friend city the teachers will also need to rethink their approach to play outdoors and should take on a more helpful role of nurturing good play -and even entering into playing with the children.

Schoolyards for children under six should be designed to promote a whole wide range of play -and should be designed also to provide for the comfort of the adults who should be out with the children for long periods of time. One of the great contradictions about play is that the further north you go in Europe the longer young children are outdoors playing. In northern Norway as well as Sweden and Denmark young children under six are outside in all

weather -at least two hours every day. For these cultures there is no such things as bad weather- but a question of appropriate clothing.

Now I know that it is unrealistic to try to impose the values of other cultures but I mention it here to underline that it is not the children who chose to be inside so much in southern lands -but more a carry over from the fact that women in southern lands have traditionally been more closely linked to the indoors. But in child friendly cities how far do we go to preserve traditional adult behaviours that are not serving the children well? While these kinds of questions are not ones we can resolve with physical design they go to indicate just how complex the whole issue of designing for children friendly spaces really is. Physical design must go hand in hand with social design and political programmes to achieve a child friendly city

Schoolyards for children over six take on a different character as here the children are actually in classroom situations for most of the school day. When they come outside they usually come out in large numbers for short periods of time. This means that the play design should be such that the children are dispersed over the whole play area. Because the children are out for short time periods and have just been in a class room setting where they must be relatively still and quiet -play on school yards should concentrate on activities that involve a lot of movement and noise. Play items that support movements like rocking, twirling, climbing, swinging, jumping, hopping and all other ways of using the body should be offered. School age children on schoolyards also tend to sort themselves by gender and age so on schoolyards it is very important to offer a number of choices of places to experience the same kind of movements. There should also be some spaces and play corners for various small groups to engage in their own rule games.

Older school age children-early teens and adolescents also like to move and engage in playful behaviours but not where the young ones play. It is a good idea to create special corners for the older children and again involve the children in the selection of the location for the various activities.

Sports and physical education activities often dominate all the goods pace on a schoolyard -and that is something a good designer should work to avoid. While participation in sports is important -it is equally important for children to have informal play spaces where they can make up their own games

One of the concerns I have with schoolyard design is that there is perhaps too much age separation between children in schools. There are advantages to children playing in mixed age groups but usually the kind of play engaged in is dramatic, social play or some form of creative play. Sand and water play tend to bring children together-and there should be more of these kinds

of play possibilities on school yards. However avoid small sand boxes - instead offer large sand landscapes -preferable with flat stones and other features. Concerns about the soiling of the sand by animals can be dealt with by fencing and electronic signals that deter the animals. Concern about tracking sand into school can be dealt with through placement of the sand area so that children must pass over grids and sand trapping surfaces before they enter the school. In a child friendly city it is possible to find a creative solution to the adult concerns around children's play - child friendly cities do not prohibit play that children like just because it is inconvenient or problematic for some adults. Instead we as designers must find ways to reduce the inconvenience for the adults without reducing the play possibilities for the children.

Like with playgrounds in public parks there can also be a question of where are the boundaries of the playground in a schoolyard for children over 6. This question becomes more important with the new learning movements that are happening in some European countries -with the concepts of the outdoor classroom and Learning through Landscapes. These programmes advocate that the formal education activities also move outside where the children can use sections of the schoolyard for their activities. To support the learning activities portions of the schoolyards are landscaped with trees and shrubs for use in natural science classes and in some countries - such as Norway large sections of the school yards are devoted to building of huts and small houses which the children do as part of their classes which now focus more on project work than on individual sessions in reading and writing. With such programmes in the formal education periods it becomes very important that there be some part of the outdoor area reserved for the free time play -where the children themselves can decide what they want to do.

3. Beyond the playground -playing in the city

Children's use of outdoor city spaces should not however be limited to playgrounds - children should have access to many other spaces in the community. Playgrounds are great places where children can be free to be children and where childhood culture can be freely expressed. However playgrounds are places where access tends to be limited to children and their adult supervisors. Other spaces in the neighbourhood should be designed to bring adults and children together. Due to children's limited geographical or home range these spaces should be within the residential areas where many children live.

Children today lack interaction with adults other than family and teachers - and they need to be able to move freely in other places in their community where they can meet other adults -their neighbours and local shopkeepers

for example. Many adults are also lonely and can find pleasure in meeting and watching children. To nurture greater community interaction between children and adults public open spaces can be made more child friendly.

Such spaces can include:

- Squares/piazzas and market places
- Play streets/walking streets
- Historic city centres

In these places the spaces must be shared by the children and the adults and sometimes also traffic. In these kind of spaces the consideration for children involve ensuring safe access through traffic calming measures and by making these spaces places where the people in the community like to be. Providing possibilities for children's interaction with the space means re-looking at the way we design these spaces. While it can be very appropriate to set some small play items that engage the fantasy of the children-many of the other objects in the space can also be used by the children for play.

Here are some of the things that can happen in these spaces - that the children will love to be part of:

- .dancing, music, rhythmic movement
- .story telling and theatre
- .exploration and discovery
- .manipulation and creation-often with items found in the space-like leaves and twigs
- .family/group play and games -chase, hide and seek and so forth
- .communication play - games like "I-spy"
- .water and material play -where there is an accessible fountain
- .urban play - that is playing with the city
 - such as twirling around sign and light posts
 - somersaults over barriers
 - leap frog over bollards
 - balancing on walls and edges
 - side walk games - skipping, bouncing balls, sidewalk painting, side walk sales and "kick-the-can".

To encourage these kinds of activities, that is to make these spaces-child friendly - here are some of the things we should consider:

- select sign and lamp posts for good tactile experience and designs that can be used for playing around.
- select barriers and bollard designs that support playful use.
- edges and walls be designed with the idea that children will use them to balance on, walk on and sit.
- sculptures placed low to the ground and accessible to the children so they can explore them.

- ground patterns designed so they can be used for play or are visually playful.
- details in the ground that encourage jumping - or following a trail.
- rain water drainage system designed so children can see where the water goes - and can play with the water in small amounts when it rains.

Deliberately make shallow depressions in the paving to collect water for puddles and design small, shallow open drainage ditches running through the street.

Special events for the whole family in the city centre - events that involve playing are good ways to encourage and familiarise children with parts of the city they may not otherwise visit. Here is an example in the city of Odense where I live. This is a sand castle building contest where they have dumped huge loads of sand on the square in front of city hall and invited families to come and make sand castles one Saturday morning.

Playing on wheels

Playing on wheels fascinates children - and has ever since man found out how to apply the principle of the wheel to make objects that could be used to transport people. Wheels have to do with speed and movement. Also sometimes a lot of noise.

With these wheeled devices the children not only get good practise in co-ordinating left and right in both foot and hands - they also enjoy friendly competition - who can go the fastest.

Cycles also have a lot to do with fantasy and children love exploring what they can do with these things on the move.

Like with other play possibilities the way wheels are used changes throughout childhood - and increases in complexity, speed and distance as the child develops experience and skills. The skater culture is a fascinating one to study - as here we see how one set of children teach the younger ones techniques. These skills are all self taught - yet they are so very skilled. With the children on skateboards and rollers skates we also see how children inspire and motivate each other to develop even further and to try new things.

Also on bicycles some children practise and practise what they can do with it - to the point where they can go places one would never dream they could. Children do not accept the limits we adults take for granted - and we can all learn a lot from this.

With wheels, on wheels, we also move out from the designated playground and into playing in the whole city. Children over 10 are difficult to hold in the playground - if it is a boring playground. Especially boys will find other,

more interesting places to play - and the girls choose to stay at home and play with friends there. Young children however need to be able to explore their neighbourhood and city - and feel a part of the community. And today they often get around on wheels.

Boys use bikes and skateboards to move around the city - as do some girls but not nearly to the extent that boys do. We need to do more research to find out why this is the case. Even the experts on play must recognise the fact that we adults do not know enough about children's play to be able to provide the optimum opportunities for the children.

Accessible nature in city environments

Children value nature highly -in fact it is their preferred play item or space. One of the most effective ways to make child friendly environments and at the same time enliven boring urban sprawl is to incorporate natural and semi-natural spaces into the neighbourhood. Natural woodlands, ponds, streams, grasslands -all are attractive "found" play spaces that children value highly. Before further land use zoning and development takes place in child friendly cities it is a must that you take an inventory with the children to identify those spaces where they like to play -to ensure that you do not overdevelop those semi-natural areas that mean so much to them.

The natural attraction of water

Water and humans go together - we are after all 90% water. And water and children's play are natural partners. Children are attracted to water - and WILL play with it.

By water and the places where water meets the land is often where you find children. These places also have interesting nature that further interests the children

These places need not be in a playground not large and complex. Small streams of shallow water that do not represent any hazard to the child can easily be provided in many city spaces. Wherever a water feature is designed they should be designed to permit children to play with the water.

Planning for children's access to outdoor spaces

Planning the city and allocating land uses so that there are quality environments for play accessible and within easy reach for every child is a complex activity that involves balancing adult demands and convenience, politics and economy among other things.

Today in many western cities the spaces allocated to children's play are the left over pieces that can't be used for anything else. And this allocation

process all too often ignores the children's desires and actual use patterns of the city spaces. There are some typical planning criteria that includes guidelines about how far a child at different ages should go to find a play space.

Here is an example from the UK

Level of provision	Location rel. to home	Purpose	Area
Doorstep play areas	within 50 m	Mainly for children under 5 and as a meeting place for adults caring for children. Separate sites for older children for social play	Small- 50 to 100 sq m.
Local play space	400 m	Mainly for children over 5 years or adults with small children.	At least 1 hectare
Adventure playgrounds	400 m	To provide challenging play for children of all ages under adult supervision	1000 - 10000 sq m.
Neighbourhood park	5-600 m	To provide for all age groups from young to elderly	About 4 ha
District park	Within 2-3 km	All ages -as above	At least 20 ha

This is an example of a theoretical plan for play provision- however very few cities outside of the model cities have ever met these standards. Such a standard is difficult to impose on a historic city -and probably is not necessary for the well being of the children. Such planning standards ignore that there are other limits on children's access --such as time, traffic and the unwillingness of the adults to accompany the child to these places. Such formulaic applications are criticized because they can result in boring areas that seem to be the same everywhere.

Good quality spaces -that are sunny and pleasant, without a lot of traffic, that may not be designated playgrounds, but where the adults like to go with children and where the children are free to move and explore can be good alternatives to the playground. But - and it is a big but, the children must be free to move about here - to use their bodies as they need to - they must not be required to sit still or be quiet.

Children's Safety at Play

When discussing the planning and design of outdoor spaces for children the issue of children's safety must also be addressed. There are two parts to the issue of the safety of children-

1. This is the necessary precautions and good professional practises to be followed to ensure that the spaces are free of hidden hazards that could result in serious injuries to the children. -these issues are now dealt with through the En norms for play equipment and play spaces - these are EN1176 and EN1177.

Most of these content of these norms deal with the manufacture of safe play equipment -and for you as city designers you can rest assured that the norms are met if you purchase only play items that have be tested and certified as conforming to the EN 1176.

In addition you must be aware that there are requirements for the surfacing under and around the play items where children are in movement and raised more than 60 cm above the ground. Here the EN 1176 describes the size of the fall area you need to concern yourself with and EN 1177 describes the requirements for the fall or impact surface. The EN also requires that the play equipment manufacturer provide you with this information as it pertains to the items you are purchasing.

2. The second aspect of children's safety at play is the issue of the adult's - especially parents and supervisors - perceived notions of potential dangers to children and their fears for their children's safety. Here we are dealing with a whole set of emotions and irrational fears -and this makes work very difficult. The media loves to portray children as victims -it makes selling headlines every time - and therefore today, through the media coverage it is very easy to come to the conclusion that every child is in immediate danger of being kidnapped, abused or seriously injured on play equipment. This is not the case in fact. There has been no increase in the incident of attacks on children in the last 40 years -just an increased coverage of the cases.

Traffic has increased as a threat to children - and this should be dealt with in ways that does not limit the child's mobility so much as it does today. Drivers must be prepared to share the streets.

With regard to the potential for injury - if the play items and their surrounding meets the norms there need be no further hindrance to the children's use. Some adults try to go further than the norms and eliminate play items that can appear risky to them although completely in compliance with the norm -but this is a mis-guided effort -and does nothing to improve the safety of the children-it only results in even more experience starvation of the children.

There is a big difference between making safe playgrounds and making safe play for children. If playgrounds are made so very safe that the children find them no longer challenging then the children will find some other place to play- places where there has been no safety considerations taken. For

example in the UK when the first set of safety norms were introduced for playgrounds in the late 80's many local authorities responded by taking all the play equipment out from the playgrounds and closing the playgrounds - this meant that there were no unsafe playgrounds -but the result also was that children started playing in the streets -where they had always played before there were playgrounds -and in the following year children's deaths in traffic increased dramatically.

Safety of children at play is just as much an issue of the competence of the children as well an issue of the design of the play items and spaces. Few accidents happen to children on adventure playgrounds and building playgrounds -a mainly because the children are shown how to use the items which include hammers, saws and drills, high swinging ropes, and other loose items and are permitted to play with things when they have shown that they are competent to handle the challenge. Safe play can only happen when children have sufficient experience and competence to handle visible dangers and know about taking care.

The new insight into children's safety is that **the safety of the child at play increases with the child's increasing experience and competence**. To extend this to all aspects of life we could say that the future of civilisation tomorrow is dependent on the experience and competence of today's children. This means that we need to focus more on the experience of the child and how they gain this experience. Our future tomorrow is dependent on the children's experience today. And much of this experience come with playing outdoors.

C. Designing Spaces for and with Children

When designing playful spaces there is one very important rule
-the play is in the details

While design for child friendly environments -like all good design can not followed a set recipe or formula - for the rest of the time I would like to give some examples of how we can bring more variation and variability into child friendly spaces

☀ nature and made objects

conventional playgrounds have focussed on play equipment -and these items have an important role on a good playground -when carefully selected and located with consideration for the unique environment. What we must stop giving our children is a rectangle of sand or rubber with a few pieces of play equipment - this is not a playground .

Nature has a place in child friendly environments -and in a land like Italy with such a varied nature - there should be an even greater place for nature on the Italian playground. Nature in cities is not the same as in the countryside- but there should be room for plants -big ones and little ones and for insects and animals that have adapted to city living.

It is not necessary to fill all space with play things or objects -open spaces or various sizes are also important spaces for play.

☀ **elements of the earth**

Sand, water, rain, snow, ice, fire, soil, rocks all are elements of this earth that children find fascinating. Experiences with fire and water can and should be accessible to young children in Italy - the same as it to children in Scandinavia.

☀ **people**

Children need people to make play meaningful most of the time. There is a need for quiet and solitary play in the life of every child. But most of the time, most children need other children and sometimes adults to make the play really enjoyable.

While we can not plan to set people on a playground we can through our designs create places where adults and children like to spend time. This means we need to be aware of sunny places for comfortable sitting and create social corners with seating that encourages adults to talk together.

The classic placement of benches in straight lines like soldiers along the edge of a public space doesn't work . It serves to isolate people and then the adults get impatient and want to leave soon. Good comfortable benches with backs and arms, well placed so that people can make eye contact and talk are part of making adults comfortable. But they shouldn't be relegated to sitting and waiting or pushing swings. Maybe they too can find something interesting to do -write a letter, play a game, do some fitness stretches, swing, observe and even at times participate in the play.

☀ **culture in the environment**

There should be elements on that tells something about that particular place, the history of the neighbourhood or the geography of the area. Local artists can make a great contribution through communicating some idea about that place.

Considerations that preserve some aspects of nature - like old trees, rock outcroppings or indicators that tell that there once was a stream that ran through the area. There could be some reference to the cultural backgrounds of the people who have settled there.

We should also keep in mind that children create their own play cultures in a specific place. For example they create and pass on to the next generation ideas about trees and stones where fantasy people, elves or goblins live, and they often will establish certain play routines or ways to react to the space that are unique to that playground. Certain seasonal activities -snow play, and so forth can vary with the play culture of the place. In redesigning an existing playground it is important to find out about these things before deciding on the new form the playground will take.

Playing with the three dimensions of the play space to increase the variety of experiences of the children.

When I look at various playgrounds I frequently see that the designer or contractor has focussed on objects and not on spaces.

We must think first in terms of spaces for play -then choose how we want to furnish those spaces. And by space I mean the actual three dimensions of the place -not the dimensional plan view. Far too many playgrounds are drawn flat on paper or with a computer - where the focus is creating an graphic that looks good. Playgrounds should be designed with all three dimensions in mind- and from the children's viewpoint.

Here are some ideas of working with the three dimensions.

The sky is the ceiling of the outdoor space

For young children however large open spaces with the sky high up are somewhat intimidating. Young children say ."The sky is too high -bring the sky down" and that is what good design can do in some places-trees with wide overhanging branches, bamboo or willow tunnels, canopies of sail fabric, parasols, gazebos and pergolas all contribute to making a variety of heights of ceiling over the play spaces

The walls

Walls are the traditional way in which architects define spaces - and walls are part of the traditional Italian garden design. Walls need not be high - they can be quite low and they can be made so that they can be seen through in various places.

Some play items can be used as walls -a row of play houses can define a play street -while a wide row of mature hedge plants be they lilac or privet can be used also as hiding places and playhouses. Therefore when making hedges - it is a good idea at times to make a deep hedge -2 or 3 plants deep.

Walls can also be stones, mounded soil, or a series of posts, or vines on a fence - there are many ways to define outdoor spaces -and in playground

design we can use the same tools and materials as are used in good garden design.

The ground.

Play takes place not only on built play structures - the ground in the play area is in fact one of the most important play features and can inspire to much play. Many traditional childhood games are played on the ground. In fact much of child's play takes place on the ground

When I look around at the ground in spaces designed for children I can well imagine that there is an unwritten law in playground construction that says "The ground must be flat!"

I am sure this pleases all engineers and bulldozer operators but it does nothing for the play. The reality is -there is no law - it is only lazy practises -so feel free to make playgrounds where the ground is everything but flat.

The other way that the ground has been ignored is that too often the ground in a playground is all the same material. This is not good play design. The floors in play area should have a variety of different materials and textures - some hard, some softer -depending on the kinds of play that can happen in that space. The ground is not just to be seen as something children fall onto at play -but should be seen as a plaything itself. Much of children's play takes place on or from the ground and designers should look to making the ground a good play item.

Playfulness in the details

When designing for play be aware that much of the play experience can be influenced by the details in the playground.

-Edges

Research shows that children tend to play near verticals and at the edges - they are seeking space definition and the psychological comfort from verticals in the outdoors. Use this knowledge to make the edges playful. Make edge dividers between one surfacing and another into a playful balancing edge.

Create open door ways when children pass from one kind of space to another to emphasise the transition.

Walls can have peep holes and "windows" to look out on the larger world -at children's eye heights.

Children also like to collect in **corners** - which can mean in your design that you design to make a number of good corners for play in the play space or child friendly space

Corners are good for quiet play, for many kinds of social play, playing with dolls and handheld toys, for all kinds of creative and conceptual play.

Corners are extremely important to toddlers and young pre-school children. We can see that they, for example like to place themselves in a corner in a sand box. It then makes good sense that when providing for sand play for young children that there is a maximum of corners.

For school age children-who also still like to play with sand - large sand areas are important and corners are not nearly so important - here you can make a large sand lake but remember to include some verticals.

Another aspect of corners has to do with corners in pathways - especially ones used by young children with wheeled toys. Young children have difficulty negotiated 90 degree angle corners on their trikes or wheelchairs - and to avoid that worn ,muddy area that forms at such a corner- it is better to design with a curved corner -with at least a 1 meter radius. This is a much better solution than setting up barriers to keep the children on the path.

Lines in the ground are an immediate invitation to various games - jumping, hopping, running and so forth. Lines should be located and sized according to children's body skills -how far can they jump, what is a comfortable stepping/pacing rhythm, how much room do they need to do a handstand? And remember -it is not one child but two or three who are playing together

With today's landscape materials including the Notts Sport Childs Play it is possible to add a myriad of lines, patterns and colours onto the ground -but do this with care - these patterns and lines should have some meaning to the play of the children in that space. .. not be set in because some adult sees an empty space on the plan view.

Scale and enclosure -these design aspects are related to the three dimensions of the space but here I want to emphasize that we need to work with a scale that children are comfortable with . Young children especially seek out small scale spaces and enclosed spaces - we have all seen it how young children prefer to crawl under the table and play there -remember to make those small scale enclosures for the young ones.

One other aspect of design has to do with the language of design -the way in which the design communicates meaning to the children. One of the major roles for the design of the play items is to make a clear statement that this is a place for children and a place where play of all kinds is permitted.

Signalling a positive attitude toward childhood :

Lines - The Austrian artist Hundertwasser has said "straight lines kill." He could have said "straight lines kill playfulness".

Lines that are straight with right angle corners are serious, business like - express efficiency and no waste.

When we want to use lines to signal relaxation and playfulness it is the gently curving line that communicates it best.

Colours

Bright strong contrasting colour schemes have always been associated with children and childhood - however with the advent of modern synthetic paints and industrial painting techniques we have gone too far in splashing far too many colours around on the playground. Playgrounds should not look like storage boxes for crayons - they should look like well designed spaces.

While the emphasis here is on increasing variety in stimulation- this is not the same as throwing helter-skelter all the colours of the rainbow over all play equipment and then also on the ground. Colour is a powerful visual stimulant -and must be used with wisdom and a sure design hand. Children look to colour to tell them something about the object or space- so use colour as a language or signing system rather than setting a large variety of colours together on every object or element.

Variety is important but it must offer something to the play. Colourful play equipment should be selected with care - and avoid a structures with too wide a range of colours. It is better to use a more restricted colour palette on each object and bring in some variation in colours of the objects used throughout the play area. Colour is also added to the environment by natural elements, the surrounding city that forms the background, the colours in the ground and in the colours of the children's clothes. Colour is perhaps the one aspect of children's playgrounds where I would say that many times there is too much variety on the individual play item resulting in a lack of variation in experiences for the children in the playground as a whole.

I have mentioned images and art briefly in relation to culture and I want to bring your attention back to this again because it is important. Art, other non verbal signals that children understand have a number of meaning on the playground. One they can inspire the children's fantasy, secondly they can communicate something about the uniqueness of the place. Equally important they tell the children that society values them. Many children live in communities where the public art is set in the town hall and other places of adult business -and they very clearly understand

that these are symbols of importance -and they become very proud when the public society also puts these things in places for them.

In Conclusion

To design well for children's play may mean we get engaged in the controversies around views of children and children's play- and it definitely requires that the designer see themselves as an advocate for the children not as a controller or censor of the children. We must learn to trust the children and to ask more questions about our own responses.

When we design for play we need to use all the tools of the open space designer - to communicate to the children and to offer them the opportunities to enjoy a wide variety of experiences -to engage in a playful dialog with their surroundings, with their playmates and with their local culture and society. Child friendly cities are places where all people can feel comfortable - and part of the society.

I hope this very brief presentation has been able to show that there is a great deal of complexity to providing well for children's play. On the other hand the play spaces and playthings need not be so very complex - just a greater variety of them.

Play is what makes us most human and working with play provision, is in my opinion one of the most interesting and challenging works we can undertake. After all providing well for playing in the city is the best we can give our children and is the surest way we can help provide for a bright future - whatever the future may bring.

BEH

Nov 02

Attachment 1