

The Role of Playgrounds in Children's Cultural Worlds. Are Playgrounds Redundant in the Urban Environment?

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ABSTRACT: As we struggle with the demands of rapidly growing cities, the needs of our youngest citizens are being ignored. Due to how space is allocated in cities today, playground space has decreased. The loss of playground space denies children their right to play freely. This paper argues for a reconceptualisation of play space and for cross-disciplinary collaboration to get us there. Documentation of playgrounds from Europe and the US was used to outline the changes in playground design since the start of the 20th century. The concept of free play was assessed by reviewing literature and theories of diverse disciplines such as sociology, education, and cognitive developmental psychology to understand its role in children's cultural world and well-being. The philosophical works of Foucault, Hobbes, and Rousseau were included to define the notion of childhood in the reflection of the values of different times. Building regulations from North Rhine-Westphalia, Germany were considered to understand legal planning requirements for playgrounds and their relevance for urban space allocation. The findings show that playground design has been diverse over time while its purpose remained unchanged. Unsupervised outdoor play is an essential element that creates children's culture and alters culture as such. Apart from having health consequences and impacting their cultural capital, the lack of contact with nature-related playground space has a detrimental impact on children's social development and deprives them of agency. The paper concludes that changes in procedures for authorities and architectural education are necessary to generate improvements. A cross-disciplinary collaborative approach is suggested to understand children's needs and devise solutions addressing the challenges in architecture and planning.

KEYWORDS: outdoor play, playgrounds, urban childhood, architectural education, child development

INTRODUCTION

Working as an architect and urban designer in North Rhine-Westphalia, Germany, I often asked myself whether the planning and integration of playgrounds into urban design schemes is truly done in the best interest of children. It was only when completing an MA in Childhood Studies a few years ago, that I finally understood that the way we approach children's rights in urban planning is inappropriate and hazardous to children's health and culture. Research indicates that accessible space for children in cities is crucial to their social, physical, and intellectual development through play and exploration (Gebauer and Hüther 2003). Although decisions about urban planning impact children's lives, their participation and opinions are not comprehensively included in urban planning processes. Playground space is vital as an urban space exclusively reserved for children to play freely. This space is shop and advertising-free. Children can roam independently and be noisy, behaviours that are usually forbidden in other spaces where adults tend to interfere in children's play (Baumann and Wolf 2016). The benefits of playgrounds are wide-ranging. The equipment is mainly gender-neutral and designed to stimulate children's interest in physical exercise. Playgrounds can be a meeting point for different social classes and can also lead to playing in mixed-age groups. This facilitates peer learning opportunities, helping younger and older children take on different responsibilities and engage in different types of problem-solving (Hüther 2008; Vygotsky 1978). As a result, playmates and playgroups can change flexibly.

However, research over the last two decades has shown that outdoor play is under threat. In 2005, Karsten found that children in Western countries play outside less than ever before and have less contact with nature than previous generations. Kernan (2010) attributed this phenomenon to the changing urban environment where children's outdoor experiences are restricted to space provided in schools, daycare, or the home. It could be that children are no longer interested in playgrounds as suggested by Brussoni et al. (2012) who found that play space and equipment were failing to meet children's interests. If we consider free play in nature, we find barriers to outdoor play coming from concerns about safety, such as traffic, "stranger danger" and the lack of natural places within reach (Sandberg 2012, 185). In 2016, researchers found that 70 % of UK children under 16 visited the natural environment only once a week, while 12% never visited (Hunt et al.). Reduced contact with flora and fauna harms mental and physical health and damages our essential relationship to nature (Soga and Gaston 2016; Giusti et al. 2018), a relationship that is needed to understand the environment as a vital resource, and ultimately to be able to protect it against destruction.

The conference theme "Architecture into the Unknown" highlights concerns about future paths, and uncertainties around social and spatial resources, and climate change conditions. Urgent answers are needed to avert health and cultural losses that will cause lasting damage to children, society, and us. Research can provide resources to

help us shift towards urban design that allows children to play freely outside, but so far, we have been unable to implement fair and healthy urban planning grounded on this basis. This means that, as architects and urban planners, we are neglecting children's needs and rights. The reluctance to prioritise children's needs may stem from a lack of awareness of disciplines like Childhood Studies or Health Promotion in architectural education.

Having learned from these disciplines, I now understand the impact planning decisions and design can have over the human lifespan, and this knowledge significantly changed my professional approach. I believe that it is necessary to collaborate with experts outside architecture before, during, and after the completion of projects. Evidence from different disciplines can help us shape priorities in planning strategies and decisions to improve the quality of space, enabling us to create a healthy and just built environment. This paper focuses on unsupervised outdoor play in urban settings in Western Europe and the US to demonstrate the role of playgrounds in children's play, culture, and well-being.

1.0 URBAN PLAYGROUNDS IN WESTERN EUROPE AND THE US

1.1 Development of urban playgrounds

The development of the playground over the last 150 years shows striking attitude shifts. In the early 20th century, when child labour ended and children were left by themselves while parents worked, social reformers invented the playground as an urban space focused on safety, physical exercise, preventing criminality and protecting children from danger. Playgrounds were fenced in, equipped with gymnastic apparatus like swings, climbing frames and slides, were supervised, and often divided by gender. The concept of the playground can be traced back to Thomas Hobbes' 1651 book, *Leviathan*. Hobbes described a picture of social order where the child is considered powerless. Knowledge gives parents the power to rule and this changes only when children finally become parents themselves. Children's play, if not restrained by adults, would threaten the civilisation process of the child and, therefore, free play needed to be averted. Despite the popularity of these Puritan notions, more liberal concepts of children's play began to emerge, evidenced by the founding of the first Kindergarten by Friedrich Fröbel in 1840 (Michaelis and Moore 1891). However, from the beginning, playgrounds were designed to influence children's socialisation and education. Although these spaces were reserved solely for children they could easily be controlled. Towards the end of the 19th century, progressive concepts had gained recognition.

1.2 Educational idea of play

Jean Piaget (1896-1980), a developmental psychologist, promoted the educational idea of play to the broader public by emphasising how important childhood is for human development. Social interaction takes a central role in his theory, as cognitive development is navigated by a social stimulus. Children are viewed as active learners who adapt to their environment through the process of assimilation and accommodation (Piaget 1945). Publications on childcare by psychologist Arnold Gesell (1943) and psychiatrist and paediatrician Benjamin Spock (1946), supported this theory.

1.3 Child-centered play

In the 1930s, new playground concepts facilitating child-centered play were promoted in Sweden, Denmark, and Holland. Carl Theodor Sørensen, a Danish landscape architect, designed urban playground space as natural rural spaces (Kreutz 2017). To encourage children to make their own use of the environment, he integrated swings or a climbing tree at most. Although these places for children met with disapproval from parents - the children got too dirty while playing - Sørensen promoted public green spaces and their social function (Baumann and Wolfs 2018, 57). He developed his ideas further and came up with a junk playground, which later became known as the adventure playground. In 1943, the "Skrammellegeplads" (junk playground) where children were given materials and tools for building and shaping the area, was brought to life in Emdrup, a suburb of Copenhagen, with 700 family homes. Marjory Allen, an English landscape architect and playground pioneer, brought the idea of the junk playground to London in 1946, naming it Adventure Playground (London Play 2012, Soames, n.d.). Other playground ideas included the first abstract play sculpture, erected in the City Park of Stockholm, Sweden in 1949. Møller-Nielsen a Swedish-Danish artist was the first to combine abstract art and play in public space. He not only introduced abstract art in public space to a wider public but also generated a boom in playground sculptures (Baumann and Wolfs 2018).

1.4 The 1960s and Rousseau

The political movement of 1968 towards a self-empowered society influenced the idea of childhood, environment, and education. The understanding of childhood and the role of play within was the theoretical heritage of Jean-Jacques Rousseau, a French Philosopher (1712-1778), who saw children's uniqueness expressed in free natural playfulness based on their intrinsic positive values. Civilisation for him was a corruption of the child's natural innocence. Rousseau believed that children have their own rights, needs, and desires, needing safety and time to grow up healthy instead of paternalism and punishment (Rousseau 1762). This belief influenced the pedagogical principles of the 1968 movement, focusing on child raising without disciplinary elements. Public space was regarded as a democratic space where anti-institutional ideas were tested.

1.5 Safety

The 1980s brought safety standards for playground design and equipment. The Handbook for Public Playground Safety by the U.S. Consumer Product Safety Commission was published in 1981, bringing major changes for companies producing playground equipment. A Eurocode, defining the basis of structural construction products, followed in Europe in 1990 (European Committee for Standardization). Although not legally binding (Commission

of the European Communities 2003), these guidelines became standard in liability cases. Since then, playground design has been restricted by norms for safety. Parental attitudes concerning the safety of children's outdoor play and in playgrounds have changed as well. Beck (1992) calls this phenomenon "the risk society", where parents regard the world outside home as dangerous. Children's mobility became restricted to shield them from physical harm caused by traffic and unspecific threats he calls "stranger danger". Furthermore, as Rose notes, childhood is the most intensively governed sector of personal existence ... to ensure its normal development, to actively promote certain capacities of attributes such as intelligence, educability and emotional stability (Rose 1990, 121).

However, the same decade brought the Convention for the Rights of the Child (United Nations 1989) to life, regarding children as individuals with civil rights, needs, and the right to be heard, underlining children's autonomy and agency. Although initially contrary, the power structure and interests that have formed these decisions concerning children have some similarities. These include the aspect of control of children and the question of who has the power-knowledge (Foucault 1976 in Gordon and Foucault 1980). This should be our focus when we try to understand the role of playgrounds for children's right to play.

2.0 FREE PLAY

2.1 The child's right and need to play

The child's right to play is stated in Article 31 of the United Nations Convention on the Rights of the Child (United Nations 1989). The organisation International Play Association, describes play as a form of communication and expression, combining thought and action; it gives satisfaction and a feeling of achievement. It is also instinctive, voluntary, and spontaneous (IPA 1979). It is not controlled by adults. Children's enthusiasm, will, and desire to play are essential to children's cultural worlds. The latter distinguishes children from adults and represents one of the most distinctive features of childhood. It is something that children across the globe have in common (Woodyer 2013, 55).

Presumably, adults' perspective on children's play emerges from their own physical childhood experience, and through literature, toys, media, and advertising. Childhood is a common biological experience that changes over time and once we reach adulthood, it is a state we cannot return to. As time passes, adults may no longer be able to recognise important features of children's play. Sociocultural research shows how the world around us shapes childhood and play. Sociologists look at children as a group to understand how they engage with society. To them, childhood is a social construction, shaped and understood by culture (James, Jenks, and Prout 1998).

2.2 Features of play

How can adults recognise children's play? Our understanding of play stems from research on mammals. Fagen (1981) found that play helps animals to adapt to the environment to which they are exposed and therefore is an activity to improve behaviour and learning which impacts evolutionary processes over time. Burghardt (2014) further defined features of play, as a non-functional behaviour that is different from adaptive versions in structure, context, and the stage of development. It takes place when the animal is relaxed and unstimulated. However, play and its recognition is a complex concept of attitudes, behaviour, and feelings (Andrews 2015).

It can furthermore be viewed through different lenses, such as the educational, psychological, feminist, or sociological. Playgrounds are a feature of the built (cultural) environment. They are public spaces for social activities. The sociocultural approach focuses on the social activity of play concerning people and the cultural environment in which it takes place. This approach has been chosen here to investigate the role of playgrounds for children's cultural worlds within the built environment.

3.0 CHILDREN'S CULTURAL WORLD

3.1 Play and culture

The sociologist William Corsaro has researched children's play and cultural worlds extensively. Corsaro believes that "children create their own unique culture" (2012, 488) and that society and culture affect the way children experience childhood. Play is a part of this culture that emerges when children share, negotiate, and interact with their playmates and with adults. To him, children live in two cultural worlds (Corsaro 2012). Firstly, they live in the adult culture of the society they are members of. This is a social construct of commonalities expressed by elements such as music, dance, literature, and architecture linked to cultural heritage and diversity. It implies that culture is made up of "the shared values of a group or of society" (Hall 1997, 2) and that it is "a tendency across disciplines, rather than a discipline itself" (Miller 2001, 1). Secondly, children are members of their own peer culture in which they interpret adult culture by actively using, altering, and expressing aspects of it for their own concerns within their play (Corsaro and Eder 1990). Corsaro calls this process "interpretive reproduction" when children not only adopt cultural aspects from the adult world but also contribute to these aspects. Both cultures relate to one another. Children's peer cultural world although interwoven with adult culture, is equally important.

3.2 Children as social agents

He, like Mayall (2000), views children as agents, someone who negotiates and interacts with others, intending to make change. Mayall (2000) regards children as being part of the social order and asks us to recognize children's contribution to society and their ability of relationship building in families. Within this sociocultural discourse, childhood is more than a period when children grow up to become adults, but a time when children create their own culture and through this impact society. Corsaro and Mayall regard children as human beings rather than human "becomings" by valuing their potential in their present being, rather than in the future as adults. Approach-avoidance

play and dramatic roleplay reveal how children form culture when they communicate with peers during play. The approach-avoidance play

demonstrates how children cope with real fears by incorporating them into peer routines that produce control (Corsaro 2012, 494).

It enables children to engage in play sequences, confronting fear and anxieties (Marshall 1976; Schwartzman 1978). A well-known example of it is the “run-and-chase game that includes one child taking on a threatening role” (Corsaro 2012, 502), responsible for catching and eliminating players from the game. Dramatic roleplay allows children to slip into social roles, acting out adult features of power, status, gender, and control. Through play, children learn to understand social conventions and relationships. By trying out aspects of elaboration within their play, they refine social roles for their means and construct their roles through interaction with peers and adults. Children as agents of their concerns use the cultural world around them to remix and interpret fragments of it. This forms their cultural world and, finally, changes the original cultural source.

If free play is so important in children’s development, we must look at the one space where they should be able to play freely to see if it provides the appropriate conditions to foster play. We must also consider how both the cultural worlds of adults and children might change in future due to children’s interaction with outdoor space in cities, in this case, the playground.

4.0 CHILDREN IN OUTDOOR SPACE

4.1 Features of child-friendly environment

A study on child-friendly environment (Kytta 2004) reveals the interrelation between the resources and options, or affordances (Gibson 1979) of outdoor space and the level of children’s independent mobility if space was to be attractive for children. The research group consisted of 223 eight and nine-year-old and their parents, inhabitants of neighbourhoods with different urbanisation levels, who participated via questionnaires and interviews. Kytta’s findings indicate that the combination of affordances of space and the degree of independent mobility is an essential indicator in the assessment of child-friendly environments. Urbanised areas were regarded as significantly less child friendly. Also, sociocultural factors designating use of space can block children’s play activity. Space with one-use option only, such as gardens (fear of damage to plants or flowers), is a far less child-friendly environment for play than space that offers alternative use like a sports field (Holloway and Valentine 2000).

4.2 How do children engage with playground space?

Brown and Burger’s (1984) analysis of research on playgrounds between 1968 and 1981, focusing on free play of preschool children, showed that it was not the design of playground furniture, nor the material of it that brought more “desirable social language or motor behaviours”, but design that created zoning, offering encapsulated space and materials children could integrate into their play (599). Playground design is important for the promotion of children’s play acts, but children prefer outdoor space to playgrounds if both are available. Where playgrounds are located and how accessible they are within an urban design scheme has an impact on the frequency of use. Safety in children’s free play is an important factor for accident avoidance, but this means as safe as necessary and not as safe as possible (Brussoni et al. 2012). If locations offer poor natural lighting due to surrounding high buildings, have a lot of traffic, and uniform ground material they tend to stay unused (Brown and Burger 1984). Research by Barnett and Kruidenier (1981) proved that when playgrounds offer children visually enclosed play space, such as tall grass, bushes or even play furniture that facilitates hiding, more cognitive and socially complex behaviour can be seen in their play.

Childhood educators Deniz and Kalburan (2023) studied the quality and risky play options of 8 neighbourhood playgrounds and 8 green playgrounds in Hamburg, Germany. The green playgrounds were mainly located in parks or natural areas and characterised by trees, bushes, and water elements, while the neighbourhood playgrounds in densely built-up urban areas were smaller, had standardised play equipment and fewer natural elements. The researchers developed a “Risky Play Opportunities Form” for observations and used the 7 Cs Scale (Herrington and Lesmeister 2006, explained by Hansen Sandseter 2007 and supplemented by Kleppe 2018) as a benchmark to detect the visual features of the playgrounds. The 7-point scale connects the physical condition of playgrounds with the knowledge of child development and considers factors such as the relation of the play space to its surroundings, the ease of navigation within the space, opportunities to engage with and leave traces on the space, and the availability of different levels of risky play.

Deniz and Kalburan’s findings were that the green playgrounds scored higher in 6 of the 7 criteria. The exception was connectivity, meaning the visual and physical connections of play space and different zoning within. The most important features are defined entrance and exit areas, and a clear path layout helping children to find orientation and to connect cognitively with the features around. In this point neighborhood playgrounds scored higher than green playgrounds. This suggests that playgrounds with nature-related elements and areas have higher quality, but that their accessibility and mobility options need to be carefully reconsidered.

4.3 Benefits of playing in nature

According to Gerald Hüther (2008), a German neurobiologist, experiences in social relationships (e.g., children’s play) impact the neuronal structure of the brain, which helps humans cope with problems and challenges over the lifespan. Physical spaces where children play strongly mould the development of the infantile brain. Children who play in an environment that offers diverse nature-related and alterable surroundings develop more creativity and personal responsibility. Playing outside is decisively different when it takes place in an environment where not everything is man-made like in the home. Fabricated toys and technical games include guidelines and reduce

imaginative play, while contact with nature and living creatures raises the interconnectedness of the prefrontal cortex. This impacts cognitive functioning skills like sympathising with others, controlling own actions and regulating frustration and aggression. Also, self-worth and independence increase when children engage in play and exploration of nature (Nilsen 2008; Gebhard 2008). Free play in nature encourages children to develop democratic values (Aasen et al. 2009).

What does this mean for playground quantity and design in cities? Should we rewild play spaces to allow children to find a resource for imaginative and physical play? Furthermore, would building regulations allow us to create such a space?

5.0 BUILDING REGULATIONS

5.1 Playgrounds in Germany

The urban playground is a public space, mostly owned by the City Council, and which should, therefore, be a democratic space where different social groups mix and feel welcome. It should facilitate children's physical and imaginative play. However, when we look at playgrounds in urban settings in Germany, it is striking how stereotyped in their design many of them are. The space is often equipped with similar play furniture, some of which depict themed worlds or provide movement stimuli. These include swings, slides, see-saws, and climbing frames. If sports facilities are available, they are mainly limited to table tennis, football, and basketball. Sensorial stimuli are limited as flooring materials are mainly stone, sand, grass, chipped wood, or fall protection mats. While efforts have been made to diversify building materials, rearrange play equipment, and improve the overall design, most playgrounds appear more a product of safety concerns (German Institute for Standardisation 2017, 2018, 2020) where children are guided to follow the laid-out path, than an environment where children can interact freely with the space or nature. When constructing housing units with more than three flats, the Federal Building Code (2017, para. 9, no. 5) mandates the inclusion of playgrounds in the development plan. In North-Rhine Westphalia, the state with the highest density of large cities in Germany, with over 18 million residents (Federal Statistical Office 2022), a communal building regulation (Ministry of the Interior of NRW 1974) defines the location, size, equipment, and maintenance of children's play areas. The living floor area and the population density are used to calculate the size of playgrounds (section 3).

However, city populations are growing rapidly - the state capital Düsseldorf has grown by over 50,000 since 1978 (Kerl 2023). With more people living in less space, the basis for calculation is out-dated and does not reflect the necessary space requirements for playgrounds. Urban land in Germany's major cities is expensive and is sold to investors at the highest prices, while playgrounds, the responsibility of the city, cost money and need maintenance. Unfortunately, it has become an accepted practice to allow exemptions from planning regulations that can further reduce playground space in cities. Instead of building playgrounds on their sites, investors can seek permission to pay for the redevelopment or restoration of existing playgrounds in the neighbourhood. Thereby, they avoid reducing the number of housing units as outlined in the building regulation. This results in less outdoor space for all inhabitants and fails to meet children's needs. Also, it illustrates how urban planning regulations play a decisive role in playground location, quantity, and design.

CONCLUSION

Research has shown that outdoor play is critical for children's physical, intellectual, cultural, and social development. Playgrounds, the only place for urban children to play freely, are insufficiently accessible to them due to urban design (Kytta 2004). Existing playgrounds are designed with a focus on safety and developmental concerns.

Despite the shift in the 1990s towards understanding children as equal members of society whose needs are heard and whose opinions are considered in decision-making, current planning regulations still support adult and institutionalised control over urban spaces designated for children.

The cultural world of children today is shaped by adults based on their interests and cultural viewpoints. Corsaro reminds us that children create their own cultural world which feeds back into adult culture. Imaginative free play is an important feature for children to act out this agency. To do so unsupervised, nature-related outside space is needed and must be supplied by city councils. Existing planning procedures ignore children's agency and contravene children's right to play (United Nations 1998). Urban planning authorities need to understand how significant public space is in forming infantile culture and how society can benefit from sociocultural processes that are initiated by children. We are currently failing to provide children's needs for free play space in cities. Policy, urban planning, and practice ignore this fundamental feature of children's lives by destroying children's space through intensive planning and selling of public grounds for economic interest. Public spaces for play need to stay public property. More space for free play is needed and existing playground spaces need protection.

Therefore, our notion of the playground as it currently stands, needs to be reassessed. We need a sustainable discourse on public space to recognise the cultural losses due to past planning decisions and to be able to firmly place play at the heart of future urban design. However, ideas to improve and gain space for outdoor play in cities will not be found by authorities and planners alone. Research from sociocultural fields must be included.

Findings on how children engage with the outdoors (Barnett and Kruidenier 1981; Holloway and Valentine 2000; Kytta 2004; Gebhard 2008; Brussoni et al. 2012) show the interrelation of accessibility, safety, affordances and space qualities. It can serve as one base for a child-friendly environment. Researching the history of urban structures, such as the playground, and verifying whether they are still conducive to our current knowledge and cultural needs is essential to create progress. Urban planners and architects need grounded education when

planning with and for children. To create shared knowledge that can be put into practice, architectural education must change. The architectural curriculum should be supplemented by incorporating findings from childhood studies, including experts and children.

This paper aims to show that a solution cannot simply be found by building new variations of existing playground designs. Instead, to find solutions, different collaborative teams need to be formed at universities, in planning teams, and in city councils dedicated to public space for free child play.

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