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Expressionism and Serbian Industrial Architecture*

ABSTRACT: As the original movement in European Avant-garde architecture, Expressionism expanded in Serbian inter-war construction industry with reflections even after 1945. Unlike its representation in profane, sacral, and memorial structures, its manifestations in industrial architecture have not been thoroughly considered in their historical sense, even though it provoked innovative compositional solutions. Here we will analyze the expressionistic elements in industrial structures of leading Serbian architects of the post-war period and the period between two wars.

KEY WORDS: expressionism, industrial architecture, artistic freedom, Serbia.

As the original movement in European Avant-garde architecture, Expressionism expanded in Serbian inter-war construction industry with reflections even after 1945. (КАДИЈЕВИЋ 1990; БРКИЋ 1992; МИЛЕТИЋ АБРАМОВИЋ 2007; КАДИЈЕВИЋ 2012) Unlike its representation in profane, sacral, and memorial structures, its manifestations in industrial architecture have not been thoroughly considered in their historical sense, even though it provoked innovative compositional solutions. Here we will analyze the expressionistic elements in industrial structures of leading Serbian architects of the post-war period and the period between two wars.

Dilemmas about what is primary in the industrial structures: architecture – construction or the aesthetic element of the project task, technology or form, usefulness or aesthetics, impersonal functionality or expressive symbolism, visual inconspicuousness or urban intrusiveness – is what marked the work of the generation of that specific discipline’s protagonists. Experience shows that, during the drafting of conceptual design, the authors of the industrial facilities were conspicuously leaning towards one of the abovementioned principals – civil engineers towards function and technology and architects towards imagination and originality. (FRANKASTEL 1964; КАДИЈЕВИЋ 2002) But even if it has been more present, the artistic component has been significantly abated to appease the strictly utilitarian, impersonal layers of constructed entities. That impression was corroborated by the past research of the historical

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industrial facilities design, whose initial aesthetics got substantially diluted in the finishing modifications. That is the reason why only a small number of accomplished capacities received representative architectural finishing treatment since the investors lacked the appreciation for financially demanding aesthetics of these projects.

History of the new Serbian architecture shows that in a qualitative sense the constructional types have been developing unequally in accordance with unequal status in the system of academic studies. (MANEVIĆ 1972: 7–38; KADIJEVIĆ 2011) As opposed to churches and other representative types of public and private buildings, industrial architecture received the least regard. In higher education curriculum and civil engineering legislative system, for too long (1901 to 1945) it has been tied to the so-called commercial structures – it has been treated as a separate entity after the Second World War. Since the beginning of the twentieth century up until 1932 the subject “Agricultural Building Design” and later “Commercial Building Design” was the subject thought by versatile Nikola Nestorović who was superseded by Branislav Kojić. The subject “Commercial and Industrial Buildings” has been added to the curriculum after 1941. (ПОТЕР БЛАГОЈЕВИЋ 1997)

During the entire twentieth century, the suppression of author’s personal component has substantially deterred Serbian designers from specializing in architecture of industrial structures where the knowledge of technological processes has been more important than resolving the artistic issues. Spatial positioning of industrial structures, with a few exceptions, has not been thoroughly considered with regards to esthetic and urban aspect. Although fundamental civilization and economic importance of the comprehensive industrialization has been publicly emphasized, production capacities have not received equal attention in urban spatial hierarchy. There were no awards for contribution, no publicity and no substantial financial benefit in that demanding area. These constructions have not been depicted on postcards, daily or periodic illustrated press and even when that was the case instead of designers’ names only official terms and names of the owners were mentioned. With the exception of National printing office (1933) and National postage stamp factory (1936), there were no larger public tenders for industrial structures. Pushed to distant suburban areas or built on the brinks of city centers, they never caught the eye of most of the architects. The notion that there is no room for style studies, spiritual expression, placement of conventionally recognizable symbols of power or decoration which would occupy the artist with details in these projects was predominant.

The non-artistic character of most of the functional facilities was influenced by the pragmatic customers, giving architectural importance only to the administrative buildings and offices in the city, while factories were mostly built by civil engineers and anonymous foreign architects-specialists. Mills, steel-works, brickyards, cement and glass factories, lumber mills, silk, gravel, salt factories, rolling mills, breweries, printing presses, sugar factories, foundries, bakeries, dairy plants, slaughterhouses, repair shops, warehouses, hangars, harbors, gas stations, refineries, mining shafts, thermo-electric and hydro-electric plants, pumping stations and water towers, special technologies factories, storehouses, factory circle gates and guard facilities were not considered valuable, not even when they were made by respectable architects. Although some of the examples possess plastic, spatial and decorative qualities, shown in the effective grouping of the masses, suitable internal organization or refined stylistic details,

they have not reached the level of typical recognition, such as the other types of public buildings. Unlike most factory facilities, structures of technical culture (main telephone exchange, train stations, underground and above ground parking lots, observatories, laboratories, research institutes, telecommunication centers, etc), were built on more important city locations and gained a more representative architectural treatment, making them more noticeable.

The recorded authorized structures of industrial architecture, mostly located in the capital, (КУЛЕНОВИЋ 2010) in Vojvodina and a few industrial centers in central Serbia, shows the interest their authors had in the three aesthetic constants, methodologically differentiated when it comes to the question of planning production facilities. Most industrial facilities are built on the principles of utilitarian *objectivism*, with modestly decorated interiors and simple paneling in the style of Romanticism, Secession and Academism (application of shallow recesses and simplified dividing cornices, triangular gables, shallow bay windows, double pitch roofs, etc), as well as the functionalistic minimalism (characteristic for elementary cubic constructions, no decorations, light-dark contrasts and significant urban signature), while the smaller, for domestic culture more important part, was done more originally, with the marks of authors *Rationalism* and moderated *Expressionism*. However, unlike in Germany, the radical non-contextual paroxysm (more present in some other types of buildings in Serbia) but the expansive structures were used to primarily enrich the ambience of city outskirts.

Unlike the Functionalists, for whom the purpose of the building and the current entrepreneurial interest represented the primary goal, the rationalists observed utilitarianism in a more elastic way, adapting industrial structures to various and longer-lasting uses, leaving room for the initiatives of the future generations. The Rationalist is always looking for the middle value, instead of blindly succumbing to one particular case, stating a creational self-consciousness with balanced formal-structural solutions, instead of *l'art pour l'art* plastic and visual displays. On the other side, the Functionalist always remains in the narrow frame of the stated mission, the sphere of pure adaptation and objectivism, where the lack of authorial individuality is prominent. On the third side, in the circles of architectonic fantasists, hyper-individualists and expressionists, there were diametrical criteria used, to confirm the primacy of unconfined imagination in the creation of spiritual, naturalistic and emotional component of architectural creation. The various emotions, spiritual unrest and cultural ideologies of the inspired individuals have gained their extreme architectonic expression, representing the moving force in adapting broader ambience to the initial vision (buildings understood as symbolical “crowns, monuments and lighthouses” of cities, regions and countries). One expressionist wing, turned to dynamism architecture lead by Eric Mendelsohn, insisted on abstract geometrical form for expressing strong feelings and involved messages, while the other was inspired by nature and primordial urges. (МАКО 2009: 3–28) Both wings were connected by the theoretically precise determination of material-spiritual and symbolic properties of the applied plastic means.

All three differentiating constants had their creational exponents and characteristic examples in Serbia, which should be more thoroughly researched in the future. Current interpretations show that the highest achievements were made in the architecture of authorial rationalism (Jan Dubovi, Branislav Kojić, Ivan Antić, Milorad Macura, Svetislav Ličina) and expressional dynamism (Josif Najman, Momir Korunović, Danilo Kačanski, Filip Šmit, Alek-

sandar Đokić), with the entrepreneurial spirit of Dragiša Brašovan operated in between the two concepts. The impersonality of Functionalism, characteristic for its stereotypical solutions and the cult of the straight line, was most efficiently opposed by the supporters of Expressionism, since Rationalism remained undeveloped.

Architectural Expressionism was based on the expression of artistic intuition and internal expression. (SHARP 1966; PEHNT 1973; JURAS 1997: 31–45; АЛФИРЕВИЋ 2012) The passionate revolt of its bearers, marked by extreme personal vision, was pointed at the change of set order of urbanism and architecture, unlike Functionalism, which placed the outside influences, social needs and analytical sensibility of the scientific and technical era above the individual vision. The Expressionism leaned towards utopia and a performance of whirlwind emotions, while Functionalism sought unification and serial standardization of purified structures.

Realized and imagined objects were visually represented in two different ways by the Expressionists: with perspective and without perspective, which influenced their shaping in Serbia as well. The space with perspective, often to be found in their works, implied a static experience of a building, derived from a privileged frontal position, adjusted to the orthogonal matrix of thought-out configurations. With the orthogonal concept, the position of the spectator in the axis or in the point of axis opening, provided for an easier orientation in the hierarchically organized space, intensifying the impression of an arranged optical sensation. On the other hand, the revolutionarily imagined space without perspective implied a deviation from the static impression of a building in order for it to be dynamically perceived by a constant change in the spectator's position. In a space-visual organization of such structures the harmony between the parts and the whole was often lost, as evidenced by the most expansive of the known examples. Sometimes both concepts are combined, (BORSI 1984) while taking care that the expressive emphasis does not threaten the compactness of the indented structures.

The interwar Expressionism, without any deeper theoretical preparation, primarily manifested in Serbia through the external compositional emphasis, and rarely through the whole spatial structure and interiors. The ideas of Expressionism came to Serbian architecture indirectly, by way of emulating the examples from international expert magazines, as opposed to analyzing the signpost Central European examples *in situ*. Also, Serbian architects had no personal nor collaborative contact with the expert leaders of the Central European Expressionism, nor was it mentioned in schools or current architecture critiques, boiling down to an idiom to be adjusted to local conditions. However, the value of certain works inspired by Expressionism, as well as the parallel time of appearance alongside the colorful Expressionism of the Serbian art and common aspirations in the avant-garde literature and music, shows that the style of the movement was significantly present on the Serbian interwar cultural scene. The Expressionism was occasionally revived in the production of the authors of the Belgrade school of modern architecture (1952–1980), as well as in the ensuing Neo-modernism and the globalist Monumentalism, deprived of the initial critical potential. (БРКИЋ 1992; МИЛЕТИЋ АБРАМОВИЋ 2007)

Neo-Romanticism and Neo-Gothicism associations found in the shapes of gables, bay windows, openings and towers, close to the romanticism branch of Expressionism, noticeable on the industrial structures throughout Vojvodina, Belgrade and central Serbia. Although this segment shows certain significance, it is more likely that the expressive details were built into

stylistically various structures, rather than buildings that were more expressionistically shaped. It is important that Serbian industrial architecture never combined straight and slanted (or round) roofs, in order to emphasize the height differences and plastic dynamism of the used volumes (as was the case in Germany), since investors never showed any interest in that.

The Expressionism initially appeared on the structures of technical culture, and then on some industrial facilities. The indented massive block of the Ministry of post and telegraph (1926–1930), (Fig. 1) by architect Momir Korunović, represents the most impressive accomplishment of the national-romanticism branch of Serbian Expressionism. The shape and the tripartite facade link it to the conventional academic principles of composition, while by any other attributes it represents an unusual and original structure. Full of internal strength pouring out of the massive bulging volumes, as well as the expressive contrast of the horizontal and vertical emphasis, bright and shadowy surfaces, it will leave no observer indifferent. (КАДИЈЕВИЋ 1996: 56–57; РАНТЕЛИЋ 1997: 32–33; ЖИВАНОВИЋ 2001)

On his next anthological accomplishment, Post Office 2 in Belgrade (1927–1929), Korunović emphasized the contrasts of the indented facade zones more prominently, while the brimming spatial energy of the extended arches increases the expressive effect. (Fig. 2) Details of second phase plastic and lively heraldic decoration have revived the silhouette of a once striking building (damaged in bombardments of 1941–1944, after the war reconstructed in a unidentifiable fashion). (КАДИЈЕВИЋ 1996: 63–65; РАНТЕЛИЋ 1997: 32–33; МИЛАШИНОВИЋ МАРИЋ 2002: 54)

An important establishing example of a moderate modernist Expressionism is the National Bank of Serbia's Institute for Manufacturing Banknotes and Coins (1927–1929), (Fig. 3) the work of Josif Najman, tied in with the lowland landscape of Belgrade's Topčider, the parks of which the author was also in charge of. The Expressionism shapes are



Fig. 1. Ministry of post and telegraph, Belgrade



Fig. 2. Post Office 2, Belgrade



Fig. 3. National Bank of Serbia's Institute for Manufacturing Banknotes and Coins, Belgrade



Fig. 4. Printing department of same building

also those of the wavy, ribbed structure of the lateral facade, windows that are placed at a slanting angle in the opposite corner, as well as a non-conventional solution of the printing department, characterized by a ribbed ceiling divided into sections with plastic. (Fig. 4) Slanting lines of the frame overhangs and window rows of the towers, set in opposite directions (North-South) on the sides of the building emphasize asymmetry and the relationship of light and dark. With his inspired contribution of industrial architecture, planted in a green suburban landscape, where the approach with and without perspective intertwine, Najman has connected imagination and reality with invisible bonds. (KADIJEVIĆ 1990: 96–97; ĐURIĆ ZAMOLO 1992: 230–231; KULENOVIĆ 2010: 97–98).

At the beginning of the 30s, while arranging the foundations of Belgrade public buildings, traditional two-wing solutions were more and more commonly exchanged for a free composed plans. This is the case in the expressionistically composed ground-plan that won the project competition for Post Office 1 (1930) by Hans Poelzig's student Josip Pičman and his associate Andrija Baranji from Berlin. (DRĀBEVIĆ 2009; MIHALJLOV, MIŠIĆ 2009) (Fig. 5) Strong expressive curvature of the side and frontal block, was tamed by the massive paneling by the architect Vasily Androsov, upon bureaucratic decision by the higher instances. (Fig. 6)

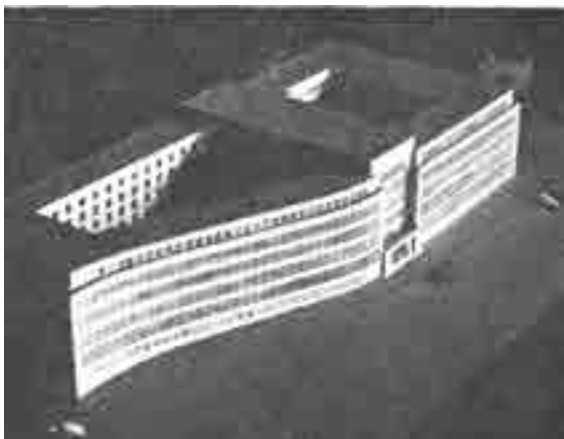


Fig. 5. Post Office 1, Belgrade (project by J. Pičman and A. Baranji)

Thermo-electric power plant “Strength and light” (1930–1932), built on the banks of Danube in Belgrade based on the project of Swiss architects, possesses elements of art deco and modern rationalism, (Fig. 7) as well as the silhouette symbolism of asymmetric blocks with a tower, characteristic of moderate Expressionism. (КНЕЖЕВИЋ 2011) (Fig. 8) Plastic expansiveness of volumes arranged

without perspective can be seen on Najman's factory "Teleoptik" in Zemun (1938–1939), (КУЛЕНОВИЋ 2010: 130) which was reduced to parts of the interior in the National postage stamp factory (1940) by the same architect. (BOGUNOVIĆ 2005: 1004)

Expressionism appeared in some industrial facilities built outside of Belgrade, such as the "Albus" factory (Fig. 9) by Danilo Kaćanski in the outskirts of Novi Sad, and Šmit's Beočin cement factory, (MITROVIĆ 2003; MITROVIĆ 2010) while it can be found in traces at the



Fig. 6. Executed Post Office 1 (by V. Androsov)



Fig. 7. Thermo-electric power plant
"Strength and light", Belgrade



Fig. 8. Front façade of Thermo-electric power plant
"Strength and light"



Fig. 9. "Albus" factory, Novi Sad



Fig. 10. National printing office, Belgrade

frontal openings of the administrative building of the textile factory in Vučje, by Grigorije Samojlov. (КАДИЈЕВИЋ, МАРКОВИЋ 1996: 89–92, 101; ПРОСЕН 2005: 102)

National printing office in Belgrade (1933–1940), (Fig. 10) the work of Dragiša Brašovan, is the pinnacle of Serbian pre-war Modernism, containing the echoes of Expressionism, found in the dynamism of the finished parts of the prominent corners, although it is the author's rationalism that prevails in the lower zones and the interior. (БРКИЋ 1992: 99–100; МИЛАШИ-НОВИЋ МАРИЋ 2002: 106; ВЛАГОЈЕВИЋ 2003: 182–183) The composition of the transformer station "Filmski grad" (1979) (Fig. 11) by Aleksandar Đokić, (БОГУНОВИЋ 2005: 780) exploits the expressive characteristics of the circle, cylinder and arch, melting them into one unrestrained indented whole. Built on a high position in the southwest rim of the capital it became an effective visual clue. (МАНЕВИЋ 1995: 44, 88–91) As a romanticist in nature, fighting against the "straight line" canon all his life, Đokić skillfully combines cylindrical segments and arcs, combining the traditions of Futurism and Expressionism. (БРКИЋ 1992: 320–321; МИЛА-



Fig. 11. Power transformer station "Filmski grad", Belgrade



Fig. 12. Power transformer station "Filmski grad" (opposite facade)

ШИНОВИЋ МАРИЋ 2002: 132) The floating structure with expressively emphasized supporters, the critics have pointed out the “virtuous gothic paraphrase”, close to the romantic branch of Expressionism. (ЈЕВТИЋ 2004: 119) (Fig. 12)

An example of moderate structural Expressionism is the base of the slim three-sided stem of the telecommunication tower on Avala (1960–1966), the work of architects Uglješa Bogunović and Slobodan Janjić. By using the three-sided prism (or a symbolical tripod), the authors have removed the usual cylindrical monomorphism from the long dart-shaped mass of the tower. (БРКИЋ 1992: 198–199; МИЛАШИНОВИЋ МАРИЋ 2002: 134). However, the Expressionism of the structure was significantly alleviated with the constructivist shape of the six-sided gondola near the top.

The overview of the influences of European Expressionism on Serbian industrial architecture shows the variety of methods by which this repertoire was used in a multifunctional way. Towards the innovative stylistics and seductive symbolism of the movement the predisposition lied with both the less and more known Serbian architects, whose works in the domain of industrial architecture has not been studied enough. That is why creating the records of the remaining examples of this stimulus is becoming an important topic for the historiography.

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ЕКСПРЕСИОНИЗАМ И СРПСКА ИНДУСТРИЈСКА АРХИТЕКТУРА

Резиме

Као оригиналан правац у европској авангардној архитектури, експресионизам је захватио и српско градитељство између два светска рата, са одјецима и после 1945. године. За разлику од заступљености на значајним профаним, сакралним и меморијалним објектима, његова испољавања у индустријској архитектури нису подробније историографски разматрана, иако је и у тој области подстакао иновативна композициона решења. Овом приликом анализирају се експресионистички елементи индустријских објеката специјализованих српских пројектаната међуратног и послератног раздобља.

Прегледним разматрањем утицаја експресионизма на српску индустријску архитектуру потврђена је разноврсност метода којима је његов репертоар коришћен. Иновативној стилистици и заводљивој симболици тог правца једнако су нагињали водећи, колико и мање познати српски градитељи, чије стваралаштво у домену индустријске архитектуре није довољно проучено. Отуд се темељито евидентирање преосталих примера намеће као важна тема будућих историографских подухвата.