

# Standardization and Innovation in Military Housing, Leisure Homes and Public Buildings in the Interwar Period Poland

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## ABSTRACT

The end of WWI marked the restoration of Poland as an independent state. The military contributed the most in regaining the independence; hence they held special privilege with the state officials. Still, in the new republic, they were met with difficult housing conditions, as the garrisons had to be established anew and the war-ridden cities had to be rebuilt. The government addressed this problem by establishing the Military Accommodations Fund. It cooperated with the Ministry of Military Affairs to supply accommodations (housing, barracks). The Fund commissioned specific designers and held open as well as limited competitions to establish typical designs that could be swiftly and economically repeated all over the country. All the while, the most prominent Polish modernist architects provided the Fund with unique projects for leisure and healthcare facilities (hospitals, sanatoriums, holiday homes, sport clubs) adding up to an image of army as an engine of modernization.

**Keywords:** Barracks, Leisure architecture, Modernism, Military cooperative

## INTRODUCTION

When after WWI Poland regained its independence, in the need to repair war damage the young state saw an opportunity to modernize and visually unify the country after a century of tripartite partitions. The best tool for the simultaneous stylistic unification and modernization of these lands was architecture. Historically, Polish lands were subjected to the processes of Germanization and Russification under the partitions. In order to consolidate them, it was necessary to use a style referring to the domestic, provincial architecture from the pre-partition period, as opposed to a more cosmopolitan style of great courts of the occupying forces. National traditionalism, commonly referred to as the “manor style”, became the official stylistics for government investments in the first years of the interwar period. Yet, it was not fit to become a carrier of modernization and was abandoned at the beginning of the 1920s.

While summing up the 15 years of Polish military construction in an independent state, Aleksander Król wrote that after unsuccessful trial and error

period with historical styles, the modernist style was introduced to assure functional yet inexpensive construction (Król, 1933). Still, essentially up until 1927, military construction relied heavily on historicism. It was then that a standard for replicable living solutions satisfying all functional and sanitary requirements was established for married officers and non-commissioned officers (NCO's). After years at the drawing board and careful financial estimations, a barracks type for modern hygienic and technological requirements was set in 1932. Since then the modernism spread like wildfire in Polish architecture. Its popularity sprung from the transition in Polish mentality: from reactionary (reassuring the repolonization of the country) to progressive (propelling Poland towards achieving European level in economy, science and the standard of living). Modernism, as a fresh phenomenon, a symbol of the new times, was perfectly suited for this purpose.

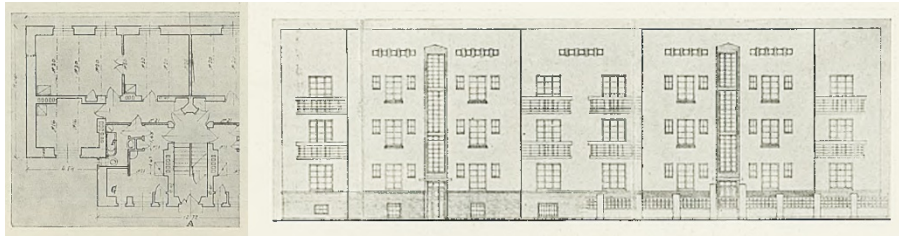
Even though modernism was an international style, prominent use of the style in Poland was less due to its cosmopolitanism, as it was to its functionality. It was also something of a modern patriotism: building a new, contemporary Poland, unlike the retrogressive country that lost freedom in 1795. Hence, for example, the great popularity of the so-called ship style, associated with the construction of Gdynia, the cult of the sea and maritime Poland at that time.

Few factors need to be taken into account while talking about the interwar *architectura militaris*. First of all the garrisons were established from scratch, as the Polish army needed to be formed anew after 123 years of non-existence. This meant that both the foot soldiers and the higher-ranking cadre needed new lodgings and training facilities. Second of all both the military personnel and ordinary citizens of child-bearing age were in dire need of health mending after years of wartime negligence: poor hygiene, malnutrition and no access to physicians. The politics of military preparedness called for all the citizens to be fit for duty and so the Ministry of Military Affairs (MMA) established a public physical education system combined with defense training. It was the basis for the construction of institutes for physical education, headed by a Central Institute built by E. Norwerth in Warsaw. For the military this policy resulted in the construction of an extensive network of holiday homes, sports facilities - mainly sailing and skiing centers - as well as sanatoriums and hospitals. The young state built also its ministry buildings and engaged in modernizing of transporting infrastructure – building a port town and airports etc.

## **THE MILITARY ACCOMMODATIONS FUND**

In the Ministry, construction matters were handled by the Department of Construction. The Department commissioned selected architects to prepare designs for specific objects. At first the designs were traditional, adhering to a historicizing stylistics, such as the military housing estate and the officers' casino in Warsaw-Rembertów, built in 1922–1924 according to the design of the architects K. Mieszkis and R. Miller.

In 1925 the government established the Military Accommodations Fund. The aim was to create a uniform type of a house with standardized



**Figure 1:** The typical apartment building for officers' and NCO's designed by W. Padlewski in 1928 (Adapted from 'Architektura i Budownictwo', vol. 5, no. 2-3 (1929)).

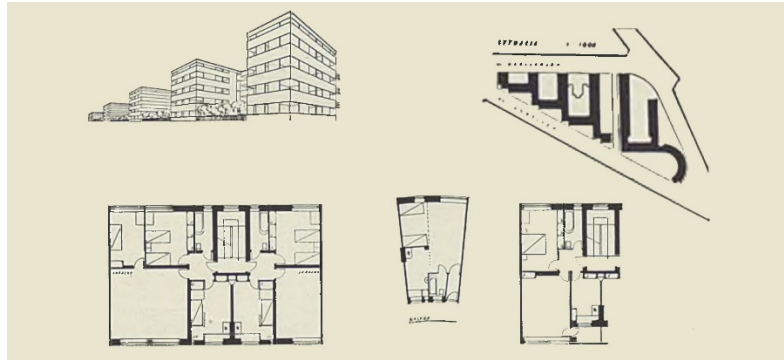
apartments and a repeatable design for hygienic barracks. Typical layouts adhering to special standards were worked out for swift and healthy construction of military housing and repeated throughout the country.

### **The Housing for the Officers and Non-Commissioned Officers**

In order to determine the best type of a residential house, the Fund announced several open competitions for the layout of officers' and NCO's apartments. These competitions had a particularly good urbanizing effect on the province, allowing for swift multiplication of a verified design in several underdeveloped garrisons. W. Padlewski (Woźnicki, 1929) won first such competition in 1928. The design he submitted was traditionalist with expressionist details. (Figure 1) Each section consisted of two 3-room cross ventilated apartments. This solution was implemented in two locations: Stanisławów and Przemyśl.

Another way to ensure high-quality projects for specific prestigious locations was to organize limited competitions to which selected architects were invited. In 1928 the Fund carried out a competition for a design of a residential block for officers in Lwów. This early competition produces a result of a simplified, however still traditional design. The winning entry by M. Nikodemowicz and W. Sawczyk was a 5-story, 3-winged building with an arched passageway to the court, decorative cartouches and a high pitched-roof (Kwiatkowska-Frejlich, 2020). The jury criticized insufficient insolation and lack of modular standardization of building elements, such as floor beams etc.

The terms of the competitions for typical officers apartment buildings demanded that the building comprised of at least 3-stories, flats had toilets, and also urged a far-reaching standardization for economic purposes, for example, "that the building elements, windows, doors, length of beams etc. were standardized". This was no doubt the result of an ongoing modernization in the worldview amongst architects. The 1st International Exhibition of Modern Architecture, organized in February 1926 in Warsaw, contributed to the creation of the Polish theory of social housing and the search for ways of its practical implementation. Creative groups "Blok" and "Praesens" promoted functionalism and constructivism (Olenderek, 2012). Military construction departed from the "manor style" around 1933 when the MMA hired over 50 young architects. The typification ensued resulting in ergonomic and economic designs.



**Figure 2:** Competition entry by B. Lachert, J. Szanajca and W. Winkler for the complex of officers' and NCO's houses in Krakow; I prize (Adapted from 'Architektura i Budownictwo', vol. 5, no. 2-3 (1929)).

In the early competitions, the jury was still fairly conservative. One interesting transitional case is an open competition for the complex of officers' and NCO's houses in Krakow. B. Lachert, J. Szanajca and W. Winkler received the first prize for an extremely bold design. (Figure 2) However, it was the more traditional project by B. Handelsman-Targowski that was selected for implementation. From the analysis of the projects emerges a certain pattern of moderate functionalism and conservative expressionist style, preferred in military construction in those first years. The jury (consisting of R. Świerczyński, Cz. Przybylski and K. Tołłoczko) was fully competent to recognize the potential in the bold modernist designs. However, having studied the tenants' preferences via surveys (*Domy mieszkalne*, 1930), they realized that their task was, to ensure hygienic living conditions and not to educate the tastes of their residents, who were opposed to radical functionalism. Still, a creeping revolution was taking place and in 1929 first truly functionalist designs appeared in the form of R. Gutt and J. Jankowski's design for officers tenement building in Wiśniowa in Warszawa. The functionalism begun appearing in the province too, e.g. Tołłoczko's designs for Bielsko, Brześć and Bydgoszcz. All those designs attempted to produce an ergonomic, healthy and cost-effective layout that could, with minimum effort, be adapted to local conditions (Rudnicka-Bogusz, 2021).

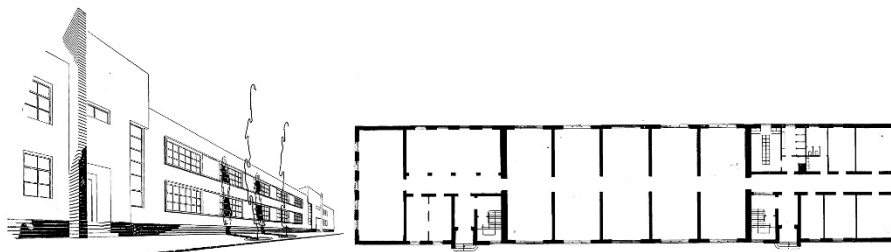
In the years 1927–1937, the Fund built 897 houses (*Domy mieszkalne*, 1938). The guiding principle of the organization: to provide sunlight, water supply, sewage systems and bathrooms in all apartments and its strict economic requirements naturally put military construction on the path of modernism. Due to the rank of the institution and the propagandist significance of its investments, the MMA often had prestigious locations at its disposal. Sometimes the plots were granted to the Fund free of charge by the municipalities, who saw it as a matter of privilege to have military housing in their custody (*Domy mieszkalne*, 1930). Most of these plots were located near the barracks, i.e. outside the city center. Therefore, the houses did not have to be adjusted to the existing alignment of buildings or along the perimeter of the quarters. As a result, the houses were situated in accordance

with the principle of the best insolation established by modernism: on the north-south axis. To ensure, that the competitions and commissions will produce economically viable and ergonomic design the Fund established a set of guidelines. They were, for the most part, based on standards specifically described in the ministerial regulation published in 1927 (Dz.U. 1927 nr 81 poz. 705). The architects were to design only block housing, with buildings having the maximum possible height allowed in regulation plans. However, buildings of five or more storeys were equipped with lifts for convenience. For economic reasons and great demand for lodgings, the smallest types of permitted flats (according to the above-mentioned regulations) were favored during design process. For better use of space, designers soon introduced a modernist solution: a laboratory kitchen. Shared washrooms for NCO's were located in the basement or in the attic. Already in 1930 these standard were questioned by the Fund as insufficient. Practice has shown that 3 and 4-room apartments, ranging between 50-90 m<sup>2</sup>, offered adequate living space for officers with families. On the other hand, especially small apartments for NCO's, with a floor area of 30 m<sup>2</sup> were not hygienic. The primary issue was cross-ventilation and insolation of apartments. The majority of officers' flats were double-aspect, with occasional semi-double aspect sections (three apartments around a single landing). Moderate floor area allocated for the NCO's allowed only for single-aspect apartments, rarely cross-ventilated. Yet, they were cheap in construction and many such units could be designed within a segment. Many designers strived to create inner courtyards while still maintaining the priority of east-west exposure.

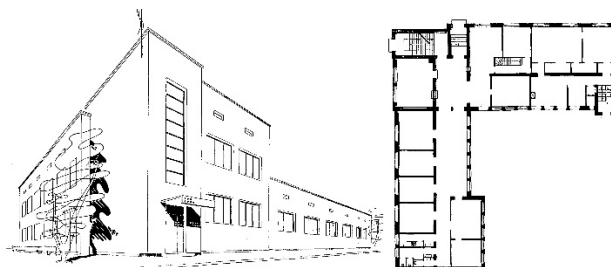
## **Barracks**

In these circumstances, establishing a Polish canon of modern standardized and hygienic barracks became a matter of honor for the Ministry. In 1928, the Design Bureau developed an experimental, hall-less design based on single- or double-squad resident-halls with staircases dedicated for each hall. It offered the greatest degree of hygiene, preventing disease and parasites from spreading to other squads and formed the greatest camaraderie between troops in one unit. The halls, 7 m deep, were bilaterally daylight and cross-ventilated. On every story, each wing housed only one hall. Hence, this system was suitable for garrisons with fewer soldiers. It also required large plots for construction, therefore it was swiftly abandoned.

The next typical design introduced by the MMA was based on the single-bay enfilade halls. This pattern was seen as combining the beneficent insolation and cross-ventilation of the hall-less design with flexibility and cost-effectiveness of traditional two-bay plans. On each side of a walkway was a section with beds, amounting to a bay width of ca.15 m. The sections on opposite sides of the corridor were open to the walkway, creating a hall containing 40 beds for servicemen. Individual halls located at the same enfilade were separated from each other with walls. Such sections could be multiplied until the necessary barracks capacity was obtained. In addition, the buildings housed: a common room, washrooms, apartments for NCO's,



**Figure 3:** Standard type of barracks with halls in enfilade, design by W. Wyszyński (Adapted from *Domy mieszkalne Funduszu Kwaterunku Wojskowego*, 1937).



**Figure 4:** Repeatable design for an infirmary by E. Michalski (Adapted from *Domy mieszkalne Funduszu Kwaterunku Wojskowego*, 1937).

offices, lecture halls and a mess hall. This type of barracks became prevalent in the interwar period, with examples such as barracks in Krakow by W. Wyszyński (Figure 3).

### Health, Leisure and Public Buildings

The standardization was also beneficial for the construction of military hospitals and infirmaries and modernist functionalism befitted their purpose. Once the functional layout of the infirmary was designed, capacity could be increased by simply adding floors in individual wings until it was a hospital building. Thus, the project of an infirmary in Pionki (Figure 4), prepared in 1937 by E. Michalski, in mirror image, was used in the same year as an infirmary in Skarżysko.

Apart from the lack of housing, the military and their families suffered primarily from health problems: pulmonary diseases and rickets. In order to remedy these problems, the Fund also dealt with the construction of healthcare facilities (Król, 1936). The military had access to holiday facilities such as the Officers' Holiday Home in Truskawiec and sanatoriums such as Military Sanatorium in Otwock (Figure 5), both designed for the MMA by E. Norwerth. After sailing and kayaking had become popular among officers, dedicated facilities appeared, such as the Yacht Club in Zegrze by Cz. Stankiewicz or Republic Officers' Yacht Club in Warsaw by J. Nagórski. They were radically different from apartment buildings that were meant to be typical designs that could be duplicated or easily adapted to local conditions. The relaxed atmosphere of healthcare facilities facilitated a creative freedom during the design



**Figure 5:** Military sanatorium in Otwock, design by E. Norwerth (Adapted from Król A., *Budownictwo wojskowe w latach 1918–1935*, 1936).

process. The resulting architecture is highly diverse and full of individual solutions: equipped with imposing glazing, rooftop and ground-floor terraces shielded from sun exposure and driving rain by overhangs for year-long use. It has an almost sculpture-like look composed of clashing functionalist cubic masses.

Modernism was also perfect for the design of the remaining garrison buildings, as they also needed to be functional, affordable to build and easy in maintenance. The influential period journal “Architecture and Construction” also mentions such investments as airports, ministry offices, commanders’ villas, etc. all adding up to an image of army as a forward thinking engine of modernization.

## CONCLUSION

The newly built military facilities of reborn Poland were trying to stand apart from all the historically set standards which evoked the partitions. They were the means of modernization of a nation made backward by occupation. Modernism - deprived of any historic connotations and internationally popular - became the ultimate tool for unification. Guided by the principle of economics in construction and ergonomics in residential space, the Military Accommodations Fund built mainly apartment buildings and barracks, contributing to the formation of new modernist standards. Typical layouts were repeated throughout the country, transferring the best cosmopolitan patterns to smaller garrisons, which contributed to their modernization. Still, military investments were much more, than repeatable solutions. Military holiday houses and sport facilities designed by some of the finest Polish modernist architects of the interwar period were among the most iconic construction of their time. The research was financed by the National Science Center: 2018/31/D/HS2/03383.

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