# Residential architecture of Warsaw in the interwar period on the example of the implementation of the Construction and Housing Cooperatives, the Military Housing Fund and the Warsaw Housing Cooperative, established in the vicinity of Pole Mokotowskie 


#### Abstract

The residential housing built in the interwar period in the area of Pole Mokotowskie is representative of the overall residential construction of that period in Poland. Its shape was influenced by social, political, economic and technological issues, as well as the time of their creation in line with the current stylistic trends. Among the residential properties of Housing Cooperatives (Spółdzielnia Budowlano-Mieszkaniowa) where the apartments were owned by the members of the cooperative, built mainly in the 1920s for the upper class of civil servants or representatives of liberal professions with well-established patterns of living with servants, layouts of pe-ripheral-block buildings with large residential premises prevail. Over the years, there has been a tendency to rationalize and introduce functional zoning, new technological and material solutions, and change the formal architectural language moving from traditional to modern forms. The Military Housing Fund (Fundusz Kwaterunku Wojskowego) approached the task of mass housing construction for officers very rationally - it was supposed to be cheap, durable, easy to maintain and hygienic. Social differences depending on the rank were clearly noticeable in the size, standard of equipment and finishing of residential properties. Mostly, it was high-


class architecture, characterized primarily by rational design, and in external forms, a durable veneer material on the facades, gray cement bricks, which are not only resistant to external conditions, but also allow for interesting artistic effects. The estate of the Warsaw Housin Cooperative Rakowiec (Warszawska Spółdzielnia Mieszkaniowa Rakowiec) (originally intended for worker housing) is an example of the implementation of modernist assumptions of mass housing, promoted by the International Congresses of Modern Architecture (CIAM), whose active members were the authors of the project - Helena and Szymon Syrkus. The resulting colony of houses for workers can be described as a function of social, technical and spatial-artistic factors. At the same time, social issues were on a par with the essential, especially for Szymon Syrkus, technical and technological factors were supposed to fulfill the slogan: to build better, cheaper, faster.

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\begin{array}{ll}
\text { Keywords: } & \text { Housing construction in the } \\
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& \text { Cooperatives } \mid \text { Military Housing } \\
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The housing situation in Warsaw at the beginning of the 20th century was described as tragic, both in terms of the number of flats available and the level of infrastructure itself ${ }^{1}$. More than a third of all flats were single-room flats, therefore, apart from the housing shortage, the main problem was their overcrowding and high rents. The city, squeezed by the "corset" of the fortress belt and neglected by the invader, had no possibility to sprawl. After regaining independence, along with the reconstruction of the functions of the capital city of Warsaw and its development, and thus an increased influx of people, the housing shortage spiked.

The first step in improving the spatial conditions of the capital in the wake of the war, in 1916, was the incorporation of the suburbs. Suburban areas, including Pole Mokotowskie, bordering the city center from the south and belonging to the military authorities, were incorporated into the city limits. It was the only area of this size among the adjoining regions, not parceled out and belonging to one institution, the State Treasury. From the early 1920s, began the development of the northern and southern outskirts of Pole Mokotowskie, which, according to urban studies from 1916 (Preliminary draft of the regulatory plan of the Capital City of Warsaw²), was to be transformed into "a district of science, passive life of small residential houses, and large wooded spaces" ${ }^{3}$.

When solving the problem of improving the housing conditions of the population of

[^0]Warsaw, apart from matters relating to the regulatory plans of the incorporated suburbs, the issues of the availability of capital and land necessary for the construction of new apartments were raised. The city's investment activities were to be supported by the state. This aid was to be of direct and indirect nature, and the planned activities were regulated by the legal acts: on the establishment of the State Housing Fund (1919) ${ }^{4}$, on land aid for housing cooperatives $(1921)^{5}$, and on the expansion of cities ${ }^{6}$. Pursuant to the acts on city expansion of 1922 and 1925, undeveloped and vacant lands belonging to the State Treasury were to be successively transferred or sold to the city for housing purposes ${ }^{7}$. However, it was only the subsequent act of 1927 that gave the city such formal and legal possibilities.

All these issues, including credit facilities ${ }^{8}$, positively influenced social initiatives to develop housing construction. In the interwar period, there were mainly two types of housing cooperatives:

- construction and housing cooperatives (spółdzielnia budowlano-mieszkaniowa SBM) where the land was jointly owned, and the apartments were owned by the members of the cooperative, which took care of and managed the buildings and community areas, and

4 The Act of August 1, 1919, Journal Of Laws No. 72, item 424.
5 The Act of July 21, 1921, Journal Of Laws No. 69, item 448.
6 The Act of September 26, 1922, Journal Of Laws No. 89, item 811, and 29.04.1925, Journal Of Laws No. 51 as amended.
7 This was done by the Local Department of the Development Committee for the Capital City of Warsaw. Warsaw, established in 1920 by the Magistrate. It was responsible for the matters of „taking over state land from the government for the city for the construction of new residential colonies, furnishing parks, boulevards and public utility buildings", in: Zygmunt Słominski, Działalność Komitetu Rozbudowy m.st. Warszawy, „Architektura i Budownictwo", 1926, no. 9, pp. 29-35, esp. p. 33.
8 The necessary condition for obtaining preferential loans from Bank Gospodarstwa Krajowego, the administrator of the resources of the State Housing Fund, was the accumulation of initial capital in the amount of $10 \%$ of the value of the investment.

- housing cooperatives, that built houses owned by the cooperative, with gave the possibility of allowing use of the apartments by members of the cooperative as tenants.

The vast majority of the established cooperatives belonged to the first type. Construction and housing cooperatives were most often of a professional and corporate nature. They brought together affluent civil servants and representatives of free professions, in other words, the pre-war intelligentsia. The only significant housing cooperative of the tenant type was Warsaw Housing Cooperative (Warszawska Spółdzielnia Mieszkaniowa - WSM), with a predetermined labor profile.

In the area of Pole Mokotowskie, several dozen SBMs were built, most often these were peripheral-block houses, located in the northern and southern strip of the incorporated areas of Pole Mokotowskie, and one WSM housing estate, in the place of the former Rakowiec farmstead.

The original military character of Pole Mokotowskie remained preserved in the postRussian barracks taken over by the Polish Army. In the post-barracks areas, not only public utility buildings were built, but also apartment blocks, which were owned by the army and financed from the state budget under the Military Housing Fund (Fundusz Kwaterunku Wojskowego - FKW). The fund was established in 1927 by the Act of 15 July 1925 "On accommodation for the army in times of peace" and became an institution organizing and supervising the construction of military housing. The houses erected as part of the FKW included service apartments for officers and married non-commissioned officers of the Polish Army (Fig. 1).

The land of the northern belt of Pole Mokotowskie in the vicinity of the Filters, incorporated in 1916 into the borders of Warsaw, due to its accessibility to urban infrastructure and proximity to the city center, was the most attractive and was the first to be parceled out and developed. Along the northern section of Topolowa Street (today's Niepodległości Avenue), representative blocks of
both construction and housing cooperatives and the Military Housing Fund were erected ${ }^{9}$.

A suburban character with a loose, mostly single-family housing surrounded in greenery, was the Staszica Colony (erected from 1922) located in this area, which was in line with the idea of a garden city, fashionable at the beginning of the 20th century. The traditionalism of both architectural forms and material and technical solutions was dominant here.

Houses erected on both sides of Topolowa Street were of a different character. New housing construction implemented as part of the emerging cooperatives on plots allocated from the state pool, had an imposed peripheral development system, with the prohibition of building outbuildings inside quarters, which made it possible to develop them as green areas ${ }^{10}$. The buildings along Topolowa were made of long, five-storey high blocks built peripherally, ended with short corner wings, which gave the architecture a more downtown character. Despite the fact that they were built by a number of separate cooperatives, and designed by different architects, their simultaneous creation (between 1925 and 1929) drew from the proximity of aesthetic solutions. The façades of the city block on the west side of Topolowa, between Wawelska and Filtrowa Streets were the most traditional. It consisted of the segments of the cooperative: "U Siebie" (At Home)

[^1](three middle, 1924-1925), "U Siebie II" (southern corner, 1927-1929) and the Cooperative of Officials of the Ministry of Justice (northern corner, 1927-1929). The architect of the entire complex - Jan Choynowski, used simplified forms and motifs from the repertoire of historical architecture: the classic composition of the facade planes featured loggia arcades separated by pilasters in great order, decorative beams of window lintels, triangular pediments of shallow breaks, bringing out the symmetry of the layout, etc. The multitude of architectural forms used gave the whole a picturesque character, which was emphasized by the greenery of the creeping vines on the walls (Fig. 2).

The functional and spatial layout of the block was as conservative as the architectural setting (two-bay with a separate communication half-track) and indirectly testified to the social status of cooperative members. These were mainly judges and prosecutors, as well as senior ministerial officials, therefore the majority of premises in the block were flats with five or more rooms, with a well-established functional pattern, with separate main and kitchen entrances and service rooms. The original layout of the apartments was mostly obliterated by post-war secondary divisions.

A calmer and more disciplined architectural form in the style of modernist historicism of the 1920s was given to the complex of the "Ognisko" (Fireplace) cooperative, built opposite (on the eastern side of Topolowa Street) according to the concept of Roman Feliński ${ }^{11}$. The complex consisted of two symmetrical, multi-family corner houses with three and four storeys, a four-storey, two-segment middle house, and single-family terraced houses situated along Lekarska Street. The whole structure was a block-border development with an internal courtyard, which consisted of

[^2]a shared garden, for the exclusive use of residents, and for the single-family gardens. The greater design discipline of this complex can also be noticed in the way of functional solutions. It is particularly visible in the specific modularity of the residential units, based on a square ${ }^{12}$ (Fig. 3).

Roman Feliński also designed a house adjoining the northern part of the Staszica colony from the side of Topolowa St. It was a block of the Cooperative of Officials of the Ministry of Internal Affairs built in the years 1927-1929 ${ }^{13}$. The five-storey, almost 100 -meter-long building has a symmetrical facade composition. The horizontality of the layout was emphasized by colorful plaster stripes (between the windows and of the windows themselves), reinforced at the cut corners with decorative rustications next to the windows. The low-slope roof, invisible from behind a small cornice, emphasized the modernist character of the building. This block can already be considered an example of Warsaw's temperate modernism of the late 1920s, another step toward full-blown modernism in the architecture of Warsaw in the 1930s (Fig. 4).

The modernism of the early 1930s is represented by the complex of residential buildings erected in the years 1931-1932, belonging to the Lawyers' Housing Cooperative of the Ministry of Justice "Temida", which was built on the eastern side of Lekarska Street. The time separating the construction of the houses of the "Temida" cooperative with the others, erected at Topolowa Street, is only two or three years, but the differences in the forms of buildings are huge. The new design method is visible not only in the cuboidal shaping, enriched only with characteristic balconies with mesh balustrades, with complete rejection of historical details, but also in functionalistically planned interiors. Kitchens, toilets and service rooms present in the architecture of

[^3]the interwar period are usually grouped at the entrance area, most often in the eastern or northern part. The dining and living rooms are located near the kitchen, while the bedrooms with access to the bathroom are located in the back of the apartment (Fig. 5). Functional zoning of rooms also appeared in earlier projects, e.g. in the apartments of the "Ognisko" cooperative, where a mixed construction system was additionally introduced (poles appear instead of a structural wall dividing the system into two routes), which gave greater freedom and flexibility in the functional layout of the apartments.

The same way of designing and thinking about housing construction, with the use of repeatable segments in a mixed structure, was used in the construction of residential houses for officers in the quarter between Topolowa, Koszykowa, Sucha (today Krzywickiego) and 6-go Sierpnia (Nowowiejska) streets. The Polish Army was the owner of the area of the former Jerusalem Barracks (Koszary Jerozolimskie). The post-Russian pavilions standing along Sucha Street became the home of the Military University of War operating there from the beginning of the 1920s. The remaining area was the subject of architectural competitions organized by the Military Housing Fund. As a result, a monumental apartment block was built at the corner of Topolowa and Koszykowa Streets (1931-1933), designed by Romuald Gutt and Józef Jankowski, and a house at the intersection of Nowowiejska and Sucha Streets (1932-1935) by Jan Reda (Fig. 6).

These were one of the largest FKW construction projects. Both housed over 90 two-bay, three- or four-room flats with service rooms, arranged in blocks up to seven storeys high, with similarly resolved shapes, with a stepped composition of corners and ceramic facade cladding. The façades of the house of R. Gutt and J. Jankowski are clad with gray cement brick, varied with brown facing brick in the area of the plinth and the main entrance gate from Koszykowa Street, as well as in the luminaries for the entrances to the
staircases. The block designed by J. Reda was faced with square gray clinker tiles.

Non-commissioned officers' houses received much more modest features. A non-commissioned officer block, designed by the same team of designers Gutt-Jankowski as the monumental officers' house at Koszykowa Street, was erected on the southern edge of Pole Mokotowskie, at the western border of the post-Russian barracks of the Keksholm Lejb Guard regiment. The house consisted of small, two- or three-room apartments heated by coal stoves, with small kitchens and small toilets equipped with a washbasin and a toilet. The lack of a bathroom in the apartment was compensated by shared baths and laundries located in the basement and in the attic. Lower standard means also more apartments available from the staircase landing. In the non-commissioned officers' house, the number ranged from three to four. The exterior design of the building was also more modest - a simple, box-like body with plastered facades only enriched with small balconies for each apartment (Fig. 7).

The architecture of the WSM housing estate in Rakowiec, built in the 1930s (1932-1935 1st stage, 1937-1938 2nd stage) is completely different. The designers of the estate, Helena and Szymon Syrkus, represented the young generation of Polish interwar modernism, created and actively participated in the avant-garde artistic groups Blok and Praesens. Following the example of the European avant-garde, they were supporters of "machine-like" architecture ${ }^{14}$. They aimed at creating a typical, modern and cheap housing construction. They perceived the "machineism" of multi-family apartment blocks not only in the use of modern technologies, structures and materials, but also in the functional aspects of spatial solutions. The rationality of the development of internal communication consisted in the introduction of an innovative corridor system

[^4](two-and-a-half-bay), in which one staircase served 16 apartments on each floor, accessible from a common corridor, which was offset every 20 meters for better lighting and ventilation of the apartments. In addition, the architects wanted to create typical flats, reducing individual space to the minimum, which was to be compensated for by community spaces for collective use - laundries, common rooms, lawns or sports facilities ${ }^{15}$.

The housing colony in Rakowiec was established on undeveloped, post-farmland, intended for workers employed in nearby factories, mainly located in Okęcie and Ochota. Ambitious plans of architects had to change when faced with the financial realities of the future tenants of the estate and the credit requirements of Towarzystwo Osiedli Robotniczych which was financing the project ${ }^{16}$. The constructor, Eng. Stanisław Hempel, working on the project replaced the modern steel load-bearing structure with thin reinforced concrete ceilings with a traditional brick wall, on which he laid "stretchedout" to the maximum (which was the span of 6 meters) wooden girders. And the prefabricated curtain walls of cellular concrete (celolite) gave way to plastered brick masonry. The commonly accessible loggias designed for the residents of the blocks for sunbathing (from the south) and airing the bedding (from the north) were also abandoned. The equipment of the apartments has also

[^5]been reduced to adjust the rent to the workers' pocket. At the request of future residents, the central heating and gas cookers were abandoned and the sanitary facilities were redesigned, replacing the bathroom with a bathtub / shower with only a small toilet. (although the tenants considered it an unnecessary luxury, suggesting installing one shared toilet on each floor).

Despite these simplifications, the colony of WSM Rakowiec was a fully avant-garde undertaking. The project referred to the issues discussed in 1929 in Frankfurt at the CIAM congress, concerning the issue of housing at the subsistence level, and a year later it was presented by the Syrkus in Brussels, at the next CIAM congress devoted to rational methods of housing construction. It was the first Warsaw housing estate with a layout rejecting the block-border buildings in favor of blocks situated along the north-south axis, transverse to the street (Pruszkowska Street). This solution was an implementation of the demands of the European avant-garde for good sunlight and ventilation of small apartments. Breaking the blocks in half of their length and shifting the axes by one residential tract with the location of entrances and staircases in this place, reduced communication costs and made the sun peek into internal corridors, creating more favorable conditions for common, semiprivate spaces, connected by staircases stairs with well-lit, deep landings (Fig. 8).

The flats themselves, despite resigning from modern construction techniques, have received some innovative solutions. First of all, the transverse arrangement of the load-bearing walls allowed for the introduction of wide window strips between them and the creation of an open plan inside, using only light partition walls. Each block was three-storey, and on each level there were 16 apartments ranging in size from 32 to $35 \mathrm{~m}^{2}$. Residential premises were treated as machines for living in, and kitchens as machines for working in. The small areas are very functional, trying to make the most ergonomic use of one and a half rooms (Figs. 9a, b).

The slenderness of the flats and the reductions in their equipment were compensated by ample common space - spacious green court yards, allotment gardens, and above all, the Social Home built in the second stage, closing the colony of apartment blocks from the north. It was feature packed with a common room with a library on the first floor, a nursery with a kindergarten on the ground floor, a dentist's and doctor's offices and baths with showers, and a mechanized laundry in the basement, where an additional emergency shelter had been arranged (Fig. 10).

## Summary

The above-mentioned examples of buildings developed in the area of Pole Mokotowskie are representative of the interwar housing in general, and on many levels: the social, political, economic, technological context or even the time of their creation. All these aspects influenced the final shape of the architecture. In SBM houses, built mainly in the 1920s for the wealthy class of state officials or representatives of free professions with well-established patterns of living with servants, the majority of buildings are peripheral-block buildings with large residential premises accessible from the staircase landings. Over the years, there has been a tendency to rationalize and improve the functional spatial systems, introduce new technological and material solutions and change the formal architectural language, which is moving from traditional toward modern forms.

In its assumptions, residential construction implemented under FKW was to be cheap, durable, easy to maintain and hygienic. The fund did not have the ambition to create innovative, avant-garde solutions - the main factor being financial. FKW approached the task of mass housing construction for officers very rationally. In 1928, competitions were announced for individual types of flats: for non-commissioned officers, one- and two-room flats with a kitchen and a toilet (shared bathrooms and laundries in the basement or in the attic), for officers: three- and four-room with a kitchen,
a servant room and a bathroom. Social differences depending on the rank were clearly noticeable in the residential houses built for FKW later. After resolving the issue of the most economical functional and spatial types, these assumptions began to be implemented in cooperation with architects of an established reputation, coming mainly from the Faculty of Architecture of the Warsaw University of Technology (Romuald Gutt, Czesław Przybylski, Romuald Świerczyński, Kazimierz Tołłoczko, Edgar Norwerth, Józefdan Lachert, Szanajca, Juliusz Żórawski and many others). In the case of the discussed examples, this cooperation resulted in original, high-class implementations, in line with the functionalist trend of the "Warsaw school of architecture", which was characterized primarily by rationalism in design, and in external forms, durable veneer material on the facades - gray cement brick, not only resistant to external conditions, but also allowing for interesting artistic effects ${ }^{17}$.

The WSM estate in Rakowiec is an example of the implementation of modernist assumptions of mass housing, promoted by the International Congresses of Modern Architecture (CIAM), whose active members were Helena and Szymon Syrkus. The resulting colony of houses for workers can be described as a function of social, technical and spatial-artistic factors. At the same time, social issues were on a par with the essential, especially for Szymon Syrkus, technical and technological factors, which were to lead to the goal of the slogan: to build better, cheaper, faster. These pioneering experiences in designing housing estates were the starting point for post-war projects which, in the case of Rakowiec development, are glorious examples of mature modernism; in the 1960s at Księcia Trojdena Street, a housing estate called "Rakowiec" was built for about 3,000 inhabitants, designed by Zasław Malicki, Oskar and Zofia Hansen, and Marian Szymanowski.

[^6]
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[^0]:    1 T. Teoplitz, Klęska mieszkaniowa i próba jej usunięcia, Warszawa 1920.
    2 Szkic wstępny planu regulacyjnego, The Architects' Club under the direction of Tadeusz Tołwiński from 1916 contained 4 basic charts in the scale of $1: 10,000$, including: General outline, Outline of communication lines, Historical development study and Existing and planned gardens and parks, see T. Kotaszewicz, Koncepcje przestrzennego rozwoju Warszawy w pracach Tadeusza Tołwińskiego 1916-1946, Warszawa 1994.
    3 Quote from T. Zarębska, Podbudowy metodyczne planów Warszawy z lat 1915-1925, „Prace Naukowe Wydziału Architektury Politechniki Warszawskiej", vol. III, Warszawa 2003, pp. 115-156, esp. p. 133.

[^1]:    9 These were: „Kolonia Staszica" occupying a quarter between the following streets: Sędziowska (delineated at the back of Topolowa), Wawelska, Sucha and Nowowiejska, and cooperatives at Topolowa: „Ognisko" on its eastern side, and "Temida" in the back of the newly marked out Lekarska Street, and on the west side „U Siebie", „U Siebie II", the Cooperative of Officials of the Ministry of Justice and the Cooperative of Officials of the Ministry of Internal Affairs, and the officers' house on the corner of Koszykowa Street and Topolowa Street, see P. Wąsowski, Architektura wielorodzinnych domów spółdzielni budowlano-mieszkaniowych w Warszawie w okresie międzywojennym (1918-1939), „Kwartalnik Architektury i Urbanistyki", 2008, no. 1, pp. 28-44, esp. p. 37; J. Zieliński, Atlas dawnej architektury ulic i placów Warszawy, vol. 12, Warszawa 2010, pp. 207-222.
    10 This type of development created better hygienic conditions - insolation and ventilation of the apartments, and the interiors of the quarters could be transformed into lawns, see P. Wąsowski, Architektura wielorodzinnych domów..., op. cit.

[^2]:    11 The original concept of R. Feliński was simplified and slightly modernized by the associates of the architect: Józef Krupa, Stanisław Kraskowski and Stefan Siennicki, see D. Kło-sek-Kozłowska, Elementy tzw. stylu racjonalnego domów spóldzielni „Ognisko" w Warszawie na tle planowania urbanistycznego międzywojennej Warszawy, „Kwartalnik Architektury i Urbanistyki", 2002, no. 3, pp. 251-264, esp. pp. 256-258.

[^3]:    12 Ibidem .
    13 J. Lewicki, Roman Feliński architekt i urbanista. Pionier nowoczesnej architektury, Warszawa 2007, pp. 80-81.

[^4]:    ${ }^{14}$ Le Corbusier preached amidst his modernist ideas that a house was "a machine for living in."

[^5]:    15 Praesens Complex, Osiedle Warszawskiej Spółdzielni Mieszkaniowej na Rakowcu, „Dom, Osiedle, Mieszkanie", 1931, No. 5, pp. 2-12.
    16 Towarzystwo Osiedli Robotniczych was a limited liability company established by a resolution of the Economic Committee of the Council of Ministers in the spring of 1934. Here are the basic guidelines for its activities: TOR only builds small, cheap flats. The usable floor area of the apartments does not exceed: $36 \mathrm{~m}^{2}$ in block houses, $42 \mathrm{~m}^{2}$ in single-family houses. TOR does not finance the construction of housing for individuals, it does so for the construction of entire housing estates or their parts. Loans of the Towarzystwo Osiedli Robotniczych are cheap (2\%). These loans can only be obtained by people earning no more than PLN 250 per month. According to „Dom, Osiedle, Mieszkanie", 1934, No. 1, p. 22; J. Strzelecki, Organizacja i działalność Towarzystwa Osiedli Robotniczych, „Dom Osiedle Mieszkanie", 1935, no. 2, pp. 2-16.

[^6]:    17 A. Dybczyńska, Architektura Warszawy II Rzeczpospolitej, Warszawa 2010, p. 104; K. Kucza-Kuczyński, Twórcy i dzieła Warszawskiej Szkoły Architektury 1915-2015, Warszawa 2017, p. 56.

