ISSN 2729-7640

ALFA
ARCHITECTURE PAPERS
OF THE FACULTY OF ARCHITECTURE AND DESIGN STU
www.alfa.stuba.sk

3/2020

Summary

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COMMUNITY ARCHITECTURE

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Keywords: community center, community architecture, social hub, design for all

This article is a reaction to an ever-increasing development of active citizenship in the community sector in Slovakia and the Czech Republic. People are gathering more frequently based on their common interests; the number of communities of interest is growing and they are becoming more active as civic associations. I perceive the negative impact on people of the digitized world and social media oversaturation as a reason for the increasing number of neighboring communities.

Architecture internationally responds promptly to the needs of active communities. There is an increased demand for facilities that reflect the community's needs and provide space for people with common interests. Community centers reflect human needs to play, learn, co-work, create meaningful relationships, and enhance community spirit regardless of social background, age, or political and spiritual beliefs. New community centers have acquired an important role in community development. Their design for program fulfillment, ecology, and inclusivity are creating an image of the community they serve.

The study of community centers requires not only defining the term "community center", but also understanding the principles of "community architecture". The latter is a relatively new erm, most often referring to a "movement" or branch of architecture with various interpretations. This article discusses some of them and wishes to offer a more coherent definition that presents community architecture as a created architectural environment, which we can approach by preferring individual solutions typical for existing architecture for communities. This type of architecture represents an alternative approach to conventional architectural practice, transforming architects into facilitators and creators of change.

Socio-cultural leisure facilities, together with hybrids with additional social functions, are being inconsistently termed, yet we could comprehend them as community centers. Many attributes are associated with these places. They are often called social, civic, neighborhood, multifunctional, leisure, recreational, multigenerational, or meeting centers. Dated terms, such as house of culture, social house, leisure center, center for culture and education, center of art or a rather vague expression socio-cultural facility, are typical for the Slovak facilities that most resemble the concept of the community center. However, these terms are not adequate to label new community concepts, since concepts can combine more functions than just cultural and educational. Community centers might be a place for sport and wellness activities, health and social services, retail, public catering, or more.

Unclear definition of the term “community center” and the wide spectrum of its program may be some reasons for this. Research of successful projects allows us to understand and verify design solutions, and typical repeating patterns.

The community center can be perceived as a multifunctional leisure facility, focused on facilitating community interaction and strengthening community ties, thus contributing to community development. It creates a democratic environment that enables and encourages the fulfillment of fundamental human rights, but only if it is accessible to each member of the community “on an equal basis with others” and following “design for all” principles. Due to the possibility of providing a wide range of leisure activities corresponding to the needs of community members, the community center can be considered as one of the most important local leisure facilities.

The article presents a basic categorization of community centers divided according to their origin, size, targeted age group, and degree of multifunctionality. Three examples are selected and elaborated to demonstrate different characters of multifunctionality.

The purpose of this article is to draw attention to the topic of community architecture as a response to the lack of these facilities in Slovakia. The need for informal leisure places designed to strengthen the sense of community is increasing along with the need to create meaningful relationships among people. The role of architects is to respond by designing to the needs of users and to create an environment accessible to all. Such facilities should be the heart of the community and connect different people through a varied program under one roof. This design requires an architect with ingenuity, finding balance in fulfilling the needs of contractor and final users, choosing the right form and scale, and finding logic in a complex concept. Community centers are playgrounds for people and architects as well.

As mentioned before, community architecture provides a broad scope waiting to be researched. Especially in Slovakia, this type of architecture is still an unexplored phenomenon. There is a scarcity of information from community architecture theory and its implementation in practice. Therefore, this paper elaborates on the concept of community architecture and community centers, as well as presenting unique local projects and community concepts from the Czech Republic and Slovakia.

The opinion that community architecture deserves more attention in practice, whether as a small public intervention, reconstruction, conversion, adaptation, or new construction, is presented in the article’s conclusion. The practice is crucial for further research on this topic, and enables transdisciplinary cooperation with other fields of research (e.g. applied psychology). The role of architects is emphasized, since their attitude to the issue will determine whether high-quality architecture is to become the setting for community life in Slovakia.

FUTURISTIC CEMETERY DESIGNS, VISIONS OF THE FUTURE FUNERARY ARCHITECTURE

Mária Jurášková

Keywords: culture, death, cemeteries, funerary architecture, futurism

What kinds of spaces, objects and shapes can represent cemeteries? Futuristic cemetery designs, and visions of funerary architecture of the future, express an entirely new approach to this topic. In comparison with the present day cemeteries, they explore new possibilities of working with space and material, intensify the usage of urban areas and emphasize the overall architectonic expression. They provide an answer to the fundamental problems faced by “traditional” cemeteries today. The authors of futuristic visions experiment not only with scale, volume, material and height, but also with new technologies and materials. This new direction taken up by the funerary architecture, perceives cemeteries as sophisticated architectonic structures generating space and as comfortable, specific and unique environments: places of innovation bringing

developmental impulses. The presented futuristic cemetery designs, and visions of funerary architecture of the future, are characterized by innovative approaches which can be viewed as cultural-architectonic, functional-operational, mass-space and construction-material experiments.

Vertical cemeteries occupy a minimum of built-up area and so use the available space effectively. The main advantage is their capacity to accommodate numerous graves and urn niches and their construction is economically convenient. Since they do not take up too much surface area, they can be placed in central urban zones and thus be easily accessible to city residents. Vertical cemeteries have the potential to fit together with the skylines of many metropolises which are often dominated by high-rise buildings. The negative features comprise general sensitivity to safety risks such as fires, earthquakes or other natural calamities, and challenges in energy efficiency, typical for high-rise structures. As an example of a vertical cemetery, we present “The Last House” futuristic design by a Korean architect Kim Chan Joong.

Underground cemeteries make use of free space below the surface level and as such are—in a way—a “negation” of vertical cemeteries. Instead of extending skywards, they are downward-oriented and can often be connected with already existing underground places. An obvious advantage is that they save space. They can extend over tens or hundreds of meters underground and be oriented either horizontally or vertically. Another advantage is that they fit into the urban environment and do not disrupt the city skyline. Susceptibility to some safety risks, such as fires, is one of the drawbacks; however, a major issue is providing optimal ventilation and lighting. As an example of an underground cemetery, we present the “Metro Pére Lachaise” futuristic concept, created by architecture student Zaiga Padoms.

Cemeteries floating on water solve the problem of land scarcity by using water surfaces. Nowadays many metropolises are located along the sea coast or on a major river running through the city. Among the pros of cemeteries floating on water we can count attractive nature settings on the water and at the same time in the city, mobility (the cemetery can be anchored in various docks along the coastline or by the riverside and hence be easily accessible to city residents and offer a panoramic view on the city). Their cons are possible safety risks such as fires, earthquakes, tsunami waves and the like. As an example of a cemetery floating on water, we present the futuristic “Columbarium at Sea” designed by architect Tin Shin But.

Green cemeteries create new vegetated areas in already built-up locations. They are a part of the cities’ regeneration, contributing to biodiversity without expanding the city limits. They are characterized by using natural components and ecological technologies in their operation. Green cemeteries improve the quality of city areas by enhancing biodiversity and the plants in the cemetery and its surroundings help regulate dustiness, heat/temperature and provide for shading. On the other hand, as a disadvantage, ecological materials usually require a larger initial investment, also needed for running green technologies. To give an example of a green cemetery, we present the “Moksha Tower”, a futuristic design created by architects Fu Yalin and Lin Ihsuan.

Current trends such as a steep population growth and a scarcity of unbuilt zones in modern metropolises have also impact on funerary architecture: this offers room for a wide range of creative concepts and ideal conditions for creative enterprises. Authors of futuristic cemetery designs and visions for the future, address these trends using various approaches which have the potential to contribute to the innovation in funerary architecture, now facing various challenges. Futuristic designs are the result of searching new options and indicate possible directions in the future development of cemeteries. They show that taking a different perspective on funerary architecture can bring new solutions.

Projects presented in our article outline the complexity of problems related to funerary architecture and present various suggested solutions. These designs can be inspiring for architecture students and architects and stand for actual

development trends in this field of architecture, which has so far received little publication coverage in the Slovak language.

OPEN PLANNING: QUALIFICATION OF URBAN SPACE PARAMETERS FROM END USER'S PERSPECTIVE

Oto Nováček

Keywords: spatial planning, emotional mapping, open planning, measurability, environmental quality

Cities are an economic and social phenomenon reflecting accelerating effects, as projected in their space and structure. With the advent of the information age and technological progress, the city has acquired a new attribute: the- smart city. The impact of innovation on every aspect of the current city is clear. Whether it be changes in behaviour, economics, or the administration and planning of the city, technologies, especially in communication, are changing our view of how the current city should be perceived, planned and managed. The planning process should be shaped primarily by democratic, people-centred values: their rights, but also their responsibilities.

In recent decades many scientists (Jacobs, Hilier, Lynch, Gehl, Whyte, and others) have addressed the issue of the functionality of the city's spaces and structures, as well as the development of methods for how to evaluate it, in an effort to ensure the city a higher quality of life. Breakthrough changes in thinking and views of the city came mainly in the 1960s, as marked by several movements. These theoretical works can be classified into three basic scientific disciplines: the social sciences, urban sciences, and most recently urban computing.

People are inexorably interconnected with the urban environment, and in using the city spaces they create its content. The dualism of this relationship calls for a more consistent development of a more complex connection between human and space. An essential factor is the context that determines the individuality of a place. For this reason, it is desirable to observe, in addition to localization factors and the physical properties of urban structures, the influences on their use and on social interaction of intangible values. Information about human interactions with space can help architects and designers design urban spaces to stimulate positive emotions.

Therefore, the parameters of a place must be perceived in the correlation of its tangible and intangible characteristics. It is necessary to be aware of the fact that the parameters of quality lie not only in tangible elements of space, but also qualities as perceived by people. Based on international research verified in practice, certain urban performance indices have already been introduced to assess sustainability, accessibility, and morphological features. This work aims to contribute to the discourse on quantifying cognitive evaluation of spaces by evaluating the results of empirical research. These are based on evaluating the perception of positive and negative aspects of the cities of Bratislava and Košice (sample of about 1,200 respondents).

The research works with outputs from the Emotion Maps platform, a tool for participatory city planning and a form of empirical research. This tool facilitates the active involvement of citizens in the collection of information and opinions, about the city and its public spaces and buildings. Such geographically located answers give a more detailed end-user overview of how public spaces of a given city are perceived. Empirical surveys relevant to the paper were conducted from March 2018 to May 2019.

The emotional mapping outputs were subjected to spatial analysis and sentiment analysis. Spatial analysis was evaluated using geographic information systems (GIS), specifically the freeware program QGIS, working with the heatmap function. Sentiment was analyzed using software for data analysis and visualization, in this case Microsoft Power BI.

Spatial analysis showed that most of the stated inputs are concentrated in the significant areas of the wider centre of both cities, which was the expected result. Another common denominator of both cities is a considerable spatial dispersion of positive comments, which greatly influences the positive impact of the environment (water and greenery) on the perception of the population. The analysis, on the other hand, depicted a concentration of negatively perceived areas, especially in the wider centre of both cities, mainly by traffic nodes (crossings, transport stations, etc), as well as squares and similar nodes.

In the sentiment analysis, the nouns appearing in comments were divided by similarity of meaning into seven categories: 1.) Environment and nature, 2.) Dominant features, architecture and aesthetics, 3.) Health, safety and comfort, 4.) Social dimension and activities, 5.) Transport and infrastructure, 6.) Elements of public space, and 7.) Equipment and services. These categories define and rank the parts or elements of the city that people pay the most attention to according to the number of nouns occurring.

The analysis shows that spaces in both cities provide an adequate amount and quality of natural areas, and the public is impressed by the design and architecture of both cities and their social dimension and room for activities. Among the most negatively perceived aspects in both cities is Transport and infrastructure, which confirms the assumption of the relatively low quality of spaces for pedestrian or bicycle movement.

The conclusion is devoted to the concept of Open Planning, which aims to combine the empirical knowledge of city construction that has evolved over the centuries with the possibilities offered by digital technologies. The basis should be such parameters as could be compared and weighted according to the preference of the predominant development, functional use, or nature of the space. Currently, the biggest problem is in static and inflexible master planning processes (zoning). An appropriate openness can be achieved in the future by combining data analysis (in real time) with subsequent simulation of the impact of intervention according to set parameters. Analyses from geographically located questionnaires, or similar surveys, could be used as a basis for an index of user quality. Agent Based Modelling, as an experimental system based on the creation of synthetic users of space, could become an element in verifying the whole process.

THE PHENOMENON OF TEMPORARY ARCHITECTURE – ITS BACKGROUND AND POTENTIAL

Simona Kolimárová

Keywords: temporariness, ephemerality, time, attractor, temporary architecture

Temporary architecture is one of trends in contemporary architecture. Nevertheless, structures that are constructed for the limited time scope were built in past too—temporality of structures and concepts, its intentional transience has been present in history since the very beginning. Temporary architecture was excluded from classical avant-garde architectural study programmes because the public felt it had developed beyond the need to create temporary, non-permanent, transient structures when it was possible to create permanent structures instead.

Before delving deeper into the topic, it is important to demonstrate relation between theories of time and temporary architecture. First temporary structures were constructed during the era of nomads. They can be described as simple structures that were moved to different locations, as needed. Other temporary structures were actually temporary due to the lack of building materials or of the lack of building skills, thus their transience was not intentional.

As architectural theorist Bencová states in her writings: “Classical history of architecture is built upon consistent architecture which demonstrated a certain way of thinking about architecture at the time of its origin, and on concepts of often torn-down and unpreserved structures and concepts which had one feature in common—the fundamental permanence.” (Bencová, 2010) The desire for

permanence was one of the main features of architecture – temporary architecture with its limited time scope was only verifying this logic—by temporarily changing environment after which the status quo was re-established. Special events, due to which temporary architecture was constructed, were merely perceived as “disruptive moments” interfering with the otherwise linear passage of time.

Later, the first Great Exhibition introduced the phenomenon of temporary architecture repeated cyclically with every subsequent exposition event. We can thus identify the milestone in relation to time and temporary architecture—the construction of the Crystal Palace designed by architect Joseph Paxton in London in 1851 as the first temporary exposition building that was ever built. This milestone can thus be acknowledged as the introduction of cyclical time in relation to temporary architecture, with the accompanying emergence of new types of temporary buildings—temporary exhibition buildings.

The next milestone in relation to time and temporary architecture can be seen in the theories of the association called “les événements”—”events“, which was established in 1968 in reaction to the social and political changes occurring in the period and the result of which was the introduction of the terms “event” and “movement” in architecture. This theory was later pursued by architect Bernard Tschumi. He established the term event architecture, what he describes as architecture that is tied to an even—a moment in time rather than to its physical structure and the space it creates.

Nowadays, there are structures related to festivities (linear points on the time axis—which are held for example because of an important anniversary in a particular town) and, at the same time, structures that are built because of cyclically occurring events and structures that are built as attractors in public space—there are multiple periodically repeated events, one-time events with different cycles of their repetition, which makes it impossible to identify the time culmination of these events, and only the flows of temporary architecture can be observed, rather than the peaks, which could be identified in the past.

Regardless of the uniqueness of architectural objects that are often results of attempted architectural experiments, it is possible to establish certain categories within the subject, which, besides the formal aspects, help to explain the relationships and analogies within. It is possible to identify certain common characteristics, based on which individual objects can be classified, with focus primarily on the time context, their intended purpose and content, not the space specifications of the objects.

Based on various aspects, temporary architecture can be divided into sub-categories as follows:

• based on the design process: intended temporality, unintended temporality,

• based on the function and programme: utilitarian intention, intention consisting in a change of the surrounding space, intention of selling and marketing, structures related to festivities,

• based on the position in the urban tissue: cultural landscape, in proximity to a strong natural element, public space, in proximity to an important institution.

Temporary architecture and its forms have transformed over time. We can state that nowadays, for the first time in the history, there are structures being built for different reasons such as for their ability of catalysing the space and bringing disruptive moment in the urban tissue. Unlike in the past, with the structures pragmatically utilitarian, or naive and decorative, and demonstrating the technological progress in the society—contemporary temporary architecture is seeking its purpose in the attempts to change public space and our behaviour in it.

Design process of city development, cultural institutions and public spaces that has been applied up to the present point is expanding its scope to include the implementation of temporary, flexible, or movable elements in the urban tissue. Thus, contemporary city is not only concentrating on planned, permanent

unvarying places—public space should be able to respond to informal, impromptu needs of city. Permanence of these structures can mostly be seen in the sustainability of society's lively participation in the public space, unusual use of the public space, or promotion of contemporary art and architecture. Temporary structures and concepts bring new possibilities, test different scenarios and present new ways of thinking about urban planning, about how spaces should look like and how they should be perceived and used. The value of such temporary architecture is significantly determined by its programme and utilisation, establishing it as a respectable city attractor.

DESIGN IDEATION IN VIRTUAL REALITY

Michal Jelínek

Keywords: ideation, sketching, VR, sensory cognition, creative cognition, design, research

The following text outlines a collection of observations made at various occasions between 2017 and 2020, which include onsite workshops at automotive design studios such as Volvo (April 2018), Volkswagen (November 2018), and Opel (July 2019), where I worked with professional designers from both vehicle interior and exterior departments. These events focused primarily on the ideation phase of the design process, VR integration in this context and VR blend with a complete design pipeline.

Ideation, especially in sketching, plays a natural role in the forming and sharing of an idea across virtually all fields of creative activities. We accept the sketch's visual form as a critical component of the architectural design. It is generally present in the product design process. It can also be a distinctive discipline of the fine art; however, it does not stop there. Sketching is a basic form of visual communication in everyday life; we share ideas and concepts. Although the word "sketch" may also refer to a record of a musical or performing art concept, it is essentially the sketch in its visual form that accompanies humanity across cultures and professions. It is also more than just a simple art form down to which is often reduced. I focus on the role of sketching mainly as a tool to generate ideas, and I assess how digital technologies, namely virtual reality, can contribute in this field.

Although the ideation appears to be indivisible, my observations suggest that it can be divided into four consecutive steps or stages: Mapping, Exploration, Explanation, and Persuasion. In Mapping, we get familiar with the assignment and the context; in Exploration, we explore possible solutions. The Explanation is a stage for evaluation and clarification, and finally, Persuasion; when the idea is already formed, we present it further.

Mapping sketches help designers orient themselves, analyse the context, and learn about the spatial relationship. These VR sketches typically lack any clarity, which is intentional, and they literary represent the map of relations, spatial configuration, ergonomics, the accessibility of specific areas, etc. At this stage, the role of the physical body appears to be very important.

The Exploration sketching—this is the stage where the expressive ambiguity is crucial for subsequent design decisions. In this phase, we examine our maps and assign them meanings, functions, or hierarchies. Designers use ambiguities for different interpretations, which are then used to generate various alternative designs.

Explanatory—As the designers continue to experiment with form language and gradually refine the design, it is possible to observe frequently that their designs are accompanied by their spoken commentary. The designers thus use verbalization as a tool that helps them in shaping the design.

Persuasive—At this stage of the ideation process, the formation of the idea is usually over. The designer's last task is to convert these relatively unrestricted sketches into an art form in which clarity and legibility prevail. Although the design

is still more of a concept at this stage, thanks to VR, digital data is fully 3D and can be used directly for further processing, such as visualization or prototype production.

In conclusion, I would like to state that the contribution of VR to design ideas seems more than beneficial, and emphasize the fact that the observations have been consistent with the results of research in the fields of cognitive psychology. Prof. Barbara Tversky refers to gestures as spatial actions that play a significant role in human cognition and analyses them in our given (creative) context, while observing architects performing simple design tasks, as they add gestures and verbal comments to their sketching act. Furthermore, her observations were independently reproduced by Dr. Vinod Goel, who also included digital tools in his experiments. In addition, these findings match the conclusions of leading experts, such as Bill Buxton. Finally, I would also like to say that placing these observations into the context of contemporary neuroscience has also gained significant support.

Needless to say, although this correlation indicates the link between the human ability to generate new concepts (to ideate) and spatial actions, we still need to continue with these observations and collect more evidence from all three angles: research on design, cognitive psychology, and neuroscience. Such a multidisciplinary approach appears to be a viable path to learning more about human creativity and describing it as a proper scientific subject.