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CONTEMPORARY DWELLING. BETWEEN TRADITION AND AVANT-GARDE

WSPÓŁCZESNE MIESZKANIE. POMIĘDZY TRADYCJĄ I AWANGARDĄ

Abstract

The evolution of housing concerns not only the improvement of usable solutions but also the compliance of changing social needs. The precursory ideas of the modernism era led to the creation of new values, such as functionalism or innovative typology of layouts. The modern apartment uses a catalog of tools and concepts developed at the beginning of the 20th century by introducing new elements into the system. The aim of the research is to define the relevant trends affecting the building structure. Basing on the analysis of selected modernist and contemporary examples, we are looking for elements reflecting social phenomena in housing. Innovative models adapt to changes in the lifestyle, needs and expectations of the user by offering modifications of traditional solutions and introducing new elements.

Keywords: dwelling, innovation, housing, functionalism, cohousing

Streszczenie

Ewolucja zabudowy mieszkaniowej dotyczy nie tylko doskonalenia rozwiązań użytkowych ale także realizacji zmieniających się potrzeb społecznych. Prekursorskie idee ery modernizmu prowadziły do stworzenia nowych wartości, jak funkcjonalizm czy innowacyjna typologia układów. Współczesne mieszkanie wykorzystuje katalog narzędzi i pojęć wypracowanych na początku XX w. wprowadzając do systemu nowe elementy. Celem badań jest określenie istotnych tendencji mających wpływ na zabudowę. Na podstawie analiz wybranych realizacji modernistycznych i współczesnych poszukujemy elementów odzwierciedlających zjawiska społeczne w strukturze mieszkania. Nowatorskie modele dostosowują się do zmian trybu życia, potrzeb i oczekiwań użytkownika oferując modyfikacje tradycyjnych rozwiązań i wprowadzając nowe elementy.

Słowa kluczowe: mieszkanie, innowacja, zabudowa mieszkaniowa, funkcjonalizm, cohousing

1. INTRODUCTION

Until the 19th century, the evolution of housing concerned mainly the practical improvement of utility solutions. Modernism promoted interest in innovations, understood as the ability to discover and test non-standard solutions that bring changę in quality. Precursive ideas and unconventional methods led to the creation of new values, such as functionalism or innovative typology of residential layouts. The modern apartment uses a catalog of tools and concepts outspreaded at the beginning of the 20th century. The development of technology and

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science supports the introduction of new elements into the system, but the basic assumptions are mostly traditional.

In the nineteenth century, the traditional, three-generation family structure disappeared, many of the functions formerly performed by the community of relatives were moved outside, which had an impact on the organization of everyday life and changing requirements regarding a place to live. In 1929 Sigfried Giedion in the Befreites Wohnen Licht, Luft, Öffnung, (Liberated Apartment, Light, Air, Opening)[2] verbalized the program of modern housing, writing about the need to liberate from a house with eternal value and expensive rent, which exploits women as cheap labour. He believed that existing standards should be replaced by a cheap, open house, that makes life easier. He also formulated an innovative definition of beauty, based on the assumption of adaptation to a new lifestyle, requiring lightness, air, movement, openness, adaptation to the environment and the combination of well-designed functions.

In the development of the contemporary concept of residence, there are innovations that became an impulse for the next generations solutions improving the quality of life

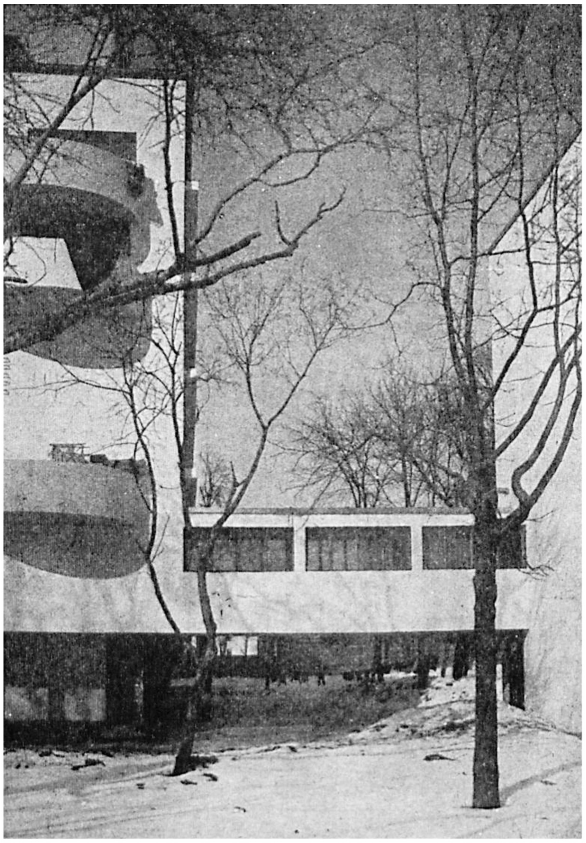
2. CONSTRUCTIVIST REFORM OF EVERYDAY LIFE

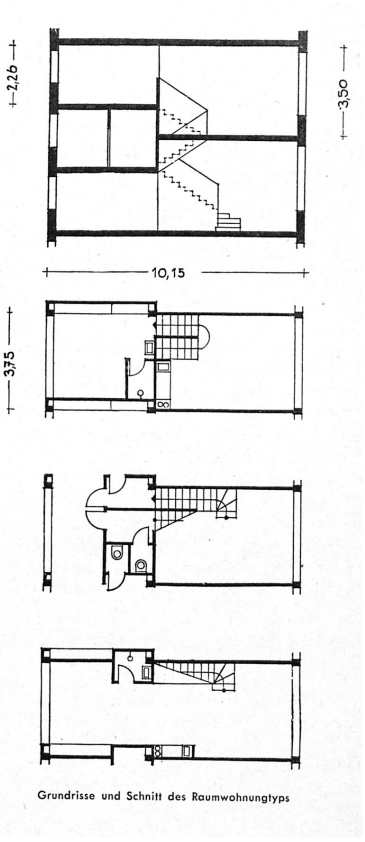
The multi-family building Narkomfin in Moscow was designed by Moiseia Ginzburg and Ignatius Milinis in 1928 for the employees of the People's Commissariat of Finance (Narodny Kommissariat Finansov) and was one of the few completed objects responding to the constructivist mission to renew everyday life. For Ginzburg, the building was an experimental space for testing theories regarding the relationships of architectural form and social life invented by constructivist groups in the 1920s.

The concept of social condenser was developed by the theoretical and practical actions of Russian constructivists. They assumed that by designing the right type of space, a new kind of society was promoted. Since an unfavorable environment can hinder social change and spatial organization is a negative catalyst, it is necessary to reverse the situation and create conditions for positive changes using architectural solutions[3]. In this way, avant-garde artists sought to transform the lives of the working population. This constructivist design methodology was implemented in the A-F type projects for the Building Committee of the Economic Council RSFSR (Stroikom), and then implemented in six programs, including the municipal Narkomfin house. In 1928, Stroikom commissioned Ginzburg and his colleagues to investigate the rationalization and standardization of residential units, recognizing that the economization of housing was a key step towards new, higher forms of existence. The most innovative solutions were a reaction to overpopulation typical of multi-family housing and led to a reduction of private space and the expansion of collective areas. In the F-unit, private kitchens have been reduced to kitchen cubbies and the sleeping place was minimized. The living space from floor to ceiling was about 3.6 m, while the height of sleeping and cooking places was reduced to 2.3 m. The organization of vertical space made it possible to design a wide corridor supporting three levels of residential units. When the units were combined into a building, the common

[2] Giedion S., *Befreites Wohnen Licht, Luft,* Öffnung, Füssli, Leipzig 1929, p. 5.

[3] Cooke C., *Russian avant-garde theories of art, architecture and the city*, Academy Editions, London 1995, p. 106.





Grundrisse und Schnitt des Raumwohnungtyps

Ill. 1. Narkomfin building, designed by Moisei Ginzburg i Ignaty Milinis, Moscow1928, illustrations from Die Form, University Library of Heidelberg digital resources

kitchen, laundry rooms, nurseries and clubs served to compensate the reduction of private space and stimulated a new, collective lifestyle. The Chairman of the Stroikom ratified Ginzburg's proposals and recommended to use them in prototype realizations.

The typological experiments introduced in Narkomfin implemented new socialist ideals, in line with the principle of collectivization of all elements related to the common program. Everyday activities such as cooking, raising children, playing sports, reading have been removed from the apartment and transferred to the glass half-public space in the neighboring building, which housed pre-school rooms, kitchens, libraries and gymnasiums. A shared recreation area was also planned to be extended to the roof terrace.

Private spaces, such as bedrooms, bathrooms and toilets, as well as study areas were located in an elongated block with characteristic banded windows, which symbolically opened outside, to the natural greenery, questioning the closed and internal character of the apartment.

The building was designed in reinforced concrete construction, with pillars spaced 3.75 m in the residential part and 3.50 in the services. The longitudinal body was 82.5 m long at a depth of 10 m, of which the apartments occupied about 5 m (on the first floor), 8 m (on the fourth floor) or the whole (on the second, third and fifth floors). The community building in the main part had the proportions of a cube with a side of approx. 10 m.

Narkomfin was an adaptation of two typical two-level residential units, served by a one-way illuminated corridor on every third floor (first and fourth level). Called the inner street, it provided access to the basic level of premises equipped with internal stairs running up or down. The smaller apartments were two-roomed with one bedroom, larger – three-roomed with two bedrooms. Both had a double-height living space and a kitchen and bathroom with a minimum size. The units were placed on the slab on pillars above the ground floor. The ground floor and the roof were to serve the common functions. A system of two-level flats accessible via a corridor located halfway up the storey building was used by Hans Scharoun in 1929 in a hotel house for single people and childless marriages designed for the WUWA exhibition in Wrocław[4].

The building contained a total of 54 apartments, divided into types: K for large families, small F type apartments and 2F double units with two living rooms, dining room, hall, bathroom, toilet and kitchen. Threre were 8 K type apartments for families. They had entrances from the corridor on the second level. A corridor, kitchenette with an area of approximately 4.5 m^2, a two-level living room, upstairs: two bedrooms and a bathroom were designed on an area of 90 m^2. F type flats with an area of 36 m^2 with a living room on one level and a bedroom and a small bathroom (equipped with a shower instead of a bathtub) on the second, occupied 3, 4 and 5 floor. As part of an experiment not typical for the USSR, these units were equipped with specially designed standard furniture and devices. The living space has been divided into functional areas and partly built-in equipment has been developed for each of them. In the work area there was a desk, chair and library, in the dining room: a round table, a shelf, a sofa and three soft stools. One could put together a second sofa, placing them in a special place by the wall. The bedroom had fold-out beds. Lamps were installed next to the desk and beds. In addition, moving lighting was installed on a horizontal bar that could illuminate different parts of the apartment.

[4] Urbanik J., *Wrocławska wystawa Werkbundu WUWA 1929*, Muzeum Architektury we Wrocławiu, Wrocław 2002, pp. 187, 194. Leonie Pilewski in an article „Neuer Wohnungsbau in der Sowjetunion" in Die Form in 1931 r. suggests that Russian architects were inspired by Scharoun, whose design was published earlier in Russian periodical S.A.; Die Form: Zeitschrift für gestaltende Arbeit, no. 1, 15.01.1931, p. 99.

In the dining room there was a reserve gas connection, which allowed for the installation of a small kitchen with a sink, gas or electric stove, worktop, hood, fridge and cupboard. At the end of the corridor along which the type F apartments were located, there was an additional shared kitchen, but according to design and ideological assumptions, residents should eat in the canteen.

The apartments were evaluated well, due to the optimal functional arrangement implemented on a small area. The rationalization of the layout and section as well as the design concept determined the object's value, constituting an innovative response to the housing crisis. Some of the solutions used in Narkomfine were developed by Le Corbusier, such as: pilotis, placement of public and community functions on the roof, layout of the corridors serving the entrances to the premises and two-level, two-sided housing. Subsequent modifications of the concept led to the introduction of a corridor into the interior and two-sided service of the units, as in the Unité d'habitation in Marseilles[5].

3. A LONDON MACHINE FOR LIVING

Isokon flats realized in 1934 is one of the few examples of London's interwar modernism. The building was designed in Belsize Park, on the Hampstead hills by Wells Coates, commissioned by Jacek Pritchard, furniture manufacturer as a manifesto of modern architecture. Inspired by the work of Le Corbusier, it implemented the assumptions of the machine for living. It housed a total of 29 minimalist apartments with built-in furniture, available through an open gallery. The Pritchards' apartment was designed on the top floor. Desing embraced a shared laundry room, an innovative solution in London at that time, and a common place to eat. The building was intended for young working couples and lonely people with a minimal amount of things.

Pritchards and Coates shared the fascination of the problems of a modern city living, and their building was opposed to unnecessary decorations, restrictions on the Victorian guesthouse and traditional housing conditions. Their cooperation was based on the sincere conviction that it was possible to develop and promote a method of designing and building different from the one that dominated the then speculative housing market. At the end of 1930, they developed a so-called modern unit structures, ie prefabricated components, combined in various ways to create prefabricated houses, which they called isotypes and which were to be produced and built by the newly created company: Isokon. The concept was extended to the idea of designing and selling standardized furniture and devices dedicated to interiors[6]. The aim was to find methods for producing good quality houses available at a low price. The prefabricated construction technology that they have developed ultimately did not attract producers or consumers. The only successful element of the project was the Isokon furniture system.

The most important result of these works was the search for the adequate form of a modern apartment. From the discussion on the isotypes, the idea arose to build a multi-family block with minimal flats, consisting of a large room with niches for sleeping and eating, a compact kitchenette, a bathroom and a balcony. The idea was complemented by the a shared garden, provision of a hot and cold water, garbage removal, cleaning and breakfast delivery service. In the late summer of 1932, the first concrete guidelines for Isokon housing were formulated.

[5] Sherwood R., *Modern Housing Prototypes*, Harvard University Press, Harvard 2001, p. 119.
[6] Buckley Ch., *Designing Modern Britain*, Reaktion Books, London 2007, p. 84.

Ill. 2. Isokon Flats, designed by Wells Coates, London 1934, photograph Krzysztof Koszewski

Coates thought that architectural creativity should respond to the requirements of a modern society, producing and exhibiting a better architecture that will be accepted and meet the expectations of people, thus influencing the creation of a better society. So, the starting point was the place where everyday life took place: the interior of the apartment. And the most important solution concerned his layout and equipment.

For the most important feature of modern society, Coates regarded freedom as a propensity for travel and change. The house ceased to be a permanent place of residence, unchanged from generation to generation. On this basis, he formulated a system based on a dramatic simplification of the form of housing, including both the rationalization of the plan by dividing into functional zones and reducing the space. Tomorrow's apartment was to contain furniture and furnishings, becoming an integral part of architecture. Clothing, bedding, dishes, books, paintings and sculptures would be the only personal belongings of the user. He believed that the next step in the design of residential units should be a block or a complex of flats with centralized service that allows cost optimization. Isokon Flats became a modernist manifesto – the result of reflections on the reform of the flat and space and the expression of entrepreneurial zeal. By April 1933, the final form of the block and the budget had been agreed.

The main four-storey block housed residential floors accessible from the gallery. On a typical level, there were 6 minimalistic one-room flats with an area of 25 m^2 with a kitchen niche, bathroom and wardrobe. At the ends of the building, larger units with an area of approx. 44 sq m were located: two-room apartments being an extended version of a smallest one and one-room studio accessible from a staircase, not from a gallery. On the ground floor there was an additional apartment for staff and on the fifth, withdrawn storey – a single apartment. The service space was completed from the front with an entrance tower with a staircase, in the groundfloor extended with a garage for several cars.

The construction of the building was unusual, also due to the conditions of the location. Under Lawn Road there were two railway tunnels: Midland and Scottish Railway, which ran under the southern and northern parts of the planned buildings. Under these conditions, standard foundation and use of traditional construction technologies was not possible. A frame construction of monolithic reinforced concrete was used, overhanging the frame over the tunnels. This solution favored the principle that the outside of the building reveals the processes, functions and features of the interior. The building was treated as a whole, unifying its function with form, which was the realization of the ideological concept of Coates regarding Isokon Flats.

4. CONTEMPORARY INTERPRETATIONS

Innovative housing projects strive today to meet the needs of harmonious development, reducing the impact on the environment and taking into account the expectations of different groups of users.

Since the sixties, new forms of living have been experimented with. The 1980s brought the flourishing of community life forms related to the search for an ecologically-oriented way of functioning and the emergence of alternative forms of democracy that created a new type of cooperative and sought prescriptions for the lack of housing. In the new housing estates, various layouts were used, departing from the traditional block diagram. Hybrid forms have been created, combining the advantages of various types of buildings and initiatives creat-

ing new concepts of social coexistence, such as cohousing. The community profiling of the function and spatial layout of the building enriched the residential area with common rooms, gardens, services, and sometimes places to eat or work.

The Berlin authorities allowed housing communities to preferential purchase of real estate in the center. Thanks to this, the R50 project was implemented in the Kreuzberg district according to the design of Verena von Beckerath, Jesko Fez, Tim Heide, Christoph Heinemann, Susanne Heiss and Christoph Schmidt. The detached, six-storey building with a roof garden was located in a diversified area. It housed 19 flats with an average area of 109 m^2. The characteristic open steel gallery runned around on residential floors, creating an additional common zone. A meeting room with an area of approximately 130 m^2, a laundry room and a workshop have been designed in the basement. In another Berlin project Urban BIGyard by Zanderroth Architekten, different types of dwelling were created forming a homogeneous block: 23 segments, 12 penthouses and 10 houses deep in the plot. The spaces for the community embraced: a roof terrace, a summer kitchen, a sauna and four apartments for guests.

Ill. 3. Kalkbreite, designed by Müller Sigrist Architekten, Zurich 2014

The Kalkbreite complex realized in 2012–2014 in Zurich, designed by Müller Sigrist Architekten, is an illustration of the latest trends in residential development. The social multi-family building transforms the space above the tram depot into a multifunctional structure housing a diverse commercial and social program. The terraced form occupying the polygonal inner-city quarter offer 88 apartments with the size of 1 to 9.5 rooms, 9 rooms for rent and a number of public spaces intended for culture, gastronomy, services and trade for 256 residents. The space on the roof of the converted depot is an internal open courtyard. The first three floors are intended for rent for shops, cultural facilities, restaurants, offices and compa-

Ill. 4. Silodam, designed by MVRDV, Amsterdam 2003

nies. The cooperative selects tenants who pursue progressive business projects and contribute to the activation of the place. Common spaces are used for meetings or activities outside of a small apartment or office. Residents have a canteen, laundry, office and conference rooms as well as a small, 12-room hotel part. Small apartments are combined into clusters with a large common room and kitchen. So-called joker rooms, small units for rent or joining existing apartments are designed and used. The building reduced the space per 1 person to 35 m^2 of living area (with the average in Zurich: 41 m^2). Kalkbreite breaks conventions by introducing new elements to the concept of a flat. A new form was introduced into the traditional quarter development scheme with a service ground floor and an inner courtyard, taking into account the co-creation and sharing of spaces serving various activities. Many elements go beyond the standard of a typical housing estate: multi-functional, multi-storey garden on the roof, common canteens and rooms for various activities, creating a flexible system allowing for modifications depending on the needs.

The development and interpretation of the functionalist building model is Silodam, designed by MVRDV and realized in Amsterdam in 1995–2003. Derived from classic patterns, it develops the idea of ordered diversity. It contains 157 residential units, including 142 private apartments and 15 units for rent, 600 m^2 of commercial space, a marina for boats and automated car parks for 109 cars. The diversified structure of units results from the assumption of creating living spaces of a different size, maintenance costs and ownership forms. The ten-storey, cuboidal block is divided into four sections with a different functional layout and plan. The whole is supported by five circulation verticals, connected to a network of corridors and galleries. The minimalism of form fits into the industrial neighborhood.

The multidirectionality of modern searches proves large flexibility of traditional models, allowing for adapting to the requirements of users with different needs, openess of layouts and application of innovative solutions and technologies.

5. SUMMARY

Apartments that we design today are combinations of known elements and solutions. The development of science and technology introduces fresh patterns into the system, but the material is embedded in tradition. Residential architecture should provide users with long-lasting comfort, guarantee security, be a source of satisfaction and a means to meet many individual and social needs. Today, the source of architectural innovations is first of all the technological revolution as well as social and psychological changes resulting from it. Every member of the information society aspires to expert roles. Comfort is not defined by the target state, but the ability to respond to changes and environmental parameters. Contemporary housing projects are based on the assumption of flexibility at the implementation and use stage. The openness of current models is realized not only thanks to the mobility of the physical structure. Modernism used sliding walls, movable screens and building elements. Today, in buildings with the most flexible scheme, the system is relatively stiff. In return, objects such as Kalkbreite or R50 offer rooms and spaces which program can be freely shaped. Contemporary housing models are characterized by a variety of constituent elements and vulnerability as well as the ability to respond to changes, openness to modifications leading to individualization as well as the need to control the effects of implementation and use in relation to the environment. The changing society requires new housing solutions. Contemporary implementations, just

like Narkomfin or Isokon, are not only a reflection of the current needs and expectations of the inhabitant, but also an exploration space for new elements of the functional structure, falling over time into a catalog of proven solutions.

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