

FUNCTION RESULTING FROM THE FORM – ADAPTING THE POST-WAR MODERNIST ARCHITECTURE FOR NEW FUNCTIONAL PROGRAMS

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ABSTRACT: The aim of this article is to analyze the possibilities of adaptation of modernist architecture objects erected in Poland after World War II. The specificity of the form, which was designed in the spirit of functionalism, and thus adapted to a specific functional program, makes it much more difficult to change the purpose of the objects. Similarly, material and structural solutions, which (sometimes due to their experimental, innovative character) poorly stand the test of time. Considerations on introducing new functional programs while maintaining the authenticity of objects have been illustrated with selected examples of implementation, which are to prove the thesis that the final effect of the adaptation process depends, among others, on the proper interpretation of the historical substance and the idea behind its origin.

KEY WORDS: Modernism, post-war modernism, adaptation

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The legacy of modernism and its specificity

Consideration of the theoretical foundations for the adaptation of post-war modernism architecture to new functional programs should begin with the question: do monuments of modernist architecture require different conservation strategies than the relics of earlier eras? This problem has often been taken up by the theoreticians of architecture, designers and conservators², and the issues related to renovation, adaptation, or finally - the "reproduction" of monuments, have been considered in the light of the "ideas of dynamism and functionality" that are crucial for modernism. It can be assumed that modernist architecture requires an "extended" conservation doctrine, and the object of care should be both the material layer of monuments and the ideas it embodies³. This results directly from the specificity of the modern movement, which was not only a proposal of a certain aesthetics, but above all - a revolution based on new ideological, ethical and technical principles. The close combination of modern technology with an ideological program was the unique characteristic of modernism. In his book with the significant title "Myths and Utopias of 20th Century Architecture", Jakub Wujek recalls the words of the creators of the Polish architectural avant-garde from the 1920s: "The closer the work will be to the time in which we live [...] the more modern [minds - B.C.] will be, the more modernism will be in them"," he wrote⁴. It should be emphasized that at its inception it was not a futuristic movement. "Modernism is a current moment," concluded Szymon Syrkus in 1926⁵. The modernism is a current moment. The goal of the modernists was to solve current problems "here and now". It was often associated with the "temporariness" of the chosen solutions and methods, which after solving a given problem lost their raison d'etre. The Zonnestraal tuberculosis sanatorium in Hilversum was designed by Dutch architect Jan Duiker in 1926. The designer predicted that tuberculosis, as one of the diseases of civilization, would be almost completely eradicated within 30-40 years. Therefore, he applied solutions that were relatively impermanent, contradicting the Vitruvian "firmitas" principle. It was not until Duiker fully understood the origins of the use of certain material and technological solutions that a comprehensive restoration and adaptation program was created by Wessel de Jonge⁶.

"Modernist architects believed that change is inevitable and that architecture should adapt to changing circumstances, but the use of architecture was not a goal," wrote Hilde Heynen⁷. However, the mere fact that a building was designed and built with a specific period of use in

² Cf. Piątek G., Trybuś J., *Lukier i mięso*, Published by Stowarzyszenie 40000 Malarzy, Warsaw 2012, pp. 131-134.

³ Heynen H., *Problem przemijalności w architekturze nowoczesnej*, "Autoportret. Pismo o dobrej przestrzeni" 2016, no. 2 (53), p. 10.

⁴ Wujek J., *Mity i utopie architektury XX wieku*, Arkady, Warsaw 1986, p. 211.

⁵ Syrkus Sz., Preliminarz Architektury, "Praesens"1926, no. 1, p. 6.

⁶ De Jonge W., *Three modern preservation cases. The restoration of Rietveld's Biennale Pavilion (1953-54) in Venice, Italy, compared to Sanatorium "Zonnestraal" (Jan Duiker, 1926-28) and the Van Nelle Factories (Brinkman & Van der Vlugt, 1926-31)*, Text previously published as a chapter in the RAIA Sisalation Publication, Sydney, 2004, [in:] www.wesseldejonge.nl (DOA: 14.02.2013).

⁷ Heynen H., *op. cit.*, p. 10.

mind (as was the case with Zonnestraal) does not mean that its maintenance is inappropriate. Heynen emphasizes that the strategy to preserve the heritage of modern traffic "involves balancing between faithful reproduction of the original design and dynamic renovation that accepts new functions and thus reflects the original ideals of buildings⁸.

The modernist creators have introduced concepts into the language of architecture that were not previously permanent elements of it - among the most important are "truth", understood as "authenticity" and "sincerity"9. The philosophical and ideological basis of the modern movement in many cases influences the adopted strategies of conservation and adaptation of modernist architectural works. Their ignorance or misunderstanding often leads to the use of dubious solutions that disturb the proper reception of an object. The pavilion of the Institute of Physics of the University of Łódź, which was intended by its creator, Bolesław Kardaszewski, to be a manifesto of machine aesthetics of late modernism expressed through raw, reinforced concrete, prefabricated elements, may be a disgraceful example of such solutions¹⁰. Thermomodernization of the building, performed in 2005, irrevocably distorted its perception. Similarly, the modernization of the construction of the tower for jumping into the water at the Kursaal swimming pool in Ostia, Italy, can be assessed much more subtly. The reinforced concrete circle designed in 1950 by Pier Luigi Nervi was replaced by an identical glulam construction. This action was criticized by Fulvio Irace of the Politecnico di Milano, emphasizing that in the construction the shape was as important as the material, because the creator wanted to present almost infinite possibilities of shaping reinforced concrete structures¹¹.

A monument and a work of art

The perception of architectural monuments as works of art with a finite, closed (in a way, petrified by time) form limits the possibilities of its adaptation. Already in the second half of the nineteenth century, Eugène Viollet-Le-Duc believed that monuments, in order to exist, should "live" - be used. In this, he saw their chances for survival in the following centuries, because a monument without a function became a dead monument, and often unnecessary to society. Alois Riegl, who at the end of the nineteenth century created the foundations of the theory of monuments' value, almost completely ignored the problem of their function. It was not until the 1960s that Walter Frodl introduced, among other values, also those concerning its use and functionality in his concept of monument valuation. Based on the "Carta del restauro", he stated that the new function should not deviate too much from the original one, so as not to force far-

⁸ Ibidem.

⁹ Cf. Ciarkowski B., *Kryterium autentyczności a wartościowanie zabytków architektury modernistycznej*, [in:] *Wartościowanie zabytków architektury*, ed. B. Szmygin, PKN Icomos, Warsaw 2013, pp. 71-76.

¹⁰ Kardaszewski B., *Dzielnica Wyższych Uczelni: Instytut Fizyki Uniwersytetu Łódzkiego*, "Architektura" 1986, nr 429, pp. 73–80.

¹¹ Irace F., Overview on concrete Cultural Heritage in the Mediterranean area, a lecture at InnovaConcrete Rome Workshop. The Concrete Architecture in the Mediterranean Areas and the work of Pier Luigi Nervi, Rome, 22.02.2019.

reaching transformations in the historical substance of the monument¹².

The problem of adapting monuments to the new functions, or preserving the original function, becomes one of the most important challenges faced by contemporary conservation services, architects and theorists. An unused object is doomed to a slow annihilation, but at the same time, an improperly selected program often means the loss of elements constituting the uniqueness of a given building or complex. Adaptation of a building or an assembly of buildings for new functions is often associated with a number of transformations. Their boundary should be determined by the integrity of the monument, and in the case of modernist architecture - also by the unity of form and the idea behind it.

Another challenge faced by conservators and architects is the symbolic value of modernist architecture. Mieczysław Wallis believed that "works of contemporary architecture (...) generally have no semantic or symbolic content"13. From the perspective of years, it is difficult to agree with this statement. The modernists rejected the existing symbolism and replaced it with a completely new language of architecture. For Corbusier, the brute concrete displayed in the facades of the Unite d'Habitation of Marseille had the dimension of a sign to which he attributed almost human qualities such as "loyalty ... dignity and honesty"14. A similar role was played by the widespread use of glass, the display of the building's structure ("sincerity of construction"), or even the use of certain colors. The certified structural skeleton and the glass walls of the Casa del Fascio in Como (arch. Giuseppe Terragni) symbolized transparency and honesty. The repetitive, unified forms of the residential buildings in Le Havre (arch. Auguste Perret) indicated the egalitarian character of the architecture and the community living there. At the same time, some researchers expressed doubts related to the restoration of modernist architecture. As Alan Colquhoun convinces - by restoring the original appearance of the building we create an image of the past, while the creators intended it to be an image of the latest technological achievements¹⁵. Hannah Lewi, who is looking for Rieglow's "commemorative value" in the works of the modern movement, has also considered this peculiar paradox. She warned against the pursuit of "retouching" modernist artifacts by removing the patina of time, which inevitably leads to placing modernism in one line with other historical styles¹⁶.

¹² Frodl W., Pojęcia i kryteria wartościowania zabytków. Ich oddziaływania na praktykę konserwatorską, "Biblioteka Muzealnictwa i Ochrony Zabytków" Series B – Vol. XIII, Warsaw 1966, pp. 25-26.

¹³ Wallis M., *Semantyczne i symboliczne pierwiastki architektury*, [in:] M. Wallis, Wybór pism estetycznych, TAiWPN Universitas, Cracow 2004, p. 269.

¹⁴ Jencks Ch., Le Corbusier – tragizm współczesnej architektury, Warsaw 1982, p. 156.

¹⁵ Colquhoun A., *Modernity and the Classical Tradition: Architectural Essays 1980-1987*, MIT Press, Cambridge Massachusetts 1989, p. 240.

¹⁶ Lewi H., *Paradoxes in the Conservation of the Modern Movement*, [in:] *Back from Utopia. The Challenge of the Modern Movement*, ed. Henket Hubert-Jan, Heynen Hilde, 010 Publishers, Rotterdam 2002, p. 355-357.

Form and function

Jan Tajchman stated that the adaptation of historic buildings to new functional programs should be carried out in such a way as to "extract and expose all valuable elements, while preserving the old spatial layout, in which the new function could only be inscribed, and not cut in"¹⁷. Adapting a building to needs different from its original purpose requires a number of modifications, the more the new function differs from the old one.

In the 1920s, the Dutch architect Adolf Behne distinguished two basic currents present in modern architecture: rationalism and functionalism¹⁸. The first one included those realizations that, in his opinion, had a relatively flexible structure capable of accomodating different functions. The opposite was true of the objects included in the second group, whose form, according to Louis Sullivan's concept, resulted directly from the adopted functional program. As a result, they seemed to be almost perfectly suited for a particular purpose, although their adaptability was relatively limited. The division introduced by Behne is not only one of the concepts for systematizing the achievements of the modern movement in architecture, but it has also become a starting point for contemporary conservators who define the strategy of work on modernist buildings¹⁹.

Wessel de Jonge, based on the thoughts of A. Behne, reversed the maxim of Sullivan. While in the process of designing new buildings, the form of architecture may be a resultant of its purpose, in the case of adaptation of historic buildings, it is necessary to adapt the functional program to the existing conditions. "Function follows form," said de Jonge, characterizing two of his most important projects. The rationalistic Van Nelle factory in Rotterdam has become a space used, among others, by the so-called creative industry. This was made possible by the flexible structure of the interiors, which could be arranged both in auditoriums, workshops or studios, as well as office spaces. The functionalist Zonnestraal sanatorium "forced" the introduction of a function similar to the original one - the former rooms for tuberculosis patients became a therapeutic center.

Adapting the functionalist architecture to new programs poses numerous limitations. When the members of the International Committee for the Tugendhat Villa (THICOM) developed a comprehensive program for the renovation of the Mies van der Rohe in Brno, they sought to faithfully reproduce the material and functional solutions of 1929. At the same time, in connection with the new museum function (instead of a residential one), they had to make certain changes - including toilets and a visitor service point, which were placed in the

¹⁷ Brodzka J., Ciarkowski B., *Konserwacja i kreacja architektury. Jan Tajchman i jego działalność*, Wydawnictwo TAKO, Toruń 2014, p. 33.

¹⁸ De Jonge W., *The Technology of Change: The Van Nelle Factories in Transition*, [in:] *Back from Utopia. The Challenge of the Modern Movement*, ed. Henket Hubert-Jan, Heynen Hilde, 010 Publishers, Rotterdam 2002, p. 46-47.

¹⁹ De Jonge W., Three modern preservation cases. The restoration of Rietveld's Biennale Pavilion (1953-54) in Venice, Italy, compared to Sanatorium "Zonnestraal" (Jan Duiker, 1926-28) and the Van Nelle Factories (Brinkman & Van der Vlugt, 1926-31), Text previously published as a chapter in the RAIA Sisalation Publication, Sydney, 2004, [in:] www.wesseldejonge.nl (DOA: 14.02.2013).

underground in order not to impair the integrity of the building²⁰.

The problem of the adaptation of modernist buildings seems to be particularly important in the case of the projects created after World War II. The development of technology, the popularization of reinforced concrete and the growing popularity of prefabrication in the construction industry made the post-war late modernism²¹ an individual character. The designers' efforts to optimize solutions reached an unprecedented level, which, referring to the terminology introduced by A. Behne, can be described as "extreme functionalism". Despite the declared flexibility and susceptibility to change, in the vast majority of cases it was the architecture that was supposed to shape the users' behavior, not the other way round.

Wessel de Jonge points out that in analyzing the values of modern architecture for adaptation, it is their proper interpretation²². An example of actions supported by in-depth analyses is the restoration of a former orphanage in Amsterdam by Aldo van Eyck. Designed in the second half of the 1950s, the building was a milestone in the development of structuralist trends in architecture. In the 1990s it was transformed into an office building, and Aldo and Hanna van Eyck were responsible for the adaptation project. The work carried out between 2015 and 2017 under the direction of de Jonge was aimed at returning to its original objectives. In accordance with the adopted "purist" strategy, all the layers that disturbed the reception of the original concept were removed, including those introduced by van Eyck himself²³. At the same time, the building was adapted to the requirements of modern office spaces (including lighting), seeking a compromise between the clarity of the idea and the functionality that makes the former orphanage a "living heritage"²⁴.

Unfortunately, similar situations are rare. This is due both to the numerous difficulties in adapting the heritage of late modernism and the still insufficient awareness of its value. A popular argument about the insignificant architectural and artistic value of individual objects seems to be an excuse and not a premise based on reliable analyses and valorization. The adaptation of the warehouse and office building erected in 1969 at 72 Jaracza Street in Łódź²⁵ for residential purposes ended with a complete reconstruction of the building by Bolesław Kardaszewski, from which only a reinforced concrete structural frame was left. A similar character was the transformation of the former A. Próchnik clothing factory building in Łódź for office purposes. The original building had an unusual functional arrangement forced by the small area of the

²⁰ Tostoes A., Ochrona dziedzictwa modernizmu – renowacja trzech arcydzieł architektury XX wieku, [in:] Modernizm w Europie, modernizm w Gdyni. Architektura XX wieku, jej ochrona i konserwacja w Gdyni i w Europie, ed. M. J. Sołtysik, R. Hirsch, Gdynia 2018, p. 136.

²¹ This mainly refers to late modernism, brutalism, structuralism an metabolistic tendencies in architecture.

²² Clarke N., Zijlstra H., De Jonge W., *Education for Adaptive Reuse – The TU Delft Heritage and Architecture Experience*, "Docomomo Journal" 2019, no. 3 (61), p. 70.

²³ de Jonge W., Myth and Metamorphosis: Aldo van Eyck's Orphanage (1960) in Amsterdam Restored, [in:] Metamorphosis. The Continuity of Change. 15IDC Conference proceedings, red. A. Tostoes, N. Koselj, Docomomo International - Docomomo Slovenia, Ljubljana 2018, p. 590.

²⁴ Ibidem, p. 592.

²⁵ Ciarkowski B., Bolesław Kardaszewski. Architektura i polityka, TAiWPN Univeristas, Cracow 2016, p. 59.

plot - in the 8-storey high part there were production halls, and in the multi-storey, extensive pavilion there were offices²⁶. The scope of reconstruction carried out in the years 2007-2009 changed both the layout of the body (liquidation of the low part of the object), the appearance of the elevation (replacement of concrete prefabricated elements and metal "razor blades" with composite glass) and the layout of the interior.

New function and scope of intervention

Examples of adaptations of the architecture of post-war modernism in Poland reveal a wide spectrum of concepts and strategies adopted by investors and architects. At the same time, despite the considerable diversity of typologies of the buildings themselves or the nature of the new function, they seem to confirm the hypothesis that the necessary condition is an in-depth analysis of the principles governing the original structure and the associated selection of a new use.

In 2009, the lower pavilion of the Warsaw Powiśle station was adapted for a café club. Erected in 1963 according to the design of Arseniusz Romanowicz and Piotr Szymaniak, the pavilion with a characteristic reinforced concrete husk-shaped cover in the form of a discus originally housed ticket offices. One of the authors of the adaptation project, Małgorzata Kuciewicz from the Centrala Design Group, described a number of problems that the architects had to face when they decided to transform a small facility into a catering outlet. The expansion of the space of the room was connected with the limitation of the size of the kitchen facilities. Moreover, only one toilet could be built, which resulted from the existing layout of the installations²⁷. Far-reaching transformations were impossible to implement, not only because of the designers' conviction about the necessity to limit the interference in the existing substance to a minimum, but also the limited budget. For this reason, the problem of draining rainwater from the roof basin remained unsolved²⁸. It is worth noting that many original technical solutions of the Warsaw-Powiśle station pavilion had to be replaced despite the architects' efforts. This was the case, for example, with the steel window joinery, which was made using the craftsman's method and turned out to be practically impossible to reproduce²⁹.

The conservative approach to the building from the first half of the 1960s presented by the designers from Centrala Design Group made Warsaw-Powiśle almost a document presenting the history of the building's transformation. Compared to it, the former suburban tram station in Łódź, dating back to 1952, is an example of a different strategy. Designed by Witold Wiśniewski and Roman Mann, the building was adapted in 2014 by Michał Winiarski to house

²⁶ Stefański K., Ciarkowski B., *Modernizm w architekturze Łodzi XX wieku*, Księży Młyn Dom Wydawniczy, Łódź 2018, p. 152-153.

²⁷ Fudala T., Archeologia modernistyczna. Rozmowa z Małgorzatą Kuciewicz (Grupa Projektowa Centrala), współautorką projektu renowacji i adaptacji dolnego pawilony stacji Warszawa-Powiśle, [in:] AR/PS Architektura Arseniusza Romanowicza i Piotra Szymaniaka, ed. G. Piątek, Centrum Architektury, Warsaw 2012, pp. 260-261.

²⁸ Ibidem, p. 261.

²⁹ Ibidem, pp. 261-263.

the Łódź District Chamber of Architects. A comprehensive renovation was carried out, while maintaining the original character of the building. Interestingly, "Architecture Station", because that was the name of the building, still fulfills its original function, and under the long roof connecting the glass pavilions occupied by Łódź architects, passengers waiting for streetcars protect themselves.

Maintaining the original function of the building seems to be a very desirable solution, but often impossible to achieve. It is worth noting at this point that often the introduction of a new functional program seemingly similar to the original one may lead to irreversible changes in the structure of the building and loss of its essential values. An example of such actions is the "Iwanowo" Cinema in Łódź, erected in 1975 according to Stefan Łobacz's project. The transformation of the detached building into a music club has resulted in a permanent transformation of the innovative internal communication system³⁰. Łobacz designed a layout similar to contemporary multiplexes, with a separate entrance and exit zone. Together with the change of the functional program, they were combined. The theater in Łask designed by Wiktor Jackiewicz met a similar fate. Realized in 1968, the small object was an example of innovative solutions in the sphere of relations between the spectator and the actor. In the hall on a hexagonal plan, a fixed multidirectional auditorium was designed, which, thanks to the movable seats, made it possible to observe events not only on the main stage, but also on the side stages³¹. Unfortunately, this innovative solution did not stand the test of time. Against this background, the "Kiev" cinema in Cracow seems to be a glorious exception, maintaining its original function. The building designed by Witold Ceckiewicz has not only been modernized and adapted to the expectations of contemporary users while maintaining the character of the body and the most important elements of interior design, but also the identity of the place is built based on its history.

New function vs. authenticity

One of the key issues in the process of adaptation of buildings is to adapt them to new functions while simultaneously preserving their authenticity. As already mentioned, the success of the whole process depends largely on the designer's awareness and the selection of an appropriate program.

In the years 2015-2016 architects from Grupa 5 Architekci studio (Roman Dziedziejko, Michał Leszczyński, Krzysztof Mycielski, Rafał Zelent, Rafał Grzelewski, Maciej Dudkiewicz) developed a project of adaptation of the building of the former art printing house in Łódź for the needs of a modern student house. The building was designed in the first half of the 1960s by Jerzy Brandysiewicz. Due to the extensive program and the small area of the plot, it was necessary to stack up the body of the building and change the production layout to vertical one. The printing house was closed in 2012, and the lack of ongoing renovations contributed to the gradual degradation of the architectural tissue. The building was not under conservator's protection, but

³⁰ Currently the building remains unoccupied and serves no function.

³¹ Szafer T. P., *Nowa architektura polska. Diariusz lat 1966-1970*, Wydawnictwo Arkady, Warsaw 1972, p. 115.

the G5A designers decided to incorporate a new, strictly defined functional program into the historical structure of the post-industrial building while preserving its unique values. Although the technical condition of some of the elements did not allow for their preservation and it was necessary to reconstruct and expand the object, the aesthetic consistency was maintained. The design assumptions emphasized the need to expose historical solutions important for the character of the former printing house, such as: "open plan of the first floor, unique load-bearing structure of the building, prefabricated elements of the elevation"³².

The positive reception of the G5A Łódź project is a proof that even functionalist buildings erected in the spirit of late modernism can carry new content and functions without losing their authenticity. At the same time, as emphasized by the creators of the adaptation of the old printing house, each object is a separate issue requiring the development of a proper strategy of action.

Unfortunately, it is still easier to list the realizations and projects that raise doubts and objections than the examples that are clearly positive. Such examples include, among others, the hospice created in in the former "millennium school" in Pojezierska Street, erected at the turn of the 1950s and 1960s by Tadeusz Herburt. The architect designed a structure consisting of interconnected pavilions of various forms adapted to the function (didactic, workshop and administrative part). It was directly conditioned by innovative, at that time, assumptions of the school curriculum³³. The transformation of the building for the needs of health care not only forces a complete change of the functional layout, but also a number of transformations of the building body - including the reduction of the amount of glazing.

In this light, the plans to adapt the Cracovia Hotel, one of the most outstanding examples of post-war modernism in Poland, for museum purposes, raise serious objections. A number of possible conflicts between the new function and form, resulting from the construction of the building (transverse load-bearing walls, typical storey height), among other things, make it difficult to believe the words of the Spanish architect Fernando Menis, who said that "in order for a building [Cracovia] to be flexible, little intervention is needed"³⁴.

Summary

"What causes degradation [of late modernist buildings - author's note] is not the material, reinforced concrete or their architecture. It is the surrounding aura", said Fulvio Irace during one of his lectures, describing the Vele di Scampia estate in Naples and pointing out the possibility of adapting a brutalist residential complex for luxury apartments or hotels³⁵. The understanding of the idea of late modern architecture and its origins seems to be a key condition for the process of adaptation to new functional programs without losing key values.

³² Klimczak D., Życie i przestrzeń. Grupa 5 Architekci, Grupa 5 Architekci, Warsaw 2018, p. 140.

³³ Stefański K., Ciarkowski B., op. cit., p. 152-153.

³⁴ Skolimowska A., *Muzeum Architektury w hotelu Cracovia*, "Architektura-murator" 2017, no. 7, pp. 22-23.

³⁵ Irace Fulvio, op. cit.

Rafał Zelent from G5A emphasizes that adaptation to new functions is the basis for work on monuments. Referring to the Cracovia Hotel and the office building of the PKP Construction Board in Cracow, he stated that "they should not become sarcophaguses, but should change as the times change [...] icons such as St. Stanislaw Kostka's Church in Warsaw or the Health and Safety Hall in the Gdansk Shipyard should be preserved in time by capsules, but most objects should change"³⁶. What is interesting is that the author of the designs of both buildings, Witold Cęckiewicz, expressed his interest in the planned adaptations, hoping that he will live to see the moment "when these buildings will fulfil their new functions"³⁷. After all, change is, as Alain Badiou stated, the driving force of modernity³⁸.



Fig. 1 A. Romanowicz, P. Szymaniak, , Lower Pavilion of Warsaw – Powiśle Train Station, Warsaw. Adaptation - Grupa Projektowa Centrala. (photo. B. Ciarkowski)

³⁶ Klimczak D., Życie i przestrzeń. Grupa 5 Architekci, Grupa 5 Architekci, Warsaw 2018, p. 131.

³⁷ Ibidem.

³⁸ Badiou A., *The Subject of Change: Lessons from the European Graduate School*, New York-Dresden 2012.

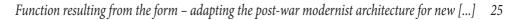




Fig. 2 W. Wiśniewski, R. Mann, Commuter Tram Station, Łódź. Adaptation – Michał Winiarski. (photo. B. Ciarkowski)



Fig. 3 J. Brandysiewicz, Printing House , Łódź. Adaptation – Grupa 5 Architekci. (photo. B. Ciarkowski)



Fig. 4 S. Łobacz, Cinema "Iwanowo", Łodź. (photo. B. Ciarkowski)



Fig. 5 T. Herburt, the so-called Millennium school in Pojezierska Street in Łódź, Łódź. (photo. B. Ciarkowski)

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