Interpenetration of the Architectural and Urban Realms in the Work of Architect Marek Budzyński

Krystyna Ilmurzynska 1

1 Faculty of Architecture, Warsaw University of Technology, Ul. Koszykowa 55, 00-659 Warszawa, Poland

Abstract. Prof. Marek Budzyński is one of the best renowned contemporary polish architects, well established among the polish architectural critic as “postmodern” and “green”. The aim of this research is a study of the interpenetration of architectural and urban design approaches in Budzyński’s work as its essential element. The research method involved analysis of Budzyński’s creations against the background of the ideas expressed in his theoretical contributions. The results of the research indicate that the architectural design of analysed objects follows the form of adjacent urban space that is essential part of every design idea. In addition, the internal structure of the analysed buildings is shaped analogically to the urban fabric. At the same time shaping the landscape seems to be as important as shaping the urban space in creating the forms of architecture. The references to traditional architecture and urban fabric are also substantial part of the researched design method. The observed features reflect the theoretical contributions formulated by Marek Budzyński. Fundamental concepts of Budzyński’s design ideas are: seeing an architectural creation as the medium of reshaping the timeless continuum of space, and understanding both a city and a building as an organism in which every part should be reconcilable with another as well as with the whole.

1. Introduction
Marek Budzyński is one of the best renowned contemporary polish architects. Although his work is characterized by the wide variety of design themes, Budzyński’ distinctive design approach is recognizable in each one of his creations. As an architect, he is well established among the polish architectural critic as “postmodern” and “green”. The main purpose of the article is to examine the interpenetration of architectural and urban design approaches in Budzyński’ work as its essential element, independent of the aesthetical features reflected in the described general view. The research method involved analysis of Budzyński’ creations against the background of the ideas expressed in his theoretical contributions. The article focuses on the realised architectural works of Budzyński: Ascension Church in Warsaw, Warsaw University Library, Highest Court in Warsaw (all with Z.Badowski), ‘Under the Birches’ housing estate (with U.Lewa and Z.Badowski), Podlasie Opera and Philharmony in Białystok and University Campus in Białystok (with K.Ilmurzyńska and Z.Badowski).

The distinguishing feature of the architects’ approach is his definition of sustainability in architecture: ‘reshaping the space for the needs of life’. Whereby the needs of life are considered as the natural living conditions as well as culture that according to the anthropological definition of B.Malinowski ‘comprises inherited artefacts, goods, technical processes, ideas, habits and values’ [1]. According to Malinowski [2] ‘the cultural need is the body of conditions, which must be fulfilled, if the community is to survive and its culture to continue’. The notion of preserving both nature and culture and
consequent contradictions of fight-cooperation, individual-collective and tradition-modern are the scope of the creative path of Marek Budzyński. He sees the architecture as the part of the continuous process of creation which comprises of two overlapping spheres: independent of man’s activity and happening with man’s participation. Searching for the harmony between these two spheres towards sustaining the conditions for life is the main objective of architecture, according to Budzyński. The described view on sustainability allows for the dynamic character of both nature and culture and occurrence of contradictions, therefore goes beyond the simple target of preservation. In the consequence the architect rejects purely ‘technorational’ approach [3], considering the intuition, heuristics and ‘teaching beyond words’ [4] as essential part of his work. Nevertheless Budzyński’s creations never contradict the technical and functional rationality, which can be contributed to the heritage of Warsaw school of architecture.

2. Theoretical contributions
Whereas the most renowned works of Marek Budzyński belong to the field of architecture, the architects’ theoretical contributions originate from urban planning. Subsequently his theoretical views have developed through the realm of architecture to the reflections on humanistic, social and theological dimension of spatial activities.

2.1. ‘Linear concentration’ (authors: M.Budzyński, K.Chwalibóg, J.Górnicki, J.Janczewski, A.Kiciński, A.Kowalewski, J.Rutkiewicz)
Within its general urban premises, the theory aimed to essentialize the relations between human activities and the urban structure and natural systems. The main structural idea consisted of the linear model of general development and the network models of local urban complexes, which later were referred by Budzyński as the cities within the city. The urban idea included the criteria of locating particular functions in particular spatial relations with other functions, urban fabric and the natural environment. The main objective was to create the sequences of complementary functions maintaining the urban and biological life.

2.2. ‘Group parcellation’
Whereas the ‘Linear concentration’ referred to the scale of the country and regional planning, the ‘Group parcellation’ theory focused on the spatial organisation of a city within the city. The general principle was to translate the social and administrative organisation into spatial structure. It featured four layers of urban structure. First of them was the division of the land into the parcels for the groups of maximum 1000 people which were meant to manage their space following the principles of direct democracy. The group of parcels was to form a self-governed urban commune. The interface between the individuals, the group and the commune translated into the main regulations of urban plan. The second layer was the network of urban belts which were the basis for technical infrastructure and communication. The network marked the boundaries of parcels. The third involved shaping the urban public space e.g. streets and squares within the chosen strings of urban network. The centripetal system of the main public space was to be formed by the regulations of the master plan involving frontage lines and the set of public and commercial functions. The fourth layer involved the green space system established on the part of the network and some of the parcels – forming parks, green avenues etc. The green space structure was to be centrifugal in order to create links with the external natural systems.

2.3. The diagram of a building in the city
By the way of elaborating on the idea of ‘Group parcellation’, the diagram addresses the issue of forming the architecture in relation to urban fabric so as to contribute the liveability of both the interior and the exterior space. It introduces the way to interpret every plot in the city in the context of contradictions of nature and culture as well as individuality and community. According to the diagram every building should border and build up two types of space. First is the urban public space – street or square – constituting the space of culture and communication. It is walled by diverse closed forms of
buildings which create the unity of multiplicity. Identification of the space is possible through unambiguity of diverse spatial forms, their plurality and multiple functions in the spatiotemporal order which is the very meaning of the street. These features combined with the symbiosis of pedestrian, cyclist and motor calmed traffic create the open public space symbolizing the democracy and challenge. Therefore, the very meaning of the public space is integration and local generation of social capital. The second type of space is the space of the isolation and links with nature. It involves the social space of the courtyards and neighbourhood as well as the building shell that synergizes with biosphere. The very meaning of this space are small-scale developments aimed at reinforcing the natural systems especially in the field of photosynthesis and fighting air pollution, local acquisition of renewable energy and water management all of which contribute also to the development of culture and social capital. The architecture of the buildings bordering this type of space is featured by the diversity of forms open to unity with nature. The internal space of the building is the space of the links between nature and culture. The building itself is meant to be the space fit for the purpose of human life, aimed at the closed cycle of use and reproduction or at closing that cycle within the city.

2.4. The basic architectural features

The interpretation of the above described diagram in the forms of the public buildings of Warsaw University Library and Highest Court in Warsaw resulted in the conceptualization of the basic architectural features, that can be called the architectural programme of Marek Budzyński. The architectural programme was later elaborated in the projects of Podlasie Opera and Philharmony in Białystok and the Campus of the University of Białystok. Called by the author ‘the features of the space reshaped with my participation’ involve:
- determining the climate of the space accordingly to its function
- emphasizing the distinguishing features in harmony with the surrounding
- adjusting the structure to the objective standards like psychophysiological characteristics of man, circulation, sense of direction, relationship between space and building elements: structure, lighting, isolation, mechanical systems etc.
- speaking the language of simple symbols

The latter includes:
- the letters as an ornament and the medium to convey universal values
- the greenery as individual architectural detail and the medium to convey the value of symbiosis of human and nature
- quotations from architectural tradition
- symbolic elements like the sign of the times and figurative art referring to the human figure and nature, bringing about the reflection on the human condition.

2.5. The ‘God’s particle’

The idea emerges from the belief that the faith in God and living in the community are the permanent human condition. They emerge from the continuity of God’s creation from the oneness of the spirit, energy and matter, that is ‘God’s particle’. Every human being consists of no end of such particles which create the internal infinity of every person. The internal infinity of every person determines the equality before the God. The human being is an organisation of interrelated elements which constellate in both hierarchical and network manner. Every person is a part of community. The cooperation for common safety and struggle for domination are the natural processes in the community. This translates in the administrative and political structure. Although the idea has been formulated about 2010, its general assumptions underpin all the projects and theoretical contributions of Marek Budzyński. [5]

3. Shaping the urban space

The idea of shaping the urban space as one of the main objectives of architecture was introduced in Budzyński’s theoretical approach as soon as in “Linear concentration’. The study described architecture as ‘not only an art of shaping the building but a complex process of spatial organisation based on the state of the art social and life science and technique’. This premise essentialized during design work on the large housing estate Ursynów Północny in Warsaw (M.Budzyński, J.Szczepanik-Dzikowski, A.Szkop, 1971-1978) when designers poetical vision of buildings which ‘do not dominate the space but become its integral part and shape it along with the greenery, terrain, people, air and light’ clashed with rigid constraints of mass prefabrication. As Marek Budzyński has put it ‘all the systems aimed to form specified building while we tried to develop these systems in order to form specific urban space’. The statement describes the pursuit to reconcile the aims of spatial creation and technical rationale visible in the later designs.

The reciprocity of architecture and urban demonstrates itself in two aspects. First is the spatial form accompanied by the functional structure. For example, the Ascension Church walls the main square (figure 2) and the more secluded ‘parish’ square at the side of the main building. The main axis of the church continues outside as the urban axis and the main entrance is the key element of the public space on the main square. The ‘parish’ square clusters side entrance to the church and the entrances to the parish offices and social spaces. The residential buildings flanking the main square are the literal interpretation of the diagram of a building in the city. Their architecture is subordinated to the aim of shaping the living public space at the one side and the green neighbourhood at the other. The same objective is present in the ‘Under the birches’ (Pod Brzozami) housing estate in Warsaw (figure 3). The central space of the Campus is the Unity of Sciences Square (Plac syntezy nauk) walled by four portals of the faculty buildings (Maths and Informatics, Physics, Biology and Chemistry). The forms of the buildings are determined by the shape and symbolism of the university public space. The entrance halls of the buildings are linked to the space of the square as all the entrance axes cross in the centre at the sculpture of ‘Big Bang’ (which can be also seen as the notion of ‘God’s particle’). At the back side the entrance halls open to the green courtyards which are linked to surrounding woods. The courtyards constitute the bound with biosphere and offer an opportunity of isolation in nature for students.
Figure 2. The square and the Ascension church in Ursynów Północny in Warsaw. Photo Krystyna Ilmurzyńska

Figure 3. The ‘Under the Birches’ housing estate in Warsaw. Photo Krystyna Ilmurzyńska
Another example of creating architecture by the urban objectives are the Warsaw University Library in Warsaw and Podlasie Opera and Philharmony in Białystok (figure 5). Both buildings form the
frontage wall on the outside bend of the street, which underpins the meaning of their facades. The secondary public space is created inside the buildings. It resembles nineteenth-century arcades and its shape is formed by continuing the paths from the exterior urban structure. The main façade of the Opera as well as the space of the foyer recreate the directions of the old urban fabric that was destroyed during the war and replaced by the park. The form of the curved colonnade allows to deliver continuity of the urban space while maintaining the links with the park.

The second aspect bounding the architecture and urban in Budzyński’s work is the symbolism of the facades that strongly influences the adjacent public space. This feature is distinctive for the architect and underpins his reputation of ‘postmodernist’. Nevertheless, the formal symbolism of the facades of Ascension Church and the Warsaw University Library as well as the portals of University Campus in Białystok is strictly bound to their role in creating the specific public space.

4. Shaping the interior space

As stated above, the interior space of the building is strongly interrelated with the external space. However, according to the diagram of a building in the city, buildings should keep their unambiguous specific ‘closed’ forms while forming an open public space. At the same time the internal structure of the buildings designed by Marek Budzyński resembles the one of a city, with the network of common spaces and specific rooms analogical to the buildings.

The way of composing the structure can be defined as the classical logic. It is visible in the plan of Highest Court in Warsaw that was praised by H.Drzewiecki for its ‘strict logic and transparency of spatial arrangement’ which create ‘self-existent cohesiveness and compositional unity but also fitting into the public space’ [6]. The inner structure of Podlasie Opera and University Campus in Białystok shows resemblance to the Nolli’s plan of Rome. The corridors and foyers resemble streets and squares while significant rooms like opera hall or auditoriums are closed architectural compositions like the public buildings depicted by Nolli (figure 6). This principle follows the footsteps of structuralism [7], however it is differentiated by treating the structure as a framework for a closed, hierarchical form.

Figure 6. The plans of Podlasie Opera in Białystok (on the left) and the University Campus in Białystok (on the right). Authors: M.Budzyński, K.Ilmurzyńska, Z.Badowski
The coexistence of the network and hierarchical systems is evident in the Warsaw University Library (figure 7). The inner space of the building permeates with the exterior through the inner street that is part of the urban network. The entrance to the library from the inner street is the portal to the temple of knowledge, modelled on the propylea. The main library hall is formed basing on symmetry and verticality, thus conveying the air of sacrum. Meanwhile the surrounding library spaces are the ‘city of books’ formed by the bookshelves and worktables ordered by the democratic open network manner. Another example is foyer of Podlasie Opera, where the irregular columns layout is modelled by the forest pattern. In the vicinity of the main entrance columns layout changes to form symmetry of the entrance axis. The internal structure in the described buildings is a mixture of modern rationality and openness and the classical order. The neutral column grid layout transforms locally into the significant fragment of space following the classical patterns of colonnades, propylaea or the aisle. Additionally the meaningfulness of that fragment of space is enhanced by the symbolical elements.

5. Reference to the landscape
The importance of the landscape and greenery is another distinguishing feature of Budzyński’s works. His attitude is often read as ‘eco-aesthetic’ because of the use of plants as an architectural dominant or a detail. Thus the goal of sacralisation of nature is achieved. The nature is perceived by Budzyński as an universal value, as is expressed in the idea of Podlasie Opera. Referring to the complex history of the place, the garden on the highest roof of the building is meant to ‘brood the bound of nature and culture over the contradictions of outlooks’. The garden becomes the cresting of the shrine of nature and culture according to the project idea. In most cases the green space is allowed for on the same terms as the urban space following the diagram of a building in the city. The two most distinctive examples are the Warsaw University Library and Podlasie Opera in Białystok. The gardens on their roofs are integral part of the parks on the ground and form the space linking nature and culture.

Another example of incorporating nature into the architecture are the housing complexes at the church square in Ursynów and ‘Under the Birches’ estate as well as University Campus in Białystok. The form of the buildings is ‘spontaneously shaped by an accident resulting of the internal functions’. That
architectural approach, accompanied by the use of climbers, is aimed at interfering with the natural organicity and the informal lifestyle in the space of green courtyards. The reference to nature is also present in shaping the internal space by the way of creating the ‘internal landscape’. This is achieved by employing the natural spatial patterns like a forest in the foyer of Podlasie Opera or a gorge in the internal street in the Warsaw University Library (figure 8).

Figure 8. The Podlasie Opera (on the left) and the Warsaw University Library (on the right). Photo K. Ilmurzyńska

6. Reference to tradition
As the analysis of the Marek Budzyński’s architecture indicates, the references to the architectural tradition are the essential means to deliver intended spatial qualities. This feature origins in several presumptions. First of them is the perceiving the forms of traditional city and historical architecture as the appropriate spatial means to fulfil human needs both in terms of social and individual well-being. The traditional forms are seen as part of the long lost ideal of integrity between form, function, society and human being.

The second premise is the heritage of the history and hand drawing teaching at the Faculty of Architecture of the Warsaw University of Technology. As Marek Budzyński describes it ‘fast synthetic redrawing of the photos, plans and sections of historical objects are the perfect means to enter the established relations of man and spatial forms into one’s subconsciousness’. This translates into the hand drawing which is the basic tool of Budzyński’s design workshop: ‘during design process the relations occur between the hand, awareness and subconsciousness which enable tangible and creative way forward for sustaining the life in the space’ [8]. This is probably the essential explanation of translating the premises of the architect into the traditional spatial forms.

The third circumstance is the architects’ fascination with the ancient architecture especially with the way its ruins are inhabited by nature. The ruins of Roman and Egyptian temples overgrown by vegetation or half buried by the sand, as depicted by Piranezi and Rupert Graves, as well as the ruins of Machu Picchu covered with vegetation are mentioned by the architect as his very inspirations. Consequently, it is hard to separate the inclination for traditional features from the pro-ecological
approach in Budzyński’s work. The two are closely related in the vision of symbiosis between culture and nature based on the ‘permanent decay’, which resembles the nineteenth century romantic gardens rather than antiquity.

The last premise also underpins the bond between the tradition and nature. It is the vision of essence of the polish culture as the fascination with classical heritage and with natural landscape perceived both as native and ruderal vegetation.

7. Results and discussions

The research method involved analysis of Marek Budzyński’ creations against the background of the ideas expressed in his theoretical contributions. The results of the research indicate that the architectural design of analysed objects follows the form of adjacent urban space that is essential part of every design idea. In addition, the internal structure of the analysed buildings is shaped analogically to the urban fabric. It is structured using the network and hierarchical patterns according to the intended atmosphere of the space. At the same time shaping the landscape seems to be as important as shaping the urban space in creating the forms of architecture. The references to traditional architecture and urban fabric are also substantial part of the researched design method. The use of the citations from the architectural tradition and incorporation of the nature into the built environment are the means of achieving the ideological goals formulated by the architect.

One could say, paraphrasing T.Avermeate [9], that relation between architecture and urban is based on ‘relative autonomy’. Whereas we can track ‘structural causality’ between building and the public space, both have their ‘relative autonomy’ consisting in their own rationality and qualities. Moreover, ‘each of them has its singular rhythms of development intrinsic to itself, such that the formation of a practice is always ‘unevenly developed’, always a complex constellation of multiple contradictions’. Resulting of this processual understanding of architecture are the fundamental concepts of arch. Marek Budzyński’s design ideas: seeing an architectural creation as the medium of reshaping the timeless continuum of space and understanding a building as a part of urban organism, where every part should be reconcilable with another as well as with the whole.

References

[1] Richards A.I. “The Concept of Culture in Malinowski’s Work”. in: Firth R. (ed.) Man and Culture: an evaluation of the work of Bronislaw Malinowski. Routledge & K.Paul, pp.15-32, London, 1957.
[2] Malinowski B. “Culture”. Encyclopaedia of the Social Sciences. Vol iv, pp. 621-46, New York, 1931
[3] Guy S., Framer G. “Reinterpreting Sustainable Architecture: The Place of Technology”. Journal of Architectural Education 54/3, pp.140-148, 2001
[4] Shibayama Z. “A flower does not talk : Zen essays”. C.E. Tuttle Co, Rutland, Vt., 1970.
[5] Drapella-Hermansdorfer A., J.Ways “Concept of ‘The God particle’ in design work of Marek Budzyński” in: NORDSCI Conference on social sciences 2018, 17-10 July 2018, Vol. 1, 13-20 pp
[6] Drzewiecki H. „Poetyka porządku”, Magazyn Budowlany 2/2000 pp.12-15 (in Polish)
[7] Herzberger H. “Open systems” in:Valena T.[ed.] Structuralism Reloaded. Rule-Based Design in Architecture and Urbanism, Edition Axel Menges, Stuttgart/London, 2011 pp.168-177
[8] Budzyński M. „Rysunek odręczny jest językiem” in: Orzechowski S. [ed.] Rysunek. Zmysł architektury, Bluebird, Warsaw, 2014 pp.22-27 (in Polish)
[9] Avermeate T. “The socius of modern architecture. Spatializing the social and socializing the spatial in CIAM and Team 10” in: Nageli W., Tajeri N. (ed.) Small interventions. New ways of living in post-war modernism, Birkhauser, Basel 2016, pp.31-32