

EXPERIMENT IN THEORY OF ARCHITECTURE

WORKSHOP AS A RESEARCH METHOD
Alexandra Dubovcová

The article is dedicated to the experimental 3D Workshop (it took place from 3. 8. – 8. 8. 8015) which represents one of the research methods of the dissertation thesis *Film cities – Visions, Utopias, Futurism*. Up to now, research lacked practical verification of couple of anticipated conclusions, which can be observed through the practical workshop. There is an assumption that people's visions about the future cities are determined by the existing movie images of future cities. Impact and degree of influence of these film visions can be tracked by examining student's works. After introductory theoretical preparation, each student was given the task of designing a fragment of their own future city. Virtual models made by students will be transformed into the physical models through 3D printers. In conclusion, all the fragments of the future city are analysed. The aim is to observe and to describe the way the sci-fi city visions are projected into the student's future city visions. The project has scientific, artistic and pedagogical goals and objectives. After fulfilling all the aims, the workshop will provide new irreplaceable materials for the final thesis and means an important interdisciplinary cooperation.

THEORETICAL FOUNDATIONS OF EMERGENT DESIGN

Tomáš Tholt

Digital discourse in design developed from simplifying conventional design process via automatization, through parametrically driven modification of similar elements, to generative emergent complex systems. Transition from parametric to emergent design represents a way from the top-down system to decentralise the bottom up way of work derived from non-linear theory. Emergent design is thus considered to be the most advanced way of design process. The paper deals with the theoretical background of an emergent approach in contemporary science and philosophy. Architecture, design and art are considered to be a part of civilization. Civilization phenomena emerge from the interactions of its parts.

DIGITAL INTERFACE

Robert Löffler

Present trends in the area of (digital) architecture and fabrication focus on the research of reactivity of a complex system of factors in architecture and digital fabrication. These determinants may vary – from operational and social to structural or material. Fabrication of architectural structures occurs in real physical world in the form of complex mechanical systems, or in the virtual world. The progress in technology enables to minimise the differences between reality and virtual reality. This moment of the realities overlap is becoming a source of inspiration and enables an application of unorthodox and innovative design processes in architecture. Reactivity becomes an

important part of design process which enables interactivity and transformation of the structures in real time. Use of high tech technologies and unorthodox design tools such as robotic arms, milling machines, 3d printers, drones, and tools of virtual and augmented reality are typical for the given issue.

ARCHITECTURAL DATABASES AND ARCHITECTURAL WORKS LOCALIZATION IN DIGITAL MAPS

Jaromír Srba

This article focuses on an architecture database management which explores new options and methods for displaying geographic location of documented works by means of map applications. The aim is to improve possibilities of locating architectural works documented in an architecture database and to allow more accurate and specific documentation of such works in particular. The research uses analytical and design methods of software engineering in the following successive steps: analysis of current methods and tools for locating works in an architecture database, analysis of needs, requirements and possibilities, then the design of recommended solutions, and finally, the implementation into the relational database model.

BANSKÁ BYSTRICA – SELECTED INDICATORS OF INTENSITY OF LAND-USE OF HOUSING ESTATES

Karol Görner

In pursuit of sustainability of our cities we increasingly face the principle of intensification. A specific issue in this context becomes the intensification of the housing estates from the

period of mass housing construction. Nowadays, when master plans of our cities are failing in management of urban development of housing estates, the need for the concept of intensification of housing estates comes to the fore. For better understanding the issue of housing estates, it is necessary to examine the diverse housing estates in the context of the entire city.

The work is aimed at calculation of selected indicators of the land use of the housing estates (Site Coverage, Floor Area Ratio, the Average Number of Ground Floors and the Population Density) within the city of Banská Bystrica. The goal was to compare the identified parameters to each other and to the reference values in terms of potential for their intensification.

The low values of the examined indicators showed that housing estates in Banská Bystrica have a relatively high potential for intensification. Depending on the nature of the particular housing estate, however, the proper forms of intensification will vary.

PRAGUE'S PERMANENT PUBLIC ART AFTER 1989

Petra Vlachynská

In this paper I focus on permanent public art in Prague installed between the years 1989 and 2015. With political changes all controlled mechanisms and institutional management in production of art in cities have been abolished. Until now there is no strategy and policy supporting public art on the level of neither municipality of Prague nor its administrative districts. I present the results of mapping Prague's permanent public art quantities in its administrative districts, their primary function and visual typology. Two art works were chosen as opposites in many aspects. I am interested in their relationship with the site on the level of space, architecture, actions, aesthetics and meaning. Do they contribute to the identity of the site? In what extent are they site-specific?

VEGETATION IN SUSTAINABLE ARCHITECTURE OF SOLAR DECATHLON PROJECTS

Barbora Janíková

Vegetation is a frequently used component in sustainable architecture providing ecological, esthetical and technological benefits. Solar Decathlon, a student architectural and engineering competition, which presents future architects' views of contemporary sustainable living, introduces a whole set of unusual and innovative elements in plant implementation into habitations. Particularly specific are the projects designed for extreme conditions of deserts, semi-deserts, or arctic areas. Throughout the history of the competition it is also possible to observe some trends in applying vegetation both in design and realization of these constructions.

THE EVANGELIC CHURCH IN TRNAVA: ON THE ORIGINS OF ITS UNIQUE SACRAL ARCHITECTURE

Katarína Haberlandová

So far, the construction background of the Evangelic church in Trnava, designed by the architect Josef Marek, has not been systematically investigated. Even though that the construction of this interesting building of sacral architecture was preceded by a competition, the forms of participating projects are not known. That is the reason why it is impossible to understand fully why Josef Marek finally decided for a non-traditional amphitheatric concept.

In the Evangelic vicarage archive has been found some project documentation from that competition as well as some older plans of the church which have not been properly examined by experts yet. They probably served as a basis when considering the modern form of the Evangelic church at the beginning of the 20th century. Among the projects there is also a design by Vienna architect Ludwig Schöne designed with an oblong ground plan and in the style of Historicism

with Neo-Romanesque and Neo-Gothic elements. There are also some projects from the early 1920s, in which the competition jury clearly defined the essential requirement for the church – the form of an amphitheatre. Not all architects who took part in the competition were able to accept this condition. Some documents reveal that in the end only two architects designed the church in the form fulfilling this requirement. It is assumed that these architects were František Gahura and Juraj Tvarožek. Nevertheless, the jury expressed their discontent and finally the project was assigned to Josef Marek who managed to fulfil this task in compliance with the requirements of modern Evangelic liturgy in full extend. The built church was not comparable to any other church from the inter-war period in Czechoslovakia. The building is valuable especially for its simple clear substance and from the outside recognizable amphitheatric layout that was very innovative for that period. Interesting features are its location on the site bordered by the fortifications and the design of its roof construction which Jozef Šimončíč pointed out in the past.

DUŠAN MARTINČEK – THE ARCHITECT OF THE CASTLE

Anna Gondová

The issue of the Restoration of the Bratislava Castle is always connected with the person, who, at that time, led the reconstruction and design works on the castle. Individual parts of the reconstruction can be defined as five restoration periods or five stages. Dušan Martinček, an architect, preservationist, pedagogue and also a versatile artist, brilliant photographer and publicist, was the leading person of the second stage. This was characterized by combination of several restoration methods. In the first phase (1950s – 1960s), the ruin was consolidated, extended and the fortification character of the castle was restored, while the Baroque originals were kept. Later

(1960s – 1970s), the Modernism entered the restoration process for both ideological and pragmatic reasons. Dušan Martinček worked as a leading architect for 18 years in Stavoprojekt Bratislava, the studio for reconstruction of monuments. The reconstruction of the Bratislava Castle was his most significant project. He himself labelled the reconstruction as the largest and the most beautiful work of his life. He took the leadership after Alfréd Piffel and led the works on the castle from 1958 to 1976. He left the continuous cultural layer and several remarkable architectural interventions. The recent restoration lasting up till now has removed most of these interventions for several reasons. The last task, that he was involved in with full concentration, was the design of a new entrance to the Castle palace from the northern terrace on which he promoted the reconstruction of the original Baroque garden. Dušan Martinček stayed connected with the Castle, even after he left the position of the main architect of the Bratislava Castle. Through the position of the main consultant for the castle restoration, he published, monitored the building works and making up of the details.

THE ARCHITECTURE OF ARMY BARRACKS IN BRATISLAVA: THEIR DEVELOPMENT AND IMPACT ON URBAN STRUCTURES

Laura Pastoreková

The city of Bratislava has always had a significant military importance due to its strategic location. The introduction of compulsory military service in 19th century made it an important garrison town, too. Apart from building headquarters, schools, hospitals and other military constructions, army focused on construction of barracks, i.e. special military buildings used by soldiers for training and accommodation. They were initially built as individual two or three-storey buildings which have been later transformed into spacious campuses with several

volumes divided according to their functions. Depending on the size and specialization of military units, Bratislava had several types of campuses with different locations. In the last decades before the World War I, along with increased urbanization and the policy of European powers, army was trying to build as many barracks as possible and soldiers were forming almost seven percent of the total city population. Only the knowledge of values and development of barracks' architecture allow us to understand their potential and importance in the future city development.

COVERING CONSTRUCTIONS FOR ARCHITECTURE IN RUINS

Lýdia Chovancová

Conservation and restoration of architecture in ruins in Slovakia has been financially supported since 2012. It covers mainly stabilisation and conservation of ruins in emergency state opening thus a dispute about their new roofs like one of the possible ways of conservation. The ruins located in natural surrounding have been often roofed by a hidden flat roof, well-preserved ruins are stylistically reconstructed. The paper aims to point out the possibilities of roof forms over ruins depending on their current actual conditions.

In introduction basic terminology related to architecture in ruins is defined, subsequently we refer to scientific disciplines influencing the procedure of conservation, restoration and presentation of ruins. Architecture as a scientific discipline is an intersection between landscape architecture, urbanism, structural engineering and monument conservation. The urban factors such as its location within the urban structure, distant views of the area and views from the area, its outline, access roads and greenery influence the applied conservation method in the given locality and implicitly the position of the shelter or covering structure. Architectural factors that need to be considered when deciding for a new roof

over the ruin are the degree of its destruction, the possibilities of its reconstruction, the original roof form, design philosophy and its new function. Two schemes of roof shapes (a slope roof and a flat roof) have been prepared to point out the scale of possible roof shelters over a preserved ruin.

Comparing the realizations and the presented schemes emerges that only a narrow range of coverings for ruins has been used in Slovakia. The indistinctive way of reconstruction is used rarely. Specialists prefer new shapes of utilitarian and hidden flat roofs.

DETAIL IN THE CONTEXT OF CONVERSION

Gabriela Rolenčíková

Architecture after the date of "best before" sometimes needs only a few touches and changes to get a second chance to be alive again. Community of people who can see a hidden potential in abandoned buildings is growing and they put pressure on recovery and recycling because nature and its exhaustible sources demonstrate that the debt produced by our contemporary lifestyle has to be paid. These efforts are difficult on the level of communication between representatives of several stakeholders participating in a building conversion (or a reuse-process). However, if a community is so advanced that it is able to overcome problems associated with the human factor, architects themselves have to take responsibility for creating a high-quality conversion project.

On the next stage, an approach to revitalization is based on a degree of intervention by relevant instruments where architects become not only a sort of 'inner souls of a building but also its exterior body'.

"Conversion is generally more difficult than designing of new objects, because it is too modified by existing structures." (Renzo Piano, 2008)

When working on a conversion project, it is the detail that attracts attention because other

varied parameters have to undergo many transformations. It is necessary to analyze, specify positive and negative properties of the existing elements, evaluate them, and thus establish ideal methods and approaches to a conversion.

IS THERE ANY POTENTIAL FOR LOCATION OF COMMERCIAL FACILITIES IN THE SLOVAK RADIO BUILDING?

Štefan Bekeš

The Slovak Radio Building in Bratislava is the "jewel" of the Slovak late Modernism according to architectural theorists. They also draw attention to the need for its protection. Another part of the professional community, and part of general public, consider this building as a relic of the communist regime, and they think it should be removed from the image of the city. The Slovak Radio Building was built for a very specific function and its construction required extremely technical, functional and technological solutions, which could be classified as unique for their period of time. However its service, technology and total current status have become outdated. Also, the building is over-sized for the current Radio needs, and as a result it will have to go through total reconstruction in the near future. It will be necessary to establish the potentials and limits of the structure that will affect the project of its renovation.

The article deals with options for integration of commercial facilities in the Slovak Radio Building. This potential (economic and structural) will be researched by watching pedestrians moving around the radio building, number of staff and students, workers and learners within walking distance of 200m from the Radio Building, the distribution of commercial facilities close to the building and the spatial options of the Radio Building. The research results will be applied to evaluate the commercial potential of the Slovak Radio Building, and will help to identify potential areas for placement of such facilities.

THE STAGE DESIGN OF SOCIAL IMITATION: AS A POLITICAL ARTEFACT IN CENTRAL EUROPEAN MUSIC THEATRE IN THE SECOND HALF OF 20TH CENTURY

Peter Mazalán

Since the second half of the 20th century, theatre has started using rather different forms of its expression tools. Mainly in German theatre society, critics have started to use the term that refers to this new practice as "Regietheater" (director's theatre). These new directing tendencies in drama interpretation led to reinterpretation of plays by exchanging or substitution of various schemes and levels of the original structures of the story such as geographical location, historical period or the relationships' patterns. Theatre in general and especially opera, as the most comprehensive artistic form, have always had the biggest power and potential to discuss the most delicate and complicated political issues. Giuseppe Verdi or Richard Wagner can be taken as examples of artistic geniuses of that age whose works was used as an important instrument to support regimes or politicians in diverse aesthetic narratives. Music or story can be timeless especially in 21st century - the century of the liveliest visualisation. One of the ways how to make the product more attractive and appealing, raising new questions and platforms for dialogue between different cultures, is the transformation of the theatre reality into a local portrait - a visual frame that brings the drama to completely new dimensions. Anna Viebrock, as one of the most influential directors and stage designers, started to implement existing places, architecture and interiors connected mostly to former Eastern Germany. With her usage of scenic space in various theatres across Europe, interesting questions have arisen. This tendency in stage design has been described as "hyperrealistic social imitation".

THE WAY TO THE WORLD BEYOND (AND NOT ONLY THERE)

A VISIT TO THE BRATISLAVA CREMATORIUM DESIGNED BY FERDINAND MILUČKÝ

Ondrej Kurek

The article is part of the PhD thesis Architecture in Movement / Movement in Architecture which analyses the presence of the term 'movement' in the architectural theory and practice, as well as in architectural history. We are especially interested in movement as process and its presence in Slovak architecture.

In this article we focused on movement as process and its types that have impact on the concept of internal architectural space. Our case study is Bratislava Crematory designed by Ferdinand Milučký. We took inspiration from studies written by Paul Rudolph who made several inspirational analyses of movement in Barcelona pavilion designed by Mies van der Rohe as we can see parallels in both structures.

For higher level of objectivity of the research results we use the Space syntax technique. With the help of this set of digital techniques for analysis of space configuration we will create different graphic outputs. Based on the evaluated results we will try to create a complex picture of movement in the researched building.

INDEPENDENT CULTURAL CENTERS AND URBAN IDENTITY

Peter Lényi

Initial impulse for this text was long-term observation and conviction, that man-made part of our environment is constantly losing its identity. The newly built structures are just very average, lacking any ambition to experiment. The old structures are disappearing and if they are not demolished, they are neglected and forgotten.

Koolhaas's text *Generic City*, published in the *S,M,L,XL*, introduces a city, which is the most general repetition of other cities, and is a bearer of non-identity. An interview, which was published in *Wired* magazine "From Bauhaus to Koolhaas" one year later, supplements these notions in more civil language. A parallel between the Koolhaas's city and the today's Central European environment doesn't lay in its size or vividness; it can be seen as emptying / loosing its identity.

Independent cultural centers are institutions, which produce and present the contemporary culture. They were built on civic basis. They preserve and produce identity: apart from basic architectural layer (preserving and using of the original historical buildings), they produce new identity, a sort of non-built kinds of culture. It is ideal to define the new character, history and identity in the way Goethe and Nietzsche indicated it, when they said, that we must despise and reject everything that subdues our creativity and activity, even if that means despising our history. The ideal is the opposite – we should seek for everything that makes us vital. Independent cultural centers produce something that is important for us, if the society wants to grow. The benefit of independent cultural centers in comparison to other parts of civic society is the fact that identity is active in physical and virtual environment, that it leaves record, trace and cumulates critical mass of people, who represent an assumption that sustainability will endure and expand.

THE TBILISI ARCHITECTURE IN VIBRATION OF THE LAST DECADES

Martin Zaiček

This article addresses an issue of political situation in the South Caucasian region within the past two decades and how it influenced the image of the architecture in Georgia. The article also examines Georgian architecture through selected buildings of late modernist architecture as well as through the phenomenon of 90's architectural transformation locally known as the *Kamikadze loggia*. The article shows how the 90's political situation changed the image of the Georgian architecture and introduces examples of Georgian late modernist architecture. The final part is dedicated to new perspectives of Georgian architecture and social transformation of the city into modern capital as a prospective EU member.
