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Children's Playgrounds in Slovak Mass Housing Estates: History and Current Trends

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Abstract

Children's playgrounds represent an important amenity in the concepts of mass housing. The study chapter presents the unique concepts of children's playgrounds that have been applied in the Slovak mass housing estates of the second half of the twentieth century, designed by architects and artist, and inspired by the best European experiences, for example, by the landscape design of the Stockholm School. The early inhabitants of the Slovak mass housing estates were predominantly young families with children. The residential aging of this homogenous social structure caused that during the lifespan of housing estates, the demand for playgrounds decreased, they became underused and fell into decay. Today, the social structure of mass housing estates becomes more heterogeneous, what puts new requirements on the design of open public spaces and, as well as, on the regeneration and design of children's playgrounds, to serve the rising demands of the inhabitants and to enhance the livability of the housing estates. The study examines the current examples of the children's playgrounds from Slovak mass housing estates, which show that nowadays the typified design of the standardized catalog type elements is used and preferred.

Keywords: mass housing, children's playgrounds, playground design, public open space, regeneration of housing estates

1. Introduction

The quality of housing stems from the fulfillment of the basic and superior living standards within the housing unit, as well as the amount of complementary services, housing utilities and amenities in the living environment. Design of the residential areas must satisfy a very wide range of human needs and desires and constitute a cultural and social milieu, reflecting

the way of life of individuals and the community [1]. Access to important urban amenities and facilities, including healthcare, education, shopping, working, transport services, culture, recreation, leisure, and the quality of public and open green spaces, increase the livability of residential neighborhoods.

Places for play and sport for different age groups, and especially children's playgrounds also belong to the amenities and facilities having the potential to increase the wellbeing of dwellers and users.

Playground experiences are having developmental significance in children's lives, playgrounds offer children opportunities to create, organize, and control their own play experiences, they allow them to learn and practice important social skills, exercise decision-making and other practical skills that will be used across the life span [2, 3].

The earliest playgrounds, reflecting the interest in the quality of urban children lives, emerged in Europe in the late nineteenth century and spread to the United States. These new spaces were intended to address social concerns about the development and health of urban children and in urban environment provided a safe place to play [4–6].

The importance of playgrounds for residential neighborhoods has been widely recognized by urban planning of the twentieth century. It was understood that children's recreation and playgrounds must be planned on a comprehensive scale: facilities need to be considered on the basis of a town as a whole to ensure that all areas are adequately served, and that the playgrounds need to be planned to provide as many as possible activities. It was suggested to prepare master plans for playgrounds and play spaces in parks, housing estates, and playing fields [7]. It was recommended to site the playgrounds in the centers of neighborhoods, adjacent to a primary school sites, to serve the interests and needs of children and at the same time to afford recreational opportunities for all people of a residential neighborhood, but also situate the toddlers' play areas and play areas for children of 5–15 years of age directly in residential areas, within convenient distances from their homes [8].

The importance of playgrounds as an urban amenity which can increase the standard of living was reflected in the urban design concepts of the mass-housing estates of the second half of the twentieth century in Slovakia as is described and illustrated by the following examples.

2. Children's playgrounds in urban design concepts of Slovak mass housing estates

In the design concepts of the large-scale mass housing estates in Slovak cities from the socialist period of the second half of the twentieth century, the modernist urban visions of dwelling in multistorey buildings, standing in the middle of extensive green areas, and modernist approaches toward creation of public space, were reflected [9, 10]. The urban concepts of large residential complexes and prefabricated panel housing estates aimed to solve the demand for "housing for all," in the era of rapid industrial and urban development of towns, and mirrored the "collective dream" of the socialist era [11]. Public spaces in the mass prefabricated

housing estates were well equipped with roads, parking places, pedestrian walkways, waste collection sites, and they were adorned by artworks, sculptures, statues, and fountains. The landscape architecture design of public spaces represented the architectural qualities of modernism of the second half of the twentieth century [12].

Because the early inhabitants of the Slovak mass housing estates were predominantly young families with children, the children's playgrounds belonged to their important amenities.

2.1. Children's playgrounds of Terasa housing estate in Košice (1962–1971)

In the urban design concept of the Terasa (Terrace) housing estate, then called New Town, in Košice, architect Berthold Hornung (1925–1997) used his knowledge of the last trends in the residential development in the countries where already gave a lot of emphasis on the coexistence of man with nature and created a concept of "living in the Park."

Inspired by the ideas of the Stockholm School and its park program [13], he followed the mottoes that the park breaks up the unrelenting flow of urban construction, and that taken as a group, parks can form a network in the urban fabric that provides citizens with necessary air and light, offer spaces for recreation, for promenades and rest, for sport and play, and that parks can create borders between different parts of the city and provide each district with an individual character and identity. According to these ideas, he formed residential districts called Luniks, each as a separate section with central amenities, which were located in the green zones [14].

As shown in the conceptual proposal for the first three Luniks from 1957 (**Figure 1**), each residential district was equipped with adequate civil facilities, school facilities, preschool



Figure 1. The first urban design concept for the three districts of the Terasa mass housing estate in Košice, the central part of every district—Lunik is created by a park with children playgrounds—(1) Suzanne's Park, (2) Kate's Park, and (3) Anne's Park. Source: Author's personal archive.

facilities, a shopping center, and also with playgrounds in the vast green space areas, which were given popular girl names—Zuzkin Park, Katkin Park and Aniĉkin Park, Suzanne’s Park, Kate’s park, and Anne’s Park (**Figure 2**).

Parents could feel free to send their children to school, or to playgrounds, because the paths to schools, kinder gardens and playgrounds did not cross the roads designated for car traffic (**Figure 3**). The building of the Terasa housing estate started in April 1962, and the construction site was visited also by deputation from Sweden.

2.2. The play area joy, Štrkovec housing estate in Bratislava (1970–1976)

The concept of the playground complex Joy, in the Štrkovec housing estate in Bratislava, was set by landscape architect Alfonz Torma and the team of the municipal gardening company in the early 1970s of the twentieth century [15]. The complex included many attractions for



Figure 2. One part of the children’s playground in the Kate’s Park, in the Terasa housing estate, equipped with austere and simple elements—square window ladder climbers, slides, swings, and sand pits. Source: Archive of Source: Archive of Centre for Landscape Architecture.



Figure 3. Green open space of the Terasa housing estate in winter, serving as winter playground. Source: Archive of Centre for Landscape Architecture.

children, mini bathing pool, mini golf, simple typified swing sets, seesaws, monkey bars, slides, and also rest areas with various surfaces and grass. The complex served not only to the inhabitants of the neighborhood, but also to visitors from wider surroundings. The typified play elements have been complemented by specific art-design elements, designed by sculptor Rastislav Miklánek, as for example the popular sculpture of camel (**Figure 4**), or the maxi chess figures (**Figure 5**).

2.3. The playground of housing estate Medzijarky in Bratislava (1973–1979)

The high-rise blocks of flats in the housing estate Medzijarky in Bratislava, designed by architects Štefan Svetko and Štefan Ďurkovič in the 1970s of the twentieth century, have been arranged in the forms of big octagonal courtyards. This solution allowed to exclude the cars from the inner space of the courtyards and to create there green spaces as adventurous playgrounds with various playground elements (**Figure 6**).



Figure 4. The concrete sculpture of camel in the sand play area was the most beloved play element of the playground. Source: Archive of Centre for Landscape Architecture.



Figure 5. The wooden chess figures in the part of the playground designated for chess game. Source: Archive of Centre for Landscape Architecture.



Figure 6. Sand area and play elements made of concrete in the playground of the housing estate Medzijarky in Bratislava. Source: Author's personal archive.



Figure 7. “UFO” as an art-design play element of the playground area, situated on the top of artificial hill, in the housing estate Medzijarky in Bratislava. Source: Author's personal archive.

The landscape design of the courtyards included artificial hills, used in the winter for sledge riding and also a unique play element “flying saucer” — unidentified flying object or “UFO,” made by sculptor Juraj Hovorka in 1979 (Figure 7).

3. Design of play elements in the playgrounds of Slovak mass housing estates in the second half of the twentieth century

Except the unique art-design elements designed by architects and artists, in the design of playgrounds in the housing estates built during the 1960s and the 1970s of the twentieth century in Slovakia, mostly simple typified and standardized playground elements have been used. Climbers, slides, swings and merry-go-rounds were made of steel, the form of the steel frames was simple, geometrical (Figures 8 and 9).

The minimalistic design of metal playground elements used in the playgrounds of the housing estates in the 1960s and the 1970s of the twentieth century in Slovakia, recall the design



Figure 8. The typified merry-go-rounds from the 1970s are still found in the playgrounds—example from the housing estate Juh in Rožňava. Source: Author's personal archive.



Figure 9. The popular playground element from the 1970s, called "Globe," was used as a climber and as a merry-go-round—example from Trnava. Source: Author's personal archive.

of the Aldo van Eyck's playground elements—the rectangular and round steel frames for climbing, or the latter like an igloo. Van Eyck's play equipment invited the child to actively explore the numerous action possibilities it provided. He paid special attention, for example, to estimating the proper distances between the bars in his climbing frames. Van Eyck intentionally created abstract play elements that do not have a single meaning and function, but rather they can be used in different ways and stimulate children's imagination [16–18].

The popularity of sand and the use of plain concrete, in elementary abstract forms, as rims of sand pits or jumping blocks, used in the Slovak playgrounds from the 1960s and the 1970s as well as witnesses Van Eyck's strong influence on the playground design of the second half of the twentieth century.

In the 1980s of the twentieth century new materials came to use in the playgrounds of Slovak housing estates—wood, in the form of logs and beams, and also ropes, as for example in



Figure 10. Examples of the play elements used in the playgrounds of the housing estate Petržalka in Bratislava, districts Háje and Lúky, in 1980–1986, design by Eva Grébertová and Jozef Slíž. Source: Author's personal archive.



Figure 11. Wood and ropes—new materials used in the design of playground elements in the housing estate Petržalka (1980–1986), by architects Eva Grébertová and Jozef Slíž. Source: Author's personal archive.

the playgrounds of the Petržalka housing estate, districts Háje and Lúky, built in the years 1980–1986 and designed by architects Eva Grébertová and Jozef Slíž (**Figures 10 and 11**).

4. Transformations of playgrounds in Slovak mass housing estates and current trends

Open public spaces are spaces intensively reflecting the cotemporary needs of the communities for their use. Public spaces reflect the society and its culture [19]. The new socio-economic conditions after the change of the communist regime have created new demands of the society toward the open public spaces in the mass housing estates, and today, the current requirements continue to transform them [9].

The residential aging of homogenous social structure of mass housing estates, previously composed of young families with children, caused that during the lifespan of housing estates, the demand for amenities like kinder gardens, elementary schools and also playgrounds decreased. Children's playgrounds became underused and fell into decay. The concept of generously designed broad green open spaces, which belonged to the most characteristic features of the mass housing estates, and were used as play areas, had its failings and shortcomings, too. Broad green open spaces suffered problems of maintenance, loss of control, or safety [9, 12].

The last decade of the twentieth century were the years of changing intra-urban patterns, which arose from the various processes conditioned by the political, economic, and social changes symptomatic for the post-socialist or transition period [20]. Since the 1990s of the twentieth century, densification of housing estates by additions of new residential, commercial, or administration buildings, and, as well as, increasing demand for car parking spaces caused losses of green open spaces [9], and also disappearance of children's playgrounds.

Today, the social structure of the mass housing estates becomes again more heterogeneous, what puts new requirements on the design of open public spaces and, as well as, on the regeneration of children's playgrounds and their design to serve adequately to the rising demands of inhabitants. While during the socialist period market with flats did not exist and was limited only to a mutual exchange of flats, after 1990, the emergence and development of real estate market with flats enabled new inhabitants to buy and move in the flats in housing estates, and today, the new generation of young families with children again creates the demand for children's playgrounds.

Many of the former playgrounds which during the previous period fell into decay have been revitalized. However, only in few cases, the playgrounds have preserved their original design structure and the original play elements (**Figure 12**). Today, the original steel playground elements, as for example the popular "Globe," do not fulfill the safety requirements according the current technical standards.



Figure 12. The preserved original steel play equipment, in front the "Globe" and the "Rocket," in the small play area in the housing estate in Šaľa. Source: Photograph by author, 2018.

In most of the cases, the old steel play elements have been replaced by new equipment, usually using the former landscape architectural setting and the former concrete elements, as could be seen, for example, in many playgrounds in the housing estate Petržalka in Bratislava (**Figure 13**).

Current examples of the children's playgrounds from Slovak mass housing estates also show that nowadays the typified design of the standardized catalog type elements is used and preferred (**Figure 14**); however, some of them show individual design (**Figure 15**).

Another characteristic feature of the children's playgrounds in the housing estates is that they become in many cases fenced (**Figure 16**). Sand and concrete are not used today, or are used very rarely. Nowadays, mostly rubber surfaces are used for the safety surfacing under play elements (**Figure 17**). In the cases of "natural" playgrounds, usually woodchips are used.



Figure 13. The original landscape architectural concept of the playground at the Gessayova Street in the Petržalka housing estate is still readable from the abstract geometrical forms of concrete platforms, which host new play elements. Source: Author's personal archive.



Figure 14. Typified and standardized play elements are mostly used in the playgrounds—the example from housing estate in Šaľa. Source: Photograph by author, 2018.



Figure 15. Some of the typified catalog play elements show individual design, play structure “Ant” situated in the courtyard of housing estate Veča in Šaľa. Source: Photograph by author, 2018.



Figure 16. The example of fenced and gated playground with typified and standardized play equipment in the housing estate Veča in Šaľa. Source: Photograph by author, 2018.

Specific art-design play objects, designed as sculptures, have disappeared from today's playgrounds. The reason is that today, every new play element installed in the playground must meet the requirements of Slovak and European technical standards—STN EN 1176, which determines general safety requirements and test methods for playground equipment and surfacing, and STN EN 1177, which determines impact attenuating playground surfacing and critical fall height. The play elements installed in playgrounds must have either a certificate or declaration of conformity with the norm, what is a complicated process.

As noted by Herrington [21], reliance on mass-produced play structures and standardized mass equipment as the primary source of outdoor play has led to playgrounds that do not relate to a community's local environment. Children seek novelty and stimulation and the playgrounds consisting only from repeated mass-produced elements ceased to be an exciting, inspiring places.



Figure 17. The rubber surface is laid under the typified and standardized mass-produced play equipment in the playground of the mass housing estate in Šaľa. Source: Photograph by author, 2018.

In Slovakia, it is possible to notice also the trend of commercialization of playgrounds [22]. The children's play has shifted from the housing estates and neighborhoods playgrounds to the specialized purpose designed centers, provided by shopping centers, or by profit making organizations. The play often moves also indoor, to play zones of retail outlets, family pubs, restaurants. Parents restrict children to use the neighborhood space around the home, to protect them from perceived social dangers [23], and to regulate where children play. The trend toward transporting children to leisure and a drift from public toward the private provision of opportunities for leisure [22] has become characteristic for playground provision in Slovak urban environment, too.

As technology evolves and becomes smarter, designing playgrounds for interaction with networks of devices has become more challenging, and using mobile phones becomes an important feature of the playgrounds [24]. However, the current trend of intelligent, interactive playgrounds, using advanced digital technologies [25, 26] is not observed, and not used, yet, in the public playgrounds of Slovak housing estates.

5. Conclusion

Successful playgrounds provide space for children's socialization, imaginative play and physical activity, provide social opportunities not only for children but also improve social cohesion between families and community members [27]. It is agreed that effective playgrounds include natural elements, encourage interaction, are highly accessible for variety of user groups, include spaces for active play, provide risk and challenge, and are safe and free of hazards [27].

These key components are considered crucial for the successful playgrounds: the design should be "tailor-made" to the playground to suit the environment in which it will be placed, the playground should be placed as to be readily accessible to all, and close to the users, it should use the natural elements, the nature of the country and surrounding plants, the playground should provide a wide range of experiences, including the selection of a variety of surfaces, textures, plants and a combination of free and organized areas. The playground

should be accessible to disabled users, to be able to play together with others and should provide for the possibility of choosing from a variety of equipment. The playground should offer different game options, should allow the children of different ages to play together, and it should allow to test the children's skills. The playground should accommodate the needs of the community; therefore, the community should be involved in its design, which should be the result of general consensus. The playground should be properly maintained and it should allow changes according to the needs arising over time.

Access to playgrounds is an important urban amenity, enhancing the quality of housing and living environment.

In the Slovak mass housing estates of the second half of the twentieth century, unique concepts of children's playgrounds have been applied, designed by architects and artist, and inspired by the best European experiences, for example by the landscape design of the Stockholm school, or by the playgrounds of Aldo van Eyck. Design of public open spaces and public playgrounds in the Slovak mass housing estates represented the architectural qualities of the modernism of the second half of the twentieth century, but their main problem was the lack of maintenance, resulting from the lack of resources.

Today, the trend to use the mass-produced play equipment in playgrounds does not respect the site specifics, reduces the potential of playgrounds to stimulate children's imagination, the trend to fence and gate the play areas, and shift them to specific zones and indoor, and reduces the access of children to play.

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