



Reading The Relationship of Children's Playgrounds with Disciplinary Architecture Through John Dewey's Educational Strategies

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Abstract

Playgrounds, included in a child's education and daily life, appear as places that, with their spatial configuration, affect the child's play experience, current teachings, and future references, thus his internal education and external freedom of movement. 21st-century playgrounds, defined enough to influence thinking or exploration, are a "disciplinary" socio-spatial problem that reinforces boundaries for children. The hypothesis of this study is that space design has disciplinary effects on the child's experience. In the study, which approaches Dewey's educational strategies and active learning methods in search of improvement, firstly, the implicit disciplinary aspects of playgrounds were identified. During the second stage, Dewey's educational strategies were examined. Finally, the focus was on "adventure playgrounds" that overlapped with Dewey's educational strategies. Riis Park Plaza and Adventure Playground, which were among the sixteen adventure playgrounds implemented in America until 1977, were determined as the sample for the study. These two areas were examined using a case study, one of the qualitative research methods. As a result of the investigations, it has been understood that playgrounds that avoid limited design criteria have the potential to activate the child's sense of curiosity, positively affect the quality of the experience, and increase the level of external freedom.

1. INTRODUCTION

"Every experience is a driving force. Its value changes only in the context of where it is pushing." [1].

The individuals' experiences and the learning or habits resulting from these experiences are related to the childhood period and the acquaintances of this period. Each experience gained is nourished by the previous experience and contains conditions that will affect the next experience; therefore, it is considered a matter of development. In this development scenario, the places where the child meets are the areas that form the basis for today's learning and influence the references of tomorrow with their active role in thought and experience.

Children's playgrounds, which serve the child's outdoor activities and "play" activities, are one of the places that have a say in the child's development [2]. While play is stated as a communication and expression model that combines thought and action, it is also considered as a means of learning to live [3,4]. Play is a child's way of learning [5]. Similarly, Bengtsson, who defines play as a natural way of intellectual and physical development, says, "play is a constant happening, a constant act of creation in the mind or in practice." [4] emphasizes the importance of play in a child's life adventure. In fact, play and learning are mutually supportive requirements for a healthy childhood and competent adulthood [6]. According to Bengtsson [7], playgrounds created for play action are at least as important as schools; at the same time, there are many things that children cannot learn from books and must experience. While playing in playgrounds, children explore the environment and their abilities, learn to avoid injuries and take risks, and further develop their ability to evaluate [8]. At this point, while play as an experience is directly involved in the child's educational scenario, playgrounds are essentially educational spaces that should encompass the game in all its aspects. Therefore, while the setup of playgrounds and the implicit

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meanings of this setup determine the educational aspect, some experiences in the space can create negative results, contrary to expectations. Emphasizing the importance of children learning by encountering various individuals, ideas, and environments, Dewey [1] stated that an experience may lead to indifference and a decrease in reactivity and sensitivity, thus limiting the chance of gaining richer experiences in the future. In this context, an experience in a place can have a negative impact on the child's thoughts, and in line with these thoughts, it can cause the child to be disciplined by limiting his behavior according to external teachings. At this point, when we look at traditional schools, the movement of students who sit in desks fixed in military seating order and move in accordance with certain signs is externally restricted while also limiting their mental and moral freedom [1]. The limitation emphasized here is that while it expresses control and guidance over behavior and thought, the limit corresponds to its psychological and social meaning in the depths of its physical meaning.

Within the scope of spatial organization, the border is both a physical and psychological factor that defines a place, divides it, unites it, sometimes creates the space, sometimes destroys it, but basically restricts the movements of the individual and, moreover, determines the movement with its physical scenario. This situation is seen as a problem in 21st century children's playgrounds, where the planning is repetitive, the fiction is almost fixed, and the movement begins to be defined as a command and as a socio-spatial problem related to the understanding of "disciplinary architecture", which has begun to push the child's thinking, discovery, and creation acquisitions in the developmental process into the background.

This practice, known with conceptualizations such as "exclusionary architecture", "hostile architecture", "defensive urban architecture", "Crime Prevention Through Environmental Design (CPTED)" and "disciplinary architecture", basically aims to control the urban and therefore public space through architecture and design; it aims not only to restrict access to this area but also to shape the ways the area is used and to direct attitudes in the area." [9]. Therefore, this practice indicates that the space predicts certain behaviors for the users, and the space design is used as a control tool to direct these predicted behaviors. The effect of this control system, which is considered a socio-spatial problem, on playgrounds, which are an important place of experience in the daily scenario of a child who learns through experience and grows with what he has learned, needs to be examined. In this context, it is necessary to investigate the reflection of space on external mobility, behavior, and freedom of thought. In this respect, while the study discusses the importance of the child's self-experience and level of external freedom in children's playgrounds through Dewey's educational strategies, it focuses on America, where Dewey's strategies were first implemented within the scope of disciplinary architecture and freedom in experience.

Dewey's educational strategies were tested at the Laboratory School he founded at the University of Chicago in 1896. The essence of the education given in this established school is to understand the relationship between social goals, values, and meanings and to support self-education [10]. At this point, Dewey argues that in the traditional education approach, adults try to impose their own standards, behavioral styles, and methods on children who progress to adulthood [1]. Moreover, Dewey, who criticized the narrow and fixed structure of traditional school and the education provided in the school, stated that traditional education was far from the ordinary conditions and impulses of life [10]. At this point, in traditional practice, the difference in skills and experience between children and adults is ignored, thus making it difficult for the child to participate in the learning process. While the child is mostly taught the memorization method, the child is restricted from establishing different and flexible relationships with things, and as a result, there are some one-way verbal relationships that acquire mechanical habits and encourage uniform actions [11]. Dewey, who considers this situation as waste in education, draws attention to the lack of organization of the traditional school. Therefore, it has been argued that in traditional practice, various departments are isolated, unity in educational objectives is lacking, and consistency in studies and methods is weak. At this point, according to Dewey, "the great problem in education on the administrative side is to secure the unity of the whole, in place of a sequence of more or less unrelated and overlapping parts, and thus to reduce the waste created from friction, reduplication, and transitions that are not properly bridged." [10]. Therefore, when Figure 1 is examined as a proposal to combine the parts of the system, the block in the middle represents the school system, while the connections indicate that the school system is not limited to itself. At this point, the connection

between the school and parts 1 (home), 2 (garden, park, county), 3 (business), and 4 (university): It expresses the relationship of effects, ideas, and materials. According to Figure 1, the school is located in a natural environment while having direct contact with the home. Children are encouraged to have contact with the environment, spend time in gardens and parks, and play outdoors. The necessity of free play within the scope of business life and school is stated. At this point, Dewey states that in traditional education, children cannot use the experiences they have gained outside of school fully and freely within the school, and states that in this education system, children cannot apply what they learn at school in their daily lives [10]. This situation corresponds to the isolation of the school from life in practice, which in theory should be a part of social life, in other words the whole.

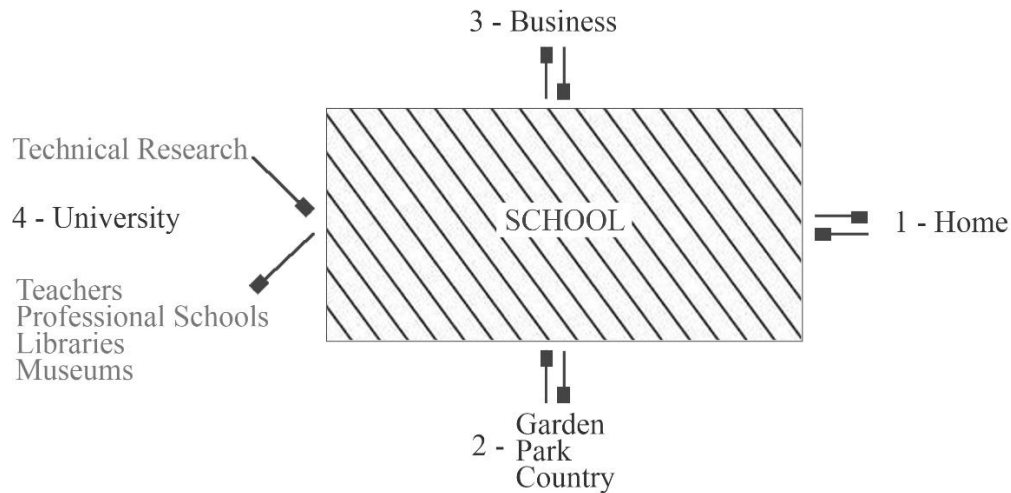


Figure 1: School as a part of social life [10] (Redrawn by the author)

Dewey criticized the functioning and understanding of the traditional education system based on coercion from above and outside. As part of his educational strategies, he advocates: Addressing the whole rather than focusing on the parts; learning through experience as opposed to the idea of learning from teachers and texts; the expression and development of individuality, against coercive behavior or teachings; freedom of action against disciplinary practices from above or outside; and becoming acquainted with the changing world, against static goals and tools [1]. Therefore, Dewey's educational strategies describe a system that is integrated into daily life and the environment, establishes a direct relationship not only with the school but also with the neighborhood, immediate surroundings, and frequently used places, is gained through experience, feeds from the whole, and serves the whole.

Aiming to bridge the gap between a child's school experience and home and neighborhood life through this school project, Dewey [12] focused on the games and pursuits that the child engages in his daily life and aimed to transfer the interest the child finds in games to education. Therefore, play and playgrounds were given physical, cognitive, social, and emotional meanings for child development within the scope of Dewey's educational strategies; the developments regarding playgrounds during this period were evaluated as the "early playground movement" [13]. However, this mobility has slowed down as many questions have arisen. Immigration issues, widespread disease, housing insecurity, and rising crime rates in the United States during the late 19th and early 20th centuries created a crisis environment. With the growing questions, a law was passed by the New York City authorities, making it a crime to play on the street, and a process occurred in which hundreds of children were arrested [6]. The Great Depression and World War II followed this process. The development of the early playground movement was slowed by World War II [13]. However, play continued for children during and after the war, with children continuing to play in bombed areas, among rubble, or in war-related environments [14]. Using the materials they easily found in the field to play, they improvised and used their imagination by building various structures, especially areas such as shelters and lighting fires, and reflected their instincts through play [15]. Therefore, playing has been considered a way to cope with negative conditions and perhaps escape from reality, albeit for a short time [14]. After the war, the role of playgrounds was reviewed for children who had witnessed and lived through the violence of the war [16]. At this point, in the post-war

period, there was a need for children to have environments that would adapt to their diverse and versatile behaviors, in other words, playgrounds where they could freely and unrestrictedly express their instinctive tendencies to explore, experiment, and invent [15]. "Adventure playgrounds" emerged in Europe by designers observed that children playing with rubble or scraps in debris fields were creating their own play and thus forming their own playgrounds [17]. In the United States, in the mid-1900s, there was a need for playgrounds where children could express themselves freely, and adventure playgrounds, where various tools and materials were provided and climbing elements were used, began to be implemented [18]. With these playgrounds, it was expected that the physical and psychological damage caused by war could be healed through play [19]. The American Adventure Playground Association (AAPA), founded in 1976, stated that there were sixteen adventure playgrounds in America in 1977 [13, 14].

Adventure playgrounds, which prioritize internal development over external guidance for play action, are associated with freedom and autonomy, and at the same time encourage children to create their own play by removing external restrictions [16]. Contrary to the monotony and homogeneity offered by traditional playground installations like swings, slides, and monkey bars, adventure playgrounds have suggested a creative playground that provides diverse experiences for the child with its space design and focuses on decision-making, strategy development, and achieving results [19]. In this context, it is understood that adventure playgrounds emphasizing the quality of the experience align more with the self-learning method than with controlling the experience through discipline. While adventure playgrounds, with their meanings and purposes, overlap with Dewey's educational strategies, they form the research universe of this study, which aims to investigate the limiting implicit meanings of 21st century playgrounds within the scope of these strategies.

The hypothesis of the research focusing on children's playgrounds is that the design of the space has a disciplinary effect on the child's experience. Disciplined, defined, or limited playgrounds can restrict a child's experiences, thereby affecting the child's environmental adaptation. At this point, when the existing literature is examined, it is noticed that playgrounds, physical activity, and child development are frequently discussed, but the disciplinary implicit meanings of these areas within the scope of space organization are not emphasized enough. Therefore, the study highlights the perceptual limits of playgrounds, which have very clear definitions and determined usage, on the child as a user and also discusses the implicit meanings of the experiences gained from such playgrounds through Dewey's reflexive thinking methods. The study, which focuses on the perceptual boundaries of children's playgrounds and examines how these boundaries affect the child's experiences with disciplinary architecture, is significant as research within its scope. The aim of the study is to expand the concept of disciplinary architecture, which is applied within the scope of controlling or restricting people, and to extend the research area of this concept to include children's playgrounds, thus drawing attention to the fact that space design and fiction are factors that can limit thought or experience.

2. METHOD

The structure of this research was planned in three stages. In the first stage, the implicit disciplinary aspects of 21st-century playgrounds that draw the child to their own limits were discussed, and in the second stage, Dewey's self-experimentation, learning by doing and active learning strategies were examined through playgrounds. In this regard, the active or passive aspects of the playground on the child were questioned. The study, which guided the research universe within the scope of Dewey's educational strategies, approached America as the place where these strategies were first implemented, and focused on adventure playgrounds that overlap with these strategies. Within the scope of the research, two out of the sixteen adventure playgrounds established in America until 1977 were reached and the sample for the research was determined in this way. Therefore, the two playgrounds reached in the final stage, Riis Park Plaza and Adventure Playground, were examined using the case study method, which is one of the qualitative research methods. In the study where the inductive approach was applied, this method was preferred because the research population to be brought closer from the part to the whole. Thus, the study, which has focused on children's playgrounds, has been narrowed down within the context of disciplinary architecture and Dewey's educational strategies, and deepened by reading the disciplinary elements of today's playgrounds through the determined examples.

3. EXPERIENCE AND PLAYGROUNDS WITHIN THE SCOPE OF DEWEY'S EDUCATIONAL STRATEGIES

Discipline is a form of power, and this power is to keep the means necessary to achieve goals under control [11]. Discipline within the scope of behavior; It is expressed as teaching certain behaviors to regulate and direct behavior [20]. When examined through Kant's philosophy of education, "The constraint whereby the constant propensity to deviate from certain rules is limited and finally eradicated is called discipline" [21]. Discipline, which has comprehensive reflections on both education and behavior, is considered a tool used to adapt the individual to the system proposed in practice. At this point, space and space design respond as a tool for the user, the "discipline" expressed within the scope of this study is related to the clear definitions of space and the role of the usage scenario it offers to the individual in line with these definitions on free thought and behavior. At this point, space is a critical element that has the potential to direct and attract the individual to his own discipline, to influence the quality, diversity or aspects of the experience that affect curiosity by either encouraging behavior or inhibiting thought. Therefore, space has implicit but strong aspects that regulate and restrict the user, and in essence discipline by directing perception.

The main lines of thinking of adult individuals are already guided or determined by the conditions they experience. A child whose place in society or interests are not predetermined is encouraged to display certain behaviors as a result of his own enthusiasm, the will of those around him, or the circumstances he is in [11]. While one of these directors is the physical space that the child experiences, the spaces that the child frequently uses and the setting in these spaces become critical issue. At this point, the guiding and descriptive level needs to be handled together with questioning and discovery in the construction of children's playgrounds that aim to liberate movement, behavior, and thought.

According to Dewey [11], observing children's activities is associated with endless testing and discovery. The child pulls, handles, punches, pushes, holds, and throws objects; in short, he plays with the object until he has exhausted all the actions he can perform. However, in playgrounds where actions and movements are clearly defined, the child's ability to discover or assign a new function to the play element is quite limited. If there is a slide on the playground, there is a sliding action, if there is a swing, there is a swinging action, and these actions are so obvious that they do not need to be questioned or thought about. At this point, thinking is described as a combination of confusion, astonishment, or curiosity [11], curiosity emerges as an important acquisition in a child's educational journey and developmental stage. Curiosity, considered the overall expression of extroverted tendencies, is considered a fundamental element for expanding experience and is also one of the primary components of reflexive thinking [11]. Reflexive thinking, on the other hand, can be considered as a flow of thoughts that arise from and support each other, and as a thought system in which a person explains himself by asking questions such as how and why. However, getting quick answers to questions in any situation or action both erodes and neutralizes curiosity. It is important to transform curiosity, which has an organic connection with the child's method of exploring the physical environment, into a tool that will serve mental or intellectual purposes during the child's education process [11]. Therefore, children's playgrounds with highly defined elements like swings and slides can diminish children's sense of curiosity and thus weaken the child's thinking or imagination. The play environment, planned on this axis and presented to the child's experience, indicates an area that externally directs the child and limits both the mind and movement adventure with the expected behaviors.

While toys or equipment in playgrounds with a clearly defined purpose describe individual play, this content is integrated into a form devoid of social meanings. This situation has consequences that impact the circumstances of coming together, learning together, and social interaction. Stating that social life improves and enlightens experience in relation to teaching and learning, Dewey [22] touched upon the aspects of sociality that enrich and activate the imagination and, at the same time, create a sense of responsibility for the accuracy of thought. At this point, he stated that self-education can be supported by observing the child's learning and knowledge during interactions or sharing with other children. In this scenario, the play has served as the foundation for creating the social environment. On the other hand, Dewey [22], who evaluated education as a social process, emphasized the importance of free

communication in experience and stated that internal or external obstacles that could affect communication should not be imposed. At this point, physical or perceptual boundaries created by design can be considered obstacles that limit a child's social communication with other children who share the same space. Therefore, playground equipment such as swings and slides that do not require community, that prioritize playing together, or that actually envisage a singular activity that prioritizes individuality are considered as elements that weaken social orientation. The predominance of these elements in a public, collaborative, and shared environment such as a playground indicates a socio-spatial problem. In such playgrounds, one child's play causes the other child to wait, this situation is considered a potential exclusion of the waiting child from the game in an environment where he is there to play. In other words, although the child is unable to join in a common play with the other children around him, he also waits for his turn without being able to establish a relationship with the play elements as he wishes, thus being pushed into a passive position in an environment where not only his thoughts but also his movements are limited by the commands of the space.

Physical inactivity is another factor that deepens passivity in children and seriously reinforces the tendency to create and receive. Physical inactivity is associated with a level of external freedom. External freedom of action is having the power and freedom to reason, make comparisons, and realize goals knowingly chosen by the child [1]. On the other hand, the external and physical aspects of movement cannot be considered independently of freedom of desire, thought, and purpose [1]. At this point, one of the most important places to encourage physical activity in children is playgrounds. Therefore, the mental and physical constructs that the child creates on his own in these areas emphasize his active role. However, playgrounds with elements that have been defined by other people and whose usage, function, form, and scenario have been determined, and almost even the play that the child will play have been decided, are where the child is controlled with his "passive" identity, while the place exhibits a controlling attitude with its "active" identity, influencing the child's intellectual direction. It describes a disciplinary environment that promotes planning.

According to Dewey [11], the cognitive aspect of education aims to preserve reflexive thinking habits, if they exist, or to acquire and develop them at every possible opportunity. Therefore, the need for reflexive thinking, the presence of diverse experiences, various stimuli, and elements that require attention in childhood and their integration into the child's daily life are conditions that encourage thinking. If we need to focus on playgrounds that are included in the child's daily life, these spaces are related to the residence and educational institution where the child lives, within the scope of walkability and accessibility. At this point, the playgrounds in the neighborhood and the diversity in these areas have a say in the quality of the experience. While diversity is emphasized as the basis of effective thinking within the scope of Dewey's educational strategies, it is incompatible with external uniformity and continuity of thought [11]. Therefore, the presence of various play elements in playgrounds, as well as the differentiation of these elements from other playgrounds in the area, contribute to different experiences and perspectives. However, as a result of standardization, repetitive or similar playgrounds in the same neighborhood display an attitude approaching uniformity. The monotony of the outside world and the ordinariness of the inner world weaken the sense of curiosity. At this point, curiosity is piqued by innovations, differences, or unexpected situations [11]. While diversity is associated with innovation, once the novelty wears off, children tend not to go anywhere that is not "their territory" as much [23]. In fact, repetitive situations for the child also damage the relationship of belonging established with the playground. Given all these factors, a situation has occurred where the child could choose to withdraw from play or could not prefer the playground, and even if the playground is used, it has become very difficult to talk about a qualified activity for the child in this space. Therefore, while monotonous playgrounds could encourage children to take uniform actions, they do not exhibit an attitude that arouses curiosity and discovery, promotes innovation, or keeps them engaged. On the contrary, conditioning the learned movements in a familiar place for the child, who has experienced the same or similar ones in the previous playground, can further reinforce the constraints that suppress the child's inner world and external freedom.

21st-century children's playgrounds contain implicit disciplinary meanings with clear definitions and regulations. The "regulation" mentioned here should not be described as a completely negative element.

“It is not true that regulation is a principle entirely foreign to experience. Otherwise, the experience will be so disorganized that it will be chaotic [1]. Within the scope of this study, there is a search for improvement in the level of limiting factors, in other words, external guidance. In this direction, in the next stage of the study, two areas that were theoretically compatible with Dewey's pragmatist-based active learning strategies and reached among the sixteen adventure playgrounds implemented in America until 1977 were examined. The extent of external freedom that the examined adventure playgrounds offer for the child within the scope of disciplinary architecture is discussed.

4. FINDINGS

Riis Park Plaza, designed by Paul Friedberg, and Adventure Playground, created by Richard Dattner, are the first examples of adventure playgrounds in America [19, 24]. Of these two examples, Riis Park Plaza was implemented in 1966, and Adventure Playground was completed in 1967 in the Manhattan district of New York. These projects were evaluated as a radical approach in the divided post-war cities of the United States and were the products of a sophisticated approach in urbanism in which activism could shape architecture [25]. At this point, the radical approach aimed to end the game based on a series of boring interactions and classical installations of separately planned elements in playground practice [19]. In fact, while these projects support social action, they are aimed at prioritizing play, imagination, and creativity in playgrounds as basic needs for children.

Riis Park Plaza, planned by Friedberg, who sees increasing play opportunities in playgrounds as part of the design, includes an amphitheater used as a playground, water pool, or seating area, has referred to an area that allows socializing or self-play with a game of checkers or similar silent games, and a place that provides a basis for different experiences [26]. This space appears as an innovative, non-standard adventure playground with a sand floor, where climbing equipment, old railway fittings, repurposed concrete sewer pipe parts, a labyrinth, and ziggurat-like spaces are used [25]. Using many innovative materials and various elements together, Riis Park Plaza has had a public expression for children that extends over a large area, thus requiring active mobility to explore or experience this diversity.

At Riis Park Plaza, where different geometric forms are used, there are different equipment and different functions that these equipment provide, as seen in Figure 2. As play equipment spread across the land, this spread followed each other with play elements. Therefore, there are no independent elements in the play field, rather a plan that ensures the flow of movement and thought rather than pauses or waiting during the play action. The flow mentioned here does not represent a fixed route but is evaluated as an organization that allows the child to progress to different elements or directions according to its own decisions within diversity. On the other hand, different levels were used within the playground, and thus the child's relationship with various dimensions was included in the play action. While these levels, which accompany the act of jumping, bouncing, or climbing, find a functional response for the child, they propose a form that prevents direct observation for the parent but allows gradual monitoring and actually increases the perception of "own space" or "free space" for the child. Solutions for vertical circulation for children to reach different levels are not stereotyped as stairs as in standard playgrounds, but the "going up" or "rising" action is provided by the play element itself, serving this function, as shown in Figure 2-b. The connecting elements among the game components have been distinguished from conventional gaming spaces as patterns similar to traversable bridges, and these elements are considered as a flow element incorporated into the play for the child. On the other hand, the connection scenario of the play equipment has suggested a plan that encourages movement by enabling the child to jump or run from one element to another and pushes him to think while in motion. In fact, at Riis Park Plaza, there is a simple yet diverse and uninterrupted composition in which simple shapes that could adapt to movement are used extensively.

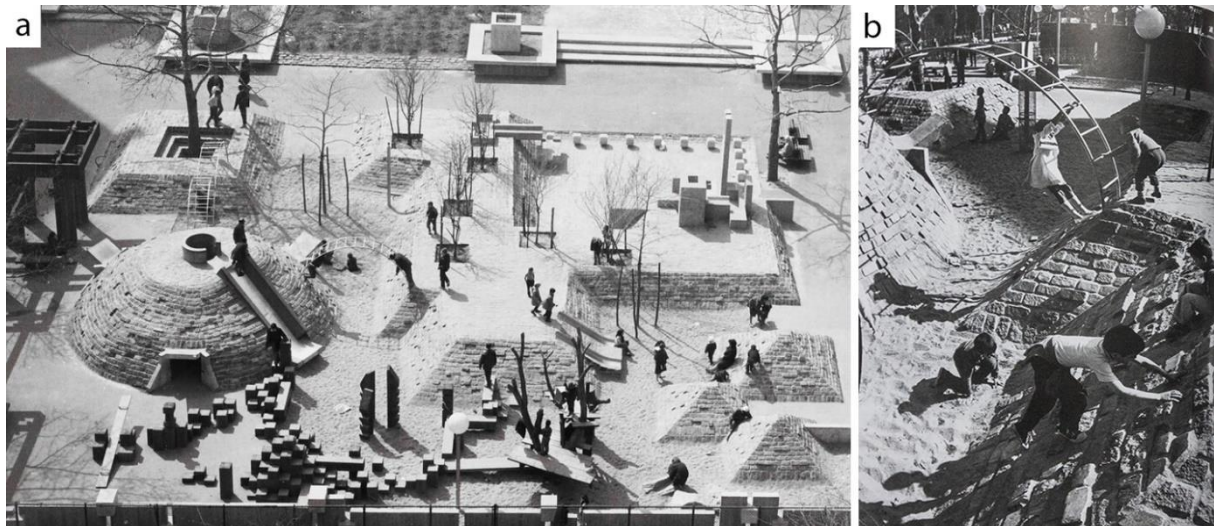


Figure 2. a) Riis Park Plaza – 1966, NY, USA [27], b) Riis Park Plaza – Play Area [27]

Criticizing figuration in playgrounds, Friedberg [24] stated that figurative play structures direct the child to certain uses, and at this point, he expresses concrete design as "real design", while real design is the element that "limits the child's imagination". At this point, figurative elements, such as animal figures, which are frequently encountered in 21st-century playgrounds, were not used in Riis Park Plaza, and abstract and more undefined play elements were used. Sand was used on the floor of the playground, and a part of the amphitheater located in the north and covering a large volume of the playground was planned as a pool to which water channels and canals are connected. As shown in Figure 3, the playground and play elements have created multiple scenarios that can be integrated into both individual and collective play. On the other hand, these elements have mostly removed boring qualities for the child, such as waiting for turns, repeating the same behavior, and restricting movement.

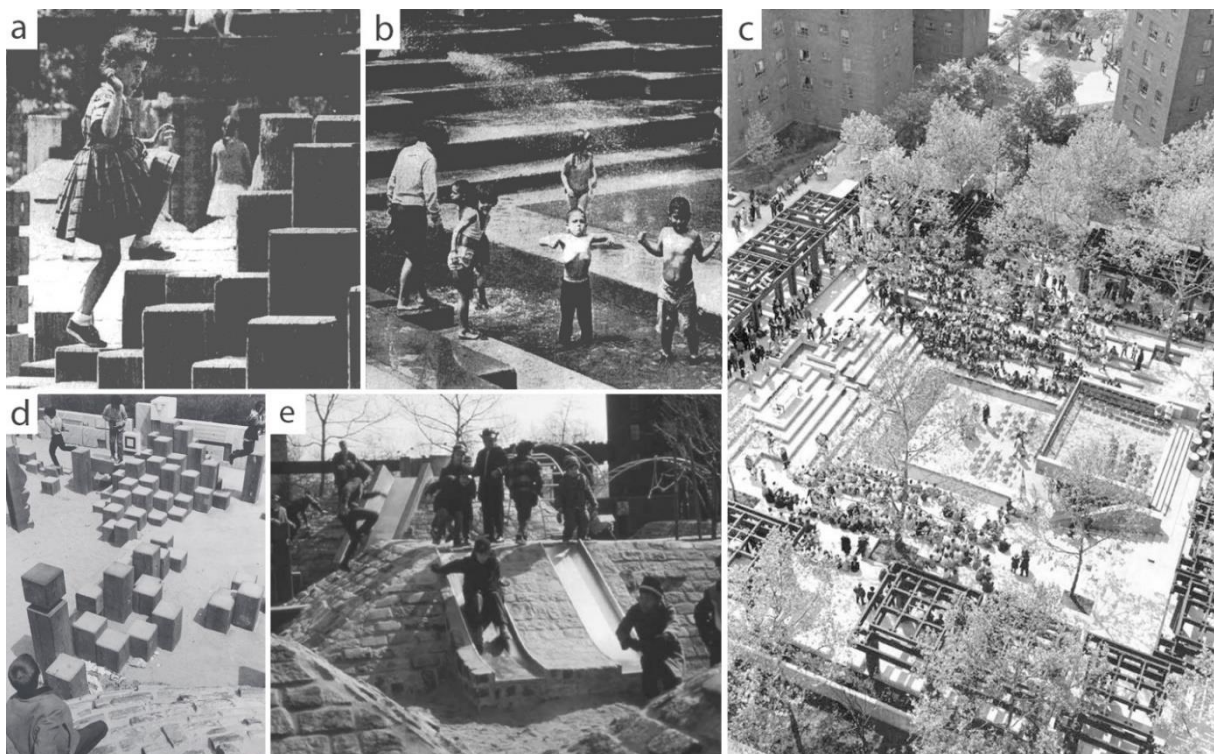


Figure 3. a) Riis Park Plaza- Play area, A child playing by herself [28], b) Riis Park Plaza – The pool and Water Channels in the amphitheatre area [28], c) Riis Park Plaza – The amphitheatre [25], d) Riis Park Plaza – Play area [29], e) Riis Park Plaza – Play Area – Children playing together [29]

Stating that children learn the conditions or rules of the adult world through play, Richard Dattner argues that playgrounds should be a "small-scale copy of the world" for children [5]. In this regard, Adventure Playground, planned by Dattner, is a practice of transforming an old playground into a more qualified area for children. This practical surface is defined as sand, and it refers to a multi-purpose adventure playground with round granite hills, a pyramid, a low tree house, slides, tunnels, water channels, and an amphitheater. In this playground, which extends on the south-north line and spreads over a wide area, the place where the amphitheater at the north end is located has also been determined as a place that will allow activities such as painting for children [24]. At this point, when the design of the playground is examined, the south side of the playground, planned in relation to the main entrance, serves physical mobility, in other words, actions such as jumping, passing through tunnels, running, skipping, hiding, rising, or climbing, as shown in Figure 4-a. On the north side, there is an application area that promotes both mental and physical actions such as playing with water, painting, playing with sand, digging, and building, as shown in Figure 4-b. This application indicates an environment created with interconnected forms within the playground, in other words, a space where different functions are solved in an interrelated manner in the same area for the child's play activity.

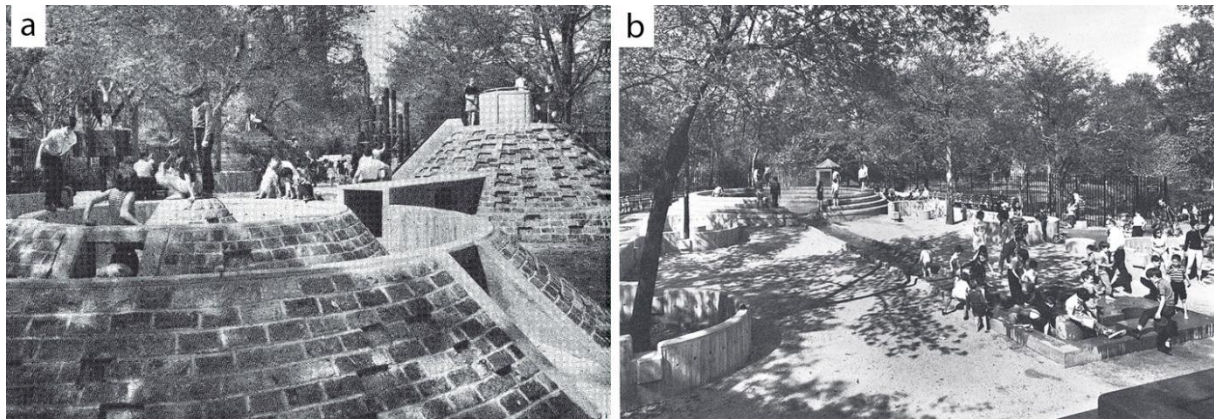


Figure 4. a) Adventure Playground – Mounds and tunnels at the southern side [19], b) Adventure Playground – The amphitheatre and water channels at the northern side [19]

At Adventure Playground, where different levels or heights are used and the play action continues not only at the ground level but also vertically, connections such as tunnels and channels to encourage play are used between the play elements, as in Riis Park Plaza. The fullness and emptiness relationship that spreads throughout the playground has brought diversity to actions such as "rising", "passing", and "stopping", and has moved them away from their stereotypical meanings and forms in standard playgrounds. Similarly, an empty space was left in the middle of the play elements placed around the playground. This empty space, which is the intersection of space, served as a square that allowed children to gather or meet. Play equipment, on the other hand, is planned to allow both individual and group play, as seen in Figure 5, and to adapt to different scenarios as a formation of simple or complex systems. All this planning has been organized on wooded land, in a natural environment, and in a green area.

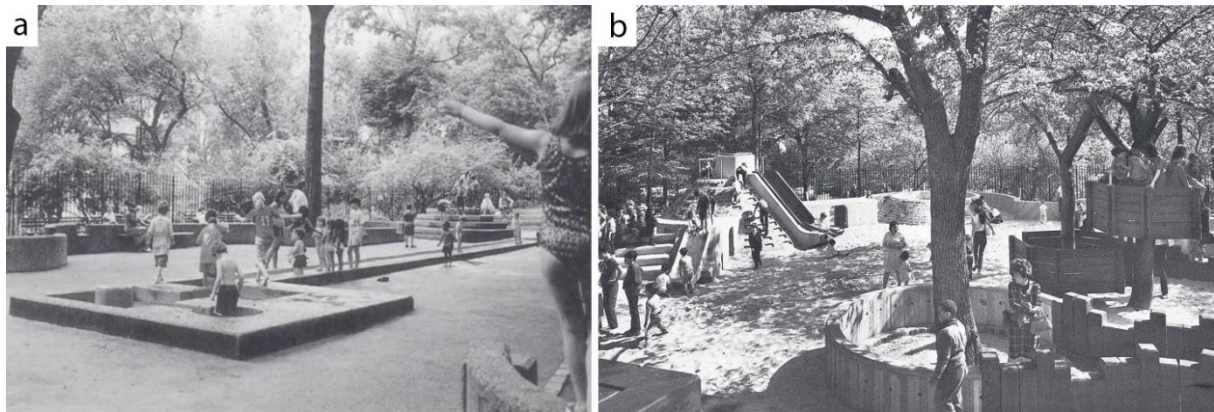


Figure 5. a) Adventure Playground – The water channel in the north [24], b) Adventure Playground – Wooden house in the middle area [19]

5. EVALUATION

While the child learns through play [26], the role of education is to facilitate the experience of the child, who is not yet as hardened and habits as an adult but whose attitude towards the world is flexible, curious, naive, and experimental [11]. In this context, the materials, equipment, and organization of the adventure playgrounds, which are the subject of this study, are influential factors on the child's education and experience, contributing to diversity and functionality. While the material choices in the playgrounds examined showed similar characteristics, both rigid and flexible materials were used in both areas. At this point, the sand and water elements used in the playground are considered as elements that vary in terms of the area they cover and their type; they are associated with the "loose parts theory" of Nicholson, who states that all children enjoy playing with variables such as materials and shapes. Within the framework of this theory, Nicholson [30] asserted that children like to play, experiment, invent, discover, and have fun using physical phenomena such as liquids, sounds, vibrations, movements, plants, ideas, fire, chemical interactions, and gravity. Thus, he emphasized that both creativity and the possibility of discovery are directly proportional to the type and number of variables. Therefore, this activity, which the child enjoys doing, has been considered as a basis for active learning, which coincides with Dewey's strategy of learning by doing or experiencing on his own. Thus, a relationship was established between a favorite activity and active learning, and this was evaluated as an important quality that would ensure the preference and continuity of the activity. On the other hand, the diversity and functionality of play equipment have been evaluated as an effective approach against the mechanization in Dewey's educational strategies, which limits the power of thinking. At this stage, the mind must play an active role so that the child's achievements or abilities are not mechanical but rather intelligent [11]. In both playgrounds examined, equipment has moved away from its forms and meanings in standard playgrounds; in other words, by getting rid of clear stereotyped meanings and descriptions such as "sliding from the elephant's trunk" and conditioned situations such as "being a captain on the ship", it has been freed for new and various meanings that the child will create in his own world of thought. In short, the organization and setup of the space at Riis Park Plaza and Adventure Playground fostered the continuity, development, and diversification of the play. In fact, for children, learning through experience or learning from experience is supported by the space.

The reduction of embodiment on objects or equipment in the examined playgrounds has also been linked to cognitive constraints and limitations. At this point, Dewey [11], who discusses abstract thought despite a stagnant monotony, asserts that abstract thought is an imagination that perceives familiar objects in a new light and thus creates new areas of experience. Therefore, the abstract form and undefined function of play equipment actually express the meanings that will be shaped or loaded by the child through play. This situation has the potential to nourish the child's imagination and world of thought. This practice, which distances the child from the conditions and boundaries of the space, actually allows the discovery of new forms of play. In these playgrounds, where innovation is preferred over standard equipment and restrictions, contrasts such as fullness and emptiness are applied, pits and mounds are used, and the play equipment is planned as an interconnected whole. In other words, rather than the separate use or

independent expression of using individual pieces in standard playgrounds, numerous complex possibilities or combinations have been created by integrating them with each other. These forms, with their form and function, have the potential to encourage children to think freely.

Adventure playgrounds, which are the subject of this study, indicate a free environment for children. These areas offer the child the opportunity to encounter many children like himself, rather than an authority or instructor such as a teacher or parent. At this point, Dewey [1] stated that children learn many situations, such as showing power, desire to rule, justice, and impartiality, while playing with other children, and stated that children are more sensitive than adults on these issues. Therefore, while playing together is considered a part of children's education, in the adventure playgrounds examined within the scope of this study, there is a non-hierarchical, socio-spatial environment that encourages playing together instead of disciplinary elements that require compliance with line or order. On the other hand, it has been argued that very few, if any, serious injuries related to these playgrounds, where adult supervision is minimal, are very few or even almost non-existent [14]. In fact, this situation can be linked to the child being more responsible towards himself when applying his own demands in a place where he can act on his own and being more careful about what he does. The mistake made under these conditions has been considered as a kind of achievement that the child achieves by trying, and therefore the child learns on his own. As a result of all these, the child learns to take responsibility, plan, think, help, and seek solutions, and actually experiences many conditions in life while playing both on his own and with other children. Therefore, the space design that supports this social interaction aims to compensate for the restrictive system in which children playing together are constantly monitored or controlled by their parents or teachers. Therefore, the space design that supports this social interaction aims to compensate for the restrictive system in which children playing together are constantly monitored or controlled by their parents or teachers. It offers a play environment that gives the child the chance to make mistakes, break down, and rebuild, and allows the child to play by thinking and taking responsibility rather than being dictated to or directed.

Although the examined adventure playgrounds presented many opportunities for the intellectual and physical development of children, they were requested to be demolished in the late 1900s due to safety concerns raised by parents. At this point, while it is claimed that adventure playgrounds are considered to be risky play for children, it has been reported that these playgrounds have the same or fewer emergency room-type injuries compared to standard playgrounds and even have a surprisingly low injury rate [14]. Ultimately, this situation was not taken into account, and while Riis Park Plaza was demolished in the late 1900s, Adventure Playground was restored. The Adventure Playground, which was saved from demolition, had holes that disturbed the parents. Some holes were closed, sand areas were replaced with safe surfaces; pyramids were lowered; and railings were added where there were none before [24]. Therefore, the child's experience of space was interrupted for reasons that the parents described as "security" and his self-learning was restricted. At this point, situations that still cause discomfort even today, such as children climbing to a place with a very low risk level, children passing through a tunnel where they cannot be observed from where parents sit, children jumping from a place with a low risk level, running in case they trip or fall, or playing in the sand, are considered safety problems. This situation, which continues today, is related to ignoring the fact that falling, rolling, or tripping is an experience caused by space equipment and materials that do not pose a risk. In fact, this situation, as stated by Frost, who argues that excessive security elements have become almost as deep as parental supervision, gradually weakens the child and, moreover, negatively affects the development of physical and cognitive skills that would protect him against possible injuries [6]. At this point, while acknowledging the necessity of a basic level of safety is mentioned, it is stated that a certain level of risk, in other words, an "acceptable risk" level, is needed in playgrounds in order not to prevent children from becoming competent individuals [14]. The fear that parents who experienced these risks at a young age have that their children will have the same experience can be associated with not choosing, not using, and finally eliminating them. In connection with all these factors, excessive security conditions in playgrounds planned in line with pure security elements have responded as one of the implicit disciplinary elements that limit the child's space experience, movement, and thought world.

According to Dewey [11], true freedom is intellectual, and the intellectual aspect of education is related to giving the child careful and comprehensive thinking habits. Playgrounds are places that have an impact on thinking habits, both through their frequent use and their functions. While thinking habits are nourished by children's current experience, they are considered a reference or driving force for their decisions in adulthood. In this regard, playgrounds that encourage children to learn on their own by being planned at an acceptable risk level rather than fixed, taught, and prepared experiences are gaining importance. More uncertain playgrounds that require questioning, discovery, and experimentation have the potential to affect the child's education, intellectual aspect, and essentially their freedom. In other words, there is an "unfinishedness" and this unfinished perception applies not only to the play but also to the play elements. The constantly reproducing, transforming, and reshaping structure of the design, rather than its fixed and finalized state, is an opportunity for the diversification of the play. A product with a flexible structure or a changing form can evolve to a point where different ideas increase and even transform the elements. At this point, while the playground is a tool for the child to generate ideas, ideas can change, and the play equipment must adapt to this situation in line with the changing ideas. Playgrounds, where unexpected, new, and rich possibilities are presented and where these possibilities are discovered by the child, have opportunities that can make the game multidimensional for the child.

Focusing on the relationship of social purposes, values, and meanings, Dewey characterized the child's life and the places he came into contact with as a whole and evaluated the teaching of a place as a general gain directly added to the child's social life. This acquired teaching creates a thought system that is added to each other or develops with a cause and effect relationship, thus activating reflexive thinking. What is mentioned here is an education model in which the child gets to know, repair, and develop himself and his own world of thought in a place reserved for him, with different experiences and various stimuli, without any external influence or force. This model describes an intertwined process for the child, which feeds the next thought or experience and actually becomes the source of another thought. In this context, playgrounds for reflexive thinking, nourished by the child's extrovert tendencies, sense of curiosity, and enriching experiences, allow and accompany actions such as discovery, understanding, reinterpretation, trial, error, risk taking, dreaming, and building, thus serving the whole. A design proposal is expected. Therefore, within the scope of this research, it was understood that the aspects of playgrounds that support reflexive thinking or the implicit aspects that restrict or limit the child are related to the design strategy of the playgrounds or equipment and are shown in Figure 6. In this respect, while the concretization of game equipment is associated with intellectual restriction; play equipment in more abstract form, which will be shaped by the meaning the child will give, has been evaluated as an application that supports reflexive thinking. On the other hand, fixed play equipment in playgrounds, play elements that only allow individual use (requiring compliance with order and order), and the concretization of these elements are considered as elements that weaken a child's curiosity and desire to explore; Loose pieces, game elements that allow playing together, and the abstraction of these elements have been found as elements that foster reflexive thinking. In addition, in this study, while the play equipment created in playgrounds solely for safety concerns was evaluated as an application that restricts movement and thought; It has been argued that play equipment designed by taking acceptable risks is an application that fosters reflexive thinking in order to ensure the child's own control. Finally, while standardized, uniform play equipment is defined and therefore considered as an element that restricts thought; Various and multi-layered possibilities have responded as an element that increases curiosity and thus supports reflexive and free thinking.

Aspects of Playgrounds that Support Reflexive Thinking	Implicit Aspects of Playgrounds That Discipline or Limit
Replacement and loose parts	Fixed elements
Abstraction of game elements	Concretization of game elements
Acceptable risk	Extreme security elements
Different forms	Repeating forms
Elements that allow playing together	Elements that allow individual use only
Various, new and multi-layered equipment	Standardized, uniform equipment
Undefined function	Defined and designated function

Figure 6: Effects of Playground Design on Children

5. CONCLUSION

Within the scope of this study, playgrounds are used as tools in the intellectual and educational role of the play, and their strengths are mentioned. This power has implicit disciplinary meanings for the playgrounds built in the 21st century, with defined and limited aspects that take control over the play from the child to a significant extent. These areas, which should accompany the child's play with both the meanings they carry and the functions they have in theory, display an active attitude that determines the play to be played by pushing the child into a passive position in practice, conditions the child's behaviors and movements with clear spatial definitions or patterns, and essentially puts the child under his own discipline. In other words, today's playgrounds are in the position of managing with the order and discipline they have, while the child, as the user, is in the position of being managed and following the commands of the space. Within the scope of this study, organization, material, and equipment are considered the governing elements of the space. At this point, physicality, which encourages playing in adventure playgrounds, is more undefined, away from patterns, allows playing together, and adapts to change and movement, has been evaluated as factors that support free play and nourish self-experience and active learning strategies. The acceptable risk for the child in playgrounds could be considered a need for the child to learn on his own. In relation to the investigations, while uniformity, concretization, definition, external control, individuality, and excessive security elements in the playgrounds implemented in the 21st century are considered disciplinary elements, a relationship has been established between the disciplinary implicit elements that close the child's experiences to innovations and new thoughts and the level of freedom. However, within the scope of the study, there is no mention of completely eliminating this level or creating a completely free environment for the child without any restrictions. While it is not possible to create an environment where security will be completely ignored or all borders will be destroyed, it is clear that even the location of playgrounds on certain land is a limiting factor. The essence of this study draws attention to the importance of an improvement in which the elements that discipline experience and experience-based learning will be reduced. As a result, in line with the findings obtained, it has been understood that the designs of playgrounds, as a place of education and experience, that accompany the play, activate the child, and encourage children to think freely are an important factor that can affect the child's present and future as an extension of today's learning. At this point, it has been realized that playgrounds that avoid commands or defined and limited design criteria have the potential to positively affect the quality of the child's experience, stimulate a sense of curiosity, and at the same time increase the level of external freedom.

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