The Architectural Phenomenon of Chernivtsi of the Beginning and the mid-20th-Century: F. Fellner, G. Helmer, F. Kiesler, H. Creangă and Others

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Abstract. Over the last 30 years, there has been considerable debate on the styles of modern architecture around the world and, particularly, in Ukraine. Interestingly, proponents of traditionalism seek answers in the reproduction of ornaments and facades of buildings or the imitation and interpretation of folk forms and materials engendered in past eras. Connoisseurs of the latest technologies and trends see the essence of modern architecture in open space planning, the universality of space and share common views on the overall versatility of objects, irrespective of the territory on which they are located. However, it is of the utmost importance that they also study extensively the outstanding personalities and their creative heritage, which will enable them to predict the potential ways of architectural development down the line. For many years the Department of Architectural Environment Design of Lviv Polytechnic National University has been investigating architecture through the prism of continental and world systems of culture with numerous cross-cultural similarities and differences, authenticity and borrowings and synthetic phenomena. In other words, the Department hones in on the development of conceptual ideas throughout European history and the World cultures. It should be noted that within the territorial boundaries of modern western Ukraine there are cities, which used to be the administrative centers of other countries. They developed in accordance with the dominant tendencies of the former capitals, which shifted their culture potential from the center to the periphery, mainly due to architecture. One of the brightest cities of the early 20th century was Chernivtsi. It was the administrative center of Bukovina, which belonged to the Austro-Hungarian monarchy, and later to the Kingdom of Romania. Hence, the experience of architects who worked in the city and erected many multifunctional buildings constitutes important evidence in our investigation. However, these are not the quantitative indicators of the completed building projects but rather the architects’ progressive ideas highlighting a phenomenal universal feature that should be taken into consideration, which is sometimes of greater importance than merely practical optimization of complex architectural forms. The paper seeks to address three architectural phenomena associated with Chernivtsi, namely, the Viennese bureau of F. Fellner...
and G. Helmer, the futurist designer F. Kiesler, and the Romanian modernist H. Creangă. The criteria for selecting these personalities were their common features: the certain period of time spent in Chernivtsi, enthusiasm and desire to constantly improve architecture, the willingness to seek understanding of the spatial, formal, historical and urban contexts of architecture. The design concepts of these architects are systematically collected and analysed at the Institute of Architecture and Design in Lviv Polytechnic National University. They are developed and implemented in student research projects, as well as bachelor's and master's theses and can lay the foundation for the innovative architectural solutions in Ukraine.

1. Introduction

The debates on the architectural visions for the future of Ukraine, in the early 21st century, have long been controversial issue. Against the backdrop of differentiation of tastes and needs, some contend that Ukrainian architecture should bear traces of ethnicity, nationality, and “folkness”, whereas others prefer it to bear resemblance to the European or the World architecture.

Since its establishment in November 28, 2002, teachers, scientists, and designers of the Department of Architectural Environment Design of Lviv Polytechnic consider architecture not merely as three-dimensional decorated structures of a certain time and place, but predominantly as an integral part of the continental and the world system of culture with a range of similarities and differences, authenticity and borrowings, and synthetic phenomena. To put it another way, the Department hone in on the development of conceptual ideas throughout European history and the World cultures. It should be noted that both theorists and practicing architects consider this approach to be fruitful. The study of the phenomenon of architectural uniqueness requires qualitatively new scientific investigation, the ability to imagine and reproduce the past, as well as to predict and foresee the future.

The topicality of this research is justified by the necessity to fuel the development of modern scientific thought - the framework of Ukrainian architecture of the future in the global context. Obviously, it consists not only in the legacy of individual personalities, design organizations, architectural schools which operated within the boundaries of modern Ukraine, but also the artists who lived in the regions which temporarily belonged to other countries.

Interestingly, the modern Western Ukraine includes a number of cities (Lviv, Uzhhorod, Chernivtsi, etc.), which used to be the administrative centers of other countries. They underwent rapid economic development initiated by the former capitals, which shifted their culture potential from the center to the periphery, mainly due to architecture. Chernivtsi was one of the most striking examples to undergo such metamorphosis. It was the administrative center of Bukovina, which belonged to the Austro-Hungarian monarchy, and later to the Kingdom of Romania.

Given this, the design concepts of architects who worked in Chernivtsi in the early and mid-20th century is of utmost importance to our studies. As a result of their activities, hundreds of different buildings were built: residential, cultural, educational, industrial, medical, the vast majority of which still function today. However, these are not the quantitative indicators of the completed building projects that should be taken into consideration, but rather the architects’ progressive ideas highlighting a phenomenal universal feature, which is sometimes of greater importance than merely practical optimization of complex architectural forms. Thus the cultural heritage of Chernivtsi is a vivid illustration of the diverse combinations of local and world culture, which created a unique image of the city, that is interesting for both studying the past and creating the future.

The paper seeks to address three architectural phenomena associated with Chernivtsi, namely, the Viennese bureau of F. Fellner and G. Helmer, the futurist designer F. Kiesler, and the Romanian modernist H. Creangă. The criteria for selecting these personalities were their common features: the
certain period of time spent in Chernivtsi, enthusiasm and desire to constantly improve architecture, the willingness to seek understanding of the spatial, formal, historical and urban contexts of architecture.

The artistic endeavours of F. Fellner and G. Helmer have been investigated in the works of many foreign researchers, such as M. Barkhin, F. Bouvier, E. Gotha, F. Courant, A. Kadluchka, J. Purchla, Z. Rachevsky, J. Spalt, O. Czerner, and Ukrainian: Yu. Biryulyov, V. Vyutsyk, R. Lypka, V. Proskuryakov, O. Proskuryakov, B. Cherkes, etc. The architectural heritage of F. Kiesler is analyzed in the works of M. Ragon, D. Bogner, L. Barbara, Y. Bohdanova, K. Yanchuk, L. Ficus, O. Mokrousova, and others.

The most notable studies and publications on H. Creangă’s architectural endeavours include the studies of S. Bilenkova, I. Korotun, R. Yuriichuk, Y. Bohdanova (Ukraine); J. Komar (Poland), A. Carpov (Moldova); O. Carabela, M. Criticos (Romania), and others.

The above mentioned publications shed light upon biographical and architectural data, but the comprehensive analyses of architectural ideas of F. Fellner and G. Helmer, F. Kiesler, H. Creangă are missing, which has long been a subject of major interest in many countries around the world. Understanding this experience is extremely valuable for the formation of the architecture of modern Ukraine.

2. The Architectural Phenomenon of Chernivtsi

Along with displaying certain marks of creativity in Chernivtsi, F. Fellner and G. Helmer’s architectural phenomenon consisted in creating a number of original objects that still successfully function and embellish many European cities. Assumingly, these architects were the first to develop and adhere to the typological palette of buildings and structures, the use of which is relevant even today. All the objects they designed and built over the fifty years of their joint creativity can be segregated into four large groups: I - Theatrical and entertainment; II - Residential; III - Industrial and warehouse; IV - Public [1].

The experience of this architectural bureau is important for the whole of Europe because F. Fellner and G. Helmer’s kaleidoscope of various artistic endeavours is displayed in 14 countries: Austria, Czech Republic, Hungary, Germany, Russia, Croatia, Romania, Poland, Switzerland, Slovenia, Bulgaria, Moldova, Slovakia - both in the capital cities and in the provincial large, average, and small capitals [2]. These four groups consist of 26 types of buildings: palaces, hotels, villas, castles, apartment buildings, banks, hospitals, savings banks, clubs, theatre and entertainment facilities. Originally, the palette of theatres featured up to 11 types: from national and city theatres to royal and concert houses. Overall, about 48 theatres had been constructed, i.e., on average, one theatre per year, which is a fantastic figure even by modern standards [3]. Moreover, the generalized principles of construction of space, the organization and presentation of the performance, meeting the requirements of various genres: drama, operetta, ballet, opera, were realized in those projects. It should be highlighted that all those multi-genre decoration systems were implemented without disrupting the comfort of living conditions and perception of the performance. The construction of these theatres contributed to the cultural development of both large artistic centres (Vienna, Brno, Prague, Odessa, Zurich or Berlin) and local (Cieszyn, Geisen, Wurtz, Mladá Boleslav, Jablonce nad Nisou, Oradea, Kecskemét, Rijeka).

Undoubtedly, F. Fellner and G. Helmer theatrical architectural network laid the foundations of a common space and environment for many nations and people in the former Austro-Hungarian Empire. It was for this very purpose that Austrian architects designed and built the city theatre in Chernivtsi. To understand the significance of this event in changing the status of the city and altogether the whole region, it is worth paying attention to the historical circumstances that accompanied that process.

For example, archival data indicate the preconditions for the construction of the theatre: “... the impetus for the construction of a new theatre in Chernivtsi was the closure of the old city theatre in 1904 by order of the President of Bukovina Prince Hohenlohe Schillingsfürst...”, “…this decision was the
last in a series of preparatory works for the construction of the New Theatre which began in 1877, when theatrical activities in the city took place exclusively in the hotel “Moldova” 200-seat auditorium…. “A theatre commission was set up to implement the idea of construction (1897) … “; “… although the commission refused to launch a tender for the theatre building, they got acquainted with the projects of new theatres in Salzburg, Cieszyn, Belitsa. Mr.Gregor, the chairman of the commission, put forward a proposal to visit Vienna to negotiate over the construction of G. Helmer and F. Fellner’s studio…”; “… after negotiations with the Viennese studio, the project was estimated at 1,400 crowns, the construction time had to take two years, provided that the studio itself would carry out construction work …”. Additionally, the archives provide some information about the stages of the project: “… in 1900, architect F. Fellner together with the committee chose the construction site (Elizabeth Square) in Chernivtsi and, despite significant amount of dismantling work, this decision was approved in January 4, 1902 …”, “… The architects of the Viennese studio completed the 700-seat theatre project in May 1902, which was submitted for final approval to the engineer Haberland, the Technical Society and the City Improvement Society, and all experts supported the project …”, “… in May 1904, architect G. Helmer arrived in Chernivtsi to approve the working drawings. The architects’ fee was 5% of the total construction amount of 600 thousand crowns …”; “… Mayor Gregor was approved as the construction manager and the contractor was F. Fellner and G. Helmer bureau” [4].

Back then, the theatre’s capacity was 863 seats, the auditorium dimensions: 17 by 17.25 m, the height was 9 m, the ground floor had 15 rows with 13 seats in each row, and the foyer was 8.4 m deep.

Thus, applying the same approaches to the design of the object as in other European cities, F. Fellner and G. Helmer brought Chernivtsi to a qualitatively new level, beyond the periphery of the monarchy. By constructing the city theatre in Chernivtsi, which in turn was the bearer of architectural concepts applied in the buildings of the City Theatre in Fürth (1902) and even earlier the City Theatre in Salzburg and the National Theatre in Vienna, they contended that the people of Bukovina are also entitled, in the political and ideological sense, to have their own high-quality public buildings.

Given typological design strategy, the proposed architectural planning scheme, although resembling the theatres planning in Fürth, Salzburg, and Vienna, can not be considered their carbon copy. Thus, the development of the genre palette of creative activities spurred a construction of a city theatre with a stunning auditorium space and a wide range of functional elements for the intelligentsia of Bukovina.

As regards figurative architecture, the city theatre, built by the highly acclaimed European architectural bureau, became not only the dominant landmark at the Theatre Square and gave it its name, but also was one of the key objects that created timeless architectural image of Chernivtsi. It is also one of the vivid historical examples, which laid the foundations of modern Ukrainian theatrical architecture. This experimental model, which helps to trace the processes that are crucial to the Ukrainian theatrical experience - scenographic, technological, staging and creative, also has objective empirical proof.

Assumingly, F. Fellner and G. Helmer were aiming for the stars, because F. Kiesler, the world-renowned star architect, was born here, in Chernivtsi, in 1890. And it was particularly the construction of their theatre that awakened his interest to architecture. The fact that F. Kiesler, the widely considered messiah of the most modern world architecture, was born in Ukraine greatly contributed to Ukraine's architectural heritage. His ideas are as relevant today as ever, their chronology and general description could be the subject of many important scientific studies [5]. F. Kiesler’s architectural work has unique features: he was one of the first, if not the first, to offer ideas for hanging, spatial cities and buildings. Since 1920, when everyone was fascinated by constructivism-functionallism, he promoted the ideas of curvilinear, spiral and spherical shapes; experimented in the areas of mobile, kinetic, transformative architecture; designed interiors, furniture, equipment in the premises, which could change their functions in the short term. F. Kiesler was one of the first to develop the theory of architectural bionics,
environmental architecture; he was the first of the architects who used the latest achievements of physicists in their architectural and artistic research. For instance, the architect applied the core structure to building construction theory, urban studies, paintings and sculptures; supported and developed the ideas of “flexible” architecture. Moreover, F. Kiesler introduced modern effective materials for architectural structures: aluminium, plastic, polymer compounds, and used them for finishing facades. Additionally, he also advocated the elimination of existing differences between urban and rural areas. Since early 20th century, the architect had been cultivating the ideas of infinity and continuity in architecture [6].

The ultimate goal of his entire creative life was the development of theatrical architectural ideas, among which the most famous are: spatial stages-constructions; theatres with “two-box” arrangement, free-flowing theatres; universal theatres; syncretic theatres; irrational scenographic installations.

At the beginning of the 21st century the forerunners of modern architecture are rightly considered to be Eero Saarinen’s masterpiece at New York International Airport featuring its curvilinear shapes of the station; spiral main space and construction of an exposition - a ramp in the S. Guggenheim Museum, built by F.-L. Wright; the city raised on the pillars of Le Corbusier, the multi-layered city of J. Friedman, the spatial city of E. Schulze-Fielitz, the spatial structures for the cities of R. LeRicolais, the “Suspended Cities” of P. Maimon, the cybernetic city of N. Schoffer; mobile architecture of housing, theatres, cities of architects W. Ruhnau, J. Friedman, G. Rothier, I. Schein, Y. Magnant, R. Coulon; “Living” structures of B. Helmke, F. Otto, P. Soleri; spherical and ovoid forms of experimental buildings of P. Hausermann, A. Quarmby, J. Goethe; architectural sculpture of M. Goeritz, J. Cuell and others. Undoubtedly, all these objects and trends were initiated and inspired by sketches, drawings, models, experimental structures and scientific and theoretical researches of Friedrich Kiesler [7].

Thus it is important for Ukraine to popularize the name of a famous compatriot, and to debunk misconceptions that F. Kiesler’s birthplace is Vienna or that he is an American architect born in Vienna. For a long time, this name was not mentioned in the professional literature due to the small number of references. It was not until 1965 that Friedrich Kiesler gained recognition for building a temple in Jerusalem that houses ancient Jewish manuscripts. Perhaps paradoxical is the assumption that multiple examples of the outstanding designer's work mentally and ideologically developed from his childhood in Chernivtsi (Ukraine). If to analyze all the projects, models, sketches, drawings, sculptures of the “endless houses” developed by F. Kiesler, the shapes of which in foreign studies are defined as curvilinear, spherical, or ovoid, we can not but notice that all of them formally have the shape of an egg. Furthermore, some models of the “endless house” (1950–1959) have drawings and reliefs on their egg-shaped surface, which resembles rather the cult of eggs and Easter painting in Bukovina and Chernivtsi than the artwork of world-famous I. Leonidov, P. Maymon, O. Niemeyer. Multiple studies have shown that F. Kiesler's ideas about spiral spaces and forms, egg-shaped “endless houses” and free-flowing theatres originate not only in medieval entertainment spaces, pyramids of the American continent, but also in temples and ancient settlements in Bukovina. In our opinion, the visual image of the temple of ancient Jewish manuscripts in Jerusalem, especially its formal elements, could originate in the engraved architect's memories about the dome-shaped churches in his childhood. Moreover, “analogues” similar in shape to the dome in Jerusalem can be easily found in Chernivtsi.

Between the First and the Second World Wars, many architects, who lived and worked in the cities of Ukraine, which temporarily belonged to different states, preferred the rationalist (reasonable) way of architecture development, i.e. functionalism. They represented various architectural schools in Europe: Adolf Liebscher in Uzhhorod; Tadeusz Obmiński, Adolf Kamienobrodzki, Józef Awin, Witold Minkiewicz in Lviv; Sergei Serafimov, Samuel Kravets, Mark Felger, Nikolai Milutin in Kharkov; Horia Creangă, Constantin Dragu, Constantin Seledzianu, Leon Silion in Chernivtsi [8], [9].
The authorities of Chernivtsi enthusiastically picked up and implemented the ideas of this trend. They invited some leading architects from Bucharest: H. Creangă, A. Weber, A. Fleminger, K. Selendjan, K. Dragu, L. Silion, C. Nanescu to design public buildings, and delegated housing projects to local architects: V. Grecul, H. Brandes, M. Brettschneider, A. Appenzelle, I. Kahlenberg and others. This policy favored the city’s upgrading and architectural transformation [10]. We should also acknowledge the outstanding Romanian modernist architect H. Creangă`s notable contributions in this respect.

Horia Creangă was born in Bucharest in July 20, 1892, and entered the local architectural school in 1916. Before completing his diploma project, he interned at the Prague Academy of Arts. In 1925, the professor Gustav Umbdenstock offered him a job at Nord Railway, where he interned at and upgraded his architectural skills. At the end of 1926 H. Creangă returned to his homeland. In 1929, he together with his brother Ion and his wife drew the project of the insurance company ARO. Its completion in 1931 was a turning point in H. Creangă`s career. In 1935, in liaison with architects Haralamb Georgescu and Nicolae Nedelsculescu he opened an office. Additionally, in 1935 – 1937 in Bucharest an office building of the Malaxa factory was built under the project of Horia Creangă.

At the end of 1936, H. Creangă was appointed a director of the construction department at the Bucharest City Hall, which increased his popularity in the Kingdom of Romania. This certainly expanded his geographic reach. The project of the building of the Society for Romanian Culture and Literature in Chernivtsi was in fact the first approved individual project in this position, which was completed in April 1937.

The architect designed the cultural centre as a complex three-dimensional composition providing its effective functionality, and ensuring efficient land use. This project exceeded investors’ expectations because the usable area turned to be larger than expected. By 1940, only the main space in which the public service office was located had been completed, but the housing construction remained unrealized.

The solution for the facades of the building of the Society for Romanian Culture and Literature was very different from the previous decisions of the architect. He abandoned the characteristic transom windows in favour of lightness and neutrality of the proposed image and its extreme simplicity. The functional organization of the building is so successful that to this day the facility is successfully operating as a Palace of Culture. Interestingly, it was described in 1940 as “… a large national palace, which is the pearl of architecture of the Romanian genius”. The building of the Society for Romanian Culture and Literature is one of the most beautiful in Horia Creangă`s architectural heritage and definitely the most valuable functionalist landmark of Chernivtsi [11].

3. Conclusions
The above facts are extremely significant for the cultural development of Ukraine in general and the city of Chernivtsi in particular. Information about the prominent personalities in Chernivtsi who influenced the development of architectural design around the world deserves to be studied, preserved and popularized. Their names and contributions will live on in the buildings and the projects they worked so hard for and on behalf of. So, in 2015, the anniversary in memory of F. Kiesler, a memorial plaque was installed on the house, where he was born [12].

Architectural ideas of F. Fellner, G. Helmer, F. Kiesler, and H. Creangă are studied at the Lviv Polytechnic National University, they are implemented and developed in bachelor’s, master’s theses and research projects and can lay the foundation for the future of Ukrainian architecture [13].

References
[1] O. Proskuriakov, “Pryntsypy arkhitektury spilky F. Felenera ta H. Helmera ta yikh rozvytok v Ukrayini” (Principles of the architecture of the union of F. Fellner and H. Helmer and their
development in Ukraine): the dissertation of the PhD: 18.00.01. Lviv. 258 p.; 2009 (in Ukrainian).

[2] V. Proskuryakov, O. Proskuriakov, “Fnomen projektowego dziedzictwa kulturowego Ferdinanda Fellnera i Hermana Helmera jako fundament wspólnej europejskiej architektury teraz i w przyszłości”, Architektura zharmonizowana w przestrzeni miasta: Monografia. Kielce: Politechnika Świętokrzyska; pp. 30–38, 2016 (in Polish).

[3] T. Lipsky, M. Aufisher, R. Edelsbaunner, L. Grinschgt, M. Kaltenbeck, A. Suppau, H. Piwonka, “Fellner und Helmer. – Theaterarchitekten Mitteleuropas 1870–1920”, Graz: Stadmuseum. 55 p.; 1999 (in German).

[4] F. Buv'ye, “Mis'kyy teatr u Chernivtsyakh u konteksti arkhitektury Felʹnera ta Helʹmera na koronnych zemlyakh Avstro-Uhorsʹkoyi monarkhiyi” (Chernivtsi City Theatre in the Context of Fellner and Helmer Architecture in the Crown Lands of the Austro-Hungarian Monarchy), Architectural heritage of Chernivtsi of the Austrian era: materials of the international scientific conference, pp. 133–146, 2003 (in Ukrainian).

[5] B. Dieter, “Friederich Kiesler Architect Maler, Bildhaur: 1890 – 1965”. Wien: Locker Verlag. 348 p.; 1988 (in German).

[6] V. Proskuryakov, “Place of F. Kiesler ideas and their influence on the world architecture nowadays and in the future”. Architectural studies, vol. 3, №2, pp. 66–71, 2017 (in English).

[7] M. Ragon, “Les Cités de l’avenir”, Paris : Editions Planète, 250 p.; 1966 (in French).

[8] Y. Bohdanova, and R. Yuriychuk, “Analiza porównawcza dziedzictwa architektury funkcjonalizmu w miastach Ukrainy”, Zabudowa na obszarach urbanizowanych, zagrożonych oraz trudnych: Monografia. Kielce: Politechnika Świętokrzyska, pp. 31–37, 2017 (in Polish).

[9] V. Proskuryakov, Y. Bohdanova, and R. Yuriychuk, “‘International Style’ and its interpretation at the beginning of the XX century”, Housing Environment: Smart Projekt, Building and City, №23, pp. 172–177, 2018. (in English).

[10] O. Carabela, M. Criticos, A. Carpov, and I. Korotun, “Chernivtsi – European architecture, Romanian architecture: (1860 – 1940)”, Bucuresti: Simetria, 200 p.; 2018 (in English and Romanian).

[11] R. Yuriychuk “Ohlyad rezulʹtativ diyalʹnosti tvortsiv funktsionalizmu v m. Chernivtsi” (Review of the activities results of the creators of functionalism in Chernivtsi), Arkhitektturnyy visnyk KNUBA, vol.13, pp. 306–315, 2017 (in Ukrainian).

[12] R. Yuriychuk, “The question of memorialization of worldwide known architect F. Kiesler in the city of Chernivtsi by architectural and memorial events and arrangements”, Architectural studies, vol. 3, №2, pp. 101–104, 2017 (in English).

[13] K. Ianchuk, “Conceptual education projecting as a method of research and development known architecture and art masters”, Housing Environment: composition in urban planning, №14, pp. 136–147, 2015 (in English).