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THE ARCHITECTURE  
OF RESIDENTIAL BUILDINGS  
IN POLAND DURING  
THE TRANSFORMATION PERIOD

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O ARCHITEKTURZE DOMÓW  
WIELORODZINNYCH W POLSCE  
W OKRESIE TRANSFORMACJI

Abstract

In the transformation period in Poland we can find many significant examples of residential architecture both single-family houses and residential (multifamily) buildings. In the article the author attempts a synthetic analysis of the evolution of residential building architectural forms in Poland after 1989. Based on the analysis of a few hundred housing projects, the author identifies the main – in his opinion – trends of creating the forms mentioned above, the ideas of design of these buildings and elements of their architecture – the architectural game. The creative attitudes and projects presented are not a closed list, but will be completed during subsequent research.

*Keywords: form, architecture, residential building, elevation, detail*

Streszczenie

W okresie transformacji w Polsce możemy odnaleźć wiele znakomitych realizacji architektury mieszkaniowej, zarówno budynków jednorodzinnych jak i wielorodzinnych. W artykule autor podejmuje próbę syntetycznej analizy ewolucji formy architektonicznej budynku wielorodzinnego w Polsce po roku 1989. Na podstawie analizy kilkuset realizacji mieszkaniowych, autor dokonuje identyfikacji najważniejszych – zdaniem autora – nurtów kształtowania wyżej wymienionych form, idei projektowania tych budynków i elementów ich architektury – architektonicznej gry. Prezentowane postawy twórcze i przytoczone realizacje nie są listą zamkniętą, będą one uzupełniane podczas dalszych badań.

*Słowa kluczowe: forma, architektura, budynek wielorodzinny, elewacja, detal*

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“... The big hopes were always related to the buildings, and in order to realize them, we must have clear ideas about the nature of humans’ needs concerning to housing...”<sup>1</sup>

## 1. INTRODUCTION

John Habraken’s words about residential buildings, included already in 1961 in the housing manifesto, explicitly pointed to the fact that residential buildings should be designed individually, with an understanding of human needs and applying technological developments – in an alternative system to mass construction. Habraken’s views are also real today – the housing environment is a living phenomenon, it is still changing. Its architectural and urban forms are also changing. The residential building cannot be amorphous, it should have a certain character, style – architecture! According to the old definition of Vitruvius, which also lost nothing in topicality to this day, architecture consists of three principles: durability (Firmitas), utility (Utilitas) and beauty (Venustas)<sup>2</sup>. The good architect should aspire to the best performance of all three attributes, associated with the durability, the utility and the beauty, that means – in relation to contemporary architecture – with the structure, the function and the form. The form in architecture has always been important, and for the majority of architects it is most important at present. It is supposed to enrapture, impress, sometimes to symbolize, to become an element of architectural history. Sometimes structure plays an important role in the idea of the form, because today the function is only a pretext in some cases. In residential architecture it was sometimes the inverse – the most important role in the design played the function of the flats, arranged in repeatable units. In some periods of the development of the housing in the 20<sup>th</sup> century, structure and economics decided about formal solutions – this caused the industrialization of the process of residential building construction in Poland and in other countries in the 60s and 70s (so-called technologism). The form of residential building was then less important – repeatable many times, schematic, standardized. They built catalogue projects, ignored the context and the problem of architectural quality, which caused many spatial problems. In Polish residential architecture we can already meet attempts to create good forms in the 1960s and 70s. Individual implementations, and individual projects with original architecture could be found. In the Polish housing of the 80s, some ideas of postmodernism started to appear. Individual, interesting projects occurred – uniques, though the scale of this phenomenon was not great. Architectural forms referring to regional forms are far more universal, which were an attempt at a response to the omnipresent prefabrication. Prof. Wojciech Kosiński wrote at that time about the need of raising, among others, “... small estate, which keep the human scale and the spatial character of old, native cities and ... small towns”<sup>3</sup>. The game (sometimes fun and jokes) of architectural forms of multifamily residential buildings and the process of the ennoblement of this category of architecture began in Poland with the beginning of the socioeconomic transformation in 1989. The author proposes to recognize features of the architectural form as the essential impera-

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<sup>1</sup> J. Habraken, *Supports: An Alternative to Mass Housing*, The Architectural Press, London 1972, [w]: *Teorie i manifesty architektury współczesnej*, Ch.Jencks, K.Kropf, Warszawa 2013, p. 43.

<sup>2</sup> Witruwiusz, *O architekturze ksiąg dziesięć*, przekład K.Kumaniecki, Wyd. Prószyński i S-ka, Warszawa 2004, p. 32.

<sup>3</sup> W. Kosiński, *Zespół mieszkaniowy w Krakowie*, Architektura 1982, nr 4, p. 53.

tive of determining the architectural trend and the creative attitude in the residential architecture of the Polish transformation period.

## **2. FUN GAMES WITH COLOUR AND MATERIAL – CREATIVE PLURALISM AT THE BEGINNING OF THE 90S**

Polish residential architecture after 1989 is very diversified in terms of the architectural language. At the start of the transformation period, because of political and economic changes, they stopped applying standard housing regulations in the design process. Simultaneously, as a result of access to modern materials and technology, we could observe a pluralism in stylistic directions, with a strong role of modernism and neoregionalism. In this period also many “amorphous” implementations occurred, without interesting details, or overloaded with details (e.g. colours), which it is hard to call architecture. Designers – after the greyness of the age of socialism – often applied numerous colours of plaster or facade bricks on elevations at the same time; metal roof sheet not only brown or red, but also green and blue, colourful lintels and balustrades of balconies. It was supposed to be cheerful and optimistic, such fun games were accepted by designers and inhabitants. As Prof. M. Misiągiewicz writes “...a gigantic number of the popular construction, filling the landscape, aesthetically dominated the space of the contemporary city ...”<sup>4</sup>.

## **3. (CREATIVE) TRADITIONALISM**

The second direction, strongly noticeable in Poland at the beginning of the 90s, was traditionalism, based on the elements of regional forms. Here we can find connections with the past and traditional architecture, traditional forms and their elements, local building traditions, e.g. by designing high roofs on four-storey or higher residential buildings, the use of wooden elements on elevations and details of balustrades. The analyses of concepts and housing constructions shows that the traditionalism of 20<sup>th</sup> and 21<sup>st</sup> centuries sometimes leads to creative traditionalism. In this case one shapes the architectural form using certain ideas, looking at the past, at regional architecture – to transpose elements of local tradition (for example transforming the archetype of traditional form with the slope roof, elements of such form or materials – stone, wood, seeking for good proportions and scale of development, also interesting concepts of semi-public spaces in housing environment, etc.). As an example of this creative traditionalism we can give e.g. the “Stone House” in Katowice, Arch. Arch. R. Jurkowski, A. Nurek, the Estate Dwor Oporow in Wroclaw, Arch. Arch. T. Sawa – Boryslawski, M. Dziewonski, and the Housing Estate in Ignatki near Bialystok, Arch. A. Duda, etc. Creative traditionalism also means designing smaller scale housing estates, looking for new forms of organizing the spatial concepts and housing standards, called medium density housing. In Poland we cannot find many such examples, for instance the housing colony in Bialystok in Pulaski street, Arch. A. Bielski; but it seems that this form of housing is going to be the big potential in the development of residential architecture in Poland in the

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<sup>4</sup> M. Misiągiewicz, *Architektoniczna geometria*, Wyd. DjaF, Kraków 2005, p. 76.



- III. 1. Wstega Warty in Poznan, Arch. J. Gurawski, Arch. P. Cieślak, example of contextualism  
III. 2. Small Housing Estate in Bialystok, Pulaski str., Arch. A. Bielski, example of creative traditionalism  
Photographs: Andrzej Tokajuk

21<sup>st</sup> century, particularly taking into consideration the “production” of usable housing surface by developers, using only the “PUM” index in project analysis. Traditional urban concepts in housing development also came back – in the form of typical city quarters.

#### 4. POSTMODERNISM GAMES OF THE 90S

Some researchers find, in this period, the continuation of postmodernism motifs from 80s, as they call it the “second wave”<sup>5</sup>. But it is not certain whether appealing to historical templates and seeking the “spirit of the place” were conscious or accidental decisions of the architects of that time. Postmodernism in architecture refers to the archetype and the reminiscence. The modernist rebellion against tradition was replaced with discovering that the past is an endless source to draw models or details from. So designers borrowed motives of tympana, columns, porticos, pediments, turrets, attics, etc. from ancient architecture. They applied compositions of buildings in the form of the permeation of basic forms – cubes, cylinders, cuboids, and others. However, here architectural quotations were often artificially attached to the buildings. Ornament, symbol, symmetry started to be elements of architectural composition<sup>6</sup>. The elevation often gained a symbolic significance, and functionalism was to some extent rejected. Postmodernist implementations of the 90s in Wrocław, Białystok, Szczecin, and other cities were seeking beauty (e.g. in Wrocław: the residential building by Arch. W. Hryniewicz, Piwna St., the building by Arch. D. Jarocka-Srodka, Micinskiego St., the building by Arch. W. Jarząbek, Wybrzeże Wyspińskiego St., in Białystok: by Arch. A. Czyzewska-Saulewicz, in Wrocławska St., etc.). Some other examples are not always convincing; sometimes they look like scenography put on the flat facade of the cuboidal form. They do not create a postmodernist space, architectural atmosphere, like the postmodernist housing realisations characteristic of the first wave in Poland from the 80s. (e.g. Housing Estate E, Nowa Huta, Arch. R. Loegler; Housing Estate in Krakow, Arch. W. Kosiński).

#### 5. NEOMODERNISM

The tendency of forming architecture as a result of function was developed in the time of the modernism, in the 1920s and 30s. Modernistic tendencies, happening in architecture and urban planning of housing in Poland also in the 60s, returned in the period of the transformation at the end of the 20<sup>th</sup> century. Buildings referring to modernism appeared in major cities such as Warsaw, Poznan, Gdynia, Szczecin, etc. – where the strong modernism of the pre-war period was noticeable. Such implementations were close stylistically to functionalism – there were good facades characterized by good proportion, straight but expressive detail, composition and forms, in white (e.g. the project by JEMS Architects in Zoliborz, Warsaw, residential buildings by Arch. K. Kucza – Kuczynski). Elevations, maintaining their modernist character, have often been divided to three parts, with the distinct base (ground floor) and with the lightly withdrawn top storey. The main part of the facade was composed with such elements

<sup>5</sup> T. Szafer, *Polska architektura współczesna*, Arkady, Warszawa 1988, p. 9.

<sup>6</sup> A. Tokajuk, *Trwanie czy przemijanie? O postmodernizmie w polskiej powojennej architekturze mieszkaniowej*, Czasopismo Techniczne, Politechnika Krakowska, nr 4A – 2011/2, z. 14, p. 429.



III. 3. Corte Verona in Wrocław, Lewicki – Latak Architectural Office, example of creative new form of residential building  
Photographs: Andrzej Tokajuk

as balconies, loggias and the rhythm of the windows. Also other modernist details came back, e.g. porte-fenêtres and bay windows. Applying these also had a positive effect on the architecture of buildings. (Housing Estate Marina, Warsaw, APA Office Kurylowicz, quarters of Eko Park, Warsaw, projects by Arch. M. Buratynska – Seruga and Arch. W. Seruga in Krakow, etc.).

We must emphasise the design in transformation period in Poland of urban housing forms, developed and popular during modernism, such as: city villas (in projects developed by the Sipinsey Architectural Office from Poznan), point block compositions (in projects developed by Stelmach & Partners Architectural Office from Lublin), and also freer housing urban schemes.

However, many residential buildings created in the neo-modernist style during the period of the transformation in Poland are buildings which only have neo-modernist facades. It is an open contradiction with the modernist principle of treating the building as a whole, rejecting urban planning and social ideas in addition. It is possible to say the neo-modernism in Poland constitutes a reaction to eclectic postmodernism and a protest against populism in architecture. Simplicity is a device of neo-modernism, we can often observe the principle of additivity, cuboidal forms. And although it expresses a certain flamboyance in housing architecture, it cannot avoid artificiality and superficiality. We can observe a lack of logic of function and the purity of the structure.

## **6. ARCHITECTURAL GAME OF DETAILS AND ELEVATIONS – THE EDGE OF CENTURIES**

Details are inherent elements of buildings. Even though the category of detail doesn't exist in the definition of architecture, every architectural work consists of details. A game in elevations – beautiful, well composed and made, became the important type of the housing game in Poland in the 21<sup>st</sup> century.

The quality of details of these elements in the period of transformation has been improved considerably. Firstly thanks to seeking interesting visual solutions, secondly thanks applying high quality materials, and thirdly thanks to fining up structural connections. Balconies and loggias stopped being a “machine-made product”, and became pretty functional-aesthetic details. In these details they have often combined metal and glass together as well as metal with wooden elements.

Blinds became a popular detail applied in residential buildings. This functional element dispersing the sun's rays became a leitmotif of the architecture of many multifamily buildings in Poland in recent years (e.g. the Tytoniówka Estate, Białystok, Arch. J. Kaczyński and others). We can find mobile blinds, appearing outside the facade (the Avenue Wilanowska Development, Warsaw, JEMS Architects) – thanks to these details, the composition of the building elevation changes and is set by the inhabitants.

Looking for beauty and originality in concepts of balconies, loggias, proportions of elevations, material solutions proves the fact that the composition of the facade became a superior category. We can name this tendency elevationalism or facade tendency. These attempts in many cases ended in interesting architectural effects; they created the identity of buildings. After many years detail has become significant again in housing, especially architectural detail of the facade. The facade has become very important, not only from an

architectural point of view, but also from marketing side as the “packages” of the flat as a product.

A very important role in the game with facade is played by windows – their proportions and arrangement give impact to the elevation’s composition. For many years windows on the elevations of multifamily buildings were designed very schematically, in repeatable lines of divisions and levels, according to the function of rooms. The size of windows was modular. During the transformation a technological progress took place in glass; it is possible to order windows of any proportions. The dimensions of windows increased, even up to 100% of the facade area – the elevation is designed as a great window on the world. Architects left the stiff schematism; they designed irregular compositions of windows on elevations more frequently, and sometimes this irregularity approaches controlled chaos.

## 7. IDEA AND FORM – THE BEGINNING OF THE 21<sup>st</sup> CENTURY

Considering economic realities and the not always positive influence of developers on the design process (highest profit, maximum area of flats), all attempts at experimenting with housing forms are valuable. But in the game of good new architecture – relations between ideas – the form, agreement with the master plan and the ability of the philosophy of housing design are decisive here. Antonio Montestiroli writes, “... getting to know the subject, study of the place, seeking the form are aspects concerning the same action conducted with the awareness that the one who designs must become a translator of the culture of community for which his project is intended”<sup>7</sup>. It is possible to identify at least a few directions of this game of architectural form in multifamily buildings in Poland in the new millennium, and such actions ended in the construction of unique objects.

The first of such creative tendencies was finding the context of the site. The details appearing with surroundings and environmental conditions define the idea of the form (this did not happen in modernism).

We can find in Poland residential projects of uniquely contextualised character – smaller scale, individual buildings (e.g. Wstega Warty in Poznan, Arch. Arch. J. Gurawski, P. Cieslak; the residential-service development near Zamkowa Street in Krakow, Arch. Arch. M. Dunikowski, J. Kutniowski, W. Obtulowicz). Some architects carefully analyse proportions and height of the designed work and refer it to the context (e.g. Thespian, Wrocław, Mackow Office Design), details appearing in surroundings, e.g. a motif of rustivating divisions in ground floors, sometimes the context gives the pretext to apply character details – marine in seaside housing (example of the Estate near Bernardowska street in Gdynia, Arch. Arch. A. Taraszkiwicz, P. Mazur, W. Targowski). All these stylistic devices are associated with the concept of the design and aim to create the identity of the place and search for beauty and an interesting new form.

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<sup>7</sup> A. Montestiroli, *Kwestie metody*, Zeszyty katedry Architektury Mieszkaniaowej, KAM IPA, Politechnika Krakowska, nr 2/2006, p. 74.

One of the most interesting tendencies in housing in Poland in the 21<sup>st</sup> century is creating original forms of residential architecture and attempts to leave the form of the box, formulated and exploited in modernism. The brick wall or the cornice become the pretexts for looking for the cosy scale or the rich tectonics of the building (e.g. projects by the Office of Lewicki & Łatak: Concerto Verona Estate in Wrocław or the Estate in Zulowska Street in Krakow); nature could also be the inspiration for the housing form (flower motifs in the residential building near Mickiewiczza Street in Białystok). We can posit the thesis, that the creative game in forms of residential buildings is becoming a kind of architectural play.

Analysing the influence of the idea on forms of residential buildings at the beginning of the 21<sup>st</sup> century in Poland interesting changes are also noticeable in the forms of residential high-rise buildings. High-rise housing structures became in recent decades elements of the new identity of cities, their trademarks. It is possible to posit the thesis that in Poland in the period of the transformation a new type of residential building was commenced – the high-rise apartment building and a new type of housing standard was created – luxury standard. High-rise buildings (residential or residential-service) built in the period of the transformation contributed to the development of the architectural form of buildings of this type, after the period of the stagnation in the last decades of the 20<sup>th</sup> century. The architectural concepts of such objects are firmly diversified, from stepwise forms, early-modernist, through buildings held in the tendency of expressive neo-modernism, through avant-garde concepts held in romantic modernism or deconstruction (e.g. the apartment building in Warsaw – Złota 44, Arch. D. Libeskind, shaped like a sail), finishing with sculpted forms, applying original solutions to the architectural details (the Sea Tower apartment building in Gdynia). The art of construction according to Corbusier was “the playing blocks in the light” and – as Prof. M. Misiągiewicz writes – “it still remains”<sup>8</sup>.

High-rise buildings (apartment and mixed-function) have a significant effect on urban planning, the landscape, the space and the profile of cities. Designing and realizing such projects became a cause of discussion about their location and a change of development plans in some cities. Of the four analysed models of location of high-rises, the most convincing and not causing spatial dissonance is the group model, e.g. in the centres of cities or in the quarters of city centre districts.

At least single high-rise buildings are legible signs, with predominant features and they have an impact on the landscape of cities, but they often do not create the harmony of the city space in the right dimensions, and sometimes have a peculiar character. We need some time to evaluate whether these objects reflect the assumptions of the sustainable development of Polish cities – not only in the spatial, but also in social, economic and environmental aspects.

## 8. SUMMARY

Based on the analyses conducted concerning the forms of architectural multifamily residential buildings of the period of the transformation, it can be observed that it is hard to talk

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<sup>8</sup> M. Misiągiewicz, *Architektoniczna geometria*, Wyd. DjaF, Kraków 2005, p. 109.

in this context about appearing styles, but it is possible to identify directions and creative attitudes. Because, according to Prof. W. Tatarkiewicz – “the style is where artists have shared their attitude and intention”<sup>9</sup>, and the transformation period is a time of creative and design pluralism, and it is hard to talk about a common attitude. The specific architectural game of forms started from the beginning of the 1990s from amorphous trends (pluralism of the materials and colours and no-ideas schematism).

In parallel they also developed rational trends (using the terminology of Przemysław Trzeciak<sup>10</sup>); one should here understand architectural forms in functionalism, referring to interwar ideas, being found in a few of the biggest Polish cities and the trend of neo-modernism, elaborating modernist ideas and being based on appropriate elevation composition and applying details, very well designed and made from first-class materials. In this phase of architectural evolution an interesting (sometimes antagonistic) trend was displayed by experiments with post-modernist forms. To the rational trend one should categorize also a traditionalism, usually conservative, in the context of the composition of the form, the proportions and details.

At the turn of the century some creative trends appeared in Polish residential architecture<sup>11</sup>. It is possible to identify the creative search and transpositions of the ideas as the contextualist attitude, and also creative traditionalism, as well as designing symbolizing, sculpting forms, the attempt to apply original details as new formal attributes. More and more often – especially at the beginning of the 21<sup>st</sup> century – architects applied not only games and elevation tricks, but also new formal ideas of the organization of the architectural form. A good time for the form also came in residential architecture.

In spite of certain restrictions (requirements concerning energy-efficient solutions, pressure of developers on raising density of the building development) it seems that we do not have to be, as Prof. J. Włodarczyk wrote, “between the unique and the uniform”<sup>12</sup>. The quality level of architectural forms of multifamily residential buildings in Poland in the period of the transformation increased a great deal. The architectural game of forms of multifamily residential buildings brings successful attempts at the creative search, gives conditions for designing unique objects of architecture.

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<sup>9</sup> W. Tatarkiewicz, *O pojęciu typu w architekturze*, Przegląd historii sztuki 1931, nr 1–2, za P. Trzeciak. *Racjonalizm i emocjonalizm w architekturze 1750–1950*, Praca doktorska, Politechnika Krakowska 1979, p. 5.

<sup>10</sup> P. Trzeciak. *Racjonalizm i emocjonalizm w architekturze 1750–1950*, Praca doktorska, Politechnika Krakowska 1979, p. 20.

<sup>11</sup> J. Gyurkovich, *Forma i kontekst w architekturze współczesnej*, [w]: Prace polskich architektów na tle kierunków twórczych w architekturze i urbanistyce w latach 1945–1995. Tom II, Kraków 1995, p. 151.

<sup>12</sup> J. Włodarczyk, *Architektura mieszkaniowa: między unikatem i uniformem*, w: II Konferencja Naukowa z cyklu Mieszkanie XXI wieku, Augustów 1999, p. 186.

## References

- [1] Habraken J., *Supports: An Alternative to Mass Housing*, The Architectural Press, London 1972, [in:]: *Teorie i manifesty architektury współczesnej*, Ch. Jencks, K. Kropf, Warszawa 2013.
- [2] Dąbrowska-Milewska G., *Wielorodzinna architektura mieszkaniowa Białegostoku 1990–2004*, Wyd. Politechniki Białostockiej, Białystok 2006.
- [3] Fabiański M., Purchla J., *Przewodnik po architekturze Krakowa*, Wyd. Literackie, Kraków 2000.
- [4] Gyurkovich J., *Architektura w przestrzeni miasta*, Politechnika Krakowska, Kraków 2010.
- [5] Gyurkovich J., *Forma i kontekst w architekturze współczesnej*, [in:]: *Prace polskich architektów na tle kierunków twórczych w architekturze i urbanistyce w latach 1945–1995*. Tom II, Kraków 1995.
- [6] Kępa L., *Postawy twórcze architektów na przykładzie krakowskiej architektury mieszkaniowej wielorodzinnej (1985–1995)*, [in:]: *Nurty i tendencje rozwojowe w architekturze drugiej połowy XX wieku*, materiały Sympozjum Rybna 1996.
- [7] Kosiński W., *Zespół mieszkaniowy w Krakowie*, Architektura 1982, nr 4.
- [8] *Leksykon Architektury Wrocławia*, Red. nauk. R. Eysymont, J. Ilkosz, A. Tomaszewicz, J. Urbanik, Wyd. Via Nowa, Wrocław 2011.
- [9] Magdziak-Grabowska M., *Architektura dziś jako manifest*, Czasopismo Techniczne, Politechnika Krakowska, R. 107, z. 15, cz. 2, Kraków 2010.
- [10] Misiągiewicz M., *Architektoniczna geometria*, Wyd. DjaF, Kraków 2005.
- [11] Montestiroli A., *Kwestie metody*, Zeszyty Katedry Architektury Mieszkaniowej, KAM IPA, Politechnika Krakowska, nr 2/2006.
- [12] *Rocznik Wydziału Architektury Politechniki Krakowskiej 2003*, Wyd. Politechniki Krakowskiej, Kraków 2003.
- [13] Szafer T., *Polska architektura współczesna*, Arkady, Warszawa 1988, p. 9.
- [14] Taraszewicz A., *Wielorodzinna architektura mieszkaniowa w Polsce okresu transformacji na przykładzie Trójmiasta*, Wyd. Politechniki Gdańskiej, Gdańsk 2004.
- [15] Tatarkiewicz W., *O pojęciu typu w architekturze*, Przegląd Historii Sztuki 1931, nr 1–2.
- [16] Tokajuk A., *Trwanie czy przemijanie? O postmodernizmie w polskiej powojennej architekturze mieszkaniowej*, Czasopismo Techniczne, Politechnika Krakowska, nr 4A – 2011/2, z. 14.
- [17] Trzeciak P., *Racjonalizm i emocjonalizm w architekturze 1750–1950*, praca doktorska, Politechnika Krakowska 1979.
- [18] Witruwiusz, *O architekturze ksiąg dziesięć*, przekład K.Kumaniecki, Wyd. Prószyński i S-ka, Warszawa 2004.
- [19] Włodarczyk J., *Architektura mieszkaniowa: między unikatem i uniformem*, [in:]: II Konferencja Naukowa z cyklu Mieszkanie XXI wieku, Augustów 1999.