

# ARCHITECTUS

No. 1(31)

2012



## Contents

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Krzysztof Hejmej, <i>Sacrum under the blue sky</i> . . . . .	3
Małgorzata Milecka, <i>The Cistercians large-scale water systems</i> . . . . .	13
Hanna Golasz-Szołomicka, <i>Tracery windows from the 14<sup>th</sup> century in Silesia</i> . . . . .	21
Bożena Grzegorzczuk, <i>The operations of building companies in Wrocław in the 2<sup>nd</sup> half of the 19<sup>th</sup> century</i> . . . . .	35
Elżbieta Trocka-Leszczyńska, Agnieszka Tomaszewicz, <i>The urban transformations of the health resort in Łądek Zdrój before 1945</i> . . . . .	43
Monika Ewa Adamska, <i>The layout of the municipal cemetery in Opole Półwieś in Gustav Allinger's projects</i> . . . . .	53
Justyna Kleszcz, <i>The route of wooden churches in Olesno County – a sketch</i> . . . . .	63
Tomasz Kruszewski, <i>The symbolic motifs in contemporary architecture of libraries – most frequent trends</i> . . . . .	75
Michał Dębek, <i>Are assessment and emotions connected with a building conditioned by its external appearance? Attitudes towards formally differentiated architectural objects</i> . . . . .	83
Michał Pelczarski, Zdzisław Pelczarski, <i>EURO 2012 Enterprise – attempt at assessing the achieved architectural and structural effects</i> . . . . .	95
Joanna Krajewska, <i>Dialectics of locality and globality of contemporary architecture</i> . . . . .	109
Wojciech Januszewski, <i>Between Europe and the East – draft on architectural landscape of Bucharest</i> . . . . .	117
Barbara Misztal, <i>Dynamic parameters of the free vibrations of various wood species</i> . . . . .	125

## Presentations

Izabela Cichońska, Jacek Kotz, Roman Czajka, <i>Intrigue of Infinity on the Border of Two Worlds on the basis of 'The Street of Crocodiles' by Bruno Schulz, i.e. a metaphor of Bruno Schulz's prose in Izabela Cichońska's concept</i> . . . . .	129
Adam Stafiniak, <i>The complex of monastic buildings with St. Michael the Archangel Orthodox Church in Jarosłówka</i> . . . . .	133
Karolina Jaklewicz, <i>Re: WUWA by Maria Kiesner</i> . . . . .	139

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Krzysztof Hejmej, <i>Sacrum pod nieboskłonem</i> . . . . .	3
Małgorzata Milecka, <i>Wielkoprzestrzenne układy wodne cystersów</i> . . . . .	13
Hanna Golasz-Szołomicka, <i>Maswerkowe okna z XIV wieku na Śląsku</i> . . . . .	21
Bożena Grzegorzczak, <i>Działalność wrocławskich spółek budowlanych w II połowie XIX wieku</i> . . . . .	35
Elżbieta Trocka-Leszczynska, Agnieszka Tomaszewicz, <i>Przekształcenia urbanistyczne uzdrowiska w Łądku-Zdroju do roku 1945</i>	43
Monika Ewa Adamska, <i>Założenie urbanistyczne cmentarza komunalnego w Opolu Półwsi w projektach Gustava Allingera</i> . . . . .	53
Justyna Kleszcz, <i>Szlak kościołków drewnianych w powiecie oleskim – szkic</i> . . . . .	63
Tomasz Kruszewski, <i>Motywy symboliczne współczesnej architektury bibliotek – najczęstsze tendencje</i> . . . . .	75
Michał Dębek, <i>Czy o ocenie i emocjach związanych z budynkiem decyduje jego wygląd zewnętrzny? Postawy wobec zróżnicowanych formalnie obiektów architektonicznych</i> . . . . .	83
Michał Pelczarski, Zdzisław Pelczarski, <i>Przedsięwzięcie EURO 2012 – próba oceny osiągniętych efektów architektoniczno-konstrukcyjnych</i> . . . . .	95
Joanna Krajewska, <i>Dialektyka lokalności i globalności architektury współczesnej</i> . . . . .	109
Wojciech Januszewski, <i>Między Europą a Wschodem – szkic o krajobrazie architektonicznym Bukaresztu</i> . . . . .	117
Barbara Misztal, <i>Parametry dynamiczne drgań swobodnych różnych gatunków drewna</i> . . . . .	125

## Prezentacje

Izabela Cichońska, Jacek Kotz, Roman Czajka, <i>Intryga Nieskończoności na Granicy Dwóch Światów w oparciu o „Sklepy cynamonowe” Brunona Schulza, czyli metafora prozy Brunona Schulza w ujęciu Izabeli Cichońskiej</i> . . . . .	129
Adam Stafiniak <i>Zespół budynków monasteru wraz z Cerkwią Św. Archaniola Michała w Jarosławcu</i> . . . . .	133
Karolina Jaklewicz, <i>Re: WUWA</i> . . . . .	139



Krzysztof Hejmej\*

## *Sacrum under the blue sky*

In 2002 the 8<sup>th</sup> and last Apostolic journey to Poland of Pope John Paul II took place. For the arrival of the Pope almost 60 papal altars were built in different towns and different regions of Poland. By *the papal altar* we should understand an architectural structure with a sacral and temporary character and whose central element constitutes the altar – sacrificial table, which is built in order to celebrate the Eucharist with the participation of the Pope during the Apostolic journey in a given country. Histories of the papal altars, in particular towns, which were built in the years 1979–2002, ended along with the end of the papal visits. In order to commemorate pilgrimage ceremonies, here and there – at the places of their performance – crosses were left<sup>1</sup>. Other tokens such as sacrificial tables were given to newly erected churches, papal thrones found their places in museums<sup>2</sup>, whereas many sculptures and paintings were used as interior decorations in churches. It also happened that the designs of some papal altars were used during constructions of new structures, e.g. chapels<sup>3</sup>. However, the papal altar was assumed to be a temporary structure and was supposed to have a motto of the papal pilgrimage by means of its form full of expression as well as to create a unique and exceptional climate of the meeting with the Pope – becoming ‘a temple of one day’.

Considering the issue of papal altars we are faced with the notion of a phenomenon in three dimensions: spatial and temporal, symbolic, and cultural:

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<sup>1</sup> For example, in Krosno, Elk, Białystok, etc.

<sup>2</sup> For example, in Stary Sącz, in the room under the main podium of the papal altar, a museum of souvenirs connected with the stay of Pope John Paul II in Stary Sącz was built.

<sup>3</sup> For example, in Zakopane the papal altar was reconstructed in this room and situated in Our Lady of Fatima Sanctuary in a smaller scale. At present, it serves as a chapel for pilgrims and visitors.

1. The phenomenon of altars in the **spatial and temporal** aspect – the papal altar was designed for a particular ceremony with the participation of the Pope, for one day and in natural surroundings.

2. The phenomenon of Polish papal altars owing to **a rich formal message of symbolic contents**. Despite its temporary usage the designers managed to create the works with a deep symbolic meaning that remained in the awareness of the celebration participants for a very long time.

3. The phenomenon of Polish papal altars with regard to the culture of a particular region and values cherished by a local population – **new pilgrimage centres**.

The first phenomenon is strictly connected with the second one. The papal altar was assumed to be a temporary structure – designers expressed religious ideas by means of architectural methods and with the use of cultural codes characteristic of a given region in an expressive and emotional way.

Analysing the solutions of papal altars from various regions of Poland and the whole world, we can observe the existence of some elements which are permanent in space – architectural and urban elements. They include as follows:

- papal altar – ‘stage’ – its architectural form is a dominant of the spatial structure and sectors for pilgrims along with approach roads

- sectors for pilgrims – ‘audience’ – usually designed on the amphitheatric plan between roads going radially from the altar and strategically combined with the urban structure of the town.

The papal altar and sectors for pilgrims create a material temple under the blue sky – a temple erected for a particular celebration with the Pope’s participation. On the basis of many scientific studies we can conclude that certain compositional elements in a Christian temple as regards their meaning possess the features which are common for



Fig. 1. 'Holy Mount' – the papal altar in Sosnowiec, 1999. The view at night. Designed by AiR Jurkowsky-Architects (photo: R. Jurkowski)

Il. 1. 'Święta Góra' – ołtarz papieski w Sosnowcu, 1999. Widok w nocy. Proj. AiR Jurkowsky-Architekci (fot. R. Jurkowski)

many religions. They are, among other things, an elevated sacrificial altar – Holy Mount (Fig. 1); a holy area, *sacrum* and *profanum* zone – the temple exterior and interior; cosmos, the Universe – the vault of the temple; the axis of the world (*axis mundi*) – vertical elements of the temple, e.g. a tower<sup>4</sup>. In accordance with the studies by M. Eliade, we can conclude that sacral architecture takes up and develops a discussion about cosmological symbolism. The sacral space experience enables a religious human being 'to set up his/her own world' at the place where sacrum is manifested in space<sup>5</sup>. Therefore, the universe finds its symbolic equivalent in the vault of the temple while the earth can be seen in the foundation of the temple and its supporting structure, i.e. columns and walls [4], [11]. The papal altar with its surroundings, namely pilgrims and the open space, create a natural temple.

<sup>4</sup> Cf. [2].

<sup>5</sup> Cf. [1].

## Inspirations

Following the conversations of the author with the designers of papal altars from various parts of Poland, it appears that the creation of the symbolic altar form was influenced by the following factors:

- firstly: a pilgrimage motto – the Pope's message
- secondly: traditions of a given region – the symbol of a place
- thirdly: an emotional attitude towards the Pope – a Pole.

Carrying out the analysis of papal altars, which were built in the years 1979–2002 in Poland, we can state that there are two groups of papal altars:

1. Altars – symbolic forms [10], presented religious and non-religious contents in a metaphorical way; in order to achieve this goal, designers employed architectural methods entering into a 'dialogue' with the imagination of a spectator–pilgrim at the same time. Doing this, they referred to traditions of a given region [6, p. 51].

2. Altars – symbolic decorations, conveyed symbolic contents in a literal and direct way by means of artistic compositions. Their characteristic feature was a certain kind of typification – in most cases there were no references to local or regional traditions.

## Altars – symbolic forms

A perfect example of conscious cooperation between a designer, investor and contractor constituted papal altars of the 1990s. – in particular the papal altar in Zakopane (1997), Ludźmierz (1991) as well as most of the altars built on the occasion of the Pope's 7<sup>th</sup> pilgrimage to Poland in 1999. It must be emphasized that as part of the trend of such altars-symbols there are also altars which were built in two opposite regions of Poland: the altar-shepherd's hut in Nowy Targ (1979) as well as the altar-boat built in Gdańsk (1987). The former became an inspiration for designers of papal altars in the Karpaty region: in Ludźmierz, Zakopane and Stary Sącz in the years 1991–1999. The symbolism of the altar whose author was Tadeusz Jędrzyński, an architect, referred to traditions of the Podhale region – formally expressed in the form of a shepherd's hut. Sectors for pilgrims around the altar were designed for about 400 thousand persons in the territory of an airport. The whole complex – the papal altar

and sectors for pilgrims were built within ten days only<sup>6</sup>. An integral part of the main celebrations was a musical and vocal programme<sup>7</sup> which when combined with the spatial composition of the papal altar in the Podhale style constituted a comprehensive work which showed the culture of this region. Eight years after the first Apostolic visit in 1987, the next great work of sacral architecture was built – the work of 'one day'. It was the altar-boat made in Gdańsk Zaspą – a residential district, whose originator and partly performer was Marian Kołodziej – a remarkable theatrical set designer. The author included many meta-

<sup>6</sup> There were eight persons involved in the process of erecting the altar – carpenters from nearby villages, whereas other works were done by 50 to 60 workers. As many as 3000 Mountaineers performed as security service in the sectors during the ceremony.

<sup>7</sup> Performed by Mountaineers dressed in regional clothes and the mixed choir consisting of 400 singers. Cf. [5, pp. 153–156].



Fig. 2. The papal altar in Gdańsk, 1987. Designed by M. Kołodziej  
(photo: archives M. Kołodziej)

II. 2. Ołtarz papieski w Gdańsku, 1987. Proj. M. Kołodziej  
(fot. z archiwum M. Kołodzieja)

phors in his concept [7]. The altar-boat – and more precisely, the altar-Galleon (Fig. 2) as it was called then – was a metaphor of the Church as a community of believers. The scaffolding at the back and on both sides of the altar was supposed to illustrate the Church which is still under construction. This idea also referred to the character of the ceremony with the participation of the Pope, which was celebrated on behalf of working people. The symbolism of the altar also referred to the place – the city of Gdańsk, a coastal region, its history and traditions. The designer – with spatial intuition typical of a set designer – excellently adjusted the whole altar scale to the size of the square, blocks of flats, a distance from the remotest participant to the Pope<sup>8</sup> who stood or sat on the throne behind all altars. According to the author's words, the residential district also acquired something metaphysical thanks to this scale. The whole complex was designed in such a way so that it could bring about a theatrical effect. And it really happened so. The altar composition was surmounted by three massive metal crosses-masts<sup>9</sup> which came from three various points and at the top they formed a compact structure of the Monument to the Fallen Shipyard Workers of 1970 – a characteristic symbol of Gdańsk. On the extensions of the cross arms on upper yards there were two white-red and one white-yellow standards as well as two flags – the papal and Gdańsk – which at a height of 40 meters were moved by means of winds and in this way they made the impression that the whole altar-galleon was in motion. This effect was additionally reinforced by clouds passing in the sky. The pilgrims who gathered in the square participated not only in *misterium*

<sup>8</sup> About one million people were expected to gather at the square. Cf. [6, pp. 54–57].

<sup>9</sup> Masts were 39 meters in height, so they were higher than the tallest 10-storey block of flats in this area.

but also in *spectaculum*. Marian Kołodziej also designed the papal altar in Sopot in 1999. The architectural design was prepared by Gdańsk architects: Małgorzata Kruszko-Szotyńska, Szczepan Szatyński and Leszek Zaleski. The altar was supposed to be located in the area of Sopot horse racing. The main element of the altar and at the same time the background for the Pope's throne was a cross and sacramental bread made of resin and fixed on aluminium constructions – the whole structure was 23 meters high. A symbol of God in the Holy Trinity dominated above the altar. The altar composition was complemented by wooden sculptures and crosses, which were made by folk artists according to Marian Kołodziej's designs. The sacrificial altar at which the Pope celebrated the Holy Mass was built at a height of eight meters above the ground level. The designer of the altar concept also took into account the fact that the Pope was going to look at the altar from the bird's eye view. Therefore, he designed it in such a way so that from above it reminded a dove – a symbol of the Holy Spirit (Fig. 3).

Among altars – symbolic forms located in the area of Northern Poland the following altars are worth mentioning: in Pelplin, Elbląg, Ełk, Drohiczyń, which were made on the occasion of the Pope's 7<sup>th</sup> pilgrimage to Poland. The papal altar in Pelplin was designed by the sculptor Jarosław Wójcik from Sierakowice. The message of the pilgrimage *God is Love* could be read in the altar's composition whose basic element was a steel construction – fishing nets pulled out by two birds situated at the height of over 20 meters. In this way, the author made a reference to the teaching of Christ about the Kingdom of God. An integral part of the composition was sacramental bread ten meters in diameter which was situated behind the Papal throne and a monumental cross 33 meters in height. The altar was made in Elbląg in the area of Aeroclub and designed by a design team under the guidance of the architect – Professor Szczepan Baum. In the centre of the whole

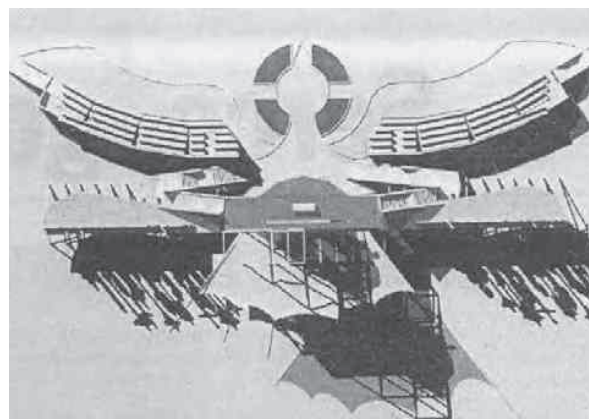


Fig. 3. The altar in Sopot, 1999. Bird's eye view, graphics.  
Designed by M. Kołodziej

II. 3. Ołtarz w Sopocie, 1999. Widok z lotu ptaka, grafika.  
Proj. M. Kołodziej



Fig. 4. The altar in Elbląg, 1999. Visualisation.  
Designed by prof. S. Baum

Il. 4. Ołtarz w Elblągu, 1999. Wizualizacja.  
Proj. prof. S. Baum

complex there was a burning heart – a symbol of love, and a papal throne (at the height of 11.4 meters above the ground level), which were surrounded by wooden poles made of laminated timber in the form of hands in an adoration gesture (Fig. 4). The whole complex was covered by a roof in the form of a tent with a cross at the top. In the altar symbolism the author also referred to the celebration of 1000 years of St. Wojciech's (Adalbert) mission and death and by means of wooden ribs he referred to the boat construction. A scene from St. Wojciech's life was presented on the sacrificial altar made of natural stone, whereas the theme of water and St. Peter's boat constituted the central idea of the papal altar designers in Elk – architects Witold Kowalczyk and Dariusz Jackowski. The altar blended in with the background while it was situated on the main gathering site. The background constituted the 19<sup>th</sup>-century downtown development, a Diocesan house and a dominating neo-Gothic tower of St. Wojciech Cathedral, the patron of Poland and Elk Diocese. From the papal platform the Pope could look at the river flowing in front of the altar. The altar roof symbolised a boat platform of St. Peter of our times, which crashed the waves made by means of side roofs. The pulpit was situated on a fragment of the altar platform sticking out in the form of a boat bow. According to Robert Łucka's solution, the architect and manager of the project, the altar in Drohiczyń referred to the ecumenical meeting in this town and at the same time it emphasised the character of the place – Podlasie Region where there are various religious denominations. A broken cross – a dominant of the altar architectural composition – symbolised divisions existing in Christian churches. The symbol of their common faith in Christ was the figure of the Crucified which connected two parts of the cross and St. Peter's fisherman's nets around the cross (Fig. 5). On the sides of the cross there were paintings which presented various religious denominations of Podlasie Region.

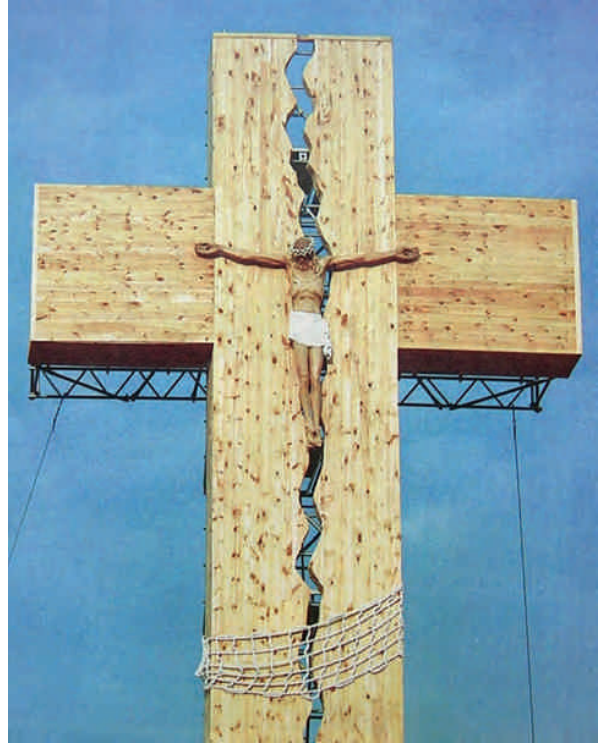


Fig. 5. The papal altar in Drohiczyń, 1999.  
Designed by arch. R. Łucka with team (photo: R. Łucka)

Il. 5. Ołtarz papieski w Drohiczyń, 1999.  
Proj. arch. R. Łucka z zespołem (fot. R. Łucka)

Papal altars of Podhale region in Ludźmierz (1991), Zakopane (1997) as well as in Stary Sącz – during John Paul II's 7<sup>th</sup> pilgrimage to Poland – turned out to be a phenomenon which was very similar to the one in Gdańsk Zaspą in 1987. Although these altars<sup>10</sup> were built in the regions with different traditions and natural conditions, their common idea became a method of designing space so that the pilgrims could participate not only in misterium but also in spectaculum. The papal altar in Zakopane, whose originator was the architect and sculptor Marek Szala<sup>11</sup>, became the form – symbol equally combining a symbolism of the place as well as the general motto of the pilgrimage<sup>12</sup>. A wooden form of the papal altar symbolized a shepherd's hut (the symbol of the place) and it also referred to Jesus' work on Earth – Shepherd of the Sheep Flock. The saving mission of Christ was presented figuratively on the sculptural decoration – referring to the Biblical 'Jacob's ladder' – blending with the front façade of the altar. Three elements in the spatial composition of the altar referred to the person of Christ: a sacrificial altar, sculptural decoration and a wooden openwork cross. The vertical and symmetric composition of the altar 'strengthened' by a perpendicular, central sculptural decoration

<sup>10</sup> i.e. in Gdańsk and in the Karpaty region.

<sup>11</sup> The architectural and building design was elaborated by architect Zbigniew Śliwiński.

<sup>12</sup> The pilgrimage motto in 1997 was the following: *Christ yesterday, today and forever.*



Fig. 6. The papal altar in Gliwice, 1999. Designed by prof. A. Lisik, visualization archives A. Lisik

Il. 6. Ołtarz papieski w Gliwicach, 1999. Proj. prof. A. Lisik, wizualizacja z archiwum A. Lisika

division, which was led above the altar roof where it changed to the form of a sculptured cross was intended to emphasise this idea. According to the designer's assumptions, the altar roof form – the basic compositional element – which constituted the vertical axis was supposed to make the impression of lightness and at the same time of solemnity and monumentality. During the celebration with the Pope's participation, an integral part of the compositional entirety was a white ribbon which served as a way of connecting the papal altar (from the sacrificial table) with the cross placed on the ski jump against the background of mountains and forests. The papal altar surrounded by mountains as well as the vocal-musical programme performed by the Polish mountaineers called *Górale* dressed in original clothes created a spectacular. Similar conditions were in *Ludźmierz* and *Stary Sącz* where the only differences referred to the form and consisted in another way of symbolic values transfer.

Apart from the aforementioned *Podhale* and *Pomerania*, one of the most characteristic regions in Poland is the region of Upper Silesia. The papal altars of this region – in *Sosnowiec* (1999) and *Gliwice* (1999) – contained a deep significance. In a symbolic way, their form referred to the pilgrimage motto which was expressed by means of constructions and materials characteristic of this region.

The motto of the 7<sup>th</sup> pilgrimage to Poland *God is Love* found its particular expression in the realisation

of the papal altar in Gliwice. The moment of man's creation, which is the act of Divine love, as presented on the Michelangelo mural in the Sistine Chapel became the main inspiration for the altar design team whose manager was the architect, Professor Adam Lisik. The motif of extended hands of God and man – Adam found its formal presentation in the form of two spatial braced-rib arches<sup>13</sup> leading to each other from the podium basis without connecting each other. According to Professor A. Lisik, a free space between arches symbolised the area of freedom which was given to man by God<sup>14</sup>. The massive, 10 meters in height podium of the altar reinforced the message of symbolic contents and was the image of Holy Mount – the place of contact between man and God, a creature and the Creator. An integral part of the altar composition – its dominant – was a steel cross (30 meters in height) which referred to the mast of Gliwice radio station – the symbol of the place (Fig. 6). The wall presenting the rising sun – the symbol of hope and new life constituted the background for the sacrificial altar.

<sup>13</sup> Truss arches were at the same time the roof of the altar. Cf. [3, pp. 16–19].

<sup>14</sup> On the basis of the author's conversation with Professor A. Lisik, the altar's designer.



Fig. 7. The papal altar in Sosnowiec, 1999. Inspired by the industrial region. Designed by AiR Jurkowsky-Architects (photo: R. Jurkowski)

Il. 7. Ołtarz papieski w Sosnowcu, 1999. Inspiracja regionem przemysłowym. Proj. AiR Jurkowsky-Architekci (fot. R. Jurkowski)

Symbolic references connected with local traditions (scientific and technical character of the town) were expressed in steel, openwork and light forms of the cross and roof above the sacrificial alter (the main podium); whereas the papal altar in Sosnowiec first of all referred to local traditions. It was the monumental symbol of the place. The basic element of the architectural composition of the altar was an openwork arch made of the spatial steel truss. The truss motif referred to the industrial character of the town. A significant symbolic and compositional element was pine – according to Ryszard Jurkowski's idea, the manager of the design – presenting pine forests which used to grow in the whole region. Both pine and the wooden cross (which hung attached to the arch construction) were placed in the 'frame' which was set by the truss construction (Fig. 7). The motive of the frame constitutes a symbol of the triumph, victory – hope for the future as well as 'window on the world'. It was possible to read the following message: the future of Sosnowiec is in the natural environment respect and in the cross – a symbol of Jesus Christ whom God sent to the world out of love for man. The altar elements such as pine, the arch-gate, altar platform (Holy Mount) were symbolic and archetypal references connected with primitive experiencing of sacral space<sup>15</sup>.

<sup>15</sup> A tree, wooden pole, Holy Mount, etc. were the places of saint-hood revelation.

### *Altars – symbolic decorations*

These altars had symbolic contents in a literary and direct way by means of artistic compositions. A certain kind of typification was a characteristic feature of the altars and in most cases there were no references to local or regional traditions.

The group of altars of this character certainly comprised the ones built in the following places: Kraków (1979, 1983, 1987, 1991, 1997), Gniezno (1979), Warsaw (1979, 1983, 1987, 1991, 1999), Niepokalanów (1983), Poznań (1983), Katowice (1983), Wrocław (1983, 1997), Lublin (1987), Tarnów (1987), Szczecin (1987), Gdynia (1987), Łódź (1987), Olsztyn (1991), Koszalin (1991), Legnica (1997), Kalisz (1997), Krosno (1997), etc. Let us analyse these most interesting altars which belong to this group. The meeting in Wrocław took place under the banner of the 46<sup>th</sup> International Eucharistic Congress which was connected with the pilgrimage motto: 'Christ yesterday, today and for ages'. Professor Edward Zielonka was the author of the altar design. The main element and axis of the composition was the cross 26 meters in height on which (at the place of arms 'crossing') the symbol of Eucharistic bread supported by hands coming out of the globe was placed. The gesture of open hands supporting the Eucharistic bread indicated unity of Christian churches

– expressed hope for the future. The whole composition of the papal altar, in the form of a triangle, consisted of arches spreading radially (sectors of a circle) and presenting the light beaming from the Eucharistic bread – it was the symbol of Jesus Christ – Light of the world (Fig. 8). In 1983 the meeting at Wrocław hippodrome



Fig. 8. Altars – symbolic decorations. The papal altar in Wrocław, 1997. Designed by prof. E. Zielonka (photo: A. Mas)

Il. 8. Ołtarze – symboliczne dekoracje. Ołtarz papieski we Wrocławiu, 1997. Proj. prof. E. Zielonka (fot. A. Mas)



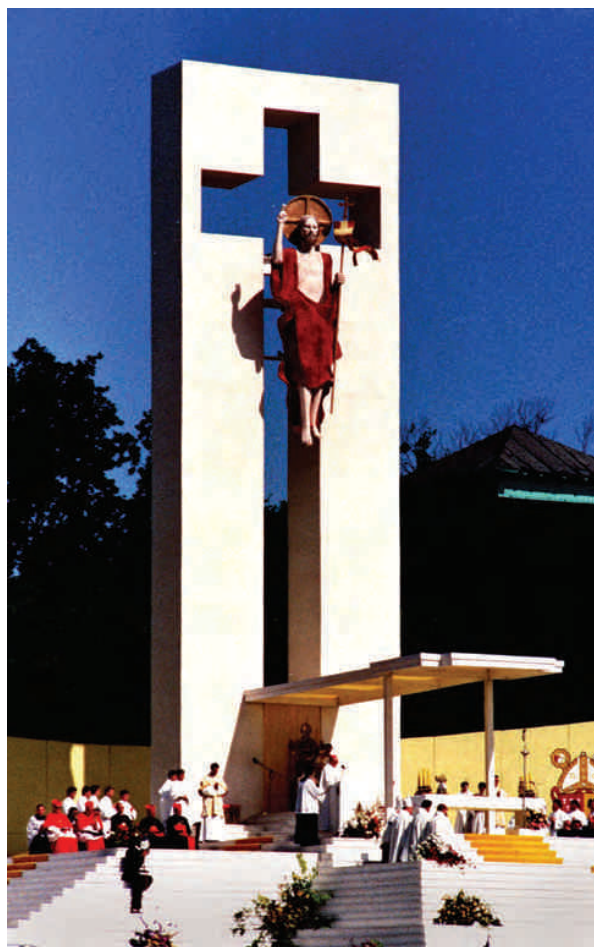


Fig. 9. Altars – symbolic decorations. The papal altar in Wrocław, 1987 (photo: A. Mas)

Il. 9. Ołtarze – symboliczne dekoracje. Ołtarz papieski we Wrocławiu, 1987 (fot. A. Mas)

took place under the following banner: 'Blessed are those who hunger and thirst for righteousness, for they will be filled'. The meeting liturgy called for reconcili-

ation recalling St. Jadwiga Śląska, the patron of reconciliation. The hippodrome surrounded by trees constituted an interesting artistic setting of the meeting as well as of the papal throne which was designed in the form of a monumental rectangular prism with an inside opening in the shape of a cross. Against the background of the cross there was a sculpture of Resurrected Jesus (Fig. 9) as the answer to the papal motto of the pilgrimage: 'Peace be with you Poland! My fatherland'. On both sides of the altar emblems of various towns in the Western Region were placed: Oleśnica, Leszno, Świdnica, Kłodzko, Jelenia Góra, Legnica, Wałbrzych, Zielona Góra and others.

According to the Rev. Cz. Mazur, the papal altar in Legnica presented symbolic motives which were strictly connected with the history of this region. A tent form of the altar and emblems of towns were a reminder of great battles (Legnica) which took place under Henryk Pobożny's command in the defence of faith and the whole Christianity endangered by the Tatars invasion. A compositional dominant of the altar was a wooden cross placed in an axis position, which referred to the pilgrimage motto – it was the symbol of Jesus Christ. A massive dove descending onto the believers and situated at the top of the roof form presented the Holy Spirit – Consoler sent on the Pentecost Day. The most powerful meaning of symbols constituted a motive of the cross with the background of the sky under which the form of the gable roof represented the Holy Mount – Golgotha. The cross, which was placed exactly in the middle of the composition and above the roof, was a vertical axis ('axis mundi') – a 'connector' between the Earth and the sky.

The altar composition in Krosno was arranged by means of a monumental openwork steel cross which constituted the main dominant of the composition as well as by means of long horizontal roofs and a steel truss in the shape of the letter 'M' above the papal throne (which symbolised Mary, the patroness of Pope John Paul II). The steel cross (about 40 meters in height) was a formal reference to drilling rigs which were characteristic of this region; thus, it was the symbol of the 'place'.

### *Significance of tradition*

Tradition can be discussed from the point of view of local and regional values which consist of culture, architecture, the natural environment, etc. as well as from the point of view of religious values. The former and the latter are strictly connected with symbols – signs which make it possible to identify with the place and community. Cultivation of native, local, regional traditions gives a sense of security, stability and strengthens the sense of belonging to a given cultural or religious community. It is especially reflected in cultures – regions which have been established (and are being established) in the natural environment where everything that is 'natural' determines particular spheres of a community life. A temple is a distinguishing feature of place and city and its proper location in a city contributes to its stronger emphasis in the awareness of residents. An open space around the papal

throne creates special conditions of the exposition and strengthens the perception of symbolic meanings of the altar – symbol. Symbolic meanings – according to J. Krenz – apart from their basic identification function, which facilitates the usage of space, fulfill the role of a social groups integrating factor, take part in creating a social identity, constitute a cell of cultural continuity and strengthen a community sense of the place [8]. Architecture appeals to the user not only by means of its form, detail but also by means of the material. The most precious is the material which comes from natural resources of the Earth. It is said that such a material has a 'soul'. Papal altars in Podhale were made of natural materials and they combined symbolism of the place and symbolism of Christian religion in one work. The wooden form of the papal altar, which presented a shepherd's hut, wooden details and

granite sculptures showed great devotion to local traditions and a deep love to natural materials. The idea was expressed by means of stone and wood. The form was emphasized by the material, whereas values of the material were underlined by details. The wooden material, which was the basic building material of papal altars in Podhale, is best 'felt' during the observation of details of these altars and examination of their various shapes as well as irregular lines. An industrial region is first of all associated with materials which are the products of man's work and are produced in artificial conditions which are in opposition to the natural environment. Steel constructions (characteristic of the region of Silesia and Krosno), which were used during the construction of papal altars, formed openwork and light forms. Values of the material were exposed in details of construction joints and in thickness of particular construction elements (Fig. 10).

### *The phenomenon of papal altars in the Karpaty region*

On the cultural and pilgrimage map of Poland the Karpaty Mountains are presented as a unique region. This is proved by the number of sanctuaries located in this region as well as by the number of pilgrims and tourists visiting historical places and sanctuaries of this region. In many scientific studies on sociology of religions, geography of religions, etc. we can encounter such expression as 'the phenomenon of Polish pilgrimages', the phenomenon of folk religiousness in Poland'. I. Sołjan in her study [9] of this region stated that the Karpaty is a unique pilgrimage region in which, apart from the centres with many centuries of tradition and a well-established position, there still appear new centres which attract numerous pilgrims. This is further confirmed by the establishment of the Diocese Pilgrimage Centre in Stary Sącz and The Pilgrimage Centre in Ludźmierz. The altars in Stary Sącz and Ludźmierz, which were built for the main ceremonies on the occasion of Pope John Paul II's visit in Poland, were left on the original building site and in this way they became a permanent part of the city landscape. Due to the presence of the exceptional Pilgrim, the altars became the object of a particular interest of pilgrims and tourists arriving at sanctuaries near which they were located. The Pope's visit contributed to many enterprises in Stary Sącz – among other things, the organization of the procession with relics of Saint Kinga of Poland from the convent of St. Clares to the papal altar (located on the common of Stary Sącz near the convent) on the occasion of the church fair and commemoration of the Pope's visit in 1999 (Fig. 11). Moreover, in Stary Sącz in the summer season a series of cultural and sport events is organised in which first of all young people take part, in particular from Nowy Sącz County. Undoubtedly, the geographical location of Stary Sącz, which is surrounded by the Beskid Sądecki Mountains, is conducive to the organisation of such events. Stary



Fig. 10. The papal altar in Sosnowiec, 1999. Steel construction (photo: R. Jurkowski)

Il. 10. Ołtarz papieski w Sosnowcu, 1999. Konstrukcja stalowa (fot. R. Jurkowski)

Sącz in Nowy Sącz County fulfils a very important role. It is the second town of this County as regards the number of population, it has many precious monuments and is characterised by tremendous values of the landscape. The location on the śródkarpacki transportation route is the reason why Stary Sącz is a very attractive town for tourists and this is conducive to the development of tourism in this region. Undoubtedly, the Pope's visit in 1999 contributed to the rapid growth of the pilgrimage tourism, which in comparison with the 1980s. – 15 000 to 40 000 people a year – increased up to 250 000 people a year after 2000. Geographical location as well as rich culture and history constitute great trumps not only of the Nowy Sącz County but also of the whole Karpaty region. In the process of uniting Europe, the Karpaty region fulfils a key role in the integration of states, in particular in East-Central Europe. On the one hand, the idea of building the Diocese Pilgrimage Centre in Stary Sącz (Fig. 12) as well as the Pilgrimage Centre in Ludźmierz resulted directly from spiritual and material needs of the towns' residents. On the other hand, it was an attempt to react against disintegration and destruction of social bonds of various kinds as well as extreme individualisation of life which could be seen after political system transformations in 1989 in Poland. Finally, the ideas of building pilgrimage centres in Stary Sącz and Ludźmierz constitute an expression of emotional bonds with the



Fig. 11. The papal altar model in Stary Sącz, 1999.  
Designed by arch. Z. Remi (photo: Z. Remi)

II. 11. Makieta ołtarza papieskiego w Starym Sączu, 1999.  
Proj. arch. Z. Remi (fot. Z. Remi)



Fig. 12. The papal altar and House of Pilgrim, Stary Sącz.  
Visualisation. Designed by Z. Remi

II. 12. Ołtarz papieski i Dom Pielgrzyma, Stary Sącz.  
Wizualizacja. Proj. Z. Remi

blessed John Paul II who – before becoming the Pope – had headed the church province of Kraków for many years. On the basis of analysing the statistics of tourist and pilgrim circulation in Stary Sącz and Ludźmierz we can conclude that the presence of the Pope in those places still inspires many people to pilgrimage – not only to the historical sanctuary but also to the place-altar which was marked with the presence of this unique Pilgrim. Following the beatification of John Paul II, we can expect that these places will certainly become transformed into new cult centres.

## Summary

The papal altar was a result of compensation of numerous symbolic meanings and codes. Depending on the given place (region) and the awareness of the designer, investor and developer, it presented various attitudes towards expressing a symbol and religious meanings. In the regions in which tradition plays a particular role (e.g., Podhale, Pomerania, Upper Silesia) we could observe a high level of awareness of the participants in the process of creating the architectural work. The idea of the project was visible in the entirety of the structure: in its spatial composition, construction, detail and mate-

rials used. In the process of creating the entire vision of the papal altar, apart from the aforementioned factors, it was significant for whom this architectural work was to be erected. The symbolic meaning of the papal altar was closely connected with the pilgrimage motto which was inspired by the Polish Pope coming to his own country – Poland. The papal altars were architectural works which communicated symbolic meanings in an expressive and emotional way – we must bear in mind that they were designed for this one exceptional day, i.e. a ceremonious meeting with the Pope.

Translated by  
Bogusław Setkiewicz

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### Sacrum pod nieboskłonem

W 2002 r. odbyła się ósma i ostatnia podróż apostolska papieża Jana Pawła II do Polski. Na przyjazd papieża wybudowano blisko sześćdziesiąt ołtarzy papieskich w różnych miastach i w różnych regionach Polski. Ołtarz papieski z założenia miał być budowlą tymczasową, swoją pełną ekspresji formą miał wyrażać motto papieskiej pielgrzymki oraz budować niepowtarzalny i wyjątkowy klimat spotkania z papieżem – stając się świątynią „jednego dnia”. Pomimo tymczasowego przeznaczenia ołtarzy papieskich ich projektanci stworzyli dzieła urzekające bogactwem przekazu symbolicznego, na długo zapisując się w świadomości uczestników uroczystości.

Ołtarz papieski i sektory dla pielgrzymów tworzą materialną świątynię pod nieboskłonem – świątynię wzniesioną na konkretnej uroczystości, z udziałem papieża. Na podstawie wielu opracowań naukowych można wywnioskować, że pewne elementy kompozycyjne w świątyni chrześcijańskiej, w warstwie znaczeniowej posiadają cechy wspólne wielu religiom. Są nimi m.in. ołtarz ofiarny na podwyższeniu – Święta Góra; święty obszar, strefa *sacrum* i *profanum* – wewnątrz świątyni i zewnątrz; kosmos, wszechświat – sklepienie świątyni; oś świata (*axis mundi*) – elementy pionowe świątyni, np. wieża. Opierając się na rozważaniach M. Eliadego, stwierdzamy, że architektura sakralna podejmuje i rozwija

symbolikę kosmologiczną. Doświadczenie sakralnej przestrzeni umożliwia człowiekowi religijnemu „założenie swojego świata” tam, gdzie *sacrum* przejawia się w przestrzeni. Wszechświat znajduje zatem swój symboliczny odpowiednik w sklepieniu świątyni, a ziemia widziana jest w podstawie świątyni i jej konstrukcji nośnej – kolumnach i ścianach. Ołtarz papieski wraz z otoczeniem, które tworzą pielgrzymi i przestrzeń otwarta, konstruują naturalną świątynię.

Ołtarz papieski był wynikiem kompensacji wielu treści symbolicznych, kodów, znaczeń. W zależności od miejsca (od regionu), od świadomości projektanta, inwestora i wykonawcy, przedstawiał różne podejście do wyrażania symbolu, treści religijnych. W regionach, w których tradycja odgrywa szczególną rolę (np.: Podhale, Pomorze, Górny Śląsk), można było zauważyć wysoką świadomość uczestników procesu powstawania dzieła architektonicznego. Idea projektu widoczna była w całości założenia: w kompozycji przestrzennej, konstrukcji, detalu, w użytych materiałach. Ołtarze papieskie były dziełami architektonicznymi, przekazującymi treści symboliczne w sposób ekspresyjny, emocjonalny – były przecież projektowane na ten jeden wyjątkowy dzień, uroczyste spotkanie z Papieżem.

**Key words:** sacral architecture, papal altars, history of religion, formal symbolism

**Słowa kluczowe:** architektura sakralna, ołtarze papieskie, historia religii, symbolika formalna



**Malgorzata Milecka\***

## *The Cistercians large-scale water systems*

Water was certainly the Cistercians' element – an order which, since Mediaeval times, realised its charisma by soil cultivation in the territory of Europe and later also by conducting business activity based on exploitation and processing of natural resources. Since their beginnings, the Cistercians were associated with rivers through the characteristic of their congregation valley locations of abbeys and as a consequence they were able to use water for their activities in a particularly conscious manner [10]. Today, we can see a real technical genius of the Cistercians by analysing the solutions of the large-scale water economy which was developed on the territories managed by this congregation in the past.

Until today, a technical and organisational sense of the Cistercians can be seen in monumental work undertaken in the abbeys in order to build water intakes, canals and economic usage of water power. Monks widely applied bold and – as for their times – modern technical solutions in order to gain control over rivers, swamps and fisheries. In the Cistercian abbeys – due to their countryside locations (which even today are characterised by a low level of urbanisation) there are still many relics of old water systems. Even though the abbeys as architectural complexes were destroyed – ponds, dykes and channels supplying water and its power to mills and other workplaces – they are still a visible part of the landscape. Researchers of the Cistercian heritage know impressive water systems, e.g. the Aubazine water network which drew water from a stream situated two kilometres from the abbey, while the aqueduct supplying

water was partially grooved in the solid rock and partially hung on big arches situated over ravines [1]. However, the scale of spatial changes that were introduced by the Cistercians can be better assessed if we analyse a long-term water economy of certain selected abbeys and its present effects on the environment. At present, these solutions resulted in the landscapes characteristic of the congregation, whose identification and comprehensive protection ought to be included in numerous activities currently aimed at a harmonious process of the formation of historical landscapes of Europe. In the author's opinion, these landscapes culturally unite our continent showing strong and still present connections based on the Christian tradition [8].

This article is an attempt to show the principles of water systems formation as built by the Cistercians in their developments on the example of the parent abbey of Cîteaux and the Polish one in Mogiła. While in Cîteaux the water system is still functioning – in spite of the old abbey destruction – we have a completely different situation in Mogiła – the abbey as a historical spatial complex with mediaeval origins is still functioning today, but as part of the city landscape because the development of Kraków largely absorbed the agricultural landscape of Mogiła concurrently covering the old water system which in the past constituted an important element of the monastery spatial economy. Comparing the characteristic features of Cîteaux and Mogiła seems to convey a significant message concerning directions of transformations of these two structures.

### *Cîteaux water system*

The oldest Cistercian abbey of Cîteaux in France constitutes an example of numerous explicit landscape transfor-

mations, which can be seen even today, brought about by the redevelopment of water courses, including the construction of ponds for stocking and water retention. The old abbey's 'water heritage' comprises, among other things, about twelve flour mills situated mainly on the water courses of Vogue and Cents-Fonts and about twenty ponds

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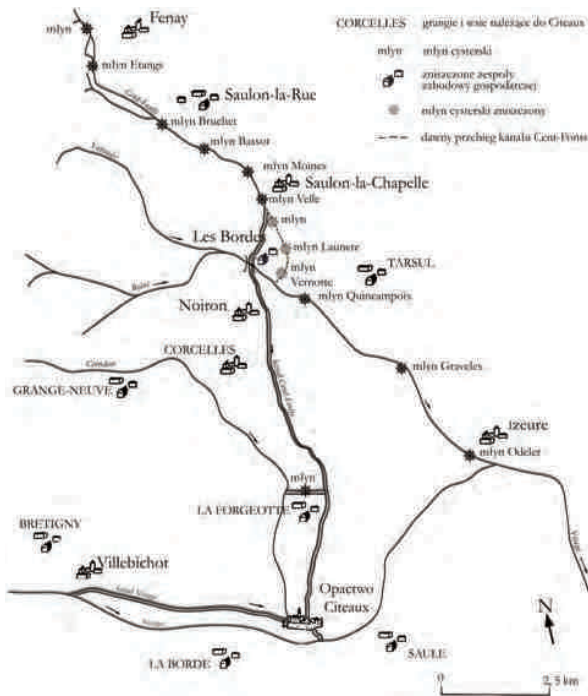


Fig. 1. Economic usage of the Cîteaux water system  
(sketch by author from: [14])

II. 1. Gospodarcze wykorzystanie układu wodnego Cîteaux  
(odrys autorki z: [14])

(Fig. 1). The changes aimed at land development, which were indispensable for running economic activity, were also made in the vicinity of the granges administered by the abbey such as la Borde, la Forgeotte and Tontenans. Analysing the contemporary Cistercian heritage in Cîteaux, we must bear in mind that the abbey and its surroundings underwent numerous transformations of the water system, mostly during the first two centuries since it was established when the water environment was diametrically rebuilt through the introduction of some significant changes in the natural structure of the area in question [14].

The first monastery was located on a flat terrain rise within the distance of 100 metres east of Coindon stream and water was probably supplied from a well. However, at the beginning of the 12<sup>th</sup> century in the times of abbot Alberic, the Cistercian community because of a shortage of water moved to a more convenient place situated about two kilometres south of la Petite Forgeotte. The abbey that was constructed then was supplied with water from Coindon and by the Vogue Canal; however, one hundred years later, apart from these two water courses, the water to the abbey was provided from Cent-Fonts from the intake situated ten kilometres above the monastery [14]. Between the years 1204 and 1216 the Cistercians started building about a 3.5 kilometres long canal from the Vogue water course, east of Villebichot village. However, this water supply was probably insufficient for the monks as starting from 1212 they began work on changing the course of Cent-Fonts stream by building a ten kilometres long canal near Saulon-la-Chapelle village. Additionally,

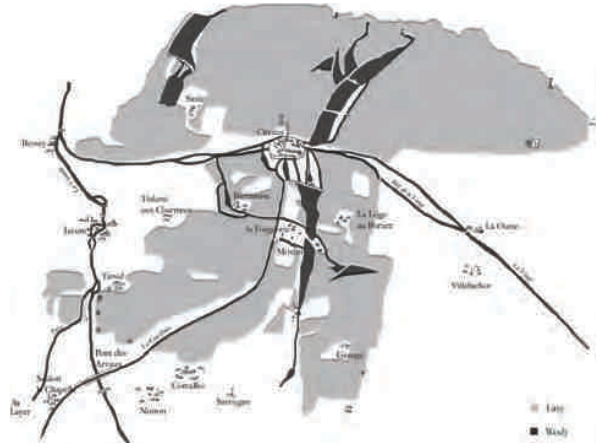


Fig. 2. Cîteaux Abbey on the background of water conditions in the 16<sup>th</sup> century (sketch by author from: [14])

II. 2. Opatwo Cîteaux na tle uwarunkowań wodnych w XVI wieku  
(odrys autorki z: [14])

between 1212 and 1218 the Cistercians worked on building a five-meter high bridge-aqueduct to make it possible to run the canal over the River Varaude. This work affected the existing water relations as a consequence of which the monks had to compensate for (as part of damages) three mills situated along the former river bed which dried out. In circa 1221 water was supplied to the abbey by means of a canal where a mill was built feeding new ponds in the vicinity of la Forgeotte grange. The Coindon stream was dammed up in two places, thanks to which another two new ponds came into being. As a consequence of these investments, the first convex three metres high earth dyke was built as well as another one that formed Grand Etang pond and it was 500 metres long, 12 metres wide and in its middle part reached the height of 7 metres. Grand Etang receives water by the canal from Cent-Fonts until today as it is situated 300 metres above the abbey, which is why it served as the abbey's water reservoir and a water tower<sup>1</sup>.

On the plan illustrating the state of the Cîteaux water system, as early as in the 16<sup>th</sup> century (Fig. 2) we can see the abbey with its extraordinary location against the background of the water development artificially created by the monks. We can admire the system composed of numerous canals, dams and an impressive aqueduct where the central point joining up the entire complicated arrangement is the monastery. Huge storage reservoirs that surround it would surely guarantee the constant power supply produced by the dammed up waters, thus providing the basis for work of various devices situated within the abbey and at the same time irrigating extensive fields and gardens of Cîteaux (Fig. 3) as well as the granges administered by the abbey.

<sup>1</sup> Between the place where the Cent-Fonts canal crosses the monastery wall and the connection with Vogue the gradient is 1% for water flow intensity which today amounts to 140 litres a second while in the 19<sup>th</sup> century it was 320 litres a second – from: [14].

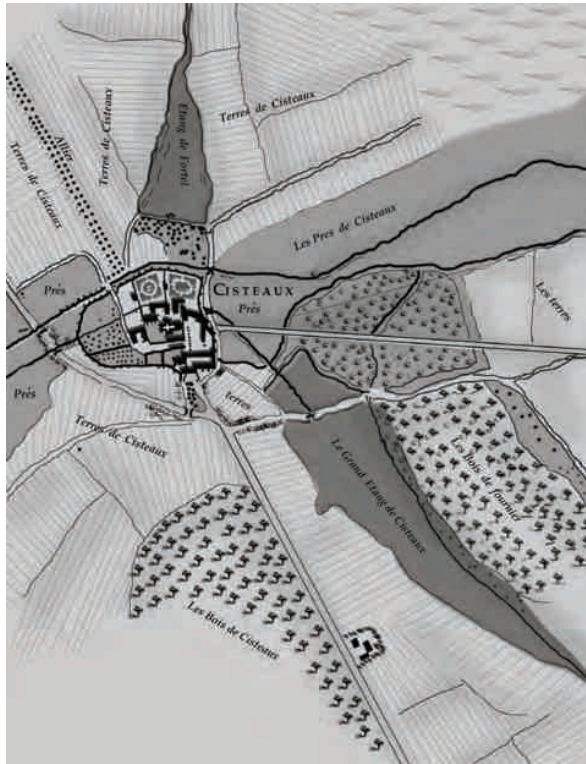


Fig. 3. Cîteaux Abbey surrounded by woodlands and water reservoirs, plan from 1755 (sketch by author from: [14])

Il. 3. Opactwo Cîteaux w otoczeniu lasów i zbiorników wodnych, wg planu z 1755 roku (odrys autorki z: [14])

Nowadays, only scarce relics the old water system of Cîteaux within the old monastery survived, however, the analysis of an aerial photograph<sup>2</sup> that shows this area as part of a larger territory proves that the old extensive system of water connections is still functioning although not in the same form as in the times when the whole area was managed by the Cistercians. In spite of being situated in the heart of France, modern Cîteaux is in fact a secluded spot, with a characteristic monotonous agricultural landscape. Deciduous forests surround a large meadow the centre of which is situated on a little depression with relics of the Cistercian monastery development. A new monastery, which is now occupied by the Trappists, was built a little north of the historical Cistercian complex. It is surrounded by a wall and has strict rules of enclosure. The fields, which surround the complex, are used for cultivating various plants which are afterwards processed in the monastery manufacturing plants because the Trappists run a plant and food farm [8]. It is worth emphasising that in spite of significant modifications within the monastery development, Cîteaux still retains features of a hermitage with forests and fields around and a landscape that is undisturbed by modern times. The impressive water system that was built by the Cistercians on this territory is a significant and extremely valuable element of this landscape today.

<sup>2</sup> <http://mapy.google.pl/> – entry: Cîteaux, Saint-Nicolas-lès-Cîteaux, Burgundia, France – 01.2011.

## Mogila water system

Another equally interesting example of a comprehensive water development can be encountered on the Polish ground, namely in Mogiła. According to the documents kept in the abbey's archives, activities of these monks were also impressive and the effects of terrain transformations as regards water relations can still be seen in the landscape even today. Unfortunately, due to a scarcity of historical information in this regard, it was not possible to reconstruct the beginnings of these transformations, however, three important documents allowed for determining the manners of open waters development within the Cistercian premises in the 19<sup>th</sup> century<sup>3</sup>. The state of water development in the Mogiła monastery in the scope of water systems formation is described in the three following plans: 'Mogiła – property of Cistercian Fathers Monastery' [11] (Fig. 4), 'Situational plan of the River Dłubnia, watercourses and water plants in districts of Mogiła, Krzesławice and Bieńczyce' [3] (Fig. 5) and 'Plan of the Vistula course near Rybitwy and Płaszowski Forest' [13] (Fig. 6). The following characteristics can be deduced from the first of these plans: the monastery which was then situated north of the Vistula was surrounded on both sides by the River Dłubnia, which also

fed water into the system of monastery ponds and gave rise to the existence of large swamps and meadows. In the vicinity of the monastery, the river flowed meridionally, it formed three river beds with the middle one being the main stream while the two outer ones were canals – watercourses. The western canal was well-regulated and it



Fig. 4. Plan of Mogiła Abbey against the background of the water system (collection of Mogiła Abbey Archives, photo: M. Milecka)

Il. 4. Plan opactwa w Mogile na tle układu wodnego (zbiory Archiwum Opactwa w Mogile, fot. M. Milecka)

<sup>3</sup> More on history and architecture of Mogiła in: [5].



Fig. 5. Plan of water system development of the Plonia River on the stretch Bieńczyce–Krzesławice (collection of Mogiła Abbey Archives, photo: M. Milecka)

II. 5. Plan rozbudowy układu wodnego rzeki Plonii na odcinku Bieńczyce–Krzesławice (zbiory Archiwum Opactwa w Mogile, fot. M. Milecka)

performed the role of the canal accompanying the main road leading to the monastery. This well-disciplined water course directly serviced the whole development; it was also the source of a minor canal that supplied water to the seven ponds and the dykes situated north of the monastery, which specifically complemented the complex of monastery gardens. These ponds (now we can see only their relics) had geometrical shapes, close to rectangles. They were connected to the middle one, i.e. the natural current of the River Dłubnia through the other canal – this solution enabled to regulate the water level between the two courses of the little river. The aforementioned water-course surrounding the monastery collected the wastes from the buildings in the south and flowing under the farm buildings (among other things, under the mill) sup-

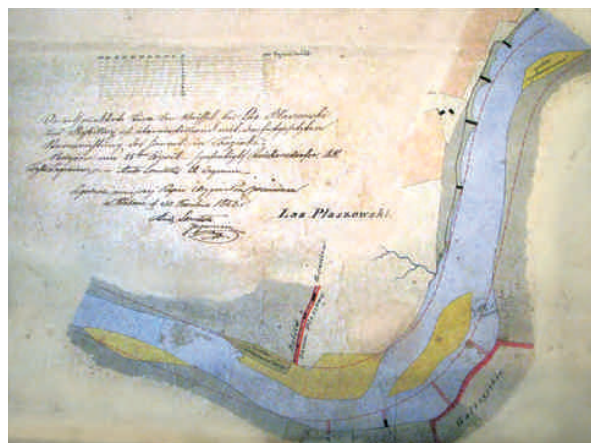


Fig. 6. Plan of the Vistula course near Rybitwy and Plasowski Forest (collection of Mogiła Abbey Archives, photo: M. Milecka)

II. 6. Plan biegu Wisły koło Rybitw i lasu plasowskiego (zbiory Archiwum Opactwa w Mogile, fot. M. Milecka)

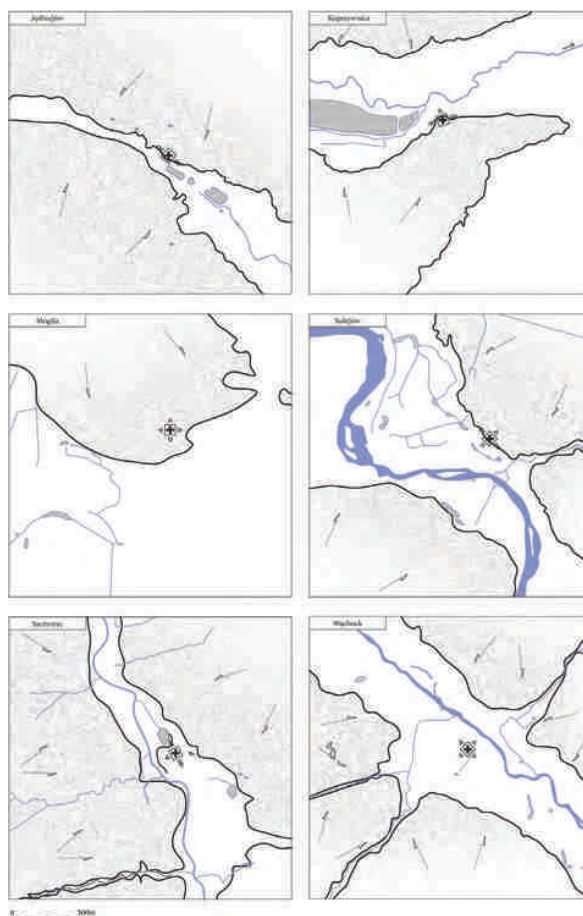


Fig. 7. Situational sketches of the abbey locations of Małopolska Group against the background of the water system (elaborated by author)

II. 7. Szkice sytuacyjne lokacji opactw grupy małopolskiej na tle układu wodnego (oprac. autorki)



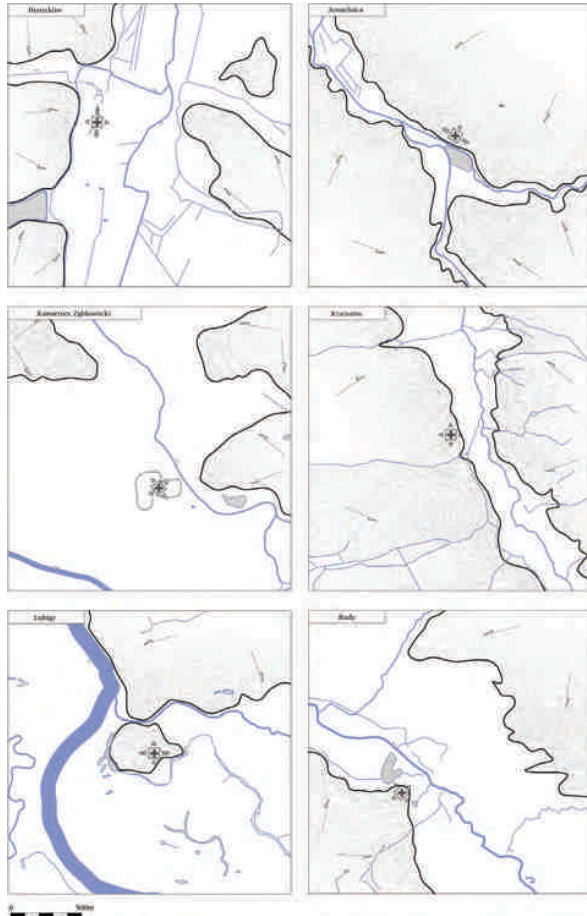


Fig. 8. Situational sketches of the abbey locations of Silesian Group against the background of the water system (elaborated by author)

Il. 8. Szkice sytuacyjne lokacji opactw grupy śląskiej na tle układu wodnego (oprac. autorki)

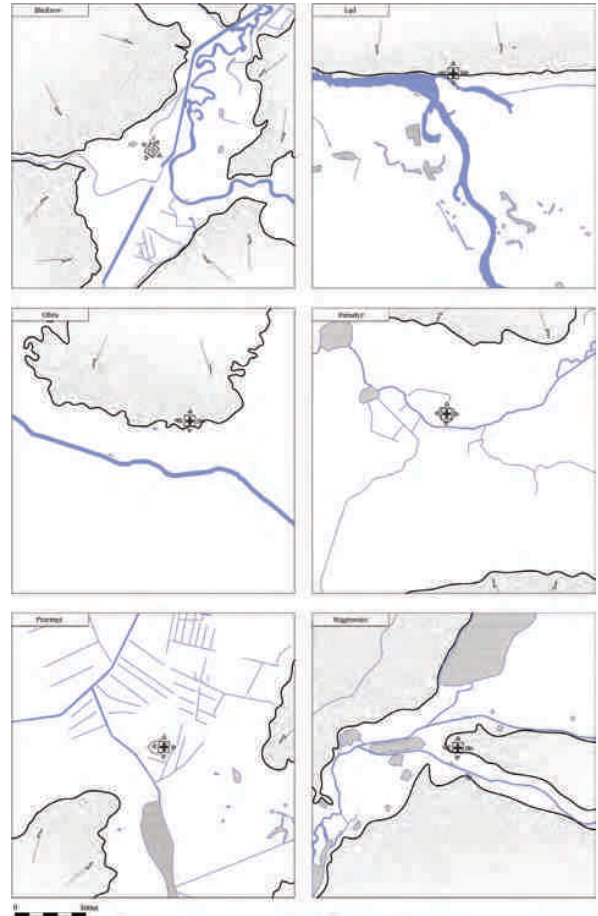


Fig. 9. Situational sketches of the abbey locations of Wielkopolska Group against the background of the water system (elaborated by author)

Il. 9. Szkice sytuacyjne lokacji opactw grupy wielkopolskiej na tle układu wodnego (oprac. autorki)

plied its power to their devices. The plan shows in detail crossings across the river in form of bridges, water structures (weirs) as well as mills; moreover, it precisely presents flood-lands, meadows, dykes and swamps, giving in some cases their proper names. Thanks to the analysis of this document, we gain detailed information concerning the development of the Vistula oxbow in the south of the Cistercian premises – its contents are ponds, swamps and forests. We can also see a wide complex of ponds in the east in Czyżyki, whereas in the eastern part of the abbey on the River Dłubnia and the eastern watercourse there are numerous dams and smaller canals.

This information is made even more detailed by the analysis of the situational plan of the River Dłubnia watercourses and water plants (Fig. 5). On the area shown in the previous plan, we could see the whole system of open waters and technical water devices. On the western border of the area shown on the plan, we can see that from the River Dłubnia a canal is separated that supplies water to the Bieńczycki mill. Dłubnia continues flowing along its natural river bed above the watercourse in parallel to it. Water separation on Anielówka divides the watercourse into two arms: one supplies another mill on Anielówka and afterwards flows back into the Dłubnia river while the other arm

flows in parallel, a little to the south. The two water courses intersect and change their structures at the point of the railway line leading to the mill as follows: the watercourse flows on as an aqueduct above the River Dłubnia, the river continues flowing on the southern side through the Krzesławicki weir, while the watercourse from this point is called 'lower', supplies a rent mill, next the Cistercian mill and afterwards the nail mill. Beyond the weir the river is separated and flows in two arms: as a main stream (middle water course) and the 'upper' watercourse. It is this watercourse that contains (according to the information on the plan) one third of all the waters, flowing around the monastery buildings and supplying the monastery mill, which functions at the edge of the monastery premises as well as the next mill (both given for lease by the Cistercians). All the three river beds of Dłubnia (one natural and two watercourses) get connected below the monastery. When all the work entrusted to the water is done, all the devices in its way put in motion and the terrains irrigated, the river finds its end in the Vistula waters.

The third plan (Fig. 6) presents a fragment of the Vistula course, near the place called Rybitwy, in the area of Pleszowski Forest. This drawing, rich in details, contains a precise project of the river regulation and what

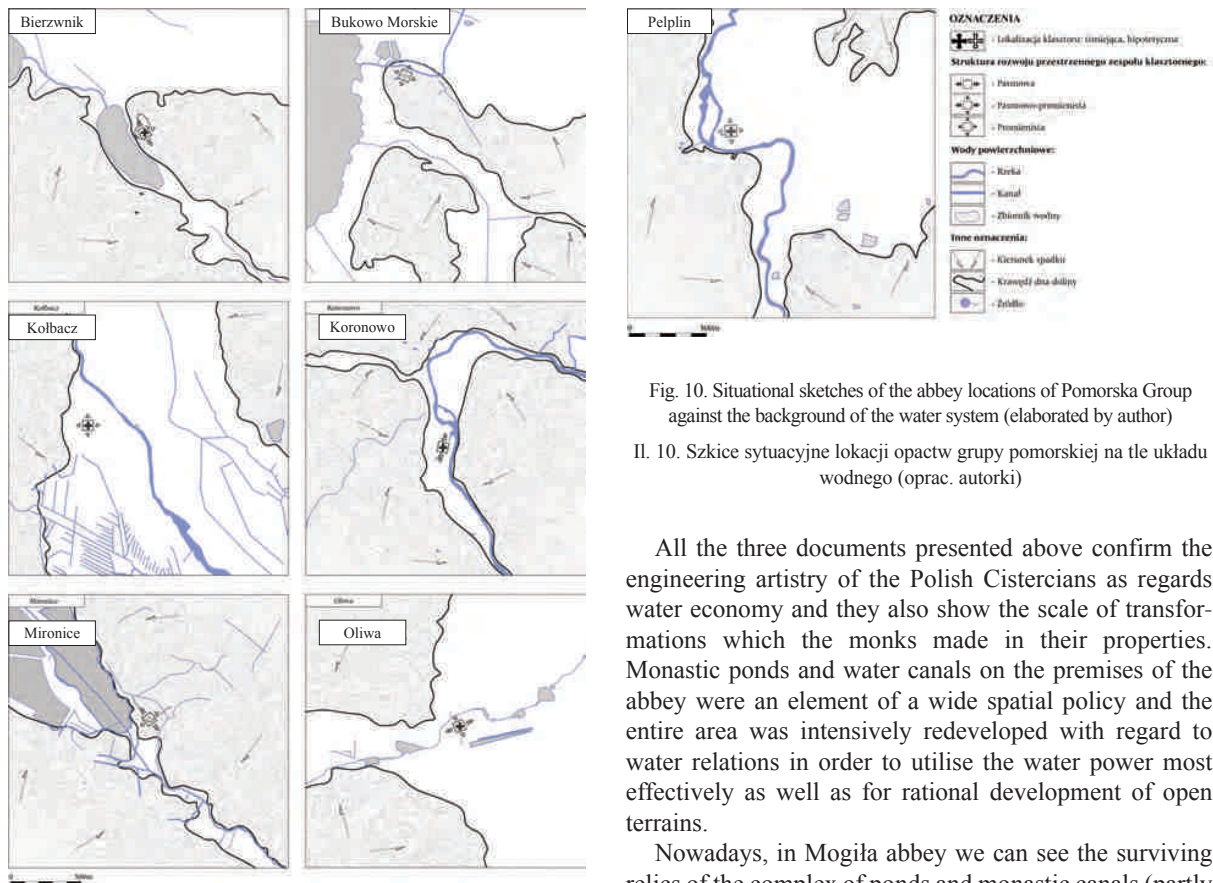


Fig. 10. Situational sketches of the abbey locations of Pomorska Group against the background of the water system (elaborated by author)

Il. 10. Szkice sytuacyjne lokacji opactw grupy pomorskiej na tle układu wodnego (oprac. autorki)

All the three documents presented above confirm the engineering artistry of the Polish Cistercians as regards water economy and they also show the scale of transformations which the monks made in their properties. Monastic ponds and water canals on the premises of the abbey were an element of a wide spatial policy and the entire area was intensively redeveloped with regard to water relations in order to utilise the water power most effectively as well as for rational development of open terrains.

Nowadays, in Mogiła abbey we can see the surviving relics of the complex of ponds and monastic canals (partly outside the monastery walls) and the water system of the River Dłubnia, now much impoverished in comparison with its 19<sup>th</sup> century condition as described above. Construction of the new working class estate Nowa Huta, which took place in the mid-twentieth century on the territories of the former Cistercian agricultural premises where the water devices and structures were situated, was connected with major transformations of the environment, including significant modifications of the water relations. It is worth realising how enormous these changes were and consequently, when elaborating urban plans concerning this part of Kraków, take into consideration some actions aimed at identification and protection of the relics of the old Cistercian water structures and devices.

would be named today as a valley biological development. On it, along the river banks, we can see regularly placed dams built in order to regulate its course (judging by the drawn axes of the target river bed). At Rybitwy, we can find a small riverside area with the following information: 'freshly planted osier bed', and its appropriate symbolic marking appears in three places along the river. There are visibly marked places in which the river bends were to be liquidated and where the river was to be given a smooth flow thanks to river bed dams in order to prevent the process of meander or sandy backwater creation.

## Conclusions

Summing up the analyses presented above, we ought to emphasize the fact that flowing and standing water constituted an inseparable attribute of the Cistercian developments. The constructions erected by the Polish monks against the background of the European solutions are not worse as regards the level of technology and spatial dynamics<sup>4</sup>. The way the abbeys were located clearly shows that the Cistercians chose the places directly situated in valleys although on

a place which was slightly elevated and thus protected from flooding. These were local rises or slight slopes. Topographical analyses of the Cistercian terrains prove that in selecting a place for building a permanent monastery, monks first of all took into consideration the following aspects: width of the valley, orientation and current of the river along with its accessibility and possibility of its subjugation. Convenient uptake and discharge of water was one of the factors conditioning the proper functioning of the abbey [8].

In Poland, apart from the Mogiła development which is important in many aspects, some other extremely interesting water systems can be found in Bierzwnik, where the Cistercians were given lands surrounded by seven lakes

<sup>4</sup> We are informed about this by all researchers of the Cistercian heritage, for example, in the books about the situation of monasteries in Europe: [2], [4], in Poland: [5], [6], [12], [16] and France [1].

and a stream connecting them on which they created the entire spatial system based on a water system; also in Buków Morski where the monastery complex comprised three lakes, sixteen ponds, two pools and some minor rivers constituting a specific axis of the monastery economy. An impressive solution can be encountered in Kołbacz where the monks changed the lower course of the River Płonia by directing it to their settlement in Dąbie and dammed up water thus causing the water level in Miedwie lake to go up [15]<sup>5</sup>. In this context, we cannot forget about a unique phenomenon on the worldwide scale which is part of the Cistercian heritage – it is an intersection of two rivers, called bifurcation. In Wągrowiec, not far from the monastery, two rivers Welna and Nielba intersect at a right angle and as geographers and hydrologists assure both rivers roll their waters on independently of each other, which seems to be almost impossible. It is worth reminding that the Wągrowiec bifurcation is the only place of this kind in Europe and one of the two in the whole world<sup>6</sup>.

However, there are many other remarkable water solutions in Poland – it is enough to analyse the presented situational sketches of the Cistercian locations to see that selecting a place for constructing a monastery was always preceded by detailed analyses in order to choose a place guaranteeing convenient living conditions and running business activity specialising in building water devices

based on the power gained from water work (Fig. 7–10). The Cistercians efficiently took advantage of the conditions in which they settled and, as a consequence, they permanently transformed the natural environment on much larger territories than the range of their properties by changing whole valleys and river basins and, as a result, the landscape in a large-scale system.

Today we can vary in our assessments of this activity: on the one hand, it is worth appreciating the remarkably apt utilisation of the forces of nature and making them work for the good of man, while on the other hand, we must become aware that this is the beginning of a rapid and conscious transformation of the natural environment leading to permanent changes in spatial structures. When the thin border line between a rational economy and excessive exploitation has been crossed, the above issue ought to be addressed. It may seem a paradox that while the first Cistercians looked for an escape and asylum from civilisation in forests surrounded by rivers and swamps, some centuries later their successors regulated rivers, drained swamps and cut forests or moved them away from abbeys. All these activities obviously deteriorated the environment standard and degraded the landscape. Peculiarly, it seems that the process of this degradation was ‘helped’ exactly by deforestation – forests perform an extremely important role, still underestimated as it seems, of decelerating water circulation. When observing the floods we have been experiencing in the recent years, we ought to consider the alleged rationality of these widespread environment transformations and their long-range aims, although they are not fully specified.

<sup>5</sup> More on transformations of water systems and the Cistercians’ activities with regard to water economy in: [7], [8] and [9].

<sup>6</sup> [http://www.srodawlkp.org/pliki/swpm\\_k22.html](http://www.srodawlkp.org/pliki/swpm_k22.html) – 01.2011.

Translated by  
Bogusław Setkiewicz

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### *Wielkoprzestrzenne układy wodne cystersów*

Zakon cystersów, mający w swojej regule uprawę roli jako jedno z głównych zajęć, wyrobił w swoim zgromadzeniu pewne stałe zasady dotyczące wyboru terenu pod lokalizację klasztoru i sposobu jego rozplanowania. Nieodłącznym atrybutem ich założeń była woda, w niezwykle sprawny sposób wykorzystywana do celów gospodarczych i przemysłowych. Cysterskie strumienie i rzeki, których wody ujęto w kanały, młynówki i stawy, przez całe wieki były źródłem wody koniecznej do nawadniania użytków rolnych i ogrodów, do pracy „kunsztów wodnych” młynów, kuźni, browarów i foluszy.

Artykuł prezentuje układy wodne na terenach administrowanych przez dwa opactwa: Cîteaux i Mogilę, w celu ukazania stosowanych przez cystersów rozwiązań w zakresie wielkoprzestrzennej gospodarki wodnej. Przekształcenia krajobrazu, jakich dokonano na prezentowanych obszarach, i ich współczesne skutki winny stanowić podstawę dalszych badań nad wpływem działalności człowieka na środowisko przyrodnicze, historyczne układy i urządzenia wodne powinny zaś być szczegółowo zbadane i objęte ochroną jako dziedzictwo kulturowe białych mnichów.

**Key words:** Cistercians abbey, monastery, wather systems, natural values

**Słowa kluczowe:** opactwo cysterskie, klasztor, system wodny, walory naturalne



Hanna Golasz-Szolomicka\*

## *Tracery windows from the 14<sup>th</sup> century in Silesia*

### *Introduction*

This paper continues the earlier publications on windows from the 13<sup>th</sup> century [3], [6]. During that century, the size of windows grew considerably and tracery developed various composition patterns. The tracery windows from the 14<sup>th</sup> century have not been subject to research so far; they are merely mentioned in monographs and rarely are their drawings or photographs shown. They were used in basilicas and hall churches which served various purposes. They were selected on

the basis of existing studies dated from the 14<sup>th</sup> century. Traceries have been preserved in churches in 17 cities. Some of them have been renovated or restored in Neo-Gothic forms [1], [20], [21]. Today their changes are often difficult to detect. It seems that most of the tracery windows presented below are original; however, it is not completely certain. A few windows which were probably renovated in the 19<sup>th</sup> century have also been presented [3], [6].

### *Windows in church elevations*

The constructions of such hall churches as the Church of the Holy Cross in Wrocław, in Kamieniec Żąbkowicki, and the Parish Church in Złotoryja (Fig. 1) which began earlier continued in the 14<sup>th</sup> century. The three-light, tall, and wide windows in the elevations of the elongated naves of the first two churches are located uniformly between buttresses – similarly to the windows in their older east parts. In the church in Złotoryja, whose nave's construction began from the south in about 1260, there are four uniformly located three-light windows in its south elevation [3]. Its north wall, whose elevation has a different design, was constructed at the beginning of the 14<sup>th</sup> century. Between the buttresses, there are three tall windows, two of which have two lights, and the third, west one has four lights. There is no window in the fourth, west bay of the main body of the church as there was a staircase tower there. Surely, that is why the west window of the north elevation is twice as wide. It is, however, difficult to explain why the remaining two windows are narrow and have two lights and not three as in the south elevation.

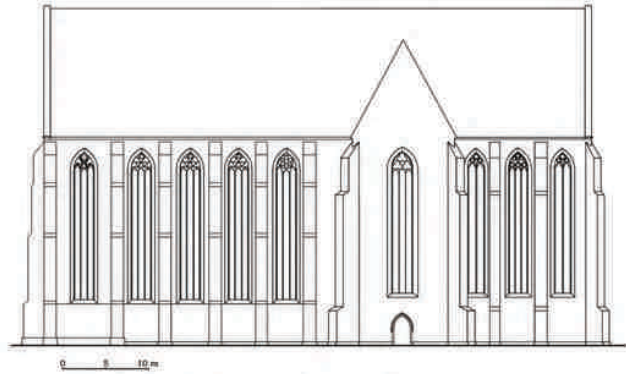
Much smaller windows were built in the Collegiate Church in Głogów which has an elongated presbytery and side chapels with a sacristy from 1335–1345 and a three-aisled hall completed in 1401 [9]. The chapels, which were constructed at the very beginning between the buttresses of the elongated walls of the nave, made the building resemble a basilica. The windows in the polygonal presbytery were tall but the traceries have not been preserved with the exception of one window which was walled-up in the Middle Ages. The two-light windows in the two-storied chapels of the presbytery have been preserved. In each of the elongated elevations of the nave, there were five windows reaching the roof of the chapels with three-light traceries. The windows in the chapels of the main body of the church are Neo-Gothic and have no traceries.

The windows in the Parish Church in Strzegom, which is a basilica, are not so tall as in hall churches but they are very wide. In the presbytery and the main body of the church from about 1335–1370 [1], [19], the windows of the nave have traceries with four lights, and in the aisle three lights and some with two lights. The transept and the presbytery come from about 1370 – the 1<sup>st</sup> quarter of the 15<sup>th</sup> century. There are very tall windows in the middle

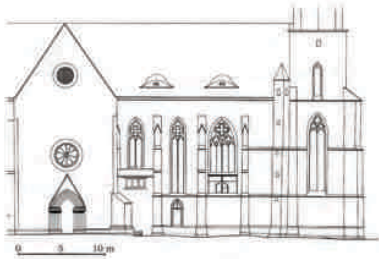
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Wrocław - the Collegiate Church of the Holy Cross



Kamieniec Ząbkowicki - the Cistercian Church



Złotoryja - the Parish Church



Głogów - the Collegiate



Strzegom - the Parish Church



Wrocław - the Church of the Blessed Virgin Mary of the Sand

Fig. 1. Elevations of churches from the 14<sup>th</sup> century (by H. Golasz-Szołomicka)

Il. 1. Elewacje kościołów z XIV wieku (oprac. H. Golasz-Szołomicka)

apse – with three lights from the east and with two lights on the sides – as well as three-light windows in the gable walls of the transept.

The windows in one of the tallest churches – the parish church in Brzeg which was built in 1365–1390 as a basilica – are tall, especially in the aisles [1]. They have three lights and occupy half of the width of the wall between buttresses and proportionally to the churches mentioned earlier they seem narrower.

There is one window located in each bay on its axis, with the exception of the Collegiate Church of the Holy Cross in Wrocław where the location of buttresses and windows in the upper church, whose bays are twice longer than those in the lower church, is the same as in the lower church [18]. On the outside, there is one window in one bay, and on the inside of the upper church, there are two windows in one wide bay.

## Windows in internal elevations

The heights of internal and external elevations in hall churches are the same. The windows are located in tall external walls of the aisles. In most churches, the walls are smooth and the windows are located right under the vaults going down very low. In the upper section of the walls between windows, there are such vault elements as corbels and ribs. Only the south wall in the Church of the Blessed Virgin Mary on the Sand in Wrocław is divided vertically with broad lesenes. There are no lesenes on the north wall, and the brick strips corresponding to the lesenes were preserved after the postwar reconstruction [16].

In basilicas, the internal elevation of the nave is much taller than the external one blocked by the aisles. In most buildings, it is composed of arcades, a strip of plane wall, and windows located high, with corbels and vault ribs between them. In the St. Nicholas' Church in Brzeg, there

is a strip of wall over arcades and window recesses go all the way to the level of the arcades, architecturally dividing the walls. Only a few buildings have lesenes. They are on the pillars and walls of the nave in St. Elisabeth's Church (1308–1387) and St. Mary Magdalene's Church (1330–1386) in Wrocław [1]. Lesenes evidently divide the wall, with windows located high in the upper section. The internal surfaces of the walls of the aisles remain smooth and have no lesenes. The tests of texture and colors of the walls conducted by E. Małachowicz [17] prove that in the 14<sup>th</sup> century, apart from the elements of architectural divisions, also different colors were applied (brick, plaster), which emphasized the natural divisions: for instance brick edges near plastered window recesses or brick edges of pillars. Two-color window recesses are the elements of the whole color composition of the wall and the interior.

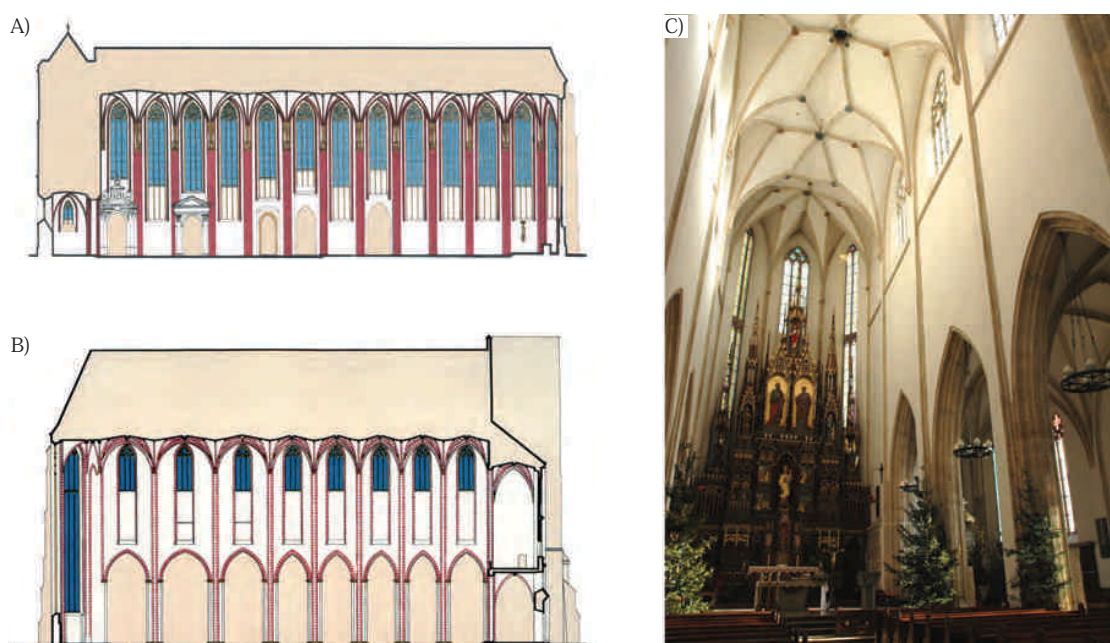


Fig. 2. Internal elevations of churches from the 14<sup>th</sup> century. A) Wrocław – the Church of the Blessed Virgin Mary on the Sand, longitudinal section by the north nave (by E. Małachowicz), B) Brzeg – the Church of St. Nicholas – longitudinal section (by O. Czerner and E. Małachowicz), C) Strzegom – the Parish Church, interior (photo: H. Golasz-Szołomicka)

II. 2. Elewacje wewnętrzne kościołów z XIV w. A) Wrocław – kościół NMP na Piasku, przekrój podłużny przez nawę północną (wg E. Małachowicza), B) Brzeg – kościół św. Mikołaja, przekrój podłużny (wg O. Czerner i E. Małachowicza), C) Strzegom – kościół parafialny, wnętrze (fot. H. Golasz-Szołomicka)

## Tracery patterns

Windows had wide splayed jambs on both sides. Only in a few structures, the jambs were molded. The patterns of tracery in the upper part of the window can be divided, similarly to the division in the 13<sup>th</sup> century, into those with central composition and those with several levels, and their arrangement could vary in one elevation. The cross sections of mullions are elongated with double trapezoids and offsets, hollows and sometimes roll moldings, which result in a multi-layered molding. The external

molding elements provide the general shape of tracery (visible in partially walled-up windows, e.g. in Strzegom), and those located deeper render a layered filling in different geometrical shapes. Sometimes the mullions were embellished with roll moldings, especially in very large windows. However, the bases and capitals on roll moldings, which were applied frequently in the 13<sup>th</sup> century and rarely at the beginning of the 14<sup>th</sup> century, were no longer used.

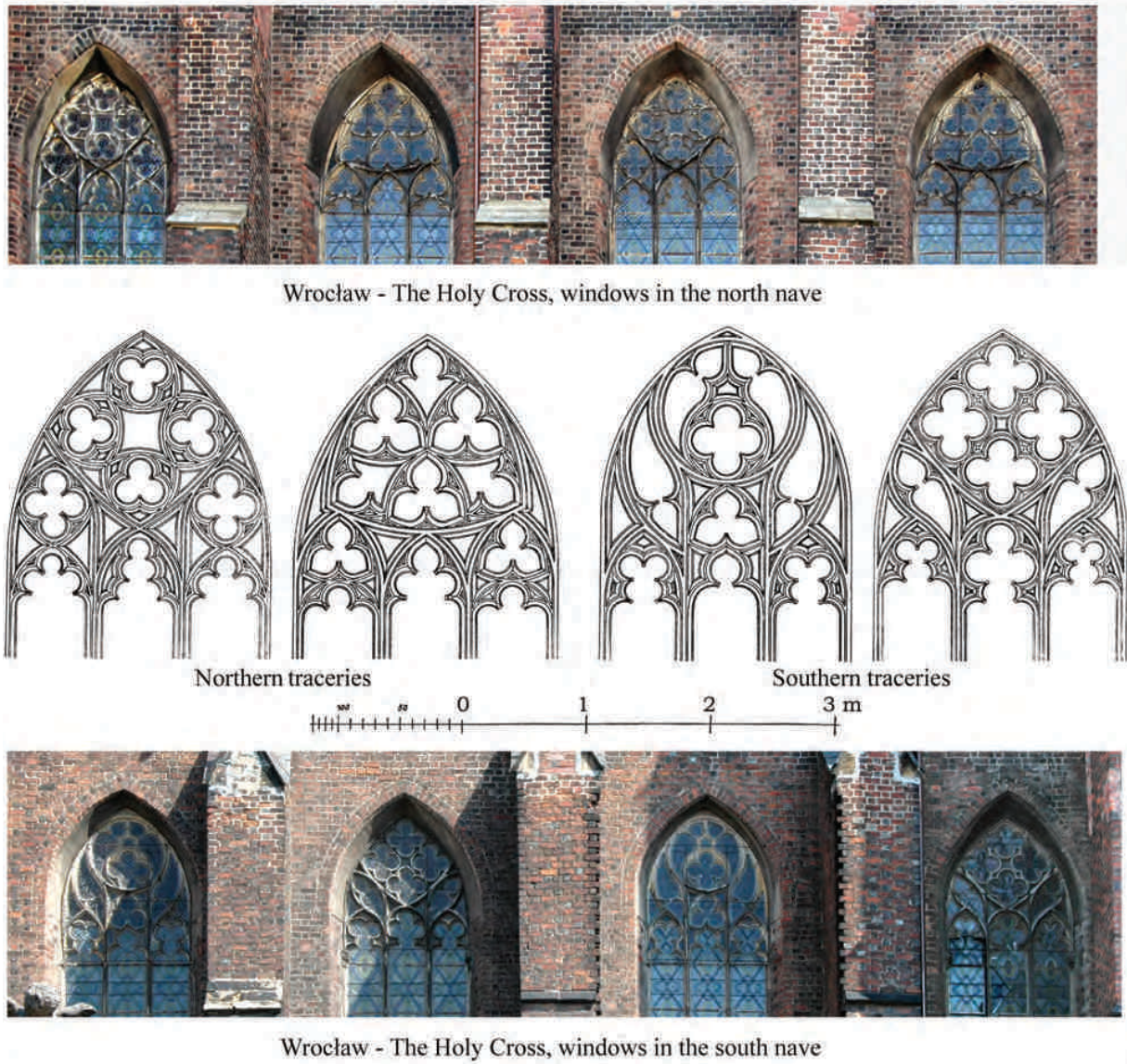


Fig. 3. Wrocław – the Collegiate Church of the Holy Cross, traceries in the nave windows (drawn acc. [11, Taf. 40], photo: H. Golasz-Szołomicka)

Il. 3. Wrocław – kolegiata św. Krzyża, maswerki okien korpusu (rys. wg [11, Taf. 40], fot. H. Golasz-Szołomicka)

In the north elevation of the **Parish Church in Złotoryja** (beginning of the 14<sup>th</sup> century) [8], there are three windows – two with two lights and one with four lights. The two-light windows have similar patterns with a circle in the middle filled with a circular quatrefoil with a pointed trefoil with a broad lower section above it under a pointed arch. The mullions extend into pointed arches with an inscribed open pointed trefoil. In the wide four-light west window, the main elements in the foreground include two pointed arches and a circle in the upper part of the window with a roll molding in their section. They are internally divided by trapezoidal profiles. The pointed arches connect with the circle and in the upper section they create an ogee. In the large pointed arches, the background is filled by two smaller pointed arches with pointed trefoils and a circle with a circular trefoil. In the central circle, there are five

circles connected with open circular trefoils which have a fleur-de-lis in the middle. The north window in the tower has two lights with a central arrangement in the upper part of the window composed of four open circular trefoils. The mullions extend into two pointed arches, with an open pointed trefoil inside them and a closed circular quatrefoil above them.

In the **Collegiate Church of the Holy Cross in Wrocław**, the four north and south three-light windows have alternate tracery patterns (Fig. 3). In the north elevation, all patterns have central elements in the upper part of the window. In two windows, it is a “curved square” with four circular trefoils inscribed in curved triangles. The other two windows have “curved triangles” with three almond-shaped trefoils in them and almond-and-triangle-shaped forms between them. The mullions in the windows



extend into three pointed arches of different heights with open trefoils and multifoils in them, and closed almond-shaped trefoils, and closed circular quatrefoils above them.

On the south side, the mullions in two windows extend into pointed arches with open “reverse” multifoils, and on the axis – in the middle light – there is a semi-circle with an open quatrefoil. In the upper part of the window, in a curved square, there are four circular quatrefoils. Both sections are completed diagonally with mouchettes. In two other south windows, the mullion in the middle extends into a tall pointed arch filled by a closed almond-shaped trefoil and an open almond-shaped trefoil under it. In the upper part of the window, there is a circle with an inscribed circular quatrefoil and two mouchettes. The other two mouchettes fill the larger circle. The two circles are not concentric but tangential in the upper part, and the larger one is open in the lower middle light.

In the **Dominican Church of St. Adalbert in Wrocław**, in the presbytery (1300–1330) [1], [14], there are tall tracery windows, the largest of which is the east window with three lights. Its slender mullions with goblet-shaped capitals and small bases meet at the top to form trefoils. The upper part of the window is filled with a rosette formed by elongated trefoils closed in pointed arches. Over the rosette, there is a small trefoil formed by open pointed trefoils. Side windows of the polygonal presbytery have extended central patterns. Over two levels of trefoils in pointed arches, there are three circles with quatrefoils arranged radially. The south elevation has five three-light windows with identical tracery patterns (reconstructed), with a concentric arrangement. The middle pointed arch with an open trefoil is topped with a closed trefoil enclosed in a taller pointed arch. Above them, there

is a large circle with a quatrefoil. Above side pointed trefoiled arches, there are smaller circles with trefoils.

The nave of the **Cathedral in Wrocław** has an original walled-up tracery window in the north wall (from the times of Bishop Henryk from Wierzbno 1308–1319) [15]. It is a three-light window with a tall pointed arch in the middle light. Above the pointed arch, there is a circular quatrefoil in a circle, and on the sides, above the side shorter pointed arches, there are similar quatrefoils in a circle, and pointed quatrefoils in a curved square above them. The side pointed arches, similarly to the middle pointed arch, had additional pointed trefoils at the bottom but slightly higher, and there was a pointed trefoil above it. That arrangement resembles the tracery pattern in St. Adalbert’s Church in Wrocław.

The **Cistercian Church in Kamieniec Ząbkowicki** has five tall three-light windows in the south elevation of the nave (1<sup>st</sup> half of the 14<sup>th</sup> century) [7], [12]. Three middle windows have identical several-level tracery patterns, and the outermost windows have central compositions in the upper part of the window. In the tracery of the right window, in a large circle, there are six elongated trefoils connected by the central circle. The mullions extend into pointed arches of various heights which is the result of their connection with the circle. An open pointed trefoil is inscribed in the shorter middle pointed arch, and pointed multifoils are inscribed in the taller side pointed arches.

The mullions in the last window on the left side branch into three pointed arches, the one in the middle being slightly taller with inscribed open trefoils. In the middle part, the trefoil is placed slightly lower and there is a closed trefoil above it. Above it, there is a centrally located circle with an inscribed circular cinquefoil, and the trefoils have flattened arches on both sides.

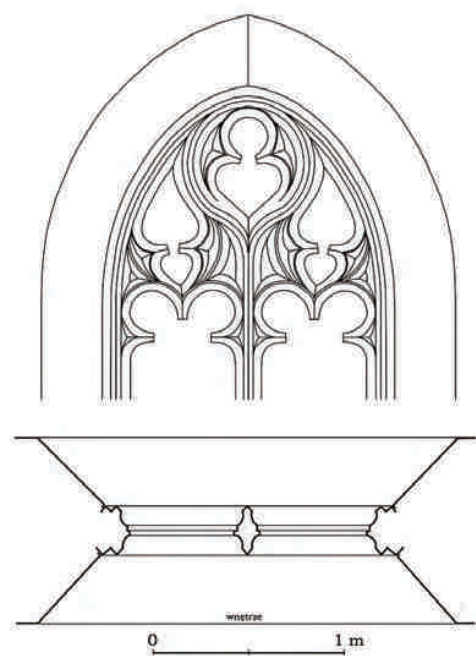


Fig. 4. Głogów – the Collegiate Church, south-west window of the presbytery (by H. Golasz-Szołomicka)

Il. 4. Głogów – kolegiata, południowo-zachodnie okno prezbiterium (rys. i fot. H. Golasz-Szołomicka)

The original tracery which has been preserved in the south window of the presbytery in the **Collegiate Church in Głogów** (1335–1401)<sup>1</sup> was walled up in the Middle Ages [9]. The two-light window has a several-level tracery in a few layers with circular and pointed forms as well as mouchettes (Fig. 4). The mullions with elongated sections with hollows in the shape of sections of a circle are topped with a triangle, the only known case so far. The other windows of the presbytery had no traceries already before World War II. The other windows of the Collegiate Church in Głogów have less complex tracery patterns and sections and it is uncertain whether they are medieval or from the 19<sup>th</sup> century.

The **Church of the Blessed Virgin Mary on the Sand in Wrocław** has longitudinal elevations with three types of tracery patterns. On the south side, in three east bays, there are three different tracery patterns which further alternate with two other types. On the north side, there are two patterns which repeat twice next to each other. Some windows most probably come from the times of the construction (1334–1386) [1], but the tracery which was moved to the Museum of Architecture in Wrocław surely dates back to those times (Fig. 5). Its central composition includes three joined circles filled with other three joined circles with open circular trefoils inscribed in them. The lower three-light part is topped with three pointed arches of various heights and forms. The side pointed arches are filled with an open circular quatrefoil. The middle pointed arch is connected with the elements of higher circles which caused its upper part to create a slight ogee. It is filled with a reverse trefoil, open from the bottom and connected with an open multifoil, all elements are circular. The composition of that tracery is applied as one of three repeated ones in the south elevation of the church but the open trefoil of the upper window is not consistent with the central radial arrangement which fills the tracery present in the Museum of Architecture.

The second type of tracery also composed of trefoils has a different pattern which should be classified rather as a composition with several levels. In the upper part of the window, there is a curved triangle and two curved squares under it. The triangle is filled with three circular trefoils joined in the middle. There is a pointed quatrefoil with inscribed open trefoils in the square. The mullions extend into three pointed arches. The tallest arch in the middle is filled with a closed pointed trefoil based on an open trefoil. The pointed arches on the sides have open quatrefoils. The third type of tracery has a central pattern – a circle with three whirling lenses. These forms are filled with mouchettes and a pointed quatrefoil in a curved square “in the front”. The lower pointed arches which touch the circle are filled with open trefoils which have pointed and circular forms. The traceries in the middle apse have central patterns. This is a radial pattern<sup>2</sup> composed of three lenses with the com-

mon middle part filled with a circular trefoil. In each of the lenses, there is a closed circular quatrefoil and two elongated open circular trefoils. Between the lenses, there are pointed arches with a group of trefoils. The lower element is evidently a composition of joined open trefoils with repeated forms under it but open to the bottom. That lower form is also in the upper pointed arches or rather curved triangles. Two side pointed arches springing from mullions are filled with an open quatrefoil connected with the lower open multifoil<sup>3</sup>.

In the middle windows, the mullions of the side sections extend into a pointed arch with an inscribed open pointed trefoil. A similar trefoil is in the middle section but there is a closed pointed trefoil above it – both enclosed in one common pointed arch which is taller by one level of composition than the side pointed arches above which there are curved triangles with inscribed pointed trefoils, identical with that in the middle but turned by about 30°. The higher level has three pointed arches joining the one in the middle, filled with trefoils with rectangular enclosures. In the upper part of the window, there is a curved square with a pointed quatrefoil.

The **Parish Church in Strzegom** (1335 nave – cir. 1450 east part) has highly decorated tracery windows [2], [19]. The windows in the aisles, the presbytery, and the transept have three lights, and the windows in the nave have four lights. Lower windows were partly surveyed by H. Lutsch [11]. The mullions have trapezoidal cross sections with a narrow rectangular end and one or several offsets. Three of the seven drawn windows do not exist anymore; they were probably walled up (or possibly come from a different church). The patterns of only few traceries are repeated – two in the polygonal east part and east windows in the nave; it is identical in the north and south sides. The traceries with central and several-level patterns have a number of elements in a few planes, which is well visible in the partly walled-up north-east window in the nave. They have circular and pointed trefoils, quatrefoils, and multiffoils, both open and closed, as well as combined. The mouchettes complete the basic decorative forms.

The four-light windows in the nave, including those in the background, have profiles with roll moldings. Each of the windows has a different tracery pattern and only two of them have central elements in the upper part of the window.

The **Parish Church in Brzeg** is a three-aisled basilica with a three-aisled presbytery with a three-sided enclosure on the axis and straight walls in the aisles. On the west side, there are two towers; there is a porch and chapels added in the south and north. The construction of the church began with the nave which is dated from 1365–1378, and three east bays of the presbytery were built in 1383–1390 [1]. The church has eight bays with large three-light tracery windows.

<sup>1</sup> The window was discovered during the renovation of the church.

<sup>2</sup> The pattern is similar to the traceries from the 4<sup>th</sup> quarter of the 13<sup>th</sup> century in the Holy Cross Church in Wrocław and the chapel in Racibórz.

<sup>3</sup> M. Doroz-Turek [2, p. 93] distinguished four patterns of stone tracery in windows of the Church of the Blessed Virgin Mary on the Sand in Wrocław: “first one composed of circles to form a quatrefoil 0–1, second one – a trefoil 0–2, third one composed of mouchettes 0–3 and the fourth one in the presbytery windows – composed of trefoils and mouchettes”.



Fig. 5. Wrocław – the Church of the Blessed Virgin Mary on the Sand, traceries (photo: H. Golasz-Szołomicka)

Il. 5. Wrocław – kościół NMP na Piasku (fot. H. Golasz-Szołomicka)

Despite different times of the construction of the nave and the presbytery, the traceries in the nave were designed for the whole long south and north elevations. They feature a few patterns repeated in two windows next to each other, corresponding to each other on south and north sides. Looking from the east, they have central patterns with a quatrefoil in a circle and with mouchettes, the three curved triangles filled with pointed trefoils. The next traceries feature a large circular quatrefoil inscribed in a circle, with a mouchette from the bottom, the next window has a tracery pattern repeated from the first two windows. The west window in the south elevation was walled up, whereas the one on the north side has a tracery with a several-level pattern with trefoils and mouchettes.

In the aisles, there are 10 original three-light tracery windows as well as portals in two bays, and the remaining windows were removed during the construction of chapels. The patterns are very complex, with only one of them repeated in different windows on the south and north sides, similar to the first windows in the nave. Most traceries feature central patterns, one has several levels and one is

concentric. The pattern of that last one has three circles with an inscribed quatrefoil arranged in two levels. The middle section of the mullions, which extend into a pointed arch with a trefoil, go high to the upper circle, and two smaller circles surround it from the sides. The several-level pattern has mullions which extend into pointed arches filled with two levels of trefoils and mouchettes, and in the upper part of the window, there is a quatrefoil. The west tracery and east tracery on the south side have the most elaborate forms. The former features four open circular trefoils in a circle, creating the central quatrefoil. The mullions extend into storied trefoils. The east tracery has a circle filled with an open quatrefoil with inscribed trefoils, and a small circle with a trefoil in the middle. Under a large circle, there are two mouchettes which go to pointed arches with trefoils into which the mullions extend.

There are five windows from the east of the church – three in the apse and two in the east walls of the aisles. The windows in the apse are exceptionally tall – their upper part reaches the level of the windows in the nave, and the sills are at the level of the windows of the aisles. That is why the

windows are additionally divided with a bar at the level of the sills of the windows in the nave. The lower part of the mullions extended into pointed arches with inscribed trefoils. The window on the axis of the three-sided apse is the only window with four lights. Above the pairs of pointed arches with trefoils, there are circles with trefoils, and above them – a large circle with a circular quatrefoil filled with open trefoils. The side windows of the apse have traceries with three lights with the same pattern with an octofoil inscribed in a circle and a mouchette from the bottom. The windows in east walls of the aisles also have the same traceries – with a central extended pattern which features four circular quatrefoils in a curved square, two mouchettes and pointed arches of the mullions filled with two levels of circular trefoils, of which the upper side ones are reversed.

The **Parish Church in Świdnica** (at present the cathedral) has an older presbytery (1330–1386, nave – 1360–1375, chapels – 15<sup>th</sup> century) [1], [4] in which there are two original windows at the end of north aisle. These are three-light windows with mullions extending into pointed arches with inscribed pointed trefoils. Above them in one window, there are three curved triangles with inscribed pointed trefoils on non-radial several levels. In the other window, the middle pointed arch is taller with an additional closed trefoil, and alternately quatrefoils and armorial shields with open trefoils around it. The lower blocks of that tracery are darker than the upper ones, and a large pointed arch is slightly lowered in relation to the profile of the jambs. The first tracery is fitted to the pointed arch but the jambs have traces of rebuilding.

The **Parish Church in Paczków** (1360–1389) [1] has most of its original tracery windows, and only a few of them were walled up. This is a hall church with a long polygonal presbytery, a tower in the north-east corner, and extensions. The windows are tall, rather narrow, with two lights, except for the middle window with three lights in the west elevation. The mullions in the windows extend into pointed and often semicircular arches, filled with circular trefoils. In the upper part of the window, the traceries are very elaborate with central and several-level patterns. In the east window, there is a circular quatrefoil in a circle surrounded by two mouchettes from the bottom. The window on the north side is filled with a square with a large pointed quatrefoil, and a curved triangle filled with three asymmetrically elongated trefoils (in other words three mouchettes are cut concavely from inside). The next windows from the east on the south side of the presbytery do not repeat the pattern from the north side. The upper parts of the first and third windows are filled with a circle with three and four mouchettes. The mullions in the second window extend into pointed arches with slender open pointed trefoils. In the middle above pointed arches, the form of trefoil is repeated but it is surrounded by a circle open from the bottom. There are slender mouchettes on its sides.

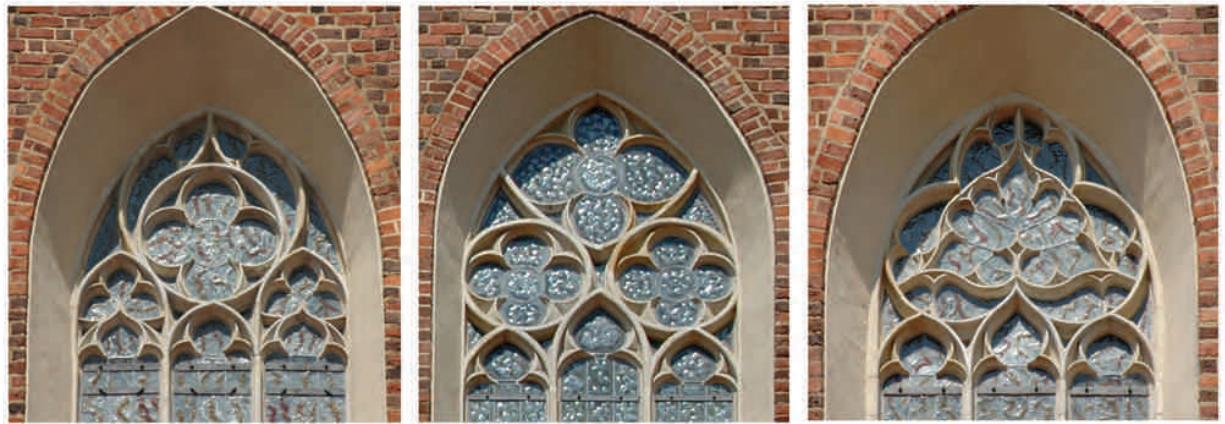
All four windows in the south elevation of the nave in Paczków are original, each with different tracery patterns. The first window from the east has a circle with a circular quatrefoil in the upper part of the window. The next tracery has a large pointed trefoil connected with the middle circle

filled with a pointed trefoil. The next tracery has a small circle with a circular trefoil with two fairly large mouchettes from the top. The mullions in the last window extend into flattened pointed arches with inscribed pointed open trefoils. There are two pointed arches on the axis, one above the other, and asymmetric closed pointed trefoils in the shape similar to an armorial shield on the sides.

The mullions in the three west windows extend into pointed arches filled with open pointed trefoils. In the upper part of the windows, there are traceries with central patterns. In the side two-light windows, this is a pattern with a circle filled with three mouchettes whirling left, and in the middle window, there is a quatrefoil with an internal circle, filled with pointed trefoils, and the whole arrangement is in a curved quatrefoil. There are pointed arches with closed pointed trefoils between bottom pointed arches and a curved square. The bottom part of the window, almost 2/3, is walled-up in the clearance, with the remaining part with three pointed blanks filled with a pointed trefoil.

The **St. Dorothy's Church in Wrocław** [13] has in its presbytery (1351–1381) four types of tracery with three lights, three on each side. In the apse in the middle in the upper part of the window, there are three curved triangles with pointed open trefoil, and three circles with inscribed open circular trefoil on the sides. In the north elevation, the first and third window has three elements in the upper part of the window – two circles with an inscribed trefoil, and above them a pointed trefoil, deformed to fit the shape of the pointed arch. In the second north window above the lower pointed arches with inscribed pointed trefoils, there are two wide pointed arches with similar trefoils, and a form similar to a mouchette in the top but with unusual proportions. On the south side of the presbytery, there are repeated two traceries with circles and wide trefoils, and three curved triangles additionally in a circle in the middle, except for the bottom part. In several traceries, there is a form of pointed arch going in between circles, creating ogival shapes. In the nave (1381 – the beginning of the 15<sup>th</sup> century), there are six tracery windows on the south side. Two east windows are identical, with two circles in the tracery just like in the presbytery, and a trefoil above them. That tracery is repeated twice, and there are two other ones with patterns composed of three elongated and deformed trefoils between them. The way in which they were made, which is less precise, indicates that they come from the 19<sup>th</sup> century.

The **Corpus Christi Church in Wrocław** (1366–1410) [13] has ten windows with seven tracery patterns (Fig. 6). The west tracery with four lights has a central pattern with a large circular quatrefoil inscribed in a circle. There are two pointed arches below it with a circle in the middle and two trefoils ogival in shape. The mullions in the remaining three-light windows also extend into trefoils, one of them ogival in shape. Two tracery patterns feature a trefoil in a circle. In one of them, it is surrounded by mouchettes and elongated trefoils; in the other, two circles are topped with an open pointed quatrefoil. In the next central pattern tracery, there is an element with a “quatrefoil” whose two arms are circular and the other



West windows of the south façades



East windows of the south façades



Windows of apse

Fig. 6. Wrocław – the Corpus Christi Church, traceries (photo: H. Golasz-Szołomicka)

Il. 6. Wrocław – kościół Bożego Ciała, maswerki (fot. H. Golasz-Szołomicka)

two pointed ones with a tip. The tracery in the middle window in the south elevation has a lot of small curvilinear elements, resembling a radial pattern.

The **Parish Church of St. Lawrence in Wołów** (the 14<sup>th</sup> century) [20] has only one tracery window in the sacristy located in the basement of the tower in the north-east corner between the presbytery and the nave. It is a two-light window with a several-level tracery pattern composed of pointed trefoils and quatrefoils.

The **Parish Church in Świerzawa** (presbytery 1381–1382, nave – the 1<sup>st</sup> half of the 15<sup>th</sup> century) [20] has a long polygonal presbytery with narrow two-light windows with the same tracery pattern. Their mullions extend into trefoils in a pointed arch and a sexfoil in a circle. The jambs are profiled with two roll moldings and hollows in between them. Some roll moldings built from polygonal brick bars are visible under damaged plaster.

The tall Gothic presbytery was added to the Romanesque nave in the **Parish Church in Środa Śląska** (before 1378–1388) [10]. It is a long three-sided presbytery with tall three-light windows in the south wall and polygonal enclosure. The north windows were walled up. The traceries have different patterns and profiles; they are slightly lowered in relation to the pointed clearance. In the middle tracery of the south window, whose elaborate profiles are the thickest, there is a date – 1891. The south-east tracery with mouchettes has different cross sections, maybe medieval?

The **Parish Church in Ziębice** has a new three-aisled presbytery built in the 2<sup>nd</sup> half of the 14<sup>th</sup> century – the beginning of the 14<sup>th</sup> century [1], [22] on a basilican plan with three polygons from the east in place of its earlier east part. Its aisles are as tall as the main body of the church, and the nave is much taller. Its windows have different sizes: the tallest ones in the polygonal enclosure of the nave have three lights, and those on the axis have four lights. The polygons of the aisles have two-light windows, and the south wall has three windows – two on the sides with three lights and the middle one with two lights. The south windows in the nave are the shortest, four of them have two lights, and one window, the east one, has a single light. The window niches inside are wider and they go lower than the glazed window clearance. The mullions extend into pointed

arches with an inscribed trefoil and a trefoil in a circle in every second tracery above it. The remaining two traceries are filled with mouchettes. The mullions in the windows in the aisle extend into pointed and semicircular arches, and there are central patterns with various forms in the upper part of the window. The tracery of the east four-light window has an extended central pattern with pointed arches. The pattern with mullions which extend into semicircular arches are repeated in the side windows of the polygon of the nave. The tracery of the east four-light window has a central pattern with two levels with open quatrefoils.

The **Parish Church in Nysa** (nave before 1392, presbytery 1423–1430) [1], [5] has exceptionally wide four-light windows in elongated elevations. Their tracery patterns are different, mostly central, which are also present in other churches for instance in the Parish Church in Brzeg. The third window from the west in the south elevation has an exceptional tracery, where the mullions extend into ogival arches which smoothly go into three circles filled with short circular trefoils with heart forms at their ends. The upper level is composed of two similar circles.

The two **west windows** in the **Collegiate Church in Wrocław** and in the **Parish Church in Nysa** feature exquisite six-light traceries with elaborate patterns in the upper part of the windows. It is not, however, certain if the traceries in such large windows are original.

## Conclusion

The tracery patterns from the 14<sup>th</sup> century are more elaborate than those from the 13<sup>th</sup> century. They can be divided into central patterns, extended central patterns, and several-level patterns. They continue or further develop the compositions from the 13<sup>th</sup> century [3]. The new elements which appeared in the 14<sup>th</sup> century include mouchettes, the oldest most probably being the one in the Collegiate Church of the Holy Cross in Wrocław<sup>4</sup>, armorial shields<sup>5</sup>, extensive multifoils, and whirling patterns.

The biggest group is that of **tracery with central patterns**. Their mullions branch into pointed arches with inscribed trefoils and the pattern in the middle with a multifoil enclosed in a circle or three elements arranged radially (Fig. 7). In Złotoryja, open trefoils are connected by fleur-de-lys<sup>6</sup>. The traceries with circular central patterns (Fig. 7A) in the Dominican Church in Wrocław and in Kamieniec Ząbkowicki and Nysa appear in rose windows with twelve, six, and seven elements with a small circle in the middle. In a small window in Świerzawa, there is a sexfoil inscribed in a circle.

The most elaborate radial tracery patterns (Fig. 7B) are in the Church of the Blessed Virgin Mary on the Sand in Wrocław. One of them is composed of three circles with three circular trefoils inscribed in them connected in the middle of the circles and in the middle of the whole pattern. The main element of the other tracery pattern is three elongated almond-shaped forms with two elongated trefoils inscribed in them and a quatrefoil at the end<sup>7</sup>. In other churches, there are radial tracery patterns composed of curved triangles with trefoils. The pattern of the tracery in the Corpus Christi Church in Wrocław is exceptional – a multifoil is inscribed in a circular trefoil with six mouchettes.

The south window in the Church of the Blessed Virgin Mary on the Sand in Wrocław has a whirling tracery pattern (Fig. 7C). Two elongated trefoils inside an almond-shaped form do not extend to the middle as in other cases but their sides join to create a mouchette. In Paczków, three mouchettes whirl inside a circle. The circle in the upper part of the window is also filled with elements of multifoils and mouchettes, creating asymmetric patterns but maintaining their central pattern character due to the mouchettes whirling inside the circle (Fig. 7D).

The main elements of the central tracery pattern also could include open or closed quatrefoils inside a curved square placed diagonally or a circle (Fig. 8). The whirling mouchettes

<sup>4</sup> Approximately at that time, mouchettes were exploited in the ornate Gothic gable of the west portal in the Church of the Blessed Virgin Mary on the Sand in Wrocław.

<sup>5</sup> The south-west window of the presbytery of the Collegiate Church of the Holy Cross in Wrocław features the forms similar to an armorial shield filled with an open trefoil.

<sup>6</sup> **Fleur-de-lys** were applied in the 2<sup>nd</sup> half of the 13<sup>th</sup> century in the tracery of east window of the church in Lubiąż.

<sup>7</sup> That pattern is similar to the window in the presbytery of the Collegiate Church of the Holy Cross in Wrocław [3].

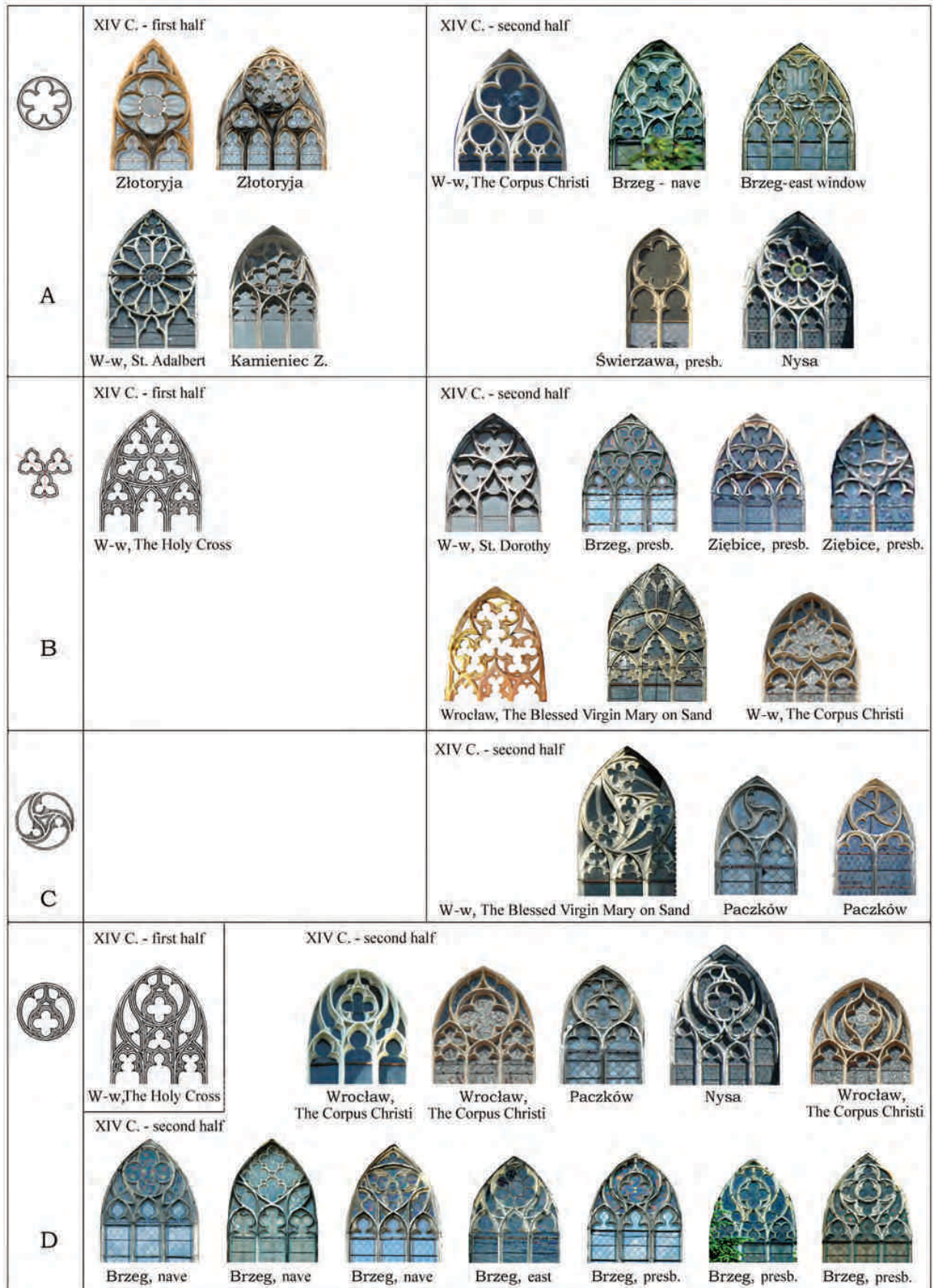


Fig. 7. Central tracery patterns (by H. Golasz-Szolomicka)

Il. 7. Maswerki o kompozycji centralnej (oprac. H. Golasz-Szolomicka)

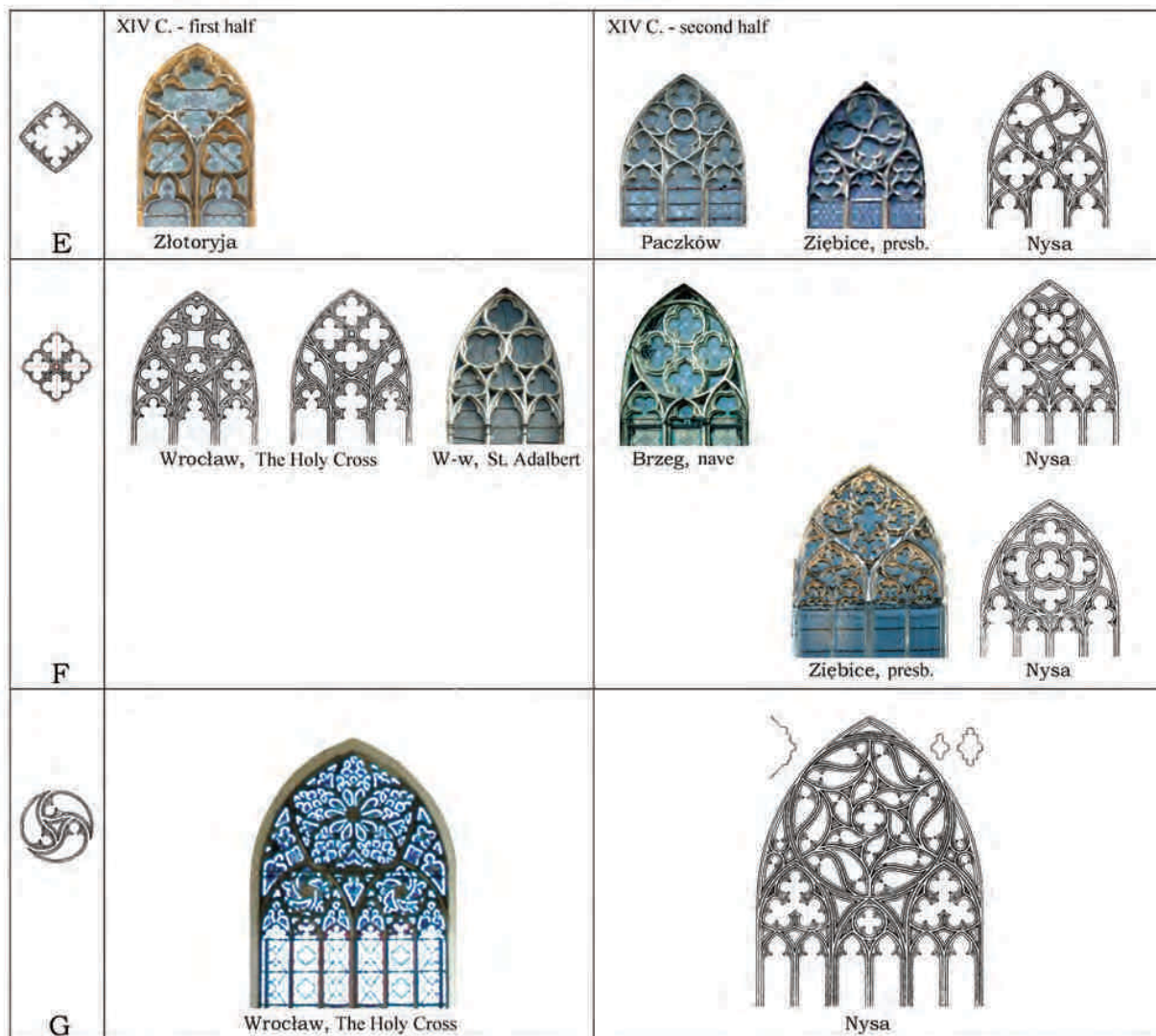


Fig. 8. Extended central tracery patterns (by H. Golasz-Szołomicka)

II. 8. Maswerki o kompozycji centralnej rozbudowanej (oprac. H. Golasz-Szołomicka)




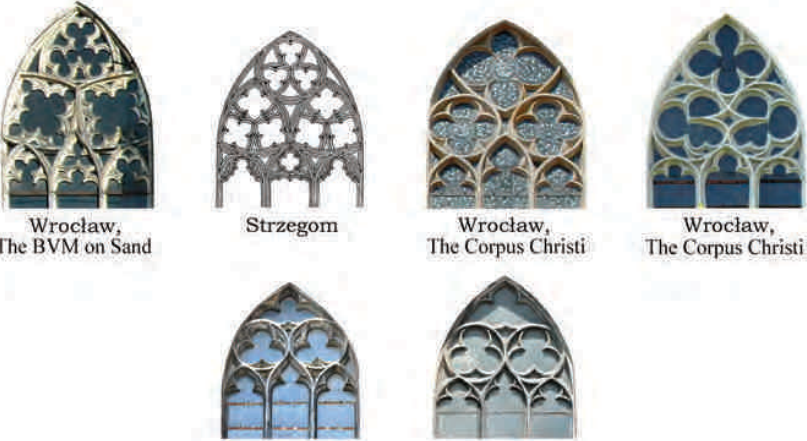



could also be inscribed in a curved square. The square was completed underneath with closed trefoils and quatrefoils, as well as trefoils or pointed arches under them with trefoils branching from mullions. In this way the central tracery pattern was enriched with elements on two levels.

Exceptionally extended tracery patterns were applied in the west windows of the Collegiate Church in Wrocław and in Nysa (Fig. 8G). In the Collegiate Church of the Holy Cross, the mullions with larger profiles mark a division into two pointed arches. Each of them is internally divided into three parts with trefoils surrounding a circle with whirling mouchettes. In the upper part of the window, there is a curved pentagon with an inscribed almond-shaped cinquefoil. The window in Nysa is divided into three parts with pointed arches. They are additionally divided internally into two parts with trefoils. Above them in the middle, there is a quatrefoil, and three radially connected trefoils on the sides. The upper part of the tracery is composed of a large circle filled with slender mouchettes whirling in different directions.






The **tracery pattern with several levels** have trefoils inscribed in a circle or in a curved triangle and quatrefoils inscribed in a curved square which were arranged in levels (Fig. 9). The several-level tracery patterns are composed of a few identical or different elements arranged on different levels. For instance all trefoils have the same arrangement, whereas in radial patterns (Fig. 7B) they were adequately reversed. In Głogów (Fig. 9K), the upper mouchette partly goes in between two lower elements, rendering the vertical divisions more evident. It looks similar in the tracery patterns in St. Dorothy's Church in Wrocław where there is a mouchette between open trefoils.

The last type of tracery pattern is the concentric tracery pattern with several levels. In three-light windows, the middle part closed with a pointed arch goes higher than the side parts. Different elements are arranged concentrically around it. That pattern appeared earlier in the east and south-west windows in the presbytery of the Collegiate Church of the Holy Cross in Wrocław [3]. The new ele-



 <p>H</p>	<p>XIV C. - first half</p>	<p>XIV C. - second half</p>  <p>Wrocław, St. Dorothy      Brzeg, presb.      Nysa      Nysa</p>			
 <p>I</p>	<p>XIV C. - first half</p>	<p>XIV C. - second half</p>  <p>Wrocław, The BVM on Sand      Strzegom      Wrocław, The Corpus Christi      Wrocław, The Corpus Christi</p> <p>Wrocław, The Corpus Christi      W-w, St. Dorothy, presbytery, north</p>			
 <p>K</p>	<p>XIV C. - first half</p>  <p>Głogów</p>	<p>XIV C. - second half</p>  <p>Paczków      W-w, St. Dorothy, presbytery, north      Ziębice, presbytery      Ziębice, presbytery      Środa Śl., par., presbytery</p>			

Several-level tracery patterns

 <p>L</p>	<p>XIV C. - first half</p>  <p>W-w, St. Adalbert</p>  <p>Wrocław, The Cathedral</p>  <p>Kamieniec Ząbkowicki</p>	<p>XIV C. - second half</p>  <p>Świdnica, presb.</p>
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Several-level concentric tracery patterns

Fig. 9. Several-level tracery patterns (by H. Golasz-Szólomicka)  
 Il. 9. Maswerki kilkupoziomowe (oprac. H. Golasz-Szólomicka)

ment in the tracery patterns from the 14<sup>th</sup> century was the armorial shield with a inscribed open trefoil.  
 Each of the tracery patterns features a great variety of forms, shapes, and mutual proportions of their component

elements. Special attention should be drawn to the application of elements of flamboyant Gothic – mouchettes as elements with fluid lines, as well as whirling patterns.

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### *Maswerkowe okna z XIV wieku na Śląsku*

Kościół z XIV wieku otrzymały wysokie okna o rozbudowanych i wielopłaszczyznowych maswerkach. Stanowią one rozwinięcie kompozycji XIII-wiecznej, ale o bardziej złożonych układach. W XIV wieku pojawiły się nowe elementy: rybnie pęcherze, forma tarczy herbowej oraz rozbudowane wieloliście i układy wirujące. Maswerki można podzielić na centralne, centralne rozbudowane i kilkupoziomowe.

**Key words:** Silesian churches from the 14<sup>th</sup> century, layout of windows in elevations, tracery with central patterns, extended central patterns, and pattern with several levels

W układzie centralnym i centralnym rozbudowanym w podłuczu umieszczano koło, kwadrat, trójkąt wypełniony wieloliściami, rybimi pęcherzami, elementami o układzie promienistym lub wirującym. Maswerki kilkupoziomowe składały się z kół, trójkątów, kwadratów wypełnionych wieloliściami ułożonymi piętrowo. W kompozycji kilkupoziomowej koncentrycznej układano wokół środkowego ostrołuku elementy w układzie koncentrycznym.

**Słowa kluczowe:** kościoły śląskie z XIV wieku, układ okien w elewacji, maswerki o kompozycji centralnej, maswerki o kompozycji centralnej rozbudowanej, maswerki o kompozycji kilkupoziomowej



Bożena Grzegorzczuk\*

## *The operations of building companies in Wrocław in the 2<sup>nd</sup> half of the 19<sup>th</sup> century*

One of the problems of Wrocław around 1850 – which in fact is rarely noticed by researchers – due to the fact that other issues are most often studied – is the issue of planned housing development and building societies closely connected with it which were established in those times<sup>1</sup>.

The lack of apartments is the syndrome of economic activation of Germany after 1840, which process was described by Thomas Nipperdey as modernization, emphasizing that it was not stimulated by the society but from outside [12, pp. 67–92]. As the historian put it: *the stagnation and backwardness had [...] their benefits: new technologies could be adopted* [12, p. 79]. It should be stressed that it allowed for the use of a number of solutions – including those in the scope of residential building – which was already developed and proven in the countries where the process of industrialization began earlier.

In respect of social housing, it is known that the English patterns were used in Europe at first, and the “Society for Improving the Conditions of the Labouring Classes” established in London in 1844 was presented as an example of a building organization in its new meaning [compare: 7, p. 413 and next]. It was those newly organized building societies which were established in Prussia in the 1850s and 1860s that brought a lot of hope for building development.

However, whereas the operations of the English company, just like “Vereeniging ten behoeve der Arbeidersklasse” (V.A) (Association for the Working Class) established on Nov. 11, 1851 in Amsterdam, were in fact charity operations, there were two types of societies which need to be distinguished in Prussia in respect of operations and assumed objectives. The first of them would include the societies which conducted primarily commercial operations and wanted to acquire building

areas to be later divided into plots for sale. Some of the societies did not, however, deal only with selling newly divided plots as they employed architects who designed buildings to be constructed and then sold to private persons or institutions. It is significant, however, that many of those societies were established on the initiative of the representatives of building professions (Bremen and Hale 1851, Lündenscheid 1853, Heilbornn 1854, Stuttgart and Szczecin 1859, Żagań and Królewiec 1861, Nuremberg 1862, Zgorzelec 1864).

The other group included the societies which operated as cooperatives, however, in a different way than in England or the Netherlands – where the initiative originated in the community of philanthropists – in Prussia they were established primarily on the initiative of the persons who were united because of the necessity to acquire a relatively inexpensive apartment. It is known that the first cooperative of that kind in the German speaking area was established in Hamburg (1862).

In the 1840s, along with the development of railroads, there was a noticeable growth of interest in Wrocław suburbs as building areas, and it was not only the construction of residential houses that intensified at that time – the first factory buildings which later developed into future industrial building appeared already in the 1<sup>st</sup> half of the 19<sup>th</sup> century [compare: 3, pp. 245–276]. Furthermore, retail and wholesale trade grew dynamically in the city; a lot of corporations of merchants, joint-stock companies, and credit institutions were established. Consequently, the demand for projects of buildings for institutions and organizations whose operations would be connected with economy grew too.

The economic boom resulted in a considerable growth of the city population over the whole century, which was connected to a large extent with an influx of people from whole Silesia<sup>2</sup>. There is no doubt that the decisions made

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<sup>1</sup> Building Bank Company was mentioned e.g. in the paper by Grzegorzczuk [5, p. 175]; next information regarding that issue is mentioned in the article: Grzegorzczuk, Tomaszewicz [8, p. 181 and next], as well as in the paper by Tomaszewicz [19, p. 40].

<sup>2</sup> The sevenfold growth in the number of Wrocław population during the 19<sup>th</sup> century is comparable to the growth in the population of such European metropolises as London, Paris, Amsterdam, Brussels, Rome, Buda-

by the city authorities then contributed to the building boom [compare: 10, p. 9 and next]. The growing demand for specialists qualified in various areas of building made the builders living in the Silesian towns and villages look for work in Wrocław. Although an intensified building movement was noticeable already in the middle of the 1850s, the real building explosion occurred much later – in 1872–1877. The boom in that area, though with varied intensity, which lasted for more than a dozen years, resulted in an influx into the city of a quite large group of architects who after graduation – most often from the Academy in Berlin – permanently settled in Wrocław<sup>3</sup>.

It should be noted that at the same time an increased demand for building plots, whose value – except for 1870 – still grew, became evident. And so in 1869, 636 plots were sold for the total sum of 10,136 thousand thalers. In 1870 – despite a decrease in the demand caused by the Franco-Prussian War – 568 plots were sold for the total sum of 8,274 thousand thalers. However, already in 1871, 623 plots were sold for the total sum of 12,438 thousand thalers, and in 1872 as many as 1,541 plots for the total amount of 85,623 thousand thalers. The average price of property which in 1869 was 15,937 thalers reached 23,116 thalers already in 1872<sup>4</sup>.

The possibility of making decent profits on trading in land at that time provided favorable conditions for establishing building joint-stock companies. The first one that we know of was Wrocław Building Society (*Breslauer Bau Gesellschaft*) established in 1858. Today it is difficult to determine if the idea of establishing the society was originated by the builder Hermann Melhorn who in 1856 purchased with his wife Laura the so called Red Farm (buildings with a horticulture farm of the area of 60 ha.) There is no doubt that the area of former horticulture farm located in Przedmieście Oławskie, bordering on the land owned by the rail and as such was not attractive for wealthy dwellers of Wrocław, could be fully and easily used for building cheaper houses or workshops. Anyway, soon the Wrocław city council came up with an idea of using that area for building cheap residential houses. The founding prospectus which was published on November 6, 1858 provided that the advocates of that idea included not only the representatives of the financial high society (such as banker D. Gordan, merchants H. Hammer and C. Keitsch) or members of the city council (D. Bülow, C.L.J. Pulvermacher, C. Studt) but also the representatives of the ruling elite with the head of the province Eduard Hans von Schleinitz<sup>5</sup>.

The whole area was purchased from the Melhorns (1862) with the raised funds and then divided into plots,

some of which were assigned for sale. The funds which were gathered in this way were supposed to be used for investing in building cheaper houses and workshops which would allow for a cheaper and faster construction of houses affordable for less wealthy members of the Society. Unfortunately, because of quarrels and disputes between its members the noble ends were never achieved and the remaining area was also sold [compare: 15, pp. 1–3].

The Wrocław Saving and Building Cooperative (*Breslauer Bau-Spar-Genossenschaft*), which was established by 44 persons on Feb. 14, 1868 based on the rules of the cooperative movement, had a much greater influence on the development of building of cheap residential houses in Wrocław. At the moment of its establishment, the cooperative members – in the number of 161 – raised the capital of 52 thousand thalers<sup>6</sup>.

The establishment of that special cooperative was preceded by almost a two-year-long discussion initiated in the “Schlesische Zeitung” already in 1866 about various forms of financing social building<sup>7</sup>. As a result of great interest generated by the idea of establishing a housing cooperative, a specially appointed seven-person board began to work on the statutes of the cooperative at the beginning of 1867<sup>8</sup>.

It is significant that the citizens of Wrocław who had been permanently living abroad also joined the discussion on the housing cooperative movement; for instance Doctor Lunge from Southsfield sent the materials on English cooperatives to the newspaper. It is known that a special brochure was published on the basis of these materials with a presentation of the methods of raising funds and their management<sup>9</sup>.

The first elections to the supervisory board were held in March 1868. Gustav Meyer was elected its Chairperson and one of the originators – the merchant Carl Schierer – was elected his Deputy. The other members of the supervisory board included notary Gustav Brier, inspector of the office Carel Laffeth, and merchant Moritz Zwettels. The positions of experts were held by the carpenter Robert Hanke and already mentioned Carl Schierer<sup>10</sup>. The cooperative inaugurated its actual operations by constructing a simple one-story semi-detached house in Huby, which was then a village, opposite the school, near the office of the factory owner Stache who personally was very interested in that investment. The building was designed by Ernst Nowack, and Joseph Morave was the director of works<sup>11</sup>. It is significant that the investment resulted in the growth of interest in that area especially among builders who not only executed the orders assigned to them but also often acted as building entrepreneurs themselves e.g. August Bößang or Edmund Schilling<sup>12</sup>.

It should be noted also that the cooperative aroused great interest in the community of Wrocław builders.

pest. London had a population of 1.117 thousand in 1800, 2.685 thousand in 1850, and 4.510 thousand in 1900. The population of Paris was respectively: 547 thousand in 1800, 1.053 thousand in 1850, and 2.630 thousand in 1900; Amsterdam: 220 thousand in 1800, 156 thousand in 1850, and 733 thousand in 1900; Rome: 163 thousand in 1800, 175 thousand in 1850, 465 thousand in 1900. Figures per M. Wagenaar [20, p. 23].

<sup>3</sup> That problem was mentioned in the article: Grzegorzczuk, [6, pp. 9–31].

<sup>4</sup> “Schlesische Zeitung”, Jan. 19, 1873, No. 31.

<sup>5</sup> Apart from those mentioned, the founders also included Robert Tüllff, regency counsel, Johann Sigismund von Dallwitz, and count Zieten.

<sup>6</sup> Compare: “Schlesische Zeitung”, May 9, 1868, No. 215.

<sup>7</sup> Compare: “Schlesische Zeitung”, Oct. 18, 1866, No. 490.

<sup>8</sup> Compare: “Schlesische Zeitung”, March 1, 1867, No. 100.

<sup>9</sup> Compare: “Schlesische Zeitung”, March 30, 1867 No.168; April 5, 1867, No. 256.

<sup>10</sup> Compare: “Schlesische Zeitung”, April 1, 1868, No. 155.

<sup>11</sup> Unfortunately the building design was not found.

<sup>12</sup> On the basis of documentation in ABMA, Vol. 1995–2005.

Its members included such reputed masters as: Carl Bröbbling, Herrmann Donat, Louis Ehrlich, Otto Fiebiger, Louis Hentschel, Friedrich Illner, Berthold Lange and Carl Schmidt, the sculptor Albert Rachner and such building entrepreneurs as Albert Nickel, Alois Seppelt, Gottfried Stojan [compare: 11].

Whereas both institutions mentioned above were interested primarily in the areas near Wrocław located east and south of its borders, the limited partnership “Matthiasfelder Bau-Commandit-Gesellschaft”, established on May 16, 1869, postulated in its founding prospectus the beginning of building expansion in the area of Przedmieście Odrzańskie which was considered *terra incognita* by a lot of inhabitants of the city [compare: 14, p. 1]. The area of that suburb – as described in the founding prospectus – was ignored despite the fact that it provided fresh air, good drinking water, and the best land for construction sites. The newly opened Dworzec Nadodrze railway station and relatively short distance to the city center provided additional advantage of that part of the city. According to the originators of the project the city hall was only 15 minutes away.

The founding capital of the partnership was supposed to be raised from the sale of 500 shares with the value of about 100 Rhine thalers. It is significant that not only was the buyout of the shares for money admitted but the shares also could be paid back by supplying materials or performing construction work. The capital of 50,000 thalers raised in this way was to be used for the purchase of area of about 98 acres. It was planned to design a square of the area of about 9.8 acres in the center, which in the future would be used as a shopping center. The remaining area around the square was to be divided by a grid of new streets with residential houses [14, p. 1]. In the opinion of the project originators the sale of plots for construction sites or independent buildings should generate substantial profits.

The possibility of achieving considerable profits – which at that time was possible by trading in land – was favorable for establishing building companies. There is no doubt that the prestige of two companies established at the beginning of the 1870s grew significantly – the Silesian Real Estate Trade Society (*Schlesische Immobilien Actien Gesellschaft*) (Oct. 31, 1871) which evolved from the “Union for Elimination of the Lack of Apartment” (*Verein zur Behebung der Wohnungsnoth*) already operating in 1871<sup>13</sup> and the Wrocław Building Bank (*Breslauer Baubank*) (est. Aug. 23, 1872). Both institutions were established on the initiative of the financial elite of Wrocław. The members of the Silesian Real Estate Trade Society’s supervisory board included the municipal judge David Friedländer, the merchant C.H.L. Kärger, and Wrocław biggest bankers – August Schmie-

der, Siegmund Sachs, Julius Schotländer and August Moser. The “core” of the board of the Wrocław Building Bank – apart from Emil Dickhut, director of Breslau-Schweidnitz-Freiburger Railway – was composed of the representatives of Wrocław high society bankers: Cohn (Gebrüder Guttentag), Siegmunt Levy (S.L. Landsberger), Edmund Oppenheim (Heymann Oppenheim), Salo Sackur (Gebrüder Sackur) Julius Schweitzer (Oppenheim & Schwetzer) and Felix Korab – royal legal advisor, attorney, and notary, as well as royal building advisor – Carl Lüdecke.

There is no doubt that the operations of both of those institutions were similar. First of all they tried to acquire the building areas located near newly laid out streets. Next, the areas were divided into plots and sold to the burghers. However, not all plots were assigned for sale. The companies usually developed the plots in the most attractive locations of the city on their own by building groups of townhouses with highly representative architecture.

To a large extent the financial success of both of those companies was determined by the founding capital as it should be emphasized that their establishment coincided with a huge economic boom which took place in the 1870s in the new German Reich. It was caused by a few factors: a large amount of five billion Francs that was paid to the German state treasury as a contribution imposed on France after the Franco-Prussian War which was won by Prussia (1870–1871), the growth of the internal market as a result of political unification of Germany, and finally the protection of domestic industry by protective customs tariffs, monetary reforms effected in 1871 and 1873 as well as the nationalization of railway in 1873–1878.

The building operations in Wrocław between 1872 and 1877 which were three times greater than over the next six years testify to fact that it was a period which was especially favorable for the growth of building<sup>14</sup>. It was typical not only of Wrocław because the building movement in Poznań was as dynamic [13, p. 272 and next].

The operations of Wrocław entrepreneurs focused mainly on construction of residential houses as high profits were expected from renting apartments, commercial space, and shops.

In this context it is impossible to ignore one more – as one might presume – rather significant issue, namely the explosion of building in the 1870s witnessed competition in the broad meaning of that word. Investors were interested mainly in the whole clusters of plots and not individual ones. A house located in the city center was a kind of advertising opportunity for its owner. The palace façades, representative staircases, conveniently laid-out interiors, stucco decorations of the salons – all this was the reason why they were called tenement palaces. It should be assumed that the highly representative architecture of

<sup>13</sup> The Union operated already in 1871, however, its members did not agree on the nature of its operations. Some of them wanted the Union to operate as a joint-stock company and it can be assumed that Schotländer was their leader; the other group, on the other hand, opted for establishing a cooperative. It should be assumed, however, there must have been other reasons for the split as the members of that union were also among the founders of the Wrocław Building Bank.

<sup>14</sup> In 1872–1877, the Building Police granted on average 370 building permits annually, whereas over two years preceding that period – in 1870 and 1871 – 183 building permits annually, and in 1878–1885 – about 151 building permits annually. Those building permits regarded both new projects and extension of already existing buildings, compare: Honigmann [9, p. 258].

those townhouses was supposed to not only demonstrate the high status of their owners but also attract clients longing for comfort and luxury, especially because they were built for rent. The grandeur and splendor of those profitable townhouses could be then considered one of the symptoms of competition.

It is significant that wherever the building complexes were representative, architects and builders were willing to build their own houses too<sup>15</sup>.

The first known commission executed by the Silesian Real Estate Trade Society which marked the beginning of its building operations included the development of the area of the so called Mysi Staw (*Mäusetzich*). This fairly large plot located between the penitentiary complex and Eichborn's garden and bordering to the north on the plot owned by Johann Gottfried Selenke's foundation was a large area used by cuirassiers as a drill square. That area was transferred to the city on the basis of the resolution from Jan. 13, 1866 which obligated the army to return to the city all its undeveloped plots located within the borders of Wrocław. Apart from the areas mentioned above, the city acquired also new plots at Wierzbowa Street 14, Mennicza Street 20, and Wszystkich Świętych Street, Basteigasse Street which does not exist today as well as Purkyniego Street 35. The city authorities paid the army a compensation in the total amount of 965 thousand thalers for the area described above. It was agreed that the area of former horse riding arena and Mysi Staw – a municipal building depot since 1871 – would be used for residential purposes. The development plan for the whole area, which included designing a large square with streets going away from it, was approved at the meeting of the City Council held on April 24, 1871. The newly designed streets marked the borders of the blocks which were divided into 77 building plots for sale. Apart from the square, which the city assigned free of charge for the construction of the Silesian Museum of Fine Arts, this whole area, together with the area which was also put up for sale of former city stables (*städische Marstall*) at Świdnicka Street, was bought for 1,220 thousand thalers<sup>16</sup> by Julius Schottländer, representing the interests of the Silesian Real Estate Trade Society, which at the moment of signing the agreement (March 23, 1872) was in organization. The extraordinary haste of the future shareholders – which, as it seems, was evident with that transaction – sheds special light on the reason why the company was incorporated, testifying to the fact that the financial elite in Wrocław fully realized the possibility of earning decent profits from that undertaking. According to the agreement which was concluded with the city authorities, the square and the streets as well as the water supply system and sewers had to be laid out and then paved by the Silesian Real Estate Trade Society (SRETS) on its own.

In September 1872, Friedrich Barchewitz – who was commissioned by the Society to execute the project –

extended the development plan of Mysi Staw [1]. The residential complex designed by him – which does not exist anymore – was composed of two parts, one located to the north of Muzealny Square and the other to the west of Muzealna Street. Both of its flanks visible from Muzealny Square presented a great tenement palace. However, if one looks closely at their plans, it is clearly visible that the whole design was composed of separate enclosed units. All of them were designed with three internal axes, and three of them additionally had side wings. The individual stories of each unit had one or two apartments with traditional interior layouts; the front axis had representative rooms, whereas the back one had bedrooms and auxiliary rooms. Both axes were separated by a hall connected directly with the landing which was invariably located along the back axis. The architect designed the additional – utility staircases – only in side wings. The annex of the complex designed in this way provided a square on the remnant of former Eichborn's garden.

The design of both façades of Barchewitz complex was based on three sections: lower, middle, and upper course; basement being the lower section. The middle section included the ground floor and the next two floors with a uniform brick cladding. The slightly higher top story was distinctively articulated by smaller order pilasters. The main expression feature of the building was the material – a combination of red clinker brick and architectural detail applied in plaster. This way of composing façades inspired by north Renaissance became particularly fashionable in Wrocław architecture in the 1880s.

Whereas SRETS developed the area of former Mysi Staw on its own, it divided the area of former horse riding arena into plots and sold them.

The next important objective of the Society – aimed at strengthening its reputation as a building tycoon in Wrocław – was to develop the area of former city stables.

It was a fairly big square, stretching south of the houses at Ofiar Oświęcimskich Street (*Junkerstr.*) to Kazimierza Wielkiego Street (*Schloßohle*). The square's irregular shape – defined from the north by existing houses and Kazimierza Wielkiego Street from the south – was a challenge for the architect because – as it can be presumed – the city authorities wanted a street (later *Königstr.*, today Leszczyńskiego Street) connecting Świdnicka Street with Kazimierza Wielkiego Street to go across that land. There is no doubt that the decision to purchase that area was based on its location – the townhouses built in that key point of the city – close to the center at Świdnicka Street, one of the busiest streets in the city, must have been profitable.

The Society's supervisory board did not commission the execution of the project to a specific architect but a competition for the development of that plot was announced in local newspapers in September 1872. The competition – for which 36 proposals were submitted – was resolved at the end of March 1873. Although the jury of the competition with Carl Lüdecke, Wilhelm Grapow and Alexander Kaumann liked most the projects by Friedrich Barchewitz, who was at that time a member of the

<sup>15</sup> Good examples include the houses of C. Schmidt at Muzealny Square, C. Schlick or Henry at Podwale Street.

<sup>16</sup> Compare: "Schlesische Provinzialblätter", 1872, p. 269.

Society, it was only after he won the competition that he was appointed director responsible for the building investments of the company<sup>17</sup>.

The architect divided the plot into two parts with Leszczyńskiego Street going diagonally across its whole area – one triangular in shape and the other irregular. Along the north side of that street, Barchewitz designed a complex composed of single townhouses which he “fit” into the existing houses. He designed the houses in the new complex with two and three internal axes and wherever possible with side wings. The ground floor served commercial and utility purposes, whereas the other stories were designed for apartments, offering – for those times – medium standard. The architectural complex laid out in this way presented a uniform whole.

The design of the building located opposite Leszczyńskiego Street was to a large extent determined by the triangular shape of the plot on which the plan of the building was based. Barchewitz designed the building by combining three single corner townhouses. It was no coincidence that the architect used the corner townhouses; actually it was a smart move of the builder who was trying to develop the plot as well as possible. According to the applicable construction law the undeveloped area of corner plots could be smaller than that of other plots. Whereas the ground floor of such a building designed in this way served only commercial purposes, its upper stories could be used in a number of ways. The part at the junction of Leszczyńskiego Street and Kazimierza Wielkiego Street – unlike the other two where apartments were planned – was designed as a hotel. That hotel had a lot of rooms laid out along its front axes – in most cases accessible from a representative hall. The rooms were connected with one another – providing suites with any number of rooms.

The front façades of the whole complex – both from the north and from the south of Leszczyńskiego Street, as well as along Świdnicka Street and Kazimierza Wielkiego Street – had a similar design with characteristic features of Classical Italian Renaissance. The fountain at the junction of Kazimierza Wielkiego Street and Leszczyńskiego Street was an additional element of the whole complex, which surely was supposed to emphasize its representative character.

An effort of the architect to impart a uniform character to the complex, which is visible at first glance, resulted in the lack of a strong landmark and the whole design seems to be slightly monotonous. Unfortunately, even the strong accent – a group of sculptures placed from Świdnicka Street: a figure of Silesia with her arms outstretched over the allegory of commerce and industry sitting at her feet – did not change it. It seems that when designing that complex, Barchewitz did not make the most of its great location, and by laying out the streets “diagonally” across the whole area he failed to design a strong urban and architectural development. Undoubtedly, however, that special layout of Leszczyńskiego Street provided an unobstructed

access to the complex without the necessity to use the narrow and inconvenient St. Doroty Street.

Another investment of the society designed by Barchewitz demonstrated a much more monumental façade. In this case, the extremely convenient location of that design was very important. The building was erected in such a way that one of its sides was located at Kościuszki Street (*Tauenzienstr.*), another at m. J. Piłsudskiego Street (*Gartenstr.*), and the façade was facing Legionów Square (*Sonnenplatz*). The façade of that 3-storied house, featuring an attached projection within 3-axis side parts, had evident divisions. The ground floor with accented rustication provided a base course for the next three stories. The first and second floors with a much more delicate rustication, were articulated by rectangular windows with decorative frames. The 4<sup>th</sup> story, which was much higher than the other ones, was divided by Corinthian pilasters placed on candelabrum pedestals with recessed balcony windows under column arcades in between them. Additionally, rich sculptural decorations (putti, sculptures, medallions, frieze with a garland, front projection and a group of sculptures with Silesia crowning the façade) added to the effective play of light and shadow.

It was actually the last representative complex designed by the company. Its later designs included simple houses built at Hercena Street 7–11 (*Forckenbeckstr.*); after their construction the company stopped its building operations and focused exclusively on speculation with land.

There is no doubt that the company became the leading real estate trader in Wrocław primarily because of Julius Schottländer – a man of exceptional knowledge of the market and its boom<sup>18</sup>. Although his underlying objective was to multiply the capital of the company, he also operated his private business, including real estate trading. He was perfectly organized and not only used his gift of anticipation and helped the company in purchasing the area of Mysi Staw but also acquired in 1877 a part of the colony of villas in Borek established by Quistrop – the entrepreneur from Berlin. After the land which was bought from the neighboring farmers was joined with Borek, 27 ha he donated to the city as green areas – provided that the city at its own cost would connect Borek to the system of water supply and sewers, it was connected to it.

It seems that the already mentioned Wrocław Building Bank (WBB) established at the same time as the Wrocław Building Union incorporated in 1871, the registered cooperative (*Breslauer Bau-Verein eingetragene Genossenschaft*) – were much less successful in that field.

WBB, headed by Benno Milch, was from the beginning of its operations more oriented to speculation with land. Although Eduard Kieselich who was a builder worked for that enterprise, its designs actually did not present an advertising character, and in fact, to a large extent, they were executed as incidental commissions such as e.g. modernization of the complex (1877) at Skargi Street 22 (*Alte Taschenstr.* 21). It is significant

<sup>17</sup> Information on the competition was published in “Schlesische Zeitung”, Jan. 15, 1873 No. 23, April 6, 1873 No. 163 and “Breslauer Zeitung”, April 4, 1873, No. 159; as well as [4].

<sup>18</sup> A perfect description of J. Schottländer was presented by Ziątkowski in [21].

that apart from buying out different areas and then selling building plots with profit, the company offered all services connected with building houses, suburban villas, pavilions, gazebos [compare: 5, p. 175].

It is then surprising that it was in that company where the idea of building Wrocław “Wilhelmsstadt” (1873) was born. It was supposed to be a complex of exclusive townhouses located between Powstańców Śląskich Street, Szczęśliwa Street, Zięlińskiego Street and Mała Street. The design developed by A. von Keller included dividing the whole area into 6 blocks. 4-storied, elegant houses were to be built along the streets with their back façades facing in a way inner fairly large yards which would resemble green oases accessible to all residents of a given block. It was also planned to create a wide arterial road which would go from Hirszfelda Square (*Höfchenplatz*) directly to Park Południowy. The idea became so attractive that the management of the company managed to attract the shareholders from its competitor SRETS to act together. The cooperation resulted in the purchase of the area popularly called Gajowice I (*Gabitz I*), in contrast to the area which SRETS had bought earlier near Grabiszyńska Street (*Grägschner Str.*) and Jęczmienna Street (*Luisenstr.*).

It seems that the cooperation must have been going well between former competitive companies as a similar area was also bought near former village of Rybaki. Whereas the structural fabric of Wilhelmsstadt was supposed to include picturesquely designed but still tenement houses, the vicinity along Piastowska Street and M. Curie-Skłodowskiej Street were going to be developed with villas. Contrary to popular expectations, no villas – except for several separate buildings – were built in this area. The only two villas at Grunwaldzka Street 98 (1872) and Liskiego Street 5/7 (1876) which have survived until today testify to the original idea of developing a peaceful and recreational district there. They both were designed by WBB [compare: 16, pp. 299–310].

The situations presented above unequivocally prove both the constant competition and great contribution of those institutions into planned development of the city. There is no doubt that the reason for establishing the co-

operatives, companies or building societies was the growing demand for all kinds of apartments: small and cheap, offering medium standard as well as grandiose suites and luxurious villas.

It is significant that at that time a similar situation could be noticed within the community of architects themselves – almost overnight – growing competition – was the reason why a great number of design offices were opened. The first such companies – mostly with two partners – appeared already in the 1870s. Among many of them was the design office incorporated in 1877 by H. Brost and C. Grosser which operated until 1894, Oesterlink & Hentschel established at the same time, or Gaze & Bötticher operating since 1901 for over a quarter of a century. Sometimes the design offices operated as family businesses, for instance the Ehrlich brothers, Erich Grau and sons or the office operated by Eugen Halfpaap with sons Günter and Rolf which was established on the basis of Simon & Halfpaap. On the one hand, it was obviously the effect of the great demand for projects; on the other hand, however, it resulted from quickly growing competition between both builders of houses and their designers.

Summing up, it should be noted that although the massive development of building companies contributed to planned development of the city, and resulted in several quite interesting designs in the city, it also triggered the correlation between the commissioner and the contractor which in fact had existed for centuries. Consequently, that pattern of business operations gradually loosened up the relationship between the commissioner and the designer. At the moment when an intermediary appeared, the commissioner practically had no influence on the appearance of the house – he could only accept the ready-made products. The architect, in the case of intermediary, very often remained anonymous. Maybe it was not a problem for recognized architects who had worked for their reputation for many years, but it must have been a problem for young people whose decision to move to Wrocław from academic centers often determined the development of their future career.

Translated by  
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### **Działalność wrocławskich spółek budowlanych w II połowie XIX wieku**

Jednym z problemów Wrocławia około roku 1850 – *nota bene* problemu, który tylko okazjonalnie, z racji omawiania najczęściej innych kwestii, zwraca uwagę badaczy – jest sprawa ówczesnej planowanej gospodarki mieszkaniowej i ściśle z nią powiązanych, tworzonych wówczas towarzystw budowlanych. Nie ulega wątpliwości, że był to wyraz aktywizacji gospodarczej Niemiec po roku 1840. Wraz z ożywieniem gospodarczym nastąpił w mieście przyrost ludności, a podejmowane wówczas przez członków zarządu miasta decyzje zaowocowały koniunkturą budowlaną. Uwidocznił się zwiększony popyt na działki budowlane, których wartość stale rosła. Można zauważyć, że w mieście pojawiła się konieczność wznoszenia nie tylko kamienic czynszowych dla zamożnych wrocławian, ale także budowy tańszych domów dla uboższych mieszkańców.

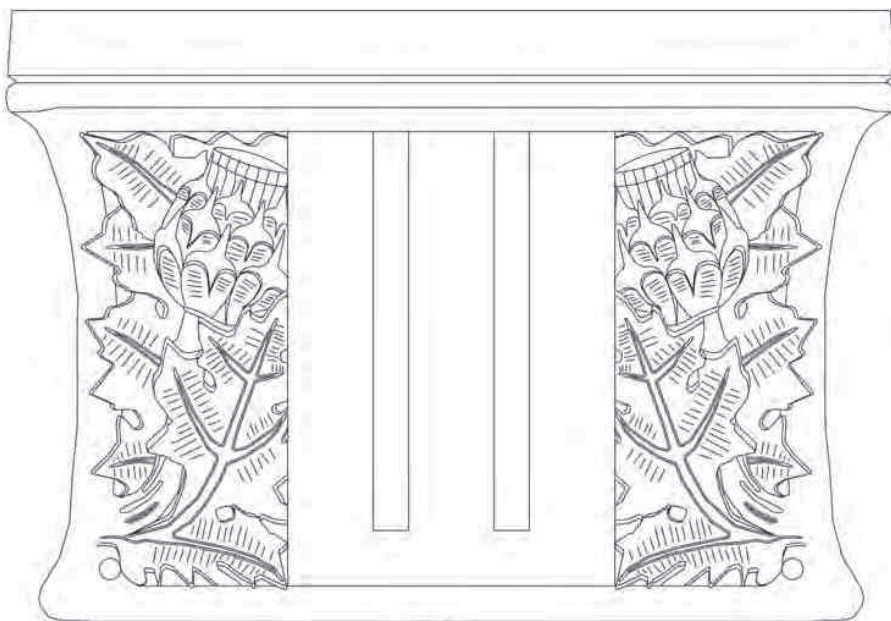
Znamienne jest, że wzorce czerpano przede wszystkim z doświadczeń angielskich, a jako przykład nowo pojętej organizacji budowlanej podawano „Society for Improving the Conditions of the Labouring Classes”, założone w Londynie w 1844 r. O ile jednak angielska spółka, podobnie jak amsterdamskie stowarzyszenie „Vereeniging ten Behoven der Arbeiderklasse”, prowadziła działalność na polu charytatywnej, o tyle na terenie Wrocławia prowadzono ją na dwa sposo-

by – pojawiły się dwie grupy stowarzyszeń o odmiennych celach. Do pierwszej z nich należy zaliczyć towarzystwa o zdecydowanie komercyjnym charakterze, które dążyły do pozyskania terenów budowlanych, następnie podziału ich na działki i sprzedaży (np. „Wrocławskie Towarzystwo Budowlane” – 1858, „Wrocławski Bank Budowlany” – 1871). Warto przy tym zaznaczyć, że część towarzystw nie zajmowała się li tylko sprzedażą nowo wytyczonych działek, zatrudniano bowiem architektów, którzy projektowali budynki, następnie realizowane i odsprzedawane prywatnym osobom bądź instytucjom (np. „Pole Maciejowe – Towarzystwo Budowlane – Komandytowe” – 1869, „Śląskie Towarzystwo Handlu Nieruchomościami” – 1872). Drugą grupę natomiast tworzyły towarzystwa, które działały na zasadach spółdzielni, jednak inaczej niż w Anglii czy Niderlandach, powstawały one przede wszystkim z inicjatywy osób, które jednoczyła konieczność zdobycia stosunkowo taniego mieszkania (np. „Wrocławska Spółdzielnia Oszczędnościowo-Budowlana” – 1868).

Naszkicowana w artykule działalność powyższych spółek jednoznacznie dowodzi nie tylko stałej rywalizacji, ale również ogromnego wkładu, jaki wniosły omawiane instytucje we współtworzenie planowego rozwoju miasta.

**Key words:** architecture 19<sup>th</sup>, social housing, building companies, Wrocław

**Słowa kluczowe:** architektura XIX w., budownictwo socjalne, spółki budowlane, Wrocław



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## *The urban transformations of the health resort in Łądek Zdrój before 1945*

Łądek Zdrój, one of the oldest and most beautiful Silesian health resorts, today slightly forgotten, was called the “jewel of the Sudety Mountains” before the Second World War and compared to the mythical Arcadia. The only thing that the region “lacks is the Greek sky” wrote not without pathos, the 18<sup>th</sup> century geologist, Leopold von Buch in the preface to his book on the structure of Łądek area [3, p. 2]. The picturesque location of Łądek Zdrój is still one its greatest values – the town was established in the eastern part of Kłodzko Region at the foot of and on the slopes of the Golden Mountains, in the valley of the Biała Łądecka River. The complex of the health resort comprises the municipal part – located in the broad valley of the river where the old trade routes used to cross, and the spa part – located both in the valley of the Biała Łądecka River and on the slopes of the neighboring hills. The attractive, undulating area with a winding river had the most decisive effect on the urban transformations of the health resort in all stages of its development.

The municipal part of Łądek Zdrój was granted the town charter in the 2<sup>nd</sup> half of the 13<sup>th</sup> century, during German colonization of Kłodzko Region, most probably during the reign of King of Bohemia Ottokar II (1253–1278) or Duke of Wrotizla Henryk IV (the Righteous) (1278–1290)<sup>1</sup>. It is unknown when the spa part of the town was established; in the oldest preserved chronicle of Silesia by Jacob Schickfuss from 1625, Samuel Schilling, a physician from Nysa, mentions that the first bathing facilities in Łądek were destroyed during the incursion of

Tatars in 1241<sup>2</sup>. It is assumed then that those springs could have been discovered at the end of the 12<sup>th</sup> or at the beginning of the 13<sup>th</sup> century [16, p. 13]. Furthermore, it seems that the baths kept operating as Schilling noted that further destruction was suffered in the spa during the Hussite Wars in 1428 and 1431.

The history confirmed by documents dates back to 1498 when George Duke of Ziębice–Oleśnica, one of three brothers ruling over Kłodzko Region at that time, “developed and enclosed of the spring” located at the foot of Świętojskie Hill near the road going along the riverbed from Łądek to Stronie Śląskie and further in the direction of Moravia [4, p. 68]. A new water intake was enclosed within a rectangle 3 by 12 cubits (cir. 1.7 by 7 m), where a “bathhouse” was designed with a chapel and nearby inn [1, p. 193]. St. George (*Georgenbad*) became patron of the chapel as well as of the whole bathing resort. At the same time the Vienna scholar, Konrad von Berge, who was asked to conduct research and determine the chemical composition of the waters from “hot springs”, confirmed their healing qualities [8, p. 80]. However, the duke’s actions did not permanently boost the reputation of the resort which, as the physician from Łądek and chronicler Gottfried Heinrich Burghart put it, “soon started to decline again” [4, p. 70]. The frequent changes of the regents of the County of Kłodzko did not favor the town growth. The situation did not improve either after the sale of the resort in 1544 to the burgher from Kłodzko Franz Kallman who, after obtaining the permit to farm the land and build the residential district on the area

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<sup>1</sup> It is assumed that the town was established on the land of the village of Leśna, former settlement of servants at Karpien Castle, between 1264 and 1290 [8, p. 77], [4, p. 11].

<sup>2</sup> After Schickfuss [12, p. 22] Burghart presents this information, writing that “it can be presumed that at those times the spring must have been rather known and used because according to all sources already around 1242 [it] was destroyed by banditry and fire and it was ruined” [4, p. 64]. A few years ago J. Dębicki tried to estimate the credibility of the information about the destruction caused by Tatars in Łądek Zdrój, compare [6, p. 20, 21].



Fig. 1. Spring of St. George, view from the north, 1736 [4, after p. 58]

Il. 1. Zdrój św. Jerzego, widok od strony północnej, 1736 [4, po s. 58]

bordering on the bathing resort, *cared more about the farmstead than about the repair and the operation of the glorious springs* [4, p. 72]. It seems that despite serious negligence St. George Spring was still in use as a *huge bathing guest house* was built below hot springs on the ducal land [4, p. 72] in about 1570. Soon afterwards a huge remodeling of the baths started; in 1572 the ownership of the spring with the bathhouse “George” and nearby area was transferred to the municipality in Łądek. In the years 1577–1580, at the request of the municipal authorities, the wooden “bathhouse” was demolished, the water intake was enclosed by granite blocks and roofed, and new baths with tubs and facilities to heat the water as well as the guest quarters were built. The bathing regulations issued in 1601 regarded not only the healing qualities of the thermal waters but “structural amenities” facilitating the use of the baths as well. Despite their apparently random layout, the design of the buildings in the resort was functionally justified – the central point of the baths included the water intake building which was connected with the ladies’ baths (*Hoffnung*) and the men’s baths (*Schwarzer Adler*) erected in its “immediate vicinity”. Additionally, single guest rooms were designed in the bath buildings. The design of the baths was complemented with boarding houses built both on the slope of Świętojerskie Hill, right by the water intake, and by the road leading to the town (Fig. 1). Most of the houses were built from wood, some from stone, however, usually such stone walls would be limited to the base course. All boarding houses had high gables and double-sloped roofs; some houses were connected with one another by galleries. After 1580, a clock tower with the works which was a gift granted to the town by George II Duke of Legnica–Brzeg was

built on the slope of the hill which was a picturesque background of the resort’s architecture [7, p. 9]. The slender shape of the tower dominated over the buildings of the baths until 1637 when a chapel dedicated to the resort’s patron was built on the plateau of the hill<sup>3</sup>.

The baths of St. George were not the only spring of mineral waters discovered in the area of Łądek Zdrój. Already in 1625, in the quoted chronicle of Silesia, Samuel Schilling mentioned the existence of *round pools which, due to the strong smell of sulfates, can be considered much warmer than the hot springs* [12, p. 25], [4, p. 76]. Furthermore, Schilling encouraged to “seriously consider the possibility of hot baths’ arrangement” on the farming lands within the distance of a “musket’s shot” from the old spring [12, p. 24], [15]. The restless years of the Thirty Years Wars did not, however, favor new investments and the municipal authorities failed to arrange and maintain other baths.

The land (*Ober Theilheim*) with the springs mentioned by Schilling was bought in 1637 by a private person, the Emperor’s advisor Johann Sigismund Hoffmann von Leuchtenstem<sup>4</sup>. Hoffmann commissioned the discovery and intake of two springs (Frederick and Mary), the warmer of which (Mary, at present Wojciech) was covered in 1678 with a balneary building with baths. One of the oldest known

<sup>3</sup> In the years 1656–1658, a masonry chapel, which still exists today, designed by Baltazar and Hans Hanisch or Carl Luragi was built in the place of the wooden building mentioned above [5, p. 71, 72].

<sup>4</sup> The date of purchase of the property by Hoffmann is uncertain – mentions Stillfried in 1637 [13, p. 125]. Burghart informs that Hoffmann started to study the hot springs in 1678 [4, p. 78], and Hauck claims that the property was bought in 1672 [1, p. 196].



Fig. 2. Mary's Spring, view from the north, 1736 [4, after p. 60]

Il. 2. Zdrój Marii, widok od strony północnej, 1736 [4, po s. 60]

views (Fig. 2) and descriptions of that building which no longer exists was included by Gottfried Heinrich Burghart in the book quoted above on springs in Łądek: [in New Baths] – he wrote – *there is a very tall, grand, wide, octagonal building made of stone up to its roof which, being the proper bath, instantly catches the eye; from the south it is connected by a covered external passage with a small chapel. That palace has a great door decorated at the top with a coat of arms of its founder and if you take a few steps through a vaulted hall, you will get to an almost 80 feet high, spacious, octagonal room with eight semi-circular windows at the top [...]. The circular ceiling is decorated with a huge gold-plated star in the middle. In the central point of that room there is an octagonal bathing room and the proper bath. It is surrounded by a gallery topped by an exquisite dome with eight windows. More than 20 rooms and other amenities were designed around that room from outside in special order on two stories where the baths' guests comfortably live and from which they can get to the bathing room and its upper ambulatory thought the doors painted blue and white. Two vaulted corridors lead from the bathing room, whose floor was covered with wooden boards due to great depth and where benches were placed around by the walls for as many as 60 people, to exquisite separate bathing rooms for men and women which have adequate height and offer proper comfort. It is also evident that the builders spared no expense, [which made] the bath exquisite, comfortable and cozy especially because it was designed as a Turkish bath and additionally, as I was assured, its original is in Ofen in Hungary* [4, p. 60, 61].

The architecture of New Baths is laid out on a rectangular plan: baths are located in its north corner, the south-

west side was occupied by a complex of boarding houses *with rooms, pantries, kitchens and basements with necessary household appliances appropriate for people from the refined estate* [8, p. 131]. From south-east, the original design was limited by a slope where ten row houses called Ten Commandments (*Zehn Gebote*) were located – their owners were mainly farmers, however, when there was a need, they offered accommodation to the guests of the bathing resort. Finally, a tavern (*Taberne*) was built from the north-east side around outbuildings. The middle of the rectangle without buildings created a square in the shape of the letter L whose wider arm served as a square in front of the entrance to Mary's Spring building, whereas the narrower one – to the boarding houses. Apart from the utilitarian qualities, the spatial design of the baths demonstrated aesthetic values as it provided the effective exposure of the most representative structure of the baths. A gazebo was built in front of the entrance to the baths with the outlet of Frederick's Spring<sup>5</sup> and a fountain decorated with the statue of Neptune. On the other hand, behind the tavern building on a star plan linden trees were planted "for people to enjoy walks if the weather was nice" (later Hoffmann Square) [8, p. 132].

The spatial composition of the architecture of the baths, which is the result of one well planned construction operation, is considered the oldest solution of this kind in Silesian health resorts [2, p. 136].

<sup>5</sup> The spring was named Frederick in 1865 to commemorate the centennial of the visit of King Frederick II to the spring.



Fig. 3. Plan of the baths in Łądek, 1804 (*Situationsplan von der Bädern bey Landeck aufgenommen im August 1804*, State Archives in Wrocław)

Il. 3. Plan sytuacyjny lądeckich kąpielisk, 1804 (*Situationsplan von der Bädern bey Landeck aufgenommen im August 1804*, Archiwum Państwowe we Wrocławiu)

The construction design of the spring was extended in 1680 to include the Chapel of Virgin Mary in the Desert located on the hill a few hundred meters from the “baths”. Both buildings were connected by an avenue with linden trees<sup>6</sup>. The water from Mary’s Spring was used to fill the pool, whereas the water from Frederick’s Spring was used to fill the bathtubs; the water used in drinking therapy came from both Frederick’s Spring and from the water spring located near the Church of Virgin Mary in the Desert (which in 1838 was named Marianna spring to honor Princess Marianne of the Netherlands)<sup>7</sup>.

In 1694, Hoffmann von Leuchtenstern bought a few nearby villages such as Karpno (*Karpenstein*), Lutynia (*Leuten*), Wrzosówka (*Heidelberg*), Wójtówka (*Voigsdorf*) and Stójków (*Olbersdorf*), and he started the construction of his own manor with a grange at the place where the

<sup>6</sup> Both the church, extended by two isles in 1690, and the thermal springs were designed by Christoph Grom [1, p. 196].

<sup>7</sup> The waters of Mary’s Spring were thoroughly tested by the emperor’s physician Adam Friedrich Kremer from Vienna who presented their chemical composition and healing properties in the brochure published in 1693. Kremer at the same time encouraged the application of the waters not only in baths but in drinking therapies as well [4, p. 80].

Biała Lądecka River and Grodzki Stream merge, by the road going from St. George’s Spring to the town [7, p. 16]. The house was connected with Mary’s Spring by another linden tree avenue.

The new baths became popular rather quickly; they were frequented by the health resort visitors and consequently became a serious competition for St. George’s Spring. Already in 1706, the town’s authorities tried to buy Mary’s thermal springs from Franz Weighart, son of Hoffmann von Leuchtenstern, however, for financial reasons the transaction was not finalized. The municipality in Łądek became owner of Hoffmann’s holdings in Kłodzko area in 1736. Unfortunately, however, the damage suffered by the town in the aftermath of Silesian Wars and a huge fire in 1739 considerably slowed down the development of the health resort. Furthermore, during the Seven Years War the bathing facilities and boarding houses were turned into field hospitals and military quarters [7, p. 21, 22].

In 1742, the rule over Kłodzko Region and a huge part of Silesia shifted from the Habsburgs to the Hohenzollerns – initially that fact had no effect on improvement of the situation of the springs in Łądek; it did not change even after they were visited by King of Prussia Frederick II

who underwent about a two-week-long therapy in Mary's baths in 1765. The actual breakthrough took place after 1782 when the minister of Silesia, Carl Georg Heinrich Count von Hoym personally got involved into the development of the health resort. On the initiative of the minister the Baths Board was appointed that took over the supervision of the health resort and at the same time took steps in order to "improve and rejuvenate the baths" [8, p. 134]. The most important task of the Board was to cause the spatial connection of Old and New Baths that in the 2<sup>nd</sup> half of the 18<sup>th</sup> century were still independent facilities separated by farming lands, meadows and private gardens (Fig. 3).

It was decided then to build half way between the thermal springs a bathhouse – "salon" that was used for social meetings of the guests of both baths [14, p. 15]. The building was located by the newly designed maple tree avenue that connected "Old" and "New Baths". On the slope of the hill below the bathhouse, a small garden was designed that was converted into an English park when the "salon" was extended in 1792 and joined St. George's Baths [7, p. 30]. At the same time public walks were designed in the valley of the Jadwizanka Stream, with a Forest Temple in the form of a small chapel, pavilion for orchestra, and a little later – a Swiss chalet with a restaurant. On the initiative of Count von Hoym the buildings of the baths were also renovated and in 1788 a new bathhouse, so called *douche baths* (*Douchebad*), was built over Frederick's Spring where the patients were offered first in Silesia bubble and shower baths [1, p. 200]. In 1794, the women's baths were extended in St. George's Spring by building a healthcare center in the new section for the poor.

At the end of the 18<sup>th</sup> century, in the vicinity of the springs – along the maple tree avenue – the first private villas were designed and built for recreational purposes. In 1793, the house of Count Maltzan (minister von Hoym's son-in-law) was built opposite the bathhouse, at the beginning of the avenue; in 1801, the house of general von Rothkirch's wife was built by St. George's bathing house, and the Radziwiłł's residence – *Hôtel de Pologne* – was built between those buildings in 1820. In 1799, general Gravert's own house was built opposite the Chapel of Virgin Mary in the Desert; a few years later, in the years 1813–1815, he commissioned the construction of another villa located by the linden tree avenue going from Mary's Spring all the way to the bridge across today's Luty Stream [7, p. 36].

As a result of effort of minister von Hoym, in 1800, Queen Louise of Prussia laid the cornerstone for the construction of a new ballroom<sup>8</sup> located in the complex of the bathhouse [7, p. 34]. After completion of the construction works central park was extended to reach New Baths, connecting them with the bathhouse by a larch tree avenue. Thus, the idea of connecting the baths by recreational paths called Spa Park (*Kurpark*) was finally realized<sup>9</sup>.

<sup>8</sup> The extension of the building was designed by architect Carl Gottfried Geissler from Wrocław [5, p. 74].

<sup>9</sup> Today it is called John Paul II's Park (earlier Central Park).



Fig. 4. Hall for walks (*Albrechtshalle*, built after World War II), view from Central Park (photo: E. Trocka-Leszczczyńska, 2009)

Il. 4. Hala spacerowa (*Albrechtshalle*, zabudowana po II wojnie światowej), widok od strony Parku Centralnego (fot. E. Trocka-Leszczczyńska, 2009)

One of the most important events in the history of Łądek was the political meeting of the King of Prussia Frederick William III with Tsar Alexander I who spent in the baths about two weeks in August 1813. The visit of the crowned heads greatly affected the popularity of the resort, especially among aristocracy, which in turn further boosted the intense growth of the baths.

In around 1820, the resort visitors were offered over 200 rooms in 18 municipal and 28 private guest houses [8, p. 134]. The appearance of the resort was systematically improved by designing new areas for walks – in 1825, an English park was designed on Świętojskie Hill around St. George's Chapel. In 1838, the Douche Baths were extended in Mary's Spring to include, apart from showers, an inhaling hall. Two years later, the main building of the thermal springs was covered with a new dome, and in 1845 another one – made of glass – was installed inside it "to prevent drafts" [1, p. 200]. At the end of the 1830s, the intake of Marianne's Spring was remodeled and in 1842 it was connected with a 146 meter long hall for walks (*Albrechtshalle*) located at the foot of the Chapel of Virgin Mary in the Desert and opened to Spa Park [11, p. 150] (Fig. 4).

Three years later, a new masonry bathhouse was built in the place of the old structure made of wooden that burned down in 1841. Next, in the years 1848–1849, modern baths called Stone Baths (*Steinbad*) – with tubs for water and peat baths – were built in the place of demolished inns, whose construction was commissioned by Hoffmann von Leuchtenstern, south-west of Mary's Baths, [10, p. 31]. The new thermal springs were fed from Meadow Spring (*Wiesenquelle*) which was discovered in 1829<sup>10</sup>. In the 1850s, the bathing facilities in the baths in both springs were renovated or replaced with copper piping, wooden tubs were replaced with new marble ones, the pools were extended and their walls and floors were

<sup>10</sup> At present Chrobry's Spring.



Fig. 5. Lądek Zdrój, plan of the town and health resort, 1890 (*Lage-plan von Bad Landeck anschließend Stadt Landeck in Schliesen*, State Archives in Wrocław)

II. 5. Lądek-Zdrój, plan miasta i uzdrowiska, 1890 (*Lage-plan von Bad Landeck anschließend Stadt Landeck in Schliesen*, Archiwum Państwowe we Wrocławiu)

covered with marble plates. The Bathhouse was also further extended in the years 1853–1854 by adding a reading room and a concert hall.

In 1861, the town's authorities bought from a private person an inn (*Brunnenhof*) with extensive areas of old farmstead located on a hill bordering on Mary's Baths from north-west. Former meadows and arable fields were converted into a park – Morning Promenade (*Morgen-Promenade*) also called Mary's Hill that was an extension of the area for walks in the Spa Park to the north [1, p. 203]. In 1865, a sanatorium for soldiers wounded in the German-Danish War (*Militär Kurhaus*) was built on the eastern slope of the hill, along the road leading to Lutynia [10, p. 33]. Later, the building would be extended into a complex of healthcare centers for the army, whose construction began in 1900<sup>11</sup>. In the 1860s, another English park, so called Children's Garden (*Kinder-Garten*) was designed behind the eastern border of Mary's Spring.

Apart from the systematic and consistent improvement of the conditions for providing therapies, the 19<sup>th</sup>-century authorities of Lądek Zdrój tried to acquire and combine the lands around the baths where later green areas were designed. It seems, however, that no coherent development plan of the resort was prepared – consequently, the private houses as well as boarding houses located between the val-



Fig. 6. Mary's Baths, view from John Paul II's Park (photo: E. Trocka-Leszczyńska, 2009)

II. 6. Łazienki Marii, widok od strony Parku Centralnego (fot. E. Trocka-Leszczyńska, 2009)

ley of the Biała Łądecka River and the western border of Spa Park were built without any specific layout according to individually granted building conditions for individual buildings. A more comprehensive development plan for new building areas was prepared in 1872, when, on the initiative of a company set up by private investors, the lands by the bend of the Biała Łądecka River, on its west side, on the eastern slope of Dzielec Hill were prepared for construction of an estate of villas. An oval square was then laid out for a carefully designed garden with three streets connecting the estate with the town, St. George's Spring and forest areas for walks. In time, healthcare centers and boarding houses were built around the square and along the streets (Fig. 5).

In 1877, a decision was made to demolish almost two-hundred-year-old Mary's Baths and replace them with a new building which, as in 1881 wrote Aleksander Ostrowicz – the spa physician and author of a guidebook about the resort published in Polish, *in respect of its magnificence and exquisiteness it resembles old thermal springs of Roman Caesars* [10, p. 137]. The building designed by Hermann Völkel – an architect from Nysa – on central plan in the forms of Italian renaissance still today is the symbol of the resort in Lądek (Fig. 6).

In 1902, the process of connecting the resort with the lands of *Ober Thalheim* village to the town began, which enabled the investments aimed at significantly improving both comfort of rest and the quality of life in the resort. The town got its water supply system in the years 1895–1896, power supply system in the years 1898–1899, and in 1897, a railroad connection between Kłodzko and Stronie Śląskie was built [8, p. 84].

At the beginning of the 20<sup>th</sup> century, on the lands of *Ober Thalheim* village, in the north part of the resort, construction of a new estate of villas was planned on the basis of old layouts of the village roads. However, in order to prevent the stylistic chaos of architecture a competition for the estate was announced in 1907. The participants of the competition were asked to prepare a design of five residential buildings: two detached single

<sup>11</sup> Today the buildings designed then belong to the complex of Adam Spa Hospital.



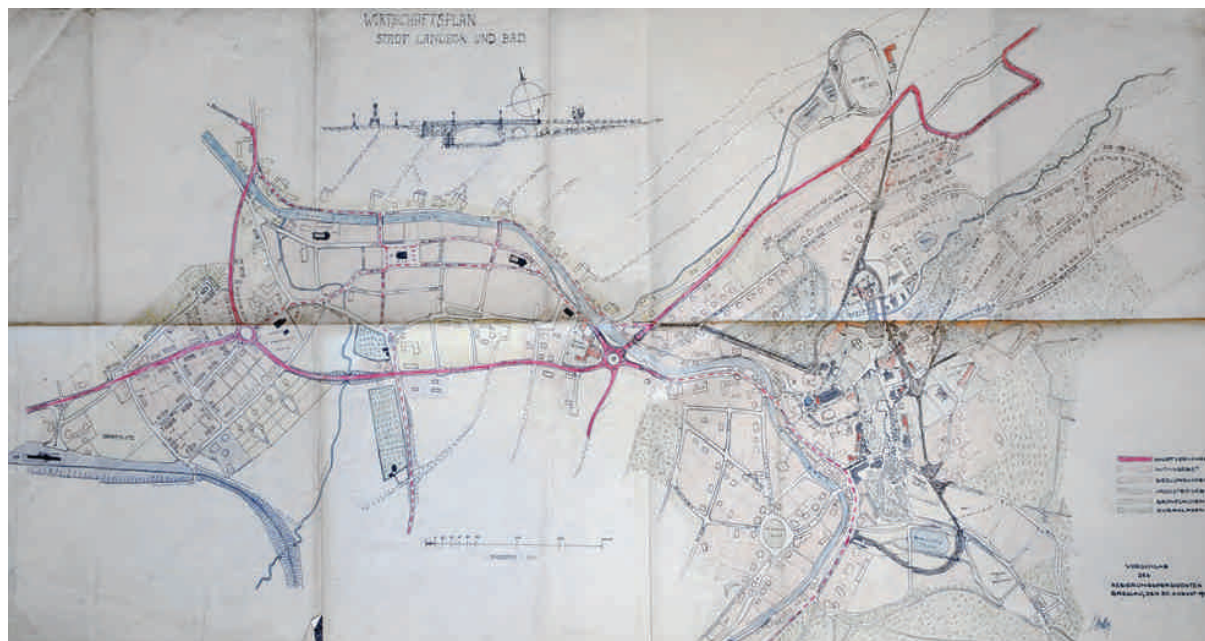


Fig. 7. Łądek Zdrój, extension project of the town and the resort – not completed, 1940 (*Wirtschafts-plan Stadt Landeck und Bad*, State Archives in Wrocław)

Il. 7. Łądek-Zdrój, niezrealizowany projekt rozbudowy miasta i uzdrowiska, 1940 (*Wirtschafts-plan Stadt Landeck und Bad*, Archiwum Państwowe we Wrocławiu)

family houses of different sizes, two boarding houses, and a multi family town house located in a compact settlement area. The conditions of the competition provided that *special attention should be paid to the rejuvenation of local architecture proven in previous centuries which has still been preserved in some parts of Silesia, and especially in the County of Kłodzko* [9, p. 252]. A record number of designs (138) were submitted for the competition, 21 of which were granted awards, however, the new residential estate in Łądek was built only in the 1920s and in the 1930s.

In 1904, it was discovered, and confirmed in 1909, that the thermal waters in Łądek demonstrate radioactive qualities; it was also determined that the radioactivity was caused by radium emanation which was applied in health therapies. Consequently, a pavilion with radium emanatorium was built near St. George's Baths in 1912.

Before the outbreak of the First World War, the construction of new baths started in the place of the oldest guest houses of George's Spring. At the beginning of the 20<sup>th</sup> century, the Bathhouse underwent another remodeling, and the great ballroom was adjusted for the needs of cinematography in 1922.

Today's appearance of the spa part of Łądek Zdrój is to a large extent the result of reorganization of space development around Mary's Spring which took place in the 1930s. This is when two boarding houses and Stone Baths – located too high in relation to the spring that fed them, were demolished [10, p. 100]. The lower section of the Karpowski Stream was channeled and then a new bathing center called Frederick was built in the lowest point near the hall for walks. At the same time peat baths were annexed to the building of Mary's thermal springs from the north.

The new bathing center, housing a swimming pool, gym, inhalatorium and pump hall, closed the area of Spa Park from the south-west; it was connected with Mary's Spring by monumental steps built in the place of demolished baths. The view on Mary's thermal springs was thus exposed, and Spa Park started to serve additional functions of a green "square" in front of the entrance to the most representative building of the resort.

In 1936, Mary's Baths were thoroughly modernized last time before the outbreak of the Second World War; the same year – on the north side of the resort in the valley of the Luty Stream – an open-air swimming pool was built. Later projects, regarding mainly the regulation of the town's communication layout, were never carried out.

In 1940, the first comprehensive project of improvement of communication both in the municipal and spa part of Łądek Zdrój was developed. Earlier, only individual streets were subject to regulation – in 1925, the road linking the resort to the town (today's Kościuszki Street) was broadened and paved. The new plan included a ring road going along the southern border of the town, connecting the old routes leading to Złoty Stok, Kłodzko and Jawornik (Fig. 7).

A new bridge across the Biała Łądecka River with the star-shaped square in front of it, facilitating a better distribution of traffic to the center of the town and the resort, was also planned. The main flow of traffic was planned in the spa to go around Mary's Hill to the south – right behind the building of Mary's thermal springs – in the place where the Ten Commandments houses were demolished and further across the undeveloped area behind Świętojerski Hill – to the road leading in the direction of Stronie Śląskie. That plan also included an extension of

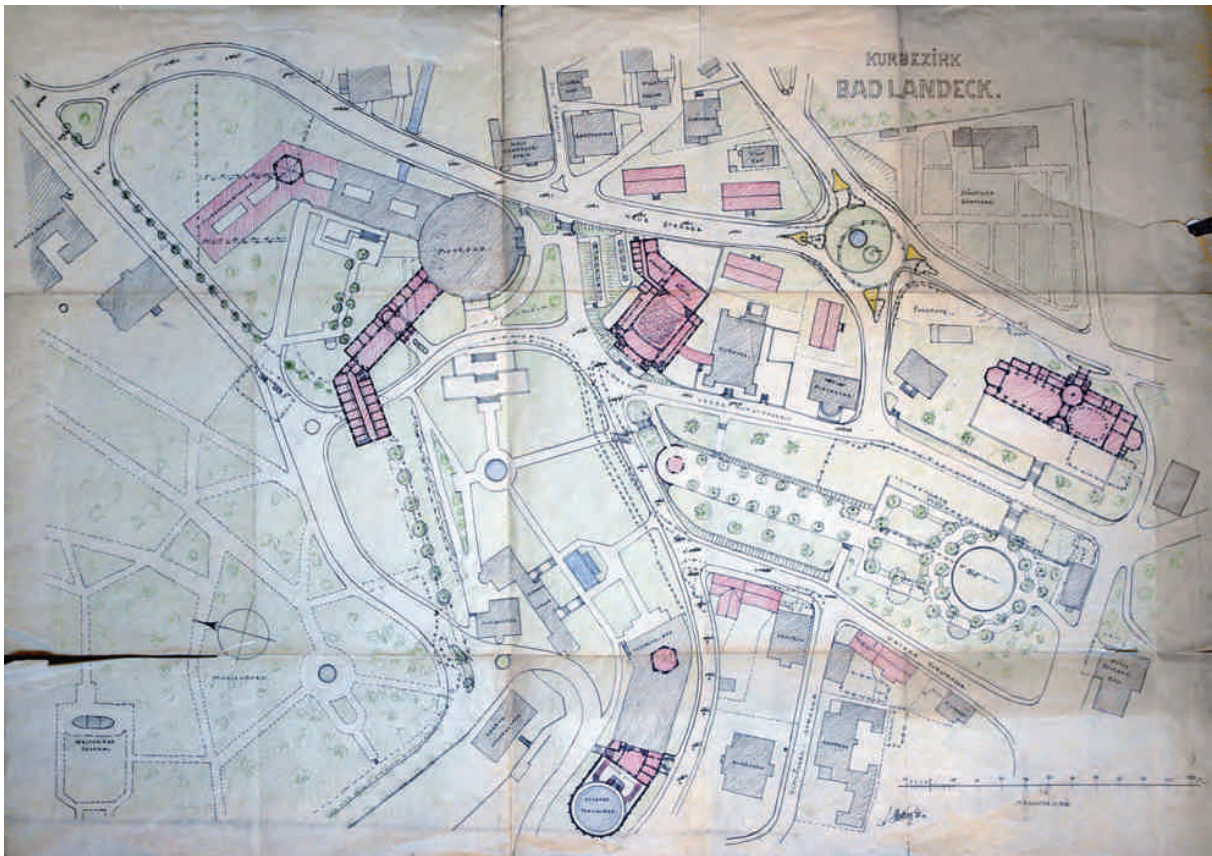


Fig. 8. Łądek Zdrój, remodeling project of the resort center – not completed, 1941 (*Kurbezirk Bad-Landeck*, State Archives in Wrocław)

Il. 8. Łądek-Zdrój, niezrealizowany projekt przebudowy centrum uzdrowiska, 1941 (*Kurbezirk Bad-Landeck*, Archiwum Państwowe we Wrocławiu)



Fig. 9. Łądek Zdrój, remodeling project of the town and resort – not completed, 1942 (*Verkehrsplan*, State Archives in Wrocław)

Il. 9. Łądek-Zdrój, niezrealizowany projekt przebudowy miasta i uzdrowiska, 1942 (*Verkehrsplan*, Archiwum Państwowe we Wrocławiu)

the estates of villas and construction of new residential buildings in the western part of the resort. Detailed guidelines regarding the reorganization of the resort center

were presented in the design from 1941 which, apart from the regulation of the layout of the streets, included the remodeling of Mary's and Frederick's Baths as well as

demolition of the Bathhouse and its replacement with public utility buildings along Górna Zdrojowa Street (*Ober Kurstrasse*)<sup>12</sup>. It also suggested a demolition of some boarding houses and construction of new houses on undeveloped building plots. Spa Park, previously English in character, was given a “French” layout (Fig. 8).

In 1942, on the basis of the design mentioned above, Erwin Klein – an architect from Wrocław – developed a new plan of reorganization of communication layout in Łądek Zdrój, suggesting a fundamental remodeling of the existing structure of the resort (Fig. 9), which resulted in moving the vehicle traffic from the resort center and removing most of the existing buildings, leaving – except for few houses and boarding houses – Mary’s and Georges’s Baths, Chapel of Virgin Mary in the Desert and part of the Bathhouse.

Instead, a construction of two large scale public utility buildings was suggested along the eastern border of Spa Park.

New boarding houses or healthcare centers were planned around an effectively designed road going from today’s Zwycięstwa Street (*Marienstrasse*) around the valley of Karpowski Stream from the north and Zamkowa Street (*Karpensteinerstrasse*) from the south. An extension of the eastern estate of villas was also planned. The town’s ring road was actually consistent with previous plan, however, the way in which the new communication axis was connected with the existing layout of roads was completely changed. Traffic in the south was directed on the route connecting the municipal part of Łądek Zdrój with Stronie Śląskie, and consequently the roads going through the spa part of the town remained to accommodate local traffic.

Today’s spatial design of the resort is to a large extent the result of the activities of prewar authorities of the town that aimed at constantly increasing the attractiveness of the resort. The town was visited by thousands of patients who were offered not only the most modern healthcare facilities but also a possibility to rest in the picturesque surrounding of green parks and forests.

<sup>12</sup> Today’s Orla Street.

Translated by  
Tadeusz Szalamacha

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### Przekształcenia urbanistyczne uzdrowiska w Łądku-Zdroju do roku 1945

Łądek-Zdrój, najstarsze kłodzkie uzdrowisko, składa się dziś z dwóch części: zabytkowego miasta – położonego na brzegu rzeki Białej Łądeckiej oraz uzdrowiska usytuowanego po obu stronach rzeki, o swobodnym układzie parkowym, z miękko prowadzonymi drogami, dostosowanymi do naturalnego ukształtowania terenu, z zabudową uzdrowiskową rozproszoną wśród zieleni.

Lokację miejskiej części Łądku-Zdroju przeprowadzono w II poł. XIII wieku. W podobnym czasie, u podnóża Wzgórza Świętojerskiego zostały odkryte ciepłe źródła, przy których zaczęło rozwijać się uzdrowisko. Pod koniec XVI wieku zarysował się układ funkcjonalny kąpieliska, w którym pozornie przypadkowe rozmieszczenie budynków, dostosowane do naturalnego ukształtowania terenu, zapewniało jego

prawidłowe funkcjonowanie. Po odkryciu kolejnych źródeł, Fryderyka i Marii, w II poł. XVII wieku założono tzw. Nowy Zdrój (późniejszy Zdrój Marii). Kompozycja przestrzenna zabudowy kąpieliska, będąca wynikiem zaplanowanej, jednorazowej akcji budowlanej, uchodzi za najwcześniejsze tego typu rozwiązanie zrealizowane na Śląsku.

Do dalszego rozwoju uzdrowiska przyczynił się w połowie XVIII wieku minister Śląska, hrabia von Hoym. Był on m.in. inicjatorem zagospodarowania obszaru między zdrojami, gdzie wybudowano dom zdrojowy i założono park angielski. W XIX wieku nadal upiększano i rozbudowywano uzdrowisko; władze Łądku dążyły do pozyskiwania i scalania kolejnych gruntów sąsiadujących z kąpieliskami, na których zakładano parki i lokalizowano zabudowę willo-

wą. Obecny układ przestrzenny uzdrowiska jest, w dużej mierze, wynikiem reorganizacji przestrzeni wokół źródła Marii, którą przeprowadzono w latach 30. XX wieku. W artykule szczegółowo przed-

stawiono kolejne etapy w historii przekształceń urbanistycznych uzdrowskiej części Łądka-Zdroju.

**Key words:** Silesia, Łądek Zdrój, health resort, urban development

**Słowa kluczowe:** Śląsk, Łądek-Zdrój, uzdrowisko, rozwój urbanistyczny



Monika Ewa Adamska\*

## *The layout of the municipal cemetery in Opole Półwieś in Gustav Allinger's projects*

### *Gustav Allinger – biographical note*

Gustav Allinger greatly contributed to the development of garden architecture and municipal green areas in the 20<sup>th</sup> century Germany. He was born in 1891 in Lauffen am Neckar, Baden–Württemberg. In 1907, he graduated from the gardening school in Heillbronn. He gained his first work experience in 1909–1911 in Heillbronn and Heidelberg, and then in the Municipal Green Areas Offices (*Gartenamt*) in Cologne and in Dortmund. In Cologne, he cooperated with Fritz Encke who was one of the most famous landscape architects and directors of parks in Germany at the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries. In 1921–1925, Allinger held an executive position in the company Späth in Berlin, at that time one of the biggest nurseries in Europe, where many German landscape architects started their careers. The next stage in Gustav Allinger's professional career was connected with Zabrze (*Hindenburg*), a city in Upper Silesia where in 1928–1932 he was director of the Green Areas Department (*Stadtgardendirektor*). In 1932, Gustav Allinger

and Hermann Rothe established *Deutsche Park und Gartengestaltung* design company. In the 1930s, when Gustav Allinger was a member of the National Socialist German Workers' Party (*NSDAP*), he held the position of advisor for landscape and consultant for construction of highways in the Third Reich [7].

After World War II, in 1945–1946, Gustav Allinger worked as advisor in public central and local offices as well as in industrial enterprises in North Rhine–Westphalia. Gustav Allinger's work at the Technical University of Berlin (*Technischen Universität Berlin*), where he was professor and director of the Institute of Garden Art and Landscape (*Institut für Gartenkunst und Landschaftsgestaltung*) from 1952 to 1959, was an important stage in his professional career. After retirement, he was for two more years connected with the Technical University of Berlin and later for a short time he cooperated with Aegean University in Izmir, Turkey. Gustav Allinger died in Bonn in 1974, at the age of 83 [7].

### *Gustav Allinger's Professional Achievements*

#### **Garden exhibitions**

The professional activities which first demonstrated Gustav Allinger's design and organizational talents were garden exhibitions [7]. In 1926, Allinger won the competition for organization of the Garden Exhibition (*Jubiläums-Gartenbau-Ausstellung*) in Dresden where he was artistic director. At that exhibition, Gustav Allinger presented among others his idea of "Kommender Garten" as a proposal of a garden of the future, combining architectural and landscape elements, open to various style trends<sup>1</sup>. In

the layout of the garden of the area of about 0.1 ha, which could easily be a contemporary layout, one can distinguish such regular forms as: a summer house, a garden pool, and a fountain as well as a softly designed alley, a rock garden, beds of heathers, herbs, and exotic cactuses (Fig. 1). A garden with such a layout was designed for a creative user and person sensitive to the beauty of nature who, on the one hand, would appreciate indigenous plant species

<sup>1</sup> A great number of formal solutions applied by Gustav Allinger in the composition of "Kommender Garten" could partly result from the will to present various possibilities of garden designs to the exhibition visitors [4].

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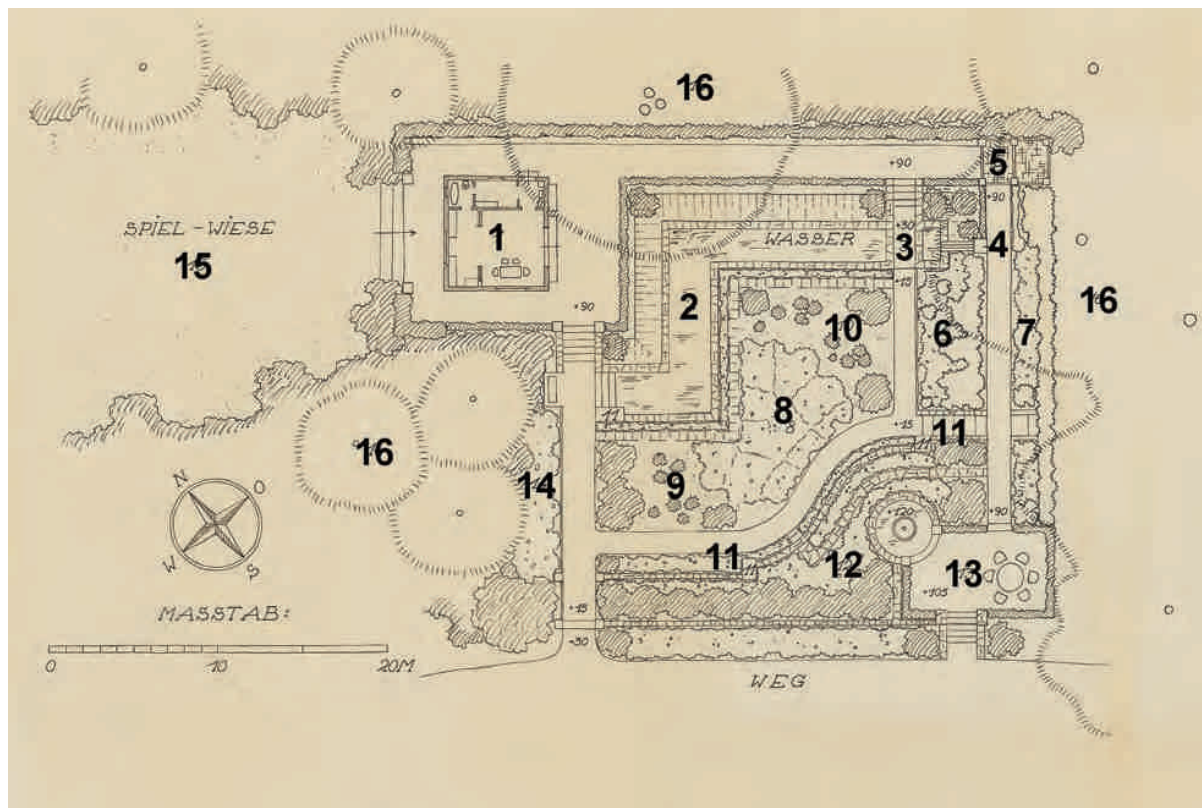


Fig. 1. Development plan of "Kommender Garten". Garden designed by Gustav Allinger for the Garden Exhibition (Jubiläums-Gartenbau-Ausstellung), Dresden, 1926. Notes after [4]: 1. summer house, 2. a garden pool, 3. alleys, 4. fountain with a sculpture, 5. gezebo, 6. rock garden, 7. shaded bed of herbs, 8. plants of low and medium height, 9. swamp garden, 10. heathers, 11. sculpture, 12. cactuses and other succulents, 13. place for rest with a fountain, 14. tall plants, 15. meadow, 16. trees (Architekturmuseum TU Berlin, Inv. Nr. GA 236,077)

II. 1. Plan zagospodarowania „Kommender Garten”. Ogród zaprojektowany przez Gustava Allingera na Wystawę Ogrodniczą (Jubiläums-Gartenbau-Ausstellung), Drezno, 1926. Objasnienia za [4]: 1. domek letni, 2. basen z wodą, 3. alejki, 4. fontanna z rzeźbą, 5. altana, 6. alpinarium, 7. zacienione stanowisko ziół, 8. rośliny o niskiej i średniej wysokości, 9. ogród bagienny, 10. wrzosi, 11. rzeźba, 12. kaktusy i inne sukulenty, 13. miejsce do odpoczynku z fontanną, 14. wysokie rośliny, 15. łąka, 16. zieleń wysoka (Architekturmuseum TU Berlin, Inv. Nr. GA 236,077)



Fig. 2. GUGALI Exhibition (Deutsche Gartenbau-und Schlesische Gewerbe-Ausstellung), Legnica, 1927. Photograph from the rose terrace in front of the buildings: "Weinrestaurant", "Rosenhof", and "Bergerhalle" (Architekturmuseum TU Berlin, Inv. Nr. GA F11502,78)

II. 2. Wystawa GUGALI (Deutsche Gartenbau-und Schlesische Gewerbe-Ausstellung), Legnica, 1927. Zdjęcie tarasu różanego przed budynkami: „Weinrestaurant”, „Rosenhof” i „Bergerhalle” (Architekturmuseum TU Berlin, Inv. Nr. GA F11502,78)

but, on the other hand, who would be open to exotic plants [4]. The layout of the exposition in Dresden marked an important stage in the development of garden exhibitions in Germany [7].

A year later, in 1927, Allinger developed the spatial concept of GUGALI Exhibition (*Deutsche Gartenbau-und Schlesische Gewerbe-Ausstellung*) in Legnica, where he was also artistic director (Fig. 2). At that time, Allinger was under the influence of the English garden art and Dutch flower fields, and those inspirations demonstrated in the single-species flower parterres with hydrageas, dahlias, roses as well as terraces with mixed summer flowers designed for the exhibition in Legnica [2]. In the 1930s, Gustav Allinger directed the German Garden Exhibition (*Deutsche Gartenbauausstellung*, 1933) and designed the plantings for the Exhibition of Summer Flowers (*Sommerblumengarten*, 1934). Both exhibitions were held in Berlin. At the garden exhibitions, Gustav Allinger could present his ideas on contemporary garden designs, the unity of house and garden, theme gardens and human needs, searching for inspiration in both early garden art and modern design trends [2].

The 1920s in Germany were the times of ideological and serious debate in the community of landscape designers on

the future of garden design, clashes between formal and less strict styles. The discussions regarded the form and shape of the modernist garden, residential house, and the garden of the future. Gustav Allinger's idea of "Kommender Garten" was a significant voice in that debate and it inspired many speakers, articles, and even actual designs<sup>2</sup> [4].

**Gardens, green areas, and park layouts**

The review of Gustav Allinger's projects from the collection of the Museum of Architecture at the Technical University of Berlin (*Architekturmuseum Technische Universität Berlin*), where Allinger worked in the 1950s, provides a large group of about 50 projects of gardens designed for private investors. Most of them are designed on small areas near single family houses primarily in Germany (e.g. Berlin, Düsseldorf, Essen, Cologne). Allinger's professional work was connected with garden designing both before and after World War II. His garden designs from the 1920s and 1930s were based on geometric divisions and axes, and they employed such landscape struc-

tures as terraces, fountains or terrain steps and they allude to the Baroque garden art. At the same time, the gardens had specially designed places for growing vegetables and fruit trees (Fig. 3). During the designing and executing the project of the municipal cemetery in Opole Półwieś, in 1928–1930, Gustav Allinger also designed the garden in Opole, at Pasieczna Street 6 (*Viktoria Strasse*) for the house of Johann Schmidt who was the municipal construction counselor. Although the house with its modernist form survived among the villas on Wyspa Pasieka, the

<sup>2</sup> The term "Kommender Garten" is attributed to Gustav Allinger who used it first to describe his concept of garden presented at the Garden Exhibition in Dresden in 1926 [4].

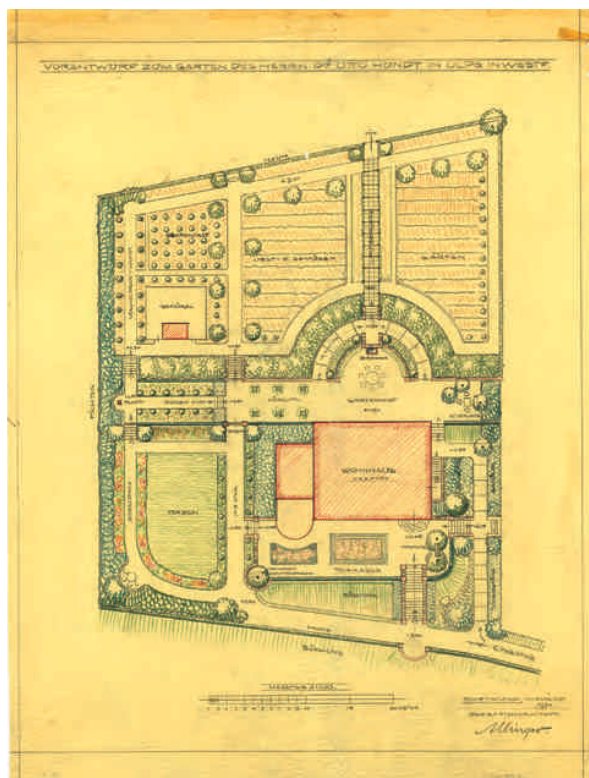


Fig. 3. Concept for development of Doctor Otto Hundt's garden, Olpe, North Rhine–Westphalia, 1921 (Architekturmuseum TU Berlin, Inv. Nr. GA 058,001)

Il. 3. Koncepcja zagospodarowania ogrodu doktora Otto Hundta, Olpe, Nadrenia Północna-Westfalia, 1921 (Architekturmuseum TU Berlin, Inv. Nr. GA 058,001)

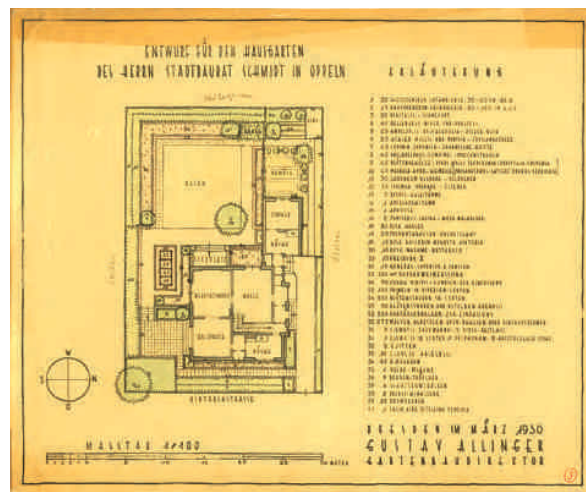


Fig. 4. Development plan of the garden of Johann Schmidt, the municipal construction counselor, Opole, Pasieczna Street 6, 1928 (Architekturmuseum TU Berlin, Inv. Nr. GA 069,002)

Il. 4. Plan zagospodarowania ogrodu miejskiego radcy budowlanego Johanna Schmidta, Opole, ul. Pasieczna 6, 1928 (Architekturmuseum TU Berlin, Inv. Nr. GA 069,002)

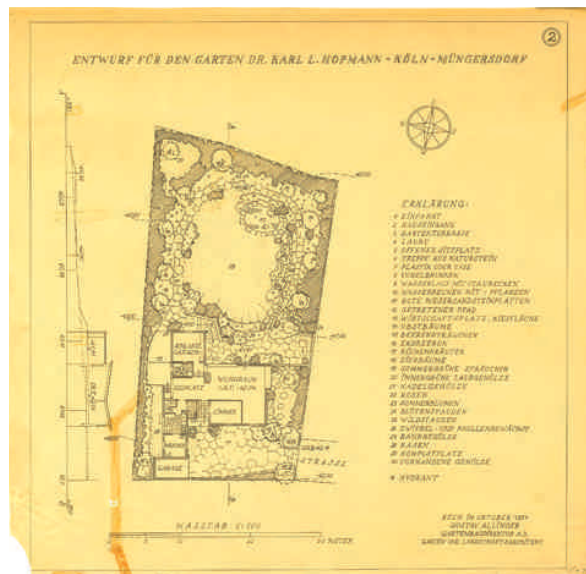


Fig. 5. Development plan of Doctor Karl Hopmann's garden, Cologne, 1951 (Architekturmuseum TU Berlin, Inv. Nr. GA 174,008)

Il. 5. Plan zagospodarowania ogrodu dla doktora Karla Hopmanna, Kolonia, 1951 (Architekturmuseum TU Berlin, Inv. Nr. GA 174,008)

layout of the garden with a simple arrangement and plantings designed in great detail, e.g. rhododendrons, azaleas, roses, bushes and fruit trees, which were used by Allinger, can be seen unfortunately only in blueprints (Fig. 4). Later gardens in Gustav Allinger's projects from the 1940s and 1950s are less formal designs with less strict path layouts and lawns in irregular shapes surrounded by plants (Fig. 5). A smaller group of projects includes designs of gardens and green areas for housing estates of different size: e.g. in Leipzig (1930), Eberswalde (1935), Neviges (1954).

Gustav Allinger's professional portfolio includes also a lot of land development projects for public benefit institutions: schools (Evangelische Schule; Erkrath-Unterbach 1957–1958, Berufsschule; Ratingen 1959–1960), universities (Pädagogische Akademie; Cologne 1957–1958), health resorts (Kurgarten; Bad Wimpfen 1930), hospitals (Krankenhaus Velebert; Velebert 1921, Stiftungs und Klinikhospital; Zagreb 1931) and private companies (Siemens&Halske; Berlin-Siemensstadt 1961–1963). Gustav Allinger also designed municipal parks (GartenStadt Park; Erfurt 1945) and parks for recreation and rest (Spiel und Erholungs Park; Erkrath 1961–1962). One of his last projects was the zoological garden with a rest park near Istanbul in Turkey (Zoologischen Garten mit Volkserholungspark am Fatihwald; Istanbul, 1970).

In 1928–1932, while working as Director of the Green Areas Department in Zabrze, Gustav Allinger was a member of the team developing the regulation plans and projects of new housing estates in the city. Together with Moritz Wolf, the municipal construction counselor, he designed many green areas in Zabrze which are still in use today, including an over one km long urban axis, one of the elements of the regulation plan of the north part of the city. The project also included a park layout of the area of about 10 ha based on wide alleys with trees, grass parterres, with no landmarks or symmetrical axis characteristic of the 19<sup>th</sup> century designs [8].

Gustav Allinger is also famous for his numerous articles on garden design in such magazines as “Die Garten-

kunst,” “Gartenschönheit,” and “Gartenwelt” (1920s and 1930s) as well as books published after World War II, e.g. *Der Deutsche Garten, sein Wesen und Seine Schöneheit in alter und neuer Zeit* (1950) and *Das Hohelied von Gartenkunst und Gartenbau; 150 Jahre Gartenbau-Ausstellungen in Deutschland* (1963).

### Projects of cemeteries

Gustav Allinger's professional achievements also include urban layouts of more than a dozen cemeteries, which is a relatively small number compared with a large group of garden projects. The documentation of the cemeteries designed in 1914–1943 in North Rhine–Westphalia, Rhineland–Palatinate, and the territory of contemporary Poland (Bolesławiec, Elbląg, Gdynia and Opole) is also in the collection of the Museum of Architecture at the Technical University of Berlin (*Architekturmuseum Technische Universität Berlin*). These are layouts of both small local cemeteries and bigger ones for medium-sized and large cities. The first projects come from 1914; Gustav Allinger was then 23. One of them is the design of a little cemetery in the town of Wanne in North Rhine–Westphalia; its geometrical layout on a flat area is based on a symmetrical, rectangular system of alleys and circular squares. A bigger evangelical cemetery in Bolesławiec (*Bunzlau*) was designed in a significantly downslope area. The spatial design of the cemetery features a short, wide axis with *Thuja plicata* on both sides, enclosed by a square with a cemetery chapel. On the east side of the axis, Gustav Allinger designed a checkerboard layout of alleys marking regular and square-like sections with circular squares. The west side of the layout has a less formal design and is more natural, taking account of the natural landscape with a large, distinctive circular square and columbarium on a circular plan (Fig. 6).

The extensive layout of the central cemetery (*Hauptfriedhof*) for the city of Dortmund which was designed in 1919–1921 and then executed with its irregular form and great scale, combining geometrical sections with those of less formal design. Although at present it is significantly extended, the cemetery's original layout with the main axis is still partly visible in the plan of the contemporary city. Apart from drawings, plans, and sections, the preserved documentation of the cemetery contains a picture of the design mockup and sketches of the fountain, bridge, and model tombstone designed by Allinger.

In the 1920s, apart from the local cemeteries in Bladenhorst and Luisenstadt, Gustav Allinger designed the layout of the municipal cemetery in Opole which is described separately in this article.

Chronologically, the last two projects of the cemeteries feature distinctive, less formal spatial designs. The layout of the central cemetery for the city of Elbląg (*Elbing*) was designed in 1938–1940 on partly forested area outside of the city. The dominant element of that layout is the oval-shaped form of a landscape park divided by the main axis of the cemetery connecting it with a smaller geometrical, regular section (Fig. 7). The preserved perspective sketches show the existing green areas (trees) with a free layout of graves, alluding to the solutions of forest cemeteries [3]

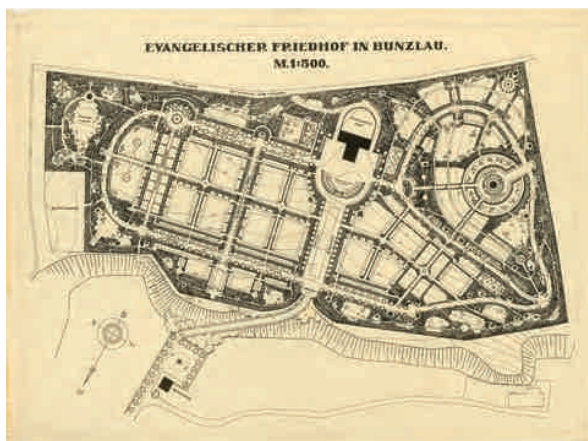


Fig. 6. Plan of the layout of the evangelical cemetery, Bolesławiec, 1914 (Architekturmuseum TU Berlin, Inv. Nr. GA 045,003)

Il. 6. Plan założenia urbanistycznego cmentarza ewangelickiego, Bolesławiec, 1914 (Architekturmuseum TU Berlin, Inv. Nr. GA 045,003)



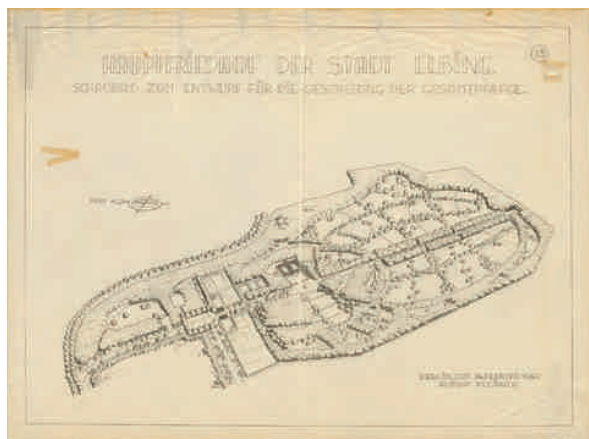


Fig. 7. Perspective drawing of a bird's eye view of the layout of the cemetery in Elbląg, 1938–1940 (Architekturmuseum TU Berlin, Inv. Nr. GA 133,013)

Il. 7. Rysunek perspektywiczny z lotu ptaka planu cmentarza w Elblągu, 1938–1940 (Architekturmuseum TU Berlin, Inv. Nr. GA 133,013)

which feature the distinctive fragments of the main axis with landmarks and architectural accents, testifying to the use of geometrical, regular elements with monumental and symmetrical features.

The drawings of the cemetery in Gdynia designed in 1943 use the term Forest Cemetery (*Waldfriedhof*) which describes its character. The drawings of the cemetery in Gdynia, available in the collections of the Museum of Architecture at the Technical University of Berlin, show the concept of the project. The intent to locate the cemetery in a forested area with a variable landscape significantly affected its spatial composition where the alleys were designed freely, taking into account the system of contour lines adding the features of a landscape park to the layout. The perspective sketch which was often used by Allinger shows a fragment of a forest with freely arranged urns on pedestals (*Urnenhain*) (Fig. 8).

The following conclusions can be drawn from the analysis of the spatial solutions of the cemeteries designed by Gustav Allinger: smaller designs on flat areas are mostly regular, geometrical layouts with symmetrical elements, axes, circular and semi-circular squares, and meticulously designed and maintained plants and landscape structures (Luisenstadt-Berlin; 1923). On the areas with more varied landscape, Allinger designed layouts which would follow the system of contour lines and slopes of the terrain with less formal features (Bolesławiec; 1919) which could sometimes assume the form of landscape parks (Gdynia; 1943). Although the layouts of some cemeteries demonstrate monumental features, Allinger divides the sections with graves by variously composed green areas, alleys with cosy niches, creating intimate places favorable for meditation.

### The layout of the cemetery in Opole Półwieś

At the beginning of the 19<sup>th</sup> century, the burials in Opole were carried out on small cemeteries located around churches and monasteries in the Old Town (*Stare Miasto*). Surrounded by the city buildings, they had a limited area

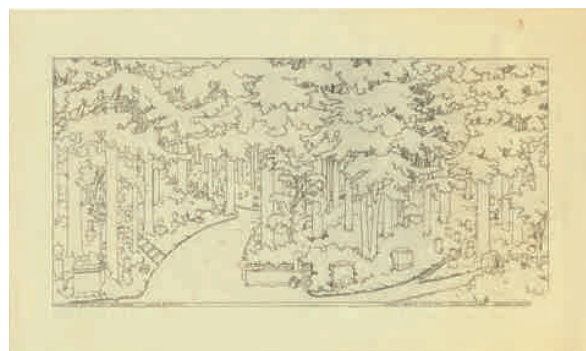


Fig. 8. Perspective drawing of a fragment of the forest cemetery (Urnenhain) in Gdynia, 1943 (Architekturmuseum TU Berlin, Inv. Nr. GA 147,010)

Il. 8. Rysunek perspektywiczny fragmentu cmentarza leśnego (Urnenhain) w Gdyni, 1943 (Architekturmuseum TU Berlin, Inv. Nr. GA 147,010)

and slim possibilities for development. One of the first decisions of the authorities in Opole – the new seat of regency – was to establish in 1817 the municipal cemetery on the west side of the Odra River, in the Odra Suburb (*Przedmieście Odrzańskie*). In the 19<sup>th</sup> century, the area of the cemetery was extended twofold, and in 1917–1920 its area was extended for the last time to cover about 7 ha<sup>3</sup>. In the 1920s, a decision was made to build a new, municipal cemetery to be located on a hill on the left bank of the Odra River behind the village of Półwieś (*Halbendorf*), which was then still outside the administrative limits of the city<sup>4</sup>. A small part of the area was occupied by the local cemetery of the village of Półwieś established in the 19<sup>th</sup> century which still exists today. Gustav Allinger was commissioned to design the layout of the new necropolis in Opole [1].

The author of the article found three perspective sketches of the layout of the cemetery in Opole Półwieś designed by Gustav Allinger in the collections of the Museum of Architecture at the Technical University of Berlin. They are a bird's eye views of the layout with the main poplar alley and a square with the buildings of the cemetery chapel. The plan of the cemetery with notes, signed by Allinger and dated September 1928, was published in the book titled *Neubauten in Oppeln* in 1929 [6]. The search conducted by the author of the Public Archives in Opole included the following groups of files: files of the Opole Regency (Division II Churches and Schools) and Regency Cartography. The files which were preserved in the first group regarded the preparation for the construction of the cemetery in 1926–1929 and the rules of the cemeteries in Opole (*Friedhofsordnung der Stadt Oppeln*) from 1930. Unfortunately, no design documentation of the new municipal cemetery was found

<sup>3</sup> The rules of the cemeteries of the city of Opole from 1929 include a provision on suspension of sale of burial plots on the cemetery at Wrocławska St. after April 1, 1931. In fact the cemetery operated until 1963 when the burials of the deceased stopped.

<sup>4</sup> The villages of Półwieś and nearby Szczepanowice were incorporated to Opole in 1936.

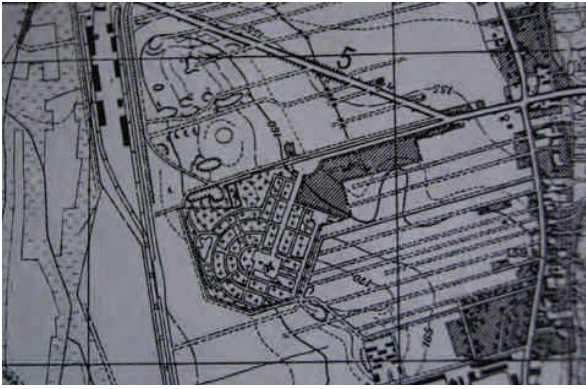


Fig. 9. Fragment of the topographic map of Opole with partly completed design of the municipal cemetery in Opole Półwieś, 1941 (Silesian Library, Katowice, file no. M 3070/368 IV)

Il. 9. Fragment mapy topograficznej Opola ze zrealizowanym częściowo założeniem komunalnego cmentarza w Opolu Półwsi, 1941 (Biblioteka Śląska, Katowice, sygn. M 3070/368 IV)

in the second group. The cartographic records from before World War II include the layout of the cemetery on the plan of Opole from 1938 (*Pharus – Plan von Oppeln*) on a scale of 1:10000 and on a topographic map of Opole from 1941 on a scale of 1:25000<sup>5</sup> (Fig. 9).

The new municipal cemetery designed by Gustav Allinger is an elongated, geometrical layout of the area of about 20 ha. based on straight lines and concentric circles, finely incorporated within the existing terrain and contour lines (Fig. 10, 11). The layout features the main axis going along the ridge of the hill to the funerary chapel building in the north-west part and a circular square with a chapel or a bell tower in the south-east part. The middle section of the cemetery is composed of rectangular burial plots designed on a checkered layout of alleys enclosed by two semicircular patterns of concentric and radial alleys; one bigger – with a funerary chapel and the other smaller – with that circular square. From the south-east, a driveway alley with Lombardy black poplars was designed perpendicular to the main alley, going up the hill from the circular entrance square to the funerary chapel located at its end. In the designed layout of the cemetery, Gustav Allinger indicated the location of a garden center, nursery, columbarium, administration and services buildings (Fig. 10). The green areas of the cemetery included primarily the trees and bushes planted along the main alleys visible on the axonometric sketch from a bird's eye view (Fig. 11). By the funerary chapel in a cubic form, capped with a flattened dome, there is a complex of buildings (morgue, rooms for clerics, physicians, administration and other auxiliary structures) designed on a plan similar to the letter "L". Furthermore, Allinger indicated the burial plots to be used first, and the plots for graves for adults and children. On both sides of the

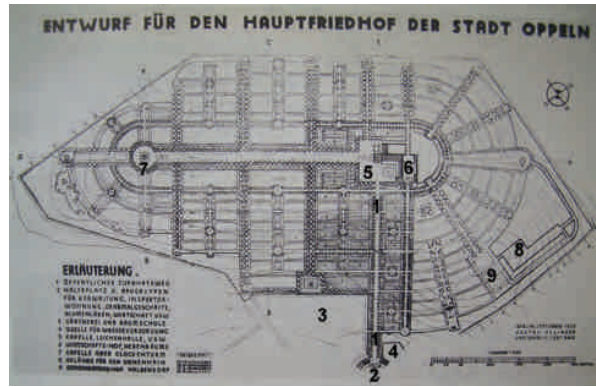


Fig. 10. Plan of the layout of the municipal cemetery in Opole Półwieś, Opole, 1928. Notes: 1. main driveway alley with column-form Lombardy black poplars, 2. circular entrance square with administration and services buildings, 3. garden center with nursery, 4. main water outlet, 5. funerary chapel with auxiliary buildings, 6. yard, 7. chapel or bell tower, 8. columbarium, 9. 19<sup>th</sup>-century, local cemetery in the village of Półwieś (Reproduction from Neubauten in Oppeln, mit einer Einleitung von Stadtbaurat Dipl. Ing. Schmidt, Berlin, F.E. Hübsch, 1929, p. 20)

Il. 10. Plan założenia urbanistycznego komunalnego cmentarza w Opolu Półwsi, Opole, 1928. Objasnienia: 1. główna aleja dojazdowa z kolumnowymi topolami włoskimi, 2. okrągły plac wejściowy z budynkami administracyjnymi i usługowymi, 3. zakład ogrodniczy ze szkółką, 4. główne ujęcie wody, 5. kaplica pogrzebowa z towarzyszącymi zabudowaniami, 6. dziedziniec gospodarczy, 7. kaplica albo dzwonnica, 8. teren kolumbarium, 9. XIX-wieczny, gminny cmentarz wsi Półwieś (Repr. z: Neubauten in Oppeln, mit einer Einleitung von Stadtbaurat Dipl. Ing. Schmidt, Berlin, F.E. Hübsch, 1929, s. 20)

main alley, the layout axis, he designed plots for burial of distinguished persons.

The new layout was commented on in the publication regarding Opole from the 1920s; Johann Schmidt described the new municipal cemetery in Półwieś in *Neubauten in Oppeln* as a regular, green layout perfectly incorporated into the assigned area [6].

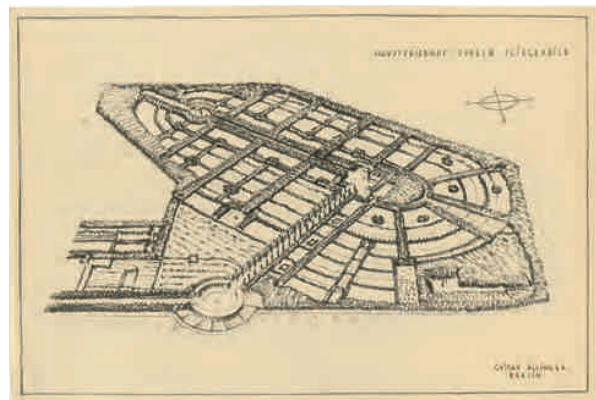


Fig. 11. Perspective drawing of a bird's eye view of the layout of the municipal cemetery in Opole Półwieś (Architekturmuseum TU Berlin, Inv. Nr. GA 068,001)

Il. 11. Rysunek perspektywiczny z lotu ptaka założenia cmentarza komunalnego w Opolu Półwsi (Architekturmuseum TU Berlin, Inv. Nr. GA 068,001)

<sup>5</sup> The spatial composition of the cemetery presented on the plan of the city of Opole from 1938 differs in its south-east part from the original layout; the topographic map, which is a more reliable source, shows the fragment of the layout completed before the war which is substantially consistent with Allinger's design.

## ***Prewar construction of the cemetery in Opole Półwieś and its postwar extensions***

The municipal cemetery was opened on March 15, 1931 [5]. The topographic map of Opole from 1941 presents the north-west part of the cemetery of the area of about 14 ha. completed at that time (Fig. 9). The composition and functional axis of the cemetery was the main driveway alley with the column-form Lombardy black poplars planted as designed on its sides, going up the hill from the semi-circular entrance square to the square with the chapel which was a spatial landmark at the end of the alley (Fig. 12). On the elongated composition axis of the layout, perpendicular to the driveway alley, a semi-circular system of concentric alleys on the north-west side of the square with the chapel and a small fragment of the main alley of that axis with the burial plots for distinguished persons on its south-east side were completed before World War II (Fig. 9, 10).

The project of the chapel with its auxiliary buildings was developed in the Municipal Construction Office (*Stadtbauamt*) in Opole. Finally, the chapel, despite being located in the place specified by Allinger and having the building volume similar to the original concept, was designed on a Greek cross plan and covered with a flat roof. The construction of the chapel's auxiliary buildings was reduced to only one wing connected to the chapel. The whole chapel building is simple in form and its



Fig. 12. Main driveway alley of the cemetery in Opole Półwieś with column-form Lombardy black poplars, 2011 (photo: M.E. Adamska)

Il. 12. Główna aleja dojazdowa cmentarza w Opolu Półwi z kolumnowymi topolami włoskimi, 2011 (fot. M.E. Adamska)

spatial design is typical of the interbellum architecture. A small, romantic structure was built in the prewar period near the main alley on a circular plan with a conical roof; unfortunately at present it is not used and its condition is bad<sup>6</sup>. What has survived from the prewar construction of the cemetery is the layout of its main alleys, some of the squares, terrain steps, retaining walls, and stone marks of some of the burial plots. The division of the burial plots into further smaller sections which developed already after World War II along with the growth of the number of the graves in the cemetery does not follow the regular pattern of Gustav Allinger's design.

The green areas with trees designed in the prewar section of the cemetery, both along the alleys and inside the burial plots which add some park feature to it are worth mentioning<sup>7</sup>. Apart from the main poplar alley, the alleys with trees which should be noted include a slightly narrower and shaded linden alley on its south-east side, going parallel to it. Further in that direction, the prewar section of the cemetery is enclosed by a row of Lombardy black poplar trees. According to the survey from 1970, about 3.5 thousand of deciduous and coniferous trees grew in that part of the necropolis in Opole, representing over 50 species and varieties, including a number of interesting dendrological specimens. The most numerous species included the following: linden, maple, ash, robinia, spruce, poplar and single specimens of oaks of monumental sizes [5].

Among the graves, most of which come from the postwar period, the author found, about 25 graves from 1931–1945, from the first period of operations of the new cemetery<sup>8</sup>. These graves were found in different places located primarily in the burial plots assigned in the project by Allinger to be used first on the north-west side of the driveway alley and in a smaller number on its south-east side.

With a few exceptions, most of them are earthen graves, mainly single, rarely family ones. The characteristic features of that group of graves include their simple forms, harmonious proportions, and sparing means of artistic expression. Mostly concrete grave frames are combined with stone upright elements in the cubic form or more often with a wavy line of the gravestone (Fig. 13). The epitaphs in German were engraved in stone, some of them with the neo-Gothic lettering difficult to read. Some gravestones have geometric ornaments or reliefs.

<sup>6</sup> In his design, Gustav Allinger included a structure similar in its form to a bell tower, however, it is located as an architectural landmark of a circular square which was not completed.

<sup>7</sup> Apart from the species of black poplar used in the perspective sketch of the main driveway alley (*Pappelallee*), the partially preserved project by Allinger unfortunately does not provide any information about the plants included in the design.

<sup>8</sup> The total number of graves provided in the card of the cemetery developed in 1984 is about 200 from that period located on that cemetery [5].



Fig. 13. Earthen grave of Angelika Bork, née Frydrychowicz (1890–1937) with a stone epitaph and inscription in the neo-Gothic lettering, 2011 (photo: M.E. Adamska)

Il. 13. Grób ziemny Angeliki Bork z domu Frydrychowicz (1890–1937) z kamienną płytą epitafijną i inskrypcjami wykonanymi czcionką neogotycką, 2011 (fot. M.E. Adamska)

Unfortunately, some modern graves in the area of the historic layout seem to be randomly located with no connection to the original layout of the alleys, some of them blocking them. Also the location of the commemorative plaques by the Golgotha of the East (*Golgota Wschodu*) near the square with the chapel does not demonstrate any features of planning on an urban scale, causing unrest and chaos.

After World War II, in the 1970s and 1980s, the cemetery was extended to the east, bordering on the residential areas

with low-rise buildings, comprising an estimated area of about 22 ha. in the shape of a square with its south-east corner cut off. The main axis of the layout was then extended according to the design by Allinger, however, without a semi-circular end. Despite being rectangular, the layout of the new alleys did not correspond to the divisions designed before the war, and there are no tall plants planned in that section of the cemetery. In the 1990s and at the beginning of the 21<sup>st</sup> century, the cemetery was further extended to the north behind Cmentarna Street, separating the new part of the cemetery from its main part without any composition connection with it. At the beginning of the 21<sup>st</sup> century, it was decided to make the final extension of the cemetery, this time to the south and west to include the area irregular in shape of about 4 ha. That investment will be executed in 2012, and consequently the area of the largest necropolis in Opole will grow to about 42 ha., with mainly industrial and residential areas around it.

Although Gustav Allinger assigned in his project of the cemetery in Opole a location for the columbarium, two such structures were built only in 2009 and 2011. Both of them, cubic in form, are located by the square with the funerary chapel.

The issue which since 2010 has been the subject of social discussions and caused a lot of controversy in connection with the municipal cemetery in Opole Półwieś is the planned construction of the south ring road of Opole that is supposed to go across the two furthest sections of the cemetery, adjoining Zbożowa Street and bordering on the semicircular part of the historic layout. Constructing the ring road would first of all result in exhuming a group of graves and depriving the historic layout of the green buffer zone. Unfortunately, the layout of the cemetery designed by Gustav Allinger is not listed in the Register of Historic Monuments in Opole<sup>9</sup>, and no local development plan is going to be developed for this area which would impose the protection of the historic layout of the necropolis with its park features.

<sup>9</sup> Only the graves of the victims of the Nazi terror, Polish Army soldiers, and the alley of the distinguished persons located on the area of the municipal cemetery in Opole Półwieś were listed in the Register of Historic Monuments in 1987.

## Conclusions

The review of Gustav Allinger's works, the author of the layout of the municipal cemetery in Opole Półwieś, provided in this paper mainly on the basis of its preserved designs, presents the formal and functional diversity of his projects completed primarily in Germany as well as in contemporary Poland over the course of almost 60 years – from the 1920s to the 1970s<sup>10</sup>.

<sup>10</sup> The author did not analyze the scope of completion of Gustav Allinger's projects or the condition of completed projects, except for single records (e.g. the cemeteries in Dortmund and Opole). The scope of research formulated this way could be the subject of a separate study.

Allinger's works include a significant group of projects of small private gardens which demonstrate the development of his style at all stages of his professional career. The project of a garden located in Opole which was found in the Museum of Architecture exists only in the form of a graphic record...

The development of garden art and its new stylistic trends was greatly influenced by the organization and projects of garden exhibitions, especially those in the 1920s, many of which were directed by Gustav Allinger and with a lot of creative involvement on his part.

Allinger's designs of cemeteries are a relatively small group among all of his projects. Most of their spatial compositions can be classified as regular and geometrical lay-

outs; a few of the layouts demonstrate less formal landscape features; some of them employ both trends at the same time. The repetitive composition elements include axes, squares in circular or semi-circular shape, poplar or linden alleys, hedgerows with cypresses and thujas. Such landscape structures as fountains, sculptures, circular bell towers, terrain steps and retaining walls are important features of those layouts designed in harmony with green areas.

The spatial design of the necropolis in Opole Półwieś, which is probably the only partly completed project from among four cemeteries designed by Gustav Allinger in the territory of contemporary Poland, demonstrate such distinctive features typical of the cemeteries designed by him as geometrical layouts of alleys, monumental axes enclosed by landmarks, plants along alleys, circular or semi-circular squares and walkways. Although the spa-

tial layout of the cemetery designed by Allinger was only partly completed before World War II and the postwar extensions – already in Poland – did not follow his original design, the preserved historic composition with park features is a significant element of the cultural landscape of Opole, testifying to the continuity of its development as well as the perfect example of solutions characteristic of the architecture of green areas from the 1920s.

The period of twenty years between the wars was the period of intense spatial development of Opole and numerous other Silesian cities in which many German architects were involved, creating the contemporary image of those cities. Gustav Allinger also contributed to that process, and his person as well as professional achievements, though less famous, deserve attention and appreciation, and his works deserve care and protection.

Translated by  
Tadeusz Szalamacha

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### *Założenie urbanistyczne cmentarza komunalnego w Opolu Półwi w projektach Gustava Allingera*

Gustav Allinger, autor projektu cmentarza komunalnego w Opolu Półwi, znacząco przyczynił się do rozwoju architektury ogrodów i zieleni miejskiej w XX-wiecznych Niemczech. Urodził się w 1891 roku w Lauffen am Neckar, w Badenii-Wirtembergii, zmarł w Bonn w 1974 roku w wieku 83 lat.

Projektowe i organizacyjne talenty Gustava Allingera ujawniły się już w latach 20. XX wieku w trakcie przygotowań i realizacji wystaw ogrodniczych.

W dorobku zawodowym Allingera znaczącą grupę stanowią projekty ogrodów, które obrazują rozwój jego stylu, towarzysząc mu na wszystkich etapach kariery zawodowej. Projekty ogrodów z lat 20. i 30. XX wieku oparte są na geometrycznych podziałach, późniejsze z lat 40 i 50. XX wieku to założenia o charakterze mniej formalnym i bardziej swobodnym. Podejmowanym tematem projektowym były również opracowania zagospodarowania terenu na obiekty użyteczności publicznej (szkoły, uczelnie wyższe, uzdrowiska i szpitale) oraz dla firm i zespołów mieszkaniowych.

W latach 1928–1932, Gustav Allinger pełnił funkcję dyrektora Urzędu Zieleni Miejskiej (Stadtgardendirektor) w Zabrze (Hindenburg), uczestniczył w pracach nad planami regulacyjnymi i projektami nowych osiedli miasta.

Założenia urbanistyczne cmentarzy to zachowana grupa kilkunastu projektów opracowanych w latach 1914–1943, na terenach Nadrenii Północnej-Westfalii, Nadrenii-Palatynatu oraz współczesnej Polski (Bolesławiec, Elbląg, Gdynia i Opole). Założenie nowego cmentarza komunalnego w Opolu Półwi, w części zrealizowane, to wydłużona, geometryczna kompozycja oparta na liniach prostych i współśrodkowych łukach. Cmentarz został oficjalnie otwarty w 1931 roku.

Cmentarz został powiększony w latach 70. i 80. XX wieku, dalsza rozbudowa nekropolii nastąpiła w latach 90. XX wieku i na początku XXI wieku. W 2012 roku realizowany będzie ostatni etap rozbudowy cmentarza.

**Key words:** 20<sup>th</sup> century landscape architecture, cemetery, Opole, Gustav Allinger

**Słowa kluczowe:** architektura krajobrazu XX wieku, cmentarz, Opole, Gustav Allinger



Drawn by Aleksandra Kaźmierczak



Justyna Kleszcz\*

## *The route of wooden churches in Olesno County – a sketch*

Olesno County (*Powiat*) is one of the twelve counties in the Opole Province (*Voivodship*) (Fig. 1), located in its south-east corner. This is the area of the former Duchy of Opole, the Land of Wieluń, and Silesia where one can notice different wood architecture traditions from the south of Poland.



Fig. 1. Location of Olesno in Poland, Fig. by author

Il. 1. Położenie Olesna w skali kraju, ryc. autor

As a result of the administration reform of Poland which was implemented a few dozen of years ago, Olesno County was incorporated into Opole Province (Fig. 2), and its area was also changed. Compared to its original borders, the County 'lost' Lasowice Wielkie Commune

(*Gmina*) which was connected to the neighboring Kluczbork County and 'gained' the area of Rudniki and Praszka



Fig. 2. Map of Olesno County, Fig. by author

Il. 2. Mapa powiatu oleskiego, ryc. autor

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Fig. 3. Map of locations of wooden churches in Silesia  
(developed by: J. Kleszcz)

Il. 3. Mapa rozmieszczenia drewnianych kościołów na terenie Śląska  
(oprac. J. Kleszcz)

Communes which historically always belonged to Wieluń Upland.

That is why this paper presents all churches located at present within the borders of Olesno County, and not on the basis of their location in historically independent areas. Historically, this area with the main city – Olesno Śląskie was located at the junction of two trade roads important for the region – the Amber Road from the Baltic Sea through Moravia to southern Europe and the Salt Road from Kraków through Wrocław to the western part of the continent. A well developed network of settlements provided good conditions for the development of a large number of wooden churches [13].

In 1871, in his paper on wooden churches in Upper Silesia, Luchs listed 194 such churches in that area [11, pp. 109–121]. 137 of them have survived until today in Upper Silesia (Fig. 3), 18 of which are located in the area of Olesno County. Still at the end of the 20<sup>th</sup> century, there were 20 of them, however, several of them were destroyed in a series of fires and thefts.

A few characteristic types can be distinguished among wooden churches in Olesno County on the basis of their foundation. They were parish or filial churches founded by the church or private founders; cemetery churches located by existing or newly established cemeteries and votive churches characteristic of the times of wars and epidemics, including a special type of the so called bubonic church.

All wooden churches in the area of Opole Region built between the 15<sup>th</sup> and 19<sup>th</sup> centuries were log structures. The churches built after 1742 had towers which were timber-framed (post-and-beam) or frame structures because of the

regulations introduced in Prussia on reduction of the use of wood which was needed for the development of industry [1].

The location of churches depended on a number of social, political, and historical factors as well as geography and nature. There are two main types of location – inside and outside a village. In the case of the latter, churches were located on hills [16]. This type of location was noted by German researchers of that area already before World War II as providing the best view and it was easy to defend, and in respect of liturgy – as the most exposed and the easiest to find. Such a location was also important for the spatial composition of the whole settlement by providing an increased scenic exposure and a landmark. The purely construction aspect should not be ignored either. It is important to choose a location for wooden structures which is less exposed to water, has a better exposure to wind and sunlight, and undoubtedly a location on a hill provides such conditions. There are also other types of location which cannot be explained by rational reasons. In such cases it is often the history of specific places which is connected with some past events often incorporated in legends or miracles as in the case of the Church of St. Anne in Olesno.

The distinctive features of the churches presented in this paper included their towers whose design was connected with the whole building. For historical reasons, as mentioned earlier, all church towers which have been preserved in the area of the County are post-and-beam or frame structures.

*The crowning achievement of all wooden churches with annexes is the Church of St. Anne in Rosenberg. Due to the name of the city of Rosenberg the part of the building with chapels was built in the shape of a rose with five petals. Its builder – the carpenter master Sempek from Gliwice at first intended to build those “rose petals” in a round form. However, as wood does not submit to bending, he designed the chapels with a two-sided end [9, p. 15–16].*

For static reasons typical tower walls were slightly tilted, which feature is much more frequent than much simpler towers with straight walls. It was Dienwiebel who first described the characteristic features of the towers and systematically divided them into types [3] (Fig. 4).

The floor plans of the churches could differ greatly. They demonstrate, however, a few characteristic features taken directly from the Latin liturgy. As a rule, with very few exceptions, the sanctuary was much narrower than the nave. This caused a number of difficulties in the wooden structures and that is why the researchers were surprised with its consistent use. However, it has not been determined whether the pattern for wooden ecclesiastical buildings in Poland was taken directly from the Western European masonry architecture or from the wooden architecture which was much more popular in those times. This opinion is shared by the Polish researcher of wooden ecclesiastical architecture in Silesia, Józef Matuszczak [14, pp. 11–12].

It was Herbert Dienwiebel who first classified wooden churches in his publication on wooden churches in Lower Silesia [3, pp. 88–93]. The churches built for Protestants have the most simple plan (Type A). The oldest churches, which one can come across now, are Type B churches with



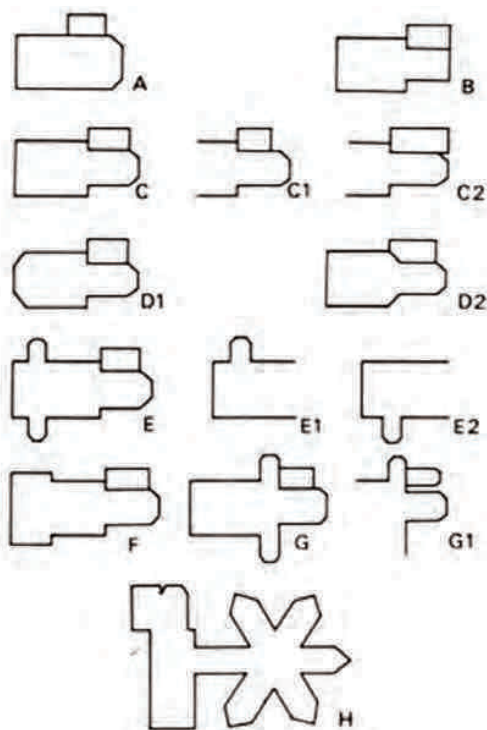


Fig. 4. Types of plans of wooden churches in Opole Silesia, [3, pp. 88–93]

II. 4. Typy rzutów kościołów drewnianych na Śląsku Opolskim, [3, s. 88–93]

a rectangular nave, sanctuary, and sacristy. The most popular was Type C where the sanctuary has a three-sided end and slightly shorter or elongated sacristy in relation to the sanctuary. There are also examples of naves with three-sided ends from the east or from the west (Type D). Those most simple types of floor plans were the basis for further variants with additional chapels from the side of the sanctuary or the nave which could be extended [29]. However, the most original floor plan was undoubtedly that of the Church of St. Anne in Olesno with radiating chapels on a plan of a rose with five petals (Type H) which was already distinguished by Dienwiebel [3, p. 91] (Fig. 5).

It is even known how much money was paid to the carpenter for his work. It was *80 Thalers, each with 36 Groshens, each Groshen with 12 Silesian Halers, and also 480 liters of rye, 480 liters of wheat, 240 liters of tartary buckwheat, 240 liters of barley, 30 liters of millet groats, 30 liters of peas, 30 quarts of butter, 2 cuts of pork fat, 3 threescores of cheese, 4 barrels of beer* [4, p. 48].

The journey around the area of almost over 970 km<sup>2</sup> should begin from the most precious historic monument of the Land of Olesno – the **Church of St. Anne in Olesno** (Fig. 6). It is the only church in this area built as a pilgrimage filial church of the parish in Olesno. The origin of that church, located in a little out-of-the-way place right outside of the town, is connected with a romantic legend about the daughter of a townsman from Olesno who was miraculously saved as a result of St. Anne's intervention and a pine tree hid the girl with its branches from robbers who were chasing her



Fig. 5. View of the radiating chapels in the Church of St. Anne in Olesno, Fig. by author

II. 5. Widok na wieniec kaplic kościoła św. Anny w Oleśnie, ryc. autor

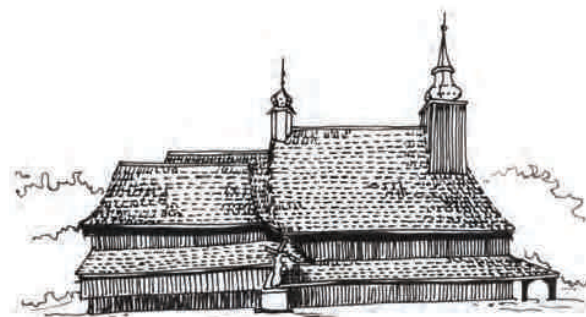


Fig. 6. View of the body of the Church of St. Anne in Olesno, Fig. by author

II. 6. Widok na korpus kościoła św. Anny w Oleśnie, ryc. autor

[8]. Still today one can admire that pine tree trunk built into the church's high altar. The first mention of the shrine built in the place of that miraculous salvation comes from 1444. The first wooden church built in that place, or actually right above that earlier shrine, dates back to 1518. According to accounts, the shrine was built by Marcin Snopek – the carpenter master born in Kraków who was living in Gliwice. Historical sources mention three forms of his last name: Snopek, Sempek, and Senepek [4, p. 48], [7, p. 310]. As the number of pilgrimages grew, it became necessary to extend the existing structure [7]. In 1668, the body of the church was annexed by five radiating indulgence chapels on a hexagonal plan, with its sixth side being the connection to the body of the church, and a wooden copula topped by a turret located above the central part. The heads of the windows both in the nave and in the sanctuary were semicircular, whereas the forms of the windows in the radiating chapels allude to the symbolism of a rose in the coat of arms of Olesno, being one of the most interesting forms of Baroque in wooden architecture, featuring squares and semicircles. In 1707, a sacristy was built from the north-east side of the sanctuary (Fig. 7).

The whole church has a number of features characteristic of wooden architecture of the region: above the choir supported on two columns there is a wooden tower topped by a bulbous cupola, whereas the nave and the sanctu-



Fig. 7. View of the Church of St. Anne in Olesno, Fig. by author

Il. 7. Widok na kościół św. Anny w Oleśnie, ryc. autor



Fig. 8. View of the Church of St. Mary Magdalene in Stare Olesno, Fig. by author

Il. 8. Widok na kościół św. Marii Magdaleny w Starym Oleśnie, ryc. autor

ary have a flat wooden ceiling [5]. The sanctuary with a three-sided end is partly blocked by a longer sacristy. A small flèche marks the place where there is a high altar. The church's roof goes low around the nave, the sanctuary and the connection, providing overhangs supported by columns. The whole building is covered with a shingled gabled roof.

The most precious treasure in the church was a winged altar from the Wit Stwosz (*Ger. Veit Stoss*) workshop [20] but this masterpiece was stolen in 1994. The main panel of the triptych presented St. Anne with her family surrounded by the church founders and the town councilors. Its wings showed four scenes from the life of the Sacred Family – the Annunciation, the Visitation, the Nativity and the Adoration of the Magi.

The side chapels were also richly decorated; different private founders cared for each of them. The first chapel from south-east was dedicated to St. Anne. It was under the patronage of Prior Michał Ochotski. The next chapel, founded by Waclaw Slabonius, presented the scenes of the Elevation of the Holy Cross. The chapels dedicated to Fourteen Holy Helpers and the Assumption of the Virgin Mary were cared for by the monks, Professor Jerzy Istl and Priest Grzegorz Istl. The last of the chapels, dedicated to Our Lady of Częstochowa, was cared for by the hermit Wawrzyniec Chylek.

Another church on the route is the **Church of St. Mary Magdalene in Stare Olesno** (Fig. 8). Built in 1680 as a filial church of the parish in Olesno, it served as such until 1911 when it became a parish church. Renovated in 1955–59, it charms with its simplicity. The church is a typical example of wooden architecture in the Opole Region. Geographically oriented, it has a log structure with the front tower connected with the nave which has a post-and-beam structure, covered with a shingled gabled roof. The tilted walls of the tower are covered with wood board siding, the tower had a spire with a pyramid roof. Additionally, above the nave, there is a small, four-sided flèche. The rectangular sanctuary, narrower than the nave, has a square end which adjoins the sacristy. Small storage rooms are located on both sides of the west tower. The tilted walls of the tower are covered with pine tree boards. The remaining walls and the roof were covered with wooden shingles.

Its interior has exquisite ceiling decorations – the sanctuary has a false barrel vault, and the nave has a flat ceiling. The choir supported on two columns is a typical solution employed in this area as is cladding with horizontal boards. The west bell tower is crowned with an octagonal pyramid roof.

The **Church of St. Lawrence in Wachów** (Fig. 9), a filial church of the parish in Wysoka, is located south



Fig. 9. View of the Church of St. Lawrence in Wachów, Fig. by author  
 Il. 9. Widok na kościół św. Wawrzyńca w Wachowie, ryc. autor



Fig. 10. View of the Church of St. Valentine in Dobrodzień, Fig. by author  
 Il. 10. Widok na kościół św. Walentego w Dobrodzieniu, ryc. autor

of Stare Olesno. It was first mentioned in 1408. The next structures were built in the place of the original church from 1560–80; the present building comes from 1706. Just like most other churches in this area, it is oriented; the body of the church has a log structure and the front tower has a post-and-beam structure. The four-sided tower with tilted walls is crowned with a four-sided cupola covered with metal sheet. The nave and the sanctuary are surrounded by overhangs supported on columns, covered with wooden shingles, just like the multi-ridge roof. Similarly to most churches in this group, the nave has a flat, wood ceiling, whereas the sanctuary has a false barrel. The sanctuary has a polygonal end with Baroque decorations of the high altar. The walls and ceilings are covered with rich polychrome by J. Marchwica from 1952.

The **Church of St. Valentine in Dobrodzień** is located furthestmost to the south in Olesno County (Fig. 10). It was first mentioned already in the 16<sup>th</sup> century, though the present building is dated to 1630. The present building was renovated and remodeled a number of times which to different extent changed its original shape and furnishings. The church suffered the greatest damage, however, during World War II; it was restored after the war. Located by a cemetery, inside the village, at present it serves only as a cemetery church.

The church has a log structure with its front tower fused in the vestibule whose width is the same as that of the nave. From outside, the whole building, including its roof and the walls, is covered with wooden shingles. The tower with a small pyramid roof is topped by a bulbous cupola. Behind a rectangular nave, there is a narrower sanctuary with a three-sided end and a four-sided sacristy, adjoining it from the side.

The sanctuary, which is covered with a false segmented vault, has late-Baroque decorations inside. The nave and the sacristy have a flat ceiling, and there is a choir supported on two columns from the side of the entrance. Similarly to most churches in that area, except for the church in Olesno, the windows have segmented heads.

In **Radawie**, which is west of Dobrodzień, there is the **Church of the Elevation of the Holy Cross** (Fig. 11). It is one of the oldest buildings in this area. It was first

mentioned in 1305. It became a parish church already in 1500. It was extensively remodeled in the 18<sup>th</sup> century and its present shape has been preserved ever since. In 1650–1944, it was a filial church of the parish in Ząbkowice, and at present it is an independent parish. After 1945, it was renovated a number of times and to a different extent. At that time, the building, which is also a log structure, in order to provide a better protection and stiffness was moved to a new foundation and placed on a masonry base course. Its external walls are covered with wood boards and to some degree also with shingles. Above the nave, there is a small hexagonal turret with a bulbous cupola. In the west part of the nave, there is an octagonal tower built as a post-and-beam structure, covered with vertical boards, topped by a bulbous roof and a blind lantern. The tower begins with a vestibule which is the base of the tower. Behind the nave, there is a narrower polygonal sanctuary. It has a sacristy adjoining it from the north with a lodge upstairs.

Its interiors are all covered with plaster and have flat ceilings. The choir is unusually supported on four columns.

The **Church of St. Roch in Grodzisko** is also unusual for the area of the county. It was first mentioned in the church documents in 1710 [2]. It has always been a filial church of the parish in Olesno. It was built near the village on a hill where a small group of townsmen from Olesno hid during the plague in 1708. It is the only votive church in that area which was erected as a result of a lot of effort and with the funds from the townsmen who survived the plague. There is a town document from August 18, 1711 which confirms the costs incurred on its construction [6], [22]. This is how its unusual design can be explained. The church does not have a tower. Its walls above overhangs are covered with wooden shingles and boards in their lower section. The whole building is covered with a gabled roof with a steeple crowned with a helm. The sanctuary with a three-sided end opens on the side to a sacristy with a founder's lodge upstairs. The date 1708 and the inscription "bubonic plague" were burned there. The whole church was built on a masonry base course, as a log structure. The masonry base course is contemporary and comes from 1960 when the building was thoroughly renovated [28].



Fig. 11. View of the Church of the Elevation of the Holy Cross in Radawie, Fig. by author

Il. 11. Widok na kościół Podwyższenia Krzyża Św. w Radawiu, ryc. autor



Fig. 12. View of the Church of St. Anthony of Padua in Sowczyce, Fig. by author

Il. 12. Widok na kościół św. Antoniego z Padwy w Sowczycach, ryc. autor

At the end of the nave, there is a choir supported on four columns. The body of the church which has a flat ceiling contrasts with the false barrel vault in the sanctuary. Also the shape of the windows is unusual, which testifies to a closer reference of the style to the church of St. Anne in Olesno than to other churches in the county. The windows in the nave do not have typical polygonal heads, and they differ from the windows in the sanctuary. The nave has windows with semicircular heads, whereas the sanctuary has circular windows. The interior decorations correspond to the times when they were made – Baroque altar comes most probably from the times when the church was built.

A little further to the east of Grodzisko, in the village of **Sowczyce**, there is the **Church of St. Anthony of Padua**. It differs from the other churches described above by the simplicity of form which is unusual for this area. The building has an eventful history. It was first mentioned in 1586. The present church was built in 1786. It was a filial church of the parish in Wysoka and originally it was built in the village of Łomnica. However, already in 1917, it was moved to Sowczyce (Fig. 12). In 1962, it stopped serving only as a filial church of the parish in Łomnica and became also a cemetery church.

Built as a log structure on a new base course, it has walls covered with wooden boards. Its gabled roof with one ridge covers both the nave and the narrower sanctuary with a vestibule annexed to it. On the other side, along the nave and the sacristy, there is a wood clad addition too. The church does not have a tower, and there is only a little, four-sided flèche covered with a shingled gabled roof above the nave. The choir, supported on two straight columns, has a flat ceiling.

Further to the east of Sowczyce, there is the **Church of St. Martin and Bartholomew located in Borki Wielkie**. The church was first mentioned in 1697 and that very building has been preserved until today. Originally, it was a filial church of the parish in Olesno; at present it is only a cemetery church. Originally, it did not have a tower. In 1789, the carpentry master Szymon Stadko built a simple tower surrounded by overhangs and wood cladding above

them. The massive tower has a pyramid roof with wooden shingles, a lantern with a bulbous cupola covered with metal sheet. Above its straight nave which has a gabled roof, there is a small hexagonal flèche with a bulbous cupola. The sanctuary with a three-sided end was annexed by a sacristy.

There are wooden flat ceilings inside with no additional painting decorations. The choir with a flat parapet, supported on two columns, was extended along part of the walls of the nave. The windows, just like in the church in Grodzisko, have semicircular heads.

The **Church of St. Hedwig in Biskupice** was mentioned already in 1415. The first building erected in that place comes from that period. The present building was built in 1718 by Jan Mixta from Krasków [21]. Until 1945, it served as a parish church. After that year, it became a filial church of the parish in Olesno. Its construction is typical of the area of Opole Region. The body of the church, which has a log structure, was annexed by a four-sided tower with slightly tilted walls topped by an octagonal bulbous cupola covered with metal sheet (Fig. 13). Above the nave which has a gabled roof, there is a small hexagonal flèche topped by a bulbous cupola. The sanctuary was annexed by a vestibule, and the tower by two storage rooms on its sides.

The circular windows in the sanctuary have outside polygonal frames. The nave has a typical flat ceiling, whereas the sanctuary has a false vault with a flattened arch. The interior has late-Baroque furnishings which date back to the times when the church was built.

The **Parish Church of St. Martin in Żytniów** was first mentioned in 1312. The building burned down several times, and the present church comes from 1817. Only its sanctuary has survived the fires. For some time, the sanctuary served as a chapel. The present building actually comes from Trzcínica [18]. After it was disassembled and moved to Żytniów, the church was put back together in 1837 by the carpenter Jakub Ośródk. This is the only church in the county which has a log structure on a cross plan with two side chapels attached to the body of the church and the sanctuary much narrower



Fig. 13. View of the Church of St. Hedwig in Biskupice, Fig. by author

Il. 13. Widok na kościół św. Jadwigi w Biskupicach, ryc. autor



Fig. 14. View of the Church of the Holy Trinity in Jaworzno, Fig. by author

Il. 14. Widok na kościół św. Trójcy w Jaworznie, ryc. autor

than the nave. Both the chapels and the sanctuary have three-sided ends. The whole building has a gabled roof covered with wooden shingles with two ridge beams. In the place where the nave and the sanctuary meet, there is a two-staged, hexagonal *flèche* with a bulbous cupola covered with metal sheet. There is a vestibule annexed from the north.

The church in Żytniów is the only wooden church in Poland with masonry crypts with the tombs of the Sieradzki family and an underground vestibule joining the church with the rectory.

The interior decoration of the church comes from the middle of the 19<sup>th</sup> century when the church was decorated in neo-Baroque style. At that time, a bell tower was also added. The nave was covered with a groin vault and the sanctuary with a typical false barrel. The window heads, which are all pointed, also testify to the unusual design of the building. Both the choir with no columns and the whole interior was covered with richly decorated polychrome.

The wooden **Church of the Holy Trinity in Jaworzno** is located furthestmost to the east in Olesno County. Although the date of its first location is unknown, it was first mentioned at the beginning of the 16<sup>th</sup> century as a church located in the place of the older one. In 1570–1660, the church served as a Roman Catholic church of the parish in Parzymiechy (Fig. 14). The church was remodeled many times, including the addition of side chapels. The most important remodelings took place in 1767 and 1921–23 [21].

A tower with its post-and-beam structure was added to the nave which has a log structure. The whole body of the church was covered with one shingled gabled roof, whereas the tower was covered with a pyramid roof with a metal sheet lantern. In the place where the nave and the sanctuary meet, there is a *flèche* with a pyramid cupola. The polygonal closure of the sanctuary was not remodeled, unlike the nave which, during the remodeling in 1921–23, was extended to the west by one bay. Additionally, at that time the width of the nave was extended north and south and two chapels were added, one on each side. A sacristy divided into two levels was also added to the body of the church. In this way an additional room was connected with the sanctuary by a window.

Covering its interiors with flat ceilings or false barrel is typical of the churches in this area.

The **Church of St. Leonard the Prior in Wierzbie** is located furthestmost to the north. Although the exact date of its construction is unknown, a wooden church dedicated to St. Leonard in that area was first mentioned in the 16<sup>th</sup> century, most likely from before 1522. The first description of the church comes from 1668. The church was extensively renovated for the first time in 1797 (replacement of wooden shingles) and then in 1889 as well as in 1949. It was totally remodeled in 1971–1974 [19].

According to various sources, the building is an example of a late-Gothic variation of a wooden church (Greater Poland type) or of a narrower category of *Wieluń* type of churches [25], with such characteristic features as a common location and time of construction (the 16<sup>th</sup> century). The *Wieluń* type of churches were built in a different way than the *Opole* type of churches from larch wood and they are log structures. The single-naved, oriented church in Wierzbie has wood siding (Fig. 15). The church's sanctuary is significantly narrower and shorter than its nave. The whole building is covered with a shingled gabled roof with two ridge beams. The only difference is the lack of a tower which would be an extension of the nave to the west with a characteristic form. Although the tower of the church in Wierzbie, which is designed on a square plan, is in fact added to the nave, it has a post-and-beam structure and its walls are slightly tilted. It has a pyramid roof also covered with wooden shingles. The church has two side sacristies, one made of wood and the other masonry with monopitch roofs. The latter was annexed with an extension built during renovation in 1949. Above the end of the nave, there is a small *flèche* on a square plan topped by a bulbous metal sheet roof. Two vestibules are from the front and the side of the nave. Special attention should be drawn to its side entrance with a wooden portal, unusual in the area of Olesno County, from the 16<sup>th</sup> century divided in two, its upper circular section inserted on a rectangular door frame [24].

Inside, the nave and the sanctuary have a common flat ceiling. The sacristy, however, has a different barrel and groin vault. The sanctuary is separated from the nave by a wooden, carved rood beam [27]. The choir, also made of wood, which is supported on two carved columns with



Fig. 15. View of the Church of St. Leonard the Prior in Wierzbie,  
Fig. by author

Il. 15. Widok na kościół św. Leonarda Opata w Wierzbju, ryc. autor



Fig. 16. View of the Church of the Assumption of the Blessed Virgin  
Mary in Uszyce, Fig. by author

Il. 16. Widok na kościół Wniebowzięcia NMP w Uszyczach, ryc. autor

the parapet projected in its middle section, is a subtle confirmation of the early-Baroque origin of the church. That part is additionally decorated by the sculptural presentation of angels playing instruments [26].

The **Church of the Assumption of the Blessed Virgin Mary in Uszyce** is located in the furthest north corner of the county. It is also one of its oldest buildings. It was first mentioned in 1386, and it existed in its present form already in 1517 when the church was consecrated. In spite of being remodeled a number of times, it did not lose its original character. In 1677–1821, the significance of the church diminished. It became a filial church of the parish in Zdziechowice [21]. In 1934, it became a parish church again. The church, which has a log structure, has a front tower which has a post-and-beam structure covered with boards and a massive pyramid roof. The external finish of the walls and the gabled roof are typical of the region. The walls are covered with pine tree boards, reinforced with special clasps, whereas the roof is covered with wooden shingles. Above the end of the nave, there is a hexagonal flèche covered with a metal sheet bulbous roof (Fig. 16). This is also a bell tower. Its bell was cast in Wrocław in 1606. It has an inscription in Polish. The sacristy with the founder's lodge upstairs which opens to the sanctuary was added to the sanctuary which has a three-sided end and is narrower than the nave. External roofed steps lead to it. The choir, which is located from the west, does not have any columns. There is a vestibule going inside from the south.

Near Uszyce, there is a village of **Gola** and the **Church of St. Nicholas** is in that village. It was mentioned already in about 1353, but its present form comes from the turn of the 17<sup>th</sup> and 18<sup>th</sup> centuries. From the very beginning it was a filial church of the parish in Zdziechowice.

As one of few churches in this area, it has a bulbous roof above the tower with a lantern which is completely covered with metal sheet. A hexagonal tower, added to the nave, was built with the same height as the gabled roof of the nave. The sanctuary, which is significantly narrower than the nave, has a three-sided end. The walls, which are covered with vertical boards, were reinforced with spe-

cial clasps; the roof has two ridge beams and it is covered with wooden shingles. One of its distinctive features are the round windows in the sanctuary. There is a choir supported on six columns from the west.

One of the most precious treasures is the gravestone of Hans von Kuschenbohr from 1684 and a bell cast in the same year in Wrocław.

The church is very similar to the **Church of St. John the Baptist in Kozłowice** which was built around the second half of the 17<sup>th</sup> century from the foundation of Adam von Frankenberg.

The church, which has a log structure, was built on a new masonry base course. A short four-sided front tower, which has a post-and-beam structure and its walls are covered with vertical boards, was added to the nave. The octagonal roof above it is covered with wooden shingles. Similarly to other churches, the sanctuary is shorter and narrower than the nave, and it has a three-sided end. A sacristy with a three-sided end and a founder's lodge upstairs which opens to the sanctuary was also added to the sanctuary. External unroofed steps lead to the lodge.

Inside, there is an impressive false barrel vault lowered in the sanctuary. Rich interior painting decoration is also worth noting. Both the walls and the vaults are covered with polychrome. The older of them, from the 18<sup>th</sup> century, covers the walls of the nave and the sanctuary, whereas the newer one, from the 19<sup>th</sup> century, was applied to the vault. The interior decoration is completed with Baroque and late-Baroque furnishings.

The **Church of St. Mary Magdalene**, built in 1679, is located in a small village of **Boroszów**, north of Olesno. Until 1757, it was a filial church of the parish in Sternalice, later, for a short time until 1775, it was a filial church of the parish in Biskupice. In 1896, after more than one hundred years when it belonged to Kościeliska, it returned to Biskupice [17].

Similarly to the buildings described above, this church has an exceptionally simple structure and very similar internal layout. Similarly, a short, massive, four-sided tower which has a post-and-beam structure with



Fig. 17. View of the Church of St. Margaret in Jamy, Fig. by author  
Il. 17. Widok na kościół św. Małgorzaty w Jamach, ryc. autor

slightly tilted walls covered with wood was added to the straight nave. The tower has an octagonal pyramid roof covered with metal sheet. Just like the other cases, the whole church has a log structure with outside wood cladding and a massive base course. Both the sanctuary with a three-sided end and the nave are covered with a shingled gabled roof with two ridge beams. A sacristy was added to the sanctuary from the side. All windows in the building have segmented heads, most simple and most popular in this area.

Inside, the choir supported on two columns has Rococo decorations. The nave has a flat ceiling, and the sanctuary, with a false barrel vault, has simple painting decorations in geometric fields.

The **Church of St. Margaret in Jamy** comes from the same period as the church in Boroszów. Although the exact date of its construction is unknown, the church was first mentioned in 1697 when it was a filial church of the parish in Gorzów Śląski. Destroyed in 1792, it was rebuilt from the foundation of Count Karol Zygmunt von Aulock. In 1956, it became a filial church of the parish in Kozłowice.

What distinguishes this church from the other churches is its squat construction, with straight walls, which is a little higher and goes above the level of the nave roof ridge. Its flattened pyramid roof has a small onion cupola. The church is also unusual because it does not have separate ridge beams above the nave and the sanctuary with a three-sided end. Both parts of the church have equal heights and one roof with one ridge beam. On the side, there is a sacristy with the founder's lodge upstairs. External unroofed steps lead to it (Fig. 17).

The choir, whose parapet projects a little in its middle section, is supported on six columns. The choir was extended to the middle of the length of the side walls of the nave.

From among the churches described in this paper, the church in Jamy is the only one with square window heads and flat ceilings above both the nave and the sanctuary.

It should be noted that this group of churches includes also the church which until 1910 was in **Olesno**,

in the so called Małe Przedmieście in place of the contemporary, masonry **Corpus Christi Church**. The old hospital church, also dedicated to Corpus Christi, which was funded at first from the municipal and later monastic treasury, was built in 1635, which is confirmed by the inscription on the beam of the side wall. It was built in place of a much older church which burned down in 1624 together with a large part of the town. This church also burned down a few years after it was built in the fire of the town in 1642; it was, however, rebuilt in its original form already in 1645 [10, p. 21].

Of all the churches which existed at that time in the county, the plan of this church was the most simple. Its sanctuary with a three-sided end was as wide as the nave and it had a four-sided turret with a bell. A small sacristy was added to the side of the sanctuary. The whole church, which was built on a base course, has a log structure. Inside, it had flat ceilings, and the sanctuary with coving. Due to its specific function, there were no liturgical vestments or utensils in that church [6, p. 230].

In 1909 [15], a decision was made to move the church to the village of Gronowice (Kluczbork County) located in the parish of Stare Olesno and to build in its place a new, masonry church. It was also then that the dedication of the church was changed to St. Giles. The church was renovated in 1959 [23].

Unfortunately, the church does not exist anymore. It burned down on the night of the 15<sup>th</sup> to 16<sup>th</sup> of August 1995. It was never rebuilt. A small, masonry temple was built in its place.

There is one more church which also should be mentioned. Namely, the almost completely forgotten church in the village of **Skrońsko**. Unfortunately, this church does not exist anymore either. It was a church dedicated to **St. Valentine and Bartholomew** from around 1600 which most probably was built under the patronage of Augustinian friars. The last time the church was thoroughly renovated and remodeled was in 1909–1910. On the night of September 27<sup>th</sup>, 1999, it burned down almost completely, most probably robbers wanted to erase their traces.

This was one of the churches which had a simple form and shape. As all other churches it was a log structure; it had a nave as well as a narrower and shorter sanctuary with a three-sided end and a side sacristy. There was a vestibule on the other side of the nave. The whole church was covered with a roof with two ridge beams, and its small tower, which had a post-and-beam structure, was fused to the nave with a pyramid roof covered with wooden shingles. Above the nave, there was also a hexagonal, metal sheet turret topped by a bulbous metal sheet cupola. Inside, the church had two founder's towers and a simple choir with no columns. The whole interior had flat ceilings.

The interior of the church had real treasures of art. A Baroque high altar from the beginning of the 18<sup>th</sup> century with the sculptures of John the Baptist, Peter and Paul with a painting from 1850 by Maciej Madzior of St. Valentine on the back. There was a regency pulpit on the side. Inside the church, there were also epitaphs of the Skroński family – painted on board, presenting Joachim

Aleksander Skroński who died in 1657 as well as Gabriel Abraham and Jadwiga Eleonora Skroński, who died in 1664, as children, and the 15<sup>th</sup> century Gothic sculptures of the Mother of God with Infant, Mary Magdalene, and

St. Hedwig as well as Baroque sculptures of, e.g. John Nepomucen, Apollonia, and the Mother of God.

In 2003, the inhabitants of Skrońsko built a new, masonry church in place of the old one.

## Summary

When comparing the catalogs of historic monuments of the Olesno County published in different years, one can notice a slow but gradual disappearance of ecclesiastical wooden buildings. What is left of them is just photographs and accounts of the authors of catalog lists. The catalog of *Historic Monuments of Art in Poland* [12] from 1960 lists as many as 23 wooden churches. *Wooden Churches in Silesia* [14] published in 1975 lists only 21 churches. At the end of the 20<sup>th</sup> century, only 20 of them still existed. At present, in 2011, that number dropped to 18. The churches are disappearing as a result of their age, their being “non-modern”, “non-commercial” or simply because of the desire to earn easy money or because of ignorance. Slowly, even imperceptibly, the most precious heritage of that land is disappearing.

Wooden churches are one of the most unique and varied architectural forms, and that is why it can be assumed that there are no two identical churches as too many factors affect the way in which they were built and their final appearance. However, from among many individual distinctive features, one can find those which are common in a specific small or big region. That is exactly why it was possible to distinguish a few groups of wooden churches which are typical of Silesia, Opole Region or Lesser Poland. The churches belonging to the Opole Region group, which undoubtedly includes the churches in Olesno County, with few exceptions such as the church in Wierzbie,

demonstrate many features which distinguish them from other churches not only in Poland but also Europe. These features are for instance the type of construction, building materials, forms of decorations and spatial layouts, which are not present in their specific arrangement anywhere else. That is specifically why the significant number of such buildings in such a small county should contribute to the growth of interest among both researchers and regular tourists in this inconspicuous treasure which has survived the turmoil of war in small villages.

What is amazing about those churches is also the fact that they survived despite being moved from hands to hands in the borderland area where several cultures and nations coexisted. In the past, it did not matter if a temple was located in Poland, if it was built by a German carpenter or if a parish priest was Czech. The multicultural character of this land which did not allow for the destruction of what was built at high cost by the closest neighbors was noticed by such German researchers as Dienwiebel or Luchs, many of whose ideas were denied after World War II, who noted in their publications the “Slavonic character” and “Germanic character” that coexisted in that area.

Saving those small masterpieces is possible because, after many years of efforts made by researchers from many countries, the general public became aware of the fact that they deserve to be saved as well as because of their impermanence they are especially priceless [26].

Translated by  
Tadeusz Szalamacha

### *Annex – Buildings listed in the register of historic monuments [26]*

1. Biskupice – Church of St. Hedwig – 35/53 from 19.12.1953 (extract from the Register).
2. Borki Wielkie – Church of St. Martin and Bartholomew – 75/54 from 22.12.1954.
3. Boroszów – Church of St. Mary Magdalene – 152/54 from 13.01.1954.
4. Dobrodzień – Church of St. Valentine – 385/60 from 12.03.1960 and 74/78 z 1.03.1978.
5. Goła – Church of St. Nicholas – 77/54 from 14.01.1954
6. Grodzisko – Church of St. Roch – 32/49 from 10.12.1949 and 149/76 z 10.02.1978.
7. Jamy – Church of St. Margaret – reg. no.: 79/54 from 13.03.1954.
8. Jaworzno – Church of Holy Trinity – 39/67 from 30.12.1967.
9. Kozłowice – Church of St. John the Baptist – 81/54 from 13.03.1954.
10. Olesno – Church of St. Anne – 33/49 from 10.12.1949 and 158/78 from 14.02.1978.
11. Radawie – Church of the Elevation of the Holy Cross – 88/54 from 24.03.1954 (extract from the Register).
12. Skrońsko – Church of St. Valentine and Bartholomew – 84/54 from 2.03.1954 (does not exist anymore).
13. Stare Olesno – Church of St. Mary Magdalene – 83/54 from 5.04.1954.
14. Sowezyce – Church of St. Anthony of Padua – 89/54 from 24.03.1954.
15. Uszyce – Church of the Assumption of the Blessed Virgin Mary – 85/54 from 12.03.1954.
16. Wachów – Church of St. Lawrence – 86/54 from 17.02.1954.
17. Wierzbie – Church of St. Leonard – 974 from 30.12.1967.
18. Żytniów – Church of St. Martin – 490-XIV-63 from 12.08.1949 and 977/67 from 30.12.1967.

### *Annex – Buildings from 1960 per Catalog of Historic Monuments of Art in Poland [12]*

1. Biskupice – Church of St. Hedwig
2. Borki Wielkie – Church of St. Martin and Bartholomew
3. Boroszów – Church of St. Mary Magdalene
4. Chocianowice – Church of the Nativity of the Blessed Virgin Mary



- |   |  |
|---|--|
| 5. Goła – Church of St. Nicholas  | 13. Lasowice Wielkie – Church of All Saints                      |
| 6. Grodzisko – Church of St. Roch                                       | 14. Olesno – Church of St. Anne                                  |
| 7. Gronowice – Church of St. Giles                                      | 15. Radawie – Church of the Elevation of the Holy Cross          |
| 8. Jamy – Church of St. Margaret  | 16. Skrońsko – Church of St. Valentine and Bartholomew           |
| 9. Kozłowice – Church of St. John the Baptist                           | 17. Stare Olesno – Church of St. Mary Magdalene                  |
| 10. Kościeliska – Church of the Visitation of the Blessed Virgin Mary   | 18. Sowczyce – Church of St. Anthony of Padua                    |
| 11. Laskowice – Church of St. Lawrence                                  | 19. Uszyce – Church of the Assumption of the Blessed Virgin Mary |
| 12. Lasowice Małe – Church of the Assumption of the Blessed Virgin Mary | 20. Wachów – Church of St. Lawrence                              |
|   | 21. Wędrynia – Church of St. John the Baptist                    |

### ***Annex – Buildings from 1975 by J. Matuszczak [14]***

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|---|---|
| 1. Biskupice – Church of St. Hedwig                                 | 11. Lasowice Małe – Church of the Assumption of the Blessed Virgin Mary |
| 2. Borki Wielkie – Church of St. Martin and Bartholomew             | 12. Lasowice Wielkie – Church of All Saints                             |
| 3. Boroszów – Church of St. Mary Magdalene                          | 13. Olesno – Church of St. Anne   |
| 4. Chocianowice – Church of the Nativity of the Blessed Virgin Mary | 14. Radawie – Church of the Elevation of the Holy Cross                 |
| 5. Goła – Church of St. Nicholas                                    | 15. Skrońsko – Church of St. Valentine and Bartholomew                  |
| 6. Grodzisko – Church of St. Roch                                   | 16. Stare Olesno – Church of St. Mary Magdalene                         |
| 7. Gronowice – Church of St. Giles                                  | 17. Sowczyce – Church of St. Anthony of Padua                           |
| 8. Jamy – Church of St. Margaret                                    | 18. Uszyce – Church of the Assumption of the Blessed Virgin Mary        |
| 9. Kozłowice – Church of St. John the Baptist                       | 19. Wachów – Church of St. Lawrence                                     |
| 10. Laskowice – Church of St. Lawrence                              | 20. Wędrynia – Church of St. John the Baptist                           |

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### ***Szlak kościółków drewnianych w powiecie oleskim – szkice***

Zespół drewnianych kościołów znajdujących się w powiecie oleskim stanowi bogaty przegląd typów drewnianej architektury Śląska. Ze względu na swoje specyficzne położenie na granicy kilku województw i krain geograficznych jest on obszernym źródłem wiedzy o transformacjach i wpływach różnych technik i tradycji budowlanych.

W pracy omówione zostały uwarunkowania historyczno-geograficzne, jakie przyczyniły się do powstania grupy kościołów opolskich. Podstawą dalszych rozważań stała się analiza literatury tematu, obejmująca genezę zainteresowania tradycją śląskiego budownictwa drewnianego, sięgająca połowy XIX wieku na terenie Niemiec. Dalszą część pra-

cy stanowi omówienie historii i architektury oraz wystroju wnętrzaśkiego obiektów znajdujących się na terenie powiatu. W opracowaniu zostały również uwzględnione obiekty, które w ciągu ostatnich dwudziestu lat uległy zniszczeniu wskutek destrukcyjnej działalności człowieka. Ich historia dowodzi słuszności wszystkich działań konserwatorskich i zabezpieczających, które zostały podjęte w ostatnich latach dla ratowania zabytków jeszcze istniejących.

Aneksem do opracowania są listy zabytków będące świadectwem zmian, jakie zachodziły w okresie powojennym, obrazujące zarówno zmiany terytorialne powiatu oleskiego, jak i powolny proces niszcze-

nia drewnianej architektury tego regionu. Dodatkową informację stanowi wypis z rejestru zabytków województwa opolskiego, świadczący o podejmowanych zaraz po wojnie działaniach mających na celu ochronę dziedzictwa ziem odzyskanych.

**Key words:** wooden ecclesiastical architecture, protection of historic monuments

**Słowa kluczowe:** drewniana architektura sakralna, ochrona zabytków



Tomasz Kruszewski\*

## *The symbolic motifs in contemporary architecture of libraries – most frequent trends*

### *Introduction*

John E. Buschman noted that the trends in the new philosophy of library management include among others a desire to create a clear language of a library building and first of all to present it in a *high-tech* convention [5, pp. 96–97]. This is a popular convention but it should be stressed that the modern construction technologies do not need to be *idée fixe* of a building. On the contrary, more and more frequently they are a tool of presenting other ideas and philosophy. The contemporary library can assume humanized features in new dimensions. The literature on library science which employs the terminology from architecture

and construction engineering, uses the term “intelligent building”. A building is “intelligent” because it has information systems such as security, ergonomics, flexibility [3, p. 41]. Unlike the old library which ‘lived’ because of its books, the modern library ‘lives’ also – or maybe sometimes primarily – because of its building. Thus the primary functions of the library are less important than the technological façade and symbolically are subjected to it. Although the modern architectural solutions determine the ‘life’ of a library, they are in the background and they only serve as tools to execute that idea.

### *Trends*

The “philosophy of building” has its restrictions too, the main of which is fashion, though it is not subjected to it. Georg Simmel saw fashion as a form of life which should guarantee a compromise between the social trend to equalize and the individual trend to vary [24, p. 22]. The libraries from different times provide a tangible testimony to following fashion and not only utility criteria when designing. The phenomena which could be classified nowadays as fashion include ecologization and westernization of spatial and aesthetic designs of libraries. It is fashionable to search for original spatial developments and ideas. Fashion includes everything regarding social activity of man. An architectural style which dominates in a specific period is fashionable, and consequently specific building materials and technologies are in fashion too. All this affects the transformations in the mental paradigm of the viewer of architecture. Fashion provides an opportunity to

make use of a single raw material simplicity of a building. However, as Marek Czyński noted, the dominance of one kind of material is a stressful factor in the building environment. Nowadays, glass has become such a material and it can be used by engineers not only as a traditional material to let in more light inside the interiors but also as a construction element in, e.g. floors, balustrades or staircases [6, p. 59]. Buildings dominated by one building material are nothing new as for centuries marble or sandstone served a fashion function, as does glass today. However, transparent glass makes an indelible impression which is uncommon when other materials are used – and that is why it can potentially cause stress among some viewers of architecture. On the other hand, it is the very transparency which can reduce stress reactions in other viewers compared to, e.g. heavy concrete structures.

In modern library buildings, light is used as an element of composition on an unprecedented scale. It is possible because of technology and the very special fashion for transparency and ecology. This is evident in such projects by Norman Foster as the British Cranfield University Library,

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Fig. 1. Philologische Bibliothek – Freie Universität Berlin.  
Photo: D. Ausserhofer

Il. 1. Philologische Bibliothek – Freie Universität Berlin.  
Fot. D. Ausserhofer

the roof around the old reading room of the British Museum, the John Spoor Broome Library at California State University Channel Islands or perfect blob architecture – and in a sense the crowning achievement of this architect's style – the Philological Library (Philologische Bibliothek) in Freie Universität Berlin from 2005. It has a shell shape filled with alternate rectangles of silver aluminum and transparent glass which allows for the penetration of as much light as possible (Fig. 1). The library has been dubbed the “Berlin Brain” – which shows the symbolic strength of the institution gained through the sensual perception of light absorbed by the building during the day and emanating it after twilight. The shape of the structure makes that after-glow look like a halo.

Built in 1963 according to the design by Gordon Bunschaft, Beinecke Rare Book and Manuscript Library has been dubbed the “Pompous Temple”. It looks especially impressive after dark. Due to the see-through marble slabs in the façades – in the opinion of Charles Jencks – the building looks like “a pile of television sets with no picture” [15, p. 19], which is an unsuccessful attempt at creating a chiaroscuro effect as the pictures of the façades with the use of pre-cast wall elements. It is an interesting example of a compact body of the building which from a simple cuboid seen from outside transforms into a closed space which helps to concentrate (Fig. 2). The ambiance which might not match other types of libraries harmonizes with the historic collections the same as the body of the building designed on an organic, elliptical plan matches the offer of the university library at the University of Cottbus (Informations-, Kommunikations- und Medienzentrum Brandenburgische Technische Universität Cottbus). Opened in 2005, it has become the symbol of the university, the city, and the region so characteristic in a newly promoted city without any long-lasting academic traditions. The Library's façade – its glass skin – was covered with entangled texts in different languages which are the illumination of the function of the building both literally and metaphorically. The architects Jacques Herzog and Pierre de Meuron realized the idea of printing on glass façades also in another library designed at the same time: Bibliothek der Hochschule für



Fig. 2. Beinecke Rare Book and Manuscript Library.  
Photo: M. Marsland / Yale University

Il. 2. Beinecke Rare Book and Manuscript Library.  
Fot. M. Marsland / Yale University

nachhaltige Entwicklung Eberswalde, however, that library has also figural motifs taken from the photographs by the German artist photographer Thomas Ruff. The same as in the Berlin blob, after dark this library's interior is lit by the building surrounding and the lines of letters create a chiaroscuro effect. The 32-meter-tall building, with no front or back, resembles a stronghold and the letters are the symbol of hidden treasures [8]. The image of a symbolic shelter of knowledge is intensified by the building's location on a hill with no tall plants or other structures around it. When mentioning the shelter, the role of light should be emphasized again – this time it is electric light which when turned on in specific points marks emergency exits. The building's lighting is then its integral part at symbolic (emanation of knowledge) as well a pragmatic level (safety and ecology).

The restrictions which are used to realize a specific idea to a certain degree determine the way a body of the building is looked at, its cultural belonging, and utility functions, which does not mean, however, that they occur at the expense of the user. In fact the restrictions affect the form and spatial development which may be especially convenient from an individual point of view. Nowadays, that connection radiates stronger but it was present in the past too. Apart from ethical issues, as already mentioned – ecology is now in fashion. Consequently, when designing

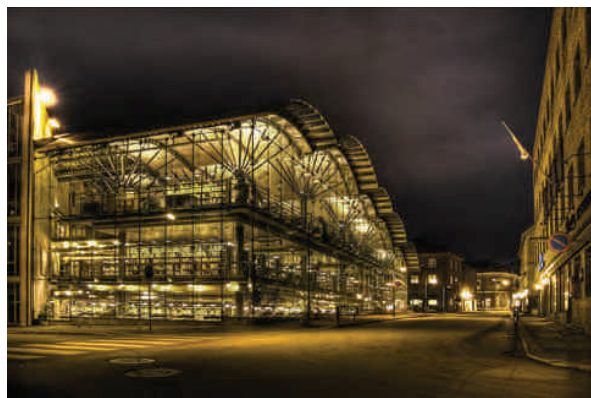


Fig. 3. Tønsberg og Nøtterøy bibliotek. Photo: P. Fiskerstrand

Il. 3. Tønsberg og Nøtterøy bibliotek. Fot. P. Fiskerstrand

libraries, the environmental issues are especially important, which is evident in the Japanese architects' designs. Their buildings, which are the function of nature – landscape and colors which are present in the surrounding environment, cooperate with the elements. As Wolfgang Welsch put it *A building is not a closed crystal but an element in a broader context. Outside is inside and inside is outside* [26, p. 186]. The presence of the cultural and ethnic perception of the natural environment can be seen in the projects by Kazuyo Sejima and Ryue Nishizawa (SANAA group) which are realized in Europe. In the Rolex Learning Center in Ecublens near Lausanne, its wavy roof, punctured with large empty holes, reflects and echoes the serpentine form of a nearby mountain range. The “landscape” building on this academic campus by the lake – with a multimedia library, language learning center, offices, eating places, lobby – in fact does not have internal walls. The emptiness, which is so typical of the far-east spirituality, helps to calm down, sending the message that *possessing nothing, one possesses everything* and that *emptiness is where form is born* [1, p. 50]. It is a material space whose character is liberating and generating. Its large space as well as its surrounding make the building center of student life – it is open regardless of perspective, symbolically connects with nature through physical glazed bridges between parts of the complex. The architecture of sustainable development in the far-east concepts shows two elements affecting the form of the building: culture and nature, as well as, assuming a more technogenic paradigm: culture and civilization [27, pp. 8–9]. The first, rather conservative, the other – dynamic. Both of them, however, which is the architectural program of the Rolex Learning Center, are inseparably connected.

Nature, as the instance to which the “philosophy of building” refers, can be a horizontal background but it can also be present near a building or inside it. Biblioteca Joan Miró in Barcelona from the late 1980s, located next to a park – makes use of its serenity “connecting” through panoramic windows in the reading room and at the same time isolating from the tumult of the city located on the other side of the building. It has a water cascade whose sound and movement provides a positive motivation to

read [12, pp. 97–98]. This is a dynamic picture but also soothing as it is far from the artificial urban rush.

The symbolism of water in a broader context is visible in the project by Charles Correa of Jawahar Kala Kendra in Jaipur in India. The complex has a square plan further divided into nine squares alluding to a model of cosmos – mandalas symbolizing the birth of a harmonious form from chaos. The library – which is its integral part – covers it. Similarly to all other elements, the library pavilion has its individual climate with a contemplative atmosphere. It is intensified by the walls made of red sandstone with the symbols from mandalas engraved in them, the nearby enclosed court, and a static small pond in the library. Similarly to the Library in Barcelona, ecological motifs were the tools used to develop the symbol-forming space in the library and around it. The religious motifs in Jaipur are significant and this kind of references are present not only in case of adaptations of ecclesiastical buildings.

Another interesting architectural design based on religious subjects is Tønsberg og Nøtterøy bibliotek in Norway – it is a project of the local group L2 Arkitekter from the late 1980s. The ruins of a medieval monastery of St. Olaf, whose remains are displayed under the Library, were the inspiration for the form of the building. In order for them to be able to radiate their spirituality, the amount of glass is significant in both the floors of the building and its glass façade which reflects not only the “world of the street” in Tønsberg but also – immaterially – its old past. The structure of the roof is supported on so called “trees of knowledge” (Fig. 3) – steel columns branching out to a number of profiles. They allude to the monastic complex in two ways: firstly – indicating that probably trees grew in that area, and secondly – regarding the already described role of vertical structures, namely their function of connecting the temporal and eternal worlds. And finally the roof – supported on the “trees” – is undulating as if it was the surface of the nearby sea. The waves are also a sign connoting the transcendence of the place – this is where the Vikings were buried. The recurring conception of folds in architecture is not, it seems, unusual or accidental; it is rather an attempt at materializing eternity in a building. The affiliation processes which introduce a foreign strain (Nordic pagan culture) to a specific work coexist with the processes of form unification [25, p. 55]. Connoting substance is obviously more inconspicuous than the denoting aspect, however, it makes the building more convenient to the function than to use. It is tangible that an attempt is made at taking the purity of nature as well as transcendence of human spiritual life and introducing them into the symbolic sphere of library architecture.

The example of the design from Tønsberg testifies to the fact that the pluralistic compilation of cultural codes, breaking the bond connecting form and function of a building, contrasting selection of its decorations, has been fashionable in architecture for several decades. These activities are becoming a play with shape, sometimes with the viewer, where what is absurd becomes a symbol as well as a tool. Furthermore, they are also a methodical judgment of the form – serious and balanced. These features are presented by the libraries which have been designed for

almost half a century by Isozaki – including the Japanese Oita Prefectural Library and Kitakyushu Central Library, the Australian Bond University Library, the Japanese Toyonokuni Library for Resources and finally the Shenzhen Cultural Center in China (where a library is one of the main parts) as well as the Qatar National Library which is still, however, only a project [1, pp. 118–119], [20, pp. 38–41]. They all have unique yet moderate shapes and details, indicating that the architect was looking for a simple language of form, infrequently drawing from historical European styles and playing with materials. They feature an elite code [16, p. 386]. If Isozaki's libraries can be classified as "Esperanto architecture", then the cultural play is the catalyst of that compilation.

The problem which results from abundant information causes an excess of substance, which is not necessarily positive. Jean Baudrillard noted that the character of information can be negative for culture. It conveys senses and meanings, neutralizing and "devouring" them at the same time. Instead of facilitating communication, information is disappearing in the communication simulation [2, p. 102]. This phenomenon occurs in relation to many modern library buildings where information itself replaces the substance. Examples include the cultural façade of the University Library in Warsaw or the Powell Temporary Library at the University of California in Los Angeles (Towell Library). This is a temporary library built for the duration of the repair of the main building. It resembles a hangar or an industrial warehouse. It was designed in the offices of Craig Hodgetts and HsinMing Fung to be used for temporary storage of the library collections in a safe place. The ideas behind that building deny the ideas of a library, regardless of its structure. The message is incoherent – the library is an institution for storage of cultural heritage for next generations, here it is temporary. It is a simulacrum which only simulates the social function because it does not make a permanent impression. There is a physical space called a library but is not a library – it is a storage place at the most.

As a rule storage places are functional, which for libraries over the last several years has been brought up as their fundamental value. Modern designs – despite the fact that that current is in reverse – have dominated thinking about libraries so much that the recommendations made by Henry Faulkner-Brown still in the 1970s [11, pp. 3–8] are quoted by librarianship experts almost like a mantra all over the world. However, the functionality is not a simple consequence of standardization and universality. It is also an expression of local construction needs and fads. Although, postmodern architecture, or more precisely one of its currents – deconstruction, unlike modern architecture, draws from cultural patterns, including ethnic ones [12, p. 21], the modern man – as Chantal Delsol put it – is not certain of the values of those cultural references and – at the most – communicates them timidly [9, p. 76]. It is quite paradoxical in the context of the opinions, which were audaciously promoted already before the war – even in Poland – on taking into account the national cultural distinctions and social structures in architecture and design [28, p. 3–4]. However, retouching our own culture and "filtering"



Fig. 4. Peckham library. Photo: Stephen Cadman

Il. 4. Peckham library. Fot. S. Cadman

it through separate systems has become the basis for developing ideas for new buildings. Consequently, the main feature is the effect – or what is more frequently defined as a "skin-deep effect" – which has replaced the typological, morphological, and tectonic profundity of traditional architecture [18, p. 37]. This is how contemporary libraries are designed. Local and ethnic elements coexist with foreign ones, complementing one another. This rule can be exemplified by the project of Frances Howard Goldwyn of the Regional Branch Library in Hollywood from 1986. The library building was developed by Frank O. Gehry and its form is emphasized both by its features (scale) and the composition principles (symmetry). It is both usual – because of the simple cuboidal shapes and monumental – because of the same shapes and their combination. It is to the same degree pompous in Hollywood style and intimate for the users who need it [13, p. 120].

Coincidentally, the form of the building also conveys a deeply rooted idea of libraries defined as shelters for cultural heritage. Their means of protection at technological level correspond to those in traditional fortresses. They have tall walls whose surface is resistant to graffiti and huge gates. Diane Ghirardo described such buildings a somber and confined but also as providing interesting and spacious interiors for those who use them [12, pp. 101–102]. Ethnic riots that took place in Los Angeles in 1992 – the Rodney King Riot – demonstrated that the ideas of civil fortress engineering does not belong to the past.

Playing is effective too. Ignoring the significance of shape and considering it a play covers up the archetypal patterns of specific types of buildings and evokes Léon Krier's concerns. The buildings of such libraries as the San Antonio Public Library or Peckham Library in London (Fig. 4) do not communicate information about their use and functions. However, they are not "misleading objects" as they do not evoke any archetypal associations and as such they are not compositionally inappropriate.

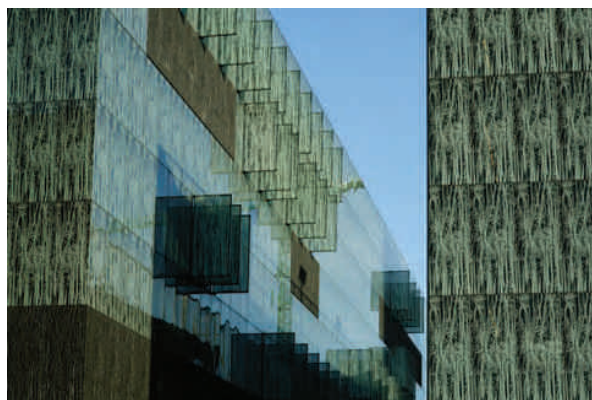


Fig. 5. Universiteitsbibliotheek Uithof. Photo: J. Bosman

Il. 5. Universiteitsbibliotheek Uithof. Fot. J. Bosman

Unlike modern forms based on the right angle geometry, they are intriguing – it is difficult to pass by the central library in San Antonio without noticing surprising geometric combinations of groups of solids composing the building or ignore the balls rolling down the ramp “frozen in time”.

Asymmetry is one of the composition principles often used in the post-modern world. It is seen in deconstructivism where rationalism and functionalism were replaced with chaos which, however, should be a readable text of culture – a technological metaphor. The works of architects who want to reject the modern restrictions of form reflect the famous claim by Jacques Derrida that *there is nothing outside the text* [10, p. 163]. If it is acknowledged that each interpretation of architecture is equally justified, then free play with geometry and the use of curved lines has turned the forms of deconstructivists into texts whose interpretations go far beyond what they were supposed to be used for. The universally known Seattle Public Library is a building perceived independently of the institution which uses it. Although its building was designed as a library, it “hid” with its meanings in the shadow of values conveyed by the building designed by Rem Koolhaas. It testifies to the fact that in spite of the growing unification of library services, the diversity of library architecture can be still visible, depending on their type. This is what is happening in the United States where academic libraries have less impressive buildings than public libraries. Furthermore, their design is not as grandiose and spectacular [3, pp. 156–157]. It is difficult to find academic buildings which are as impressive as the public library in Seattle, although their dynamic evolution in the 19<sup>th</sup> century and in the years 1910–1945 – the period of huge constructions – might indicate a different trend [17, p. 85].

When building the new University Library in Utrecht (*Universiteitsbibliotheek Uithof – Universiteit Utrecht*), a specific geometric module was used – an idea connected with what Isozaki called “amplification”, which is a designing method consisting in amplifying the form of a square. It results in an empty frame – a form of cages which can be freely filled [16, pp. 391–392]. What seems to be asymmetric is only the outer layer within which black concrete slabs

are loosely associated (actually concrete is used to provide shadow in the places where there are racks with books) and large sections of transparent glass that is imprinted with bamboo forests (Fig. 5). As demonstrated by the projects from Herzog & Meuron, this has been a popular technique of decorating façades over the last couple of years. The dominance of asymmetry demonstrates in those subtle deviations from simple shapes. Although the building does not provoke or raise excessive emotions, it signals its large volume. The rectangles in the façades and the interior spatial layout are different: filled or empty, symbolically surrounding nature (stems) and culture (recesses in walls providing view of the library collection). What emerges is unrestricted space – allowing for asymmetric activity compared to standard users’ expectations of an academic library. The library is a building which stands out in the chaotic development of the university campus [7]. What is grotesque in relation to an orderly shape becomes asymmetric to the nearest surroundings.

Probably nowhere else is the mechanistic metaphor more evident than in the Centre Georges Pompidou in Paris from 1977 designed by Richard Rogers and Renzo Piano. According to Ghirardo, there are several types of architecture of contemporary museums, i.e.: shrines, warehouses, and cultural shopping malls [12, p. 72], and the building which houses the central public library of the capital of France – Bibliothèque Publique d’Information – should belong to the second type. A steel “rhythmic” cage without any internal divisions maximizes the flexibility of space. It is a kind of warehouse, a neutral container for cultural diversity. As much as is happening inside it due to the multi-functionality of that space can also happen on the building which is covered by a network of winding walkways as well as pipes and ducts. All utility ducts are exposed with specific colors – red and gray for stairs and elevators, blue for air-conditioning, green for water, yellow and orange for power supply. That aggressive marking – despite successive paint applications – has been deliberately deprived of its urban context. On the contrary – it has become its glaring contrast [22], which is especially evident when looking at the building – a steel box squeezed in the traditional inner city district. The only complement of the Centre is the fountain by the building. Juggling with the contrast proved to be the main semiotic tool which is supposed to surprise the viewers. This is connected – which in the case of a library, usually associated with a static institution, is important – with the utilities. Their constant circulation and dynamics suggest the activity of the organizations managing the Centre.

As Jencks put it, postmodern buildings are exaggerated versions of modern construction designs which are logical, and communicative, enriched by double coding including the elements of tradition and locality [15, p. 133]. The contemporary architect can choose from among such signs which are understood and known to the users despite the fact that there is a multitude of symbols regarding different times and places. Such an architect cannot create new symbols which in social perception will not be associated with something familiar which is not connected with an already accepted system of signs and specific practical determinism [14, p. 47]. It

is the internalized codes that determine a library as “such and such”. Whenever it is different, like in the case of the public library in Seattle or the blob-architectural project of the national library in Prague – it causes concern, irritation, and protest because it includes unclear codes which do not fit the pattern of a library developed from experience. Usually it is claimed that denotation is information present in an architectural object which determines its functions, whereas connotation is a kind of ideology of those functions – communicating their scope of meaning [23, p. 188–189]. Hyper-modern libraries connote information about institutions operating inside them in a different way than expected by people who live especially in places where traditional looking buildings dominate, as for instance in Prague. Just like in the case of the conception of Jencks’ classification – they represent a variety of values, meaning they are impersonal to a larger extent than in the past. For library buildings it is an advantage favoring its egalitarianism.

When writing about architecture of libraries, Ghirardo saw the dominant influence of urban “warehouses”. She classified as warehouses the 16<sup>th</sup>-century Laurentian Library in Florence, the Wren Library in Cambridge from the next century, the 19<sup>th</sup>-century Bibliothèque Sainte-Geneviève in Paris and the libraries which have been built over the last few years. It is probably the only clear indicator of coherence between old and contemporary libraries. Her analysis does not indicate that the libraries – especially post-modern ones – could be cultural shopping malls or more so shrines, though she noticed the germ of changes in the project by Koolhaas which lost the competition for the new building of the national library in France. However, it should be noted that libraries in the future, especially public libraries which are present most often in some social environment, will not operate primarily in order to provide access to books. Apart from that, they will offer data on electronic carriers. Libraries will look for users by placing offers which will differ from the library and information operations in their traditional meaning. They will be – in a universal scope, as in the individual one they already are – offers meeting the so called everyday needs. The sacred character of library architecture will not fit them and except for museums it will not return. Their forms will have to communicate with the users at a different level. That symbolism will have to be obvious and tangibly express the new functions of the institution. This causes concerns connected with the difficulty in using codes which potentially would be reserved or at least connected with libraries.

Biblioteca Pública del Estado de Jalisco Juan José Arreola in Guadalajara which was opened in 2011 is an example which seems to illustrate that we are running out of symbols expressed in the solutions applied in the library construc-



Fig. 6. Biblioteca Pio IX – Pontificia Università Lateranense.  
Photo: T. Kruszewski

Il. 6. Biblioteca Pio IX – Pontificia Università Lateranense.  
Fot. T. Kruszewski

tion. Its design brings up associations with the styles assumed in the Center for African-American Arts and Culture in Charlotte, USA, the designers of Biblioteca Pio IX – Pontificia Università Lateranense in Rome (Fig. 6), and first of all the new building of the Jewish Museum in Berlin designed by Daniel Libeskind. The problem is that although the warped structure of the building façade in the capital of Germany alludes to the Star of David – “fallen” and “destroyed” by the Holocaust, it is not symbolically established in the Mexican metropolis. The form of the façade is only the aesthetic cover of a simple cuboidal building taken out of its cultural context. Keeping in mind that the Library is supposed to be a “gate” leading to the university campus – lines and irregular geometric figures covering its external walls resemble more a fortified gate. The building looks like a skin wounded by gigantic claws but none of these interpretations of the architects’ idea has much to do with the symbols of libraries described in the book. No special sophisticated composition of geometric “penetration” with its semantic code is visible there either. So a modern library does not have to be placed somewhere, sometimes, and for some reason. It does not even have to draw from rich traditions of architecture of this type of buildings. It is supposed to look nice or provoke – in a word generate interest and thus attract. The popular thinking which is driven by marketing reasons makes any idea of the architect good. As long as in the past one could look for some meaning (mainly analogy of the language of architecture to the functions offered in the building), nowadays one can assume that some projects are dominated by symbolic nonsense.

## Summary

The 1980s and 1990s are considered the best times in the history of development of libraries [21, p. 4]. The first decade of the 21st century does not demonstrate regress either. It seems that one of the fundamental reasons is human desire to leave some tangible marks which would

distinguish present times from other periods in the future. This desire is primal and typical of our species, however, nowadays, in the postmodern society looking hard for its identity, its significance is special. Architecture is a form which can be relatively certainly created even if provo-



cation is its only distinctive feature. It can be treated in opposition to utilitarian aspects – as an object of art and even folk art. Libraries belong to those types of buildings in which a greater role is attributed to meaning than to assumed formula [4, p. 8].

According to one more typology where a “container” is a type of object – a kind of packaging for what is inside, whereas a “laboratory” is a building causing archetypical reactions [19, pp. 322–329], it is not difficult to see that architecture of libraries belongs to the latter. At the same time, over the centuries of its evolution, a form specific to libraries has not been developed – and most probably never will develop. Apart from adapted buildings, a trend is visible to focus on the form of the building. The forms which appear most often include cuboids and other polygons, less frequently – ovals (and when they do, they cause a lot of interest, despite their objective simplicity – e.g. the Ruskin Library). Emphasis is placed on shape, with ornaments only sometimes complementing it, and sporadically reverse proportions – for the benefit of decorations. These are, in general, the features of contemporary buildings anyway. Consequently, in a way this provides a negative answer to the question whether the forms of libraries belong to exceptional architectural designs of the past or contemporary? The shapes of the

buildings are sometimes strange, e.g. the Public Library in Tampere (Tampereen kaupunginkirjasto) whose contour resembles that of a turkey. However, the forms of buildings designed for different uses are strange too. The relations look similar as regards the assumptions of urban development and design. Libraries can boast their attractive appearance, solutions demonstrating that a lot of attention is paid to their designs, e.g. the public library in Qingp (part of Shanghai agglomeration) built on a lake. However, other public utility buildings also have unique locations and significant aesthetic values. All this causes some dulling of senses. There are a lot of extraordinary buildings whose uniqueness is lost in abundance. Another factor weakening the strength of signals being emitted with the use of architecture of libraries is fashion. Consequently, both materials and colors as well as the whole form reduce the level of diversity and actually distinctness of concepts of projects.

Uniqueness is determined by a low level of competition and, to a lesser extent, by aesthetics. Additionally, since marketing has been employed in the civilizational development, it has become a norm to make every effort to draw attention or catch the eye of the passer by – a potential consumer. The intentional isolation of the message coming from the library is more difficult than ever before.

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### ***Motywy symboliczne współczesnej architektury bibliotek – najczęstsze tendencje***

W artykule poruszono problematykę motywów przewodnich stosowanych w architekturze bibliotek ostatnich trzech dekad. Wśród nich znajdują się tendencje kierowane ekologią, prostotą, etnicznością i elastycznością, ale również – wydawać by się mogło już archaiczną inspiracją – religią. Ich dobór jest podyktowany modą kreowaną przez świat zachod-

ni oraz filozofią ponowoczesną. Obie przyczyniają się do tworzenia wizerunku nowoczesnej biblioteki odizolowanej od jej tradycji, a co za tym idzie, porzucania klasycznych rozwiązań ideowo-symbolicznych konstytuujących jej dawną rolę kulturową.

**Key words:** contemporary libraries, architecture of libraries, symbols, semiotics of architecture

**Słowa kluczowe:** współczesne biblioteki, architektura bibliotek, symbolika, semiotyk architektury



**Michał Dębek\***

*Are assessment and emotions connected  
with a building conditioned by its external appearance?  
Attitudes towards formally differentiated architectural objects*

*Introduction*

During the process of designing physical environments, buildings or housing estates, the specialists, who are responsible for the shape of the surrounding space, often try to design objects which are potentially perceived in a positive way – preferred, friendly and satisfying needs. Architectural or industrial design and to some extent also spatial planning belong to particularly difficult domains because, among other things, authors should skilfully combine artistry with meeting human needs, ideas, expectations and images.

Designing is in fact a continuous process of creation and meeting the needs of people (investors, future users, ‘not engaged’ observers, etc.) or in brief – designing is a process of creation for people. When creating something we often ask ourselves questions such as ‘what emotions will my work arouse?’; ‘what will the users think about the environment designed by me?’; ‘how will the people for whom I design feel in this environment?’; ‘will my recipients in specific circumstances choose (like, prefer) this object and not another one?’ We can constantly ‘keep in touch’ with our recipients and their needs (real ones or assumed by us) thanks to this self-control. By asking questions of this type we are in the essence of the designing process, nevertheless, we still create certain hypotheses with regard to our recipients. But it is good. Such activities often give us time for auto-reflection, therefore, we make things better, we correct them or even change designs so that – as it seems to us – they could be ‘better’, i.e. perceived in a more positive way.

However, we do not usually carry out systematic examinations or measurements which would make it possible for our work to be seen with its potential recipients’

eyes in a relatively objective way, even though it is possible and quite easy nowadays. As a rule, our intuition must be sufficient, although we often base our opinions on various types of colloquial concepts of perception and human needs. Designers who are particularly skilful, ones who are penetrating observers of the reality, sensitive to various signals, endowed with the ability to see matters ‘from above’ and operate on high levels of abstraction, frequently build objects which are quite widely accepted and highly assessed.

As a matter of fact, if we aspire to satisfy human expectations connected with the designing process efficiently, we cannot exclusively rely on our personal insights and intuition. It must be noticed that the process of carrying out research, developing theories and putting forward interesting hypotheses with regard to human experiences connected with various physical environments has been taking place for many years. Such problems are dealt with by environmental psychology – among other sciences – a domain of psychology which was crystallised in the 1970s to tackle with complicated man’s relations with the surroundings (architectural as well). More information about the beginnings of environmental psychology can be found in works by Stokols [18], while the present status of this domain and its contemporary challenges are discussed in more detail by, for example, Gifford [10], [11]. Moreover, numerous researchers in psychology have been working on conditions of perception as well as the course of this process for many years. Reference to the results of this research may significantly facilitate and order thinking about designing as a process of meeting the needs of recipients. These research results shall be outlined in this article.

One of the interesting perception problems that we have to deal with on a daily basis (thinking about human experiences

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with various objects) is a relation of an external appearance of an object to its assessment, acceptance and preference. The appearance of an object is one of the basic features of each architectural object and it also seems to be one of the key factors conditioning its assessment. This results from our personal experience and everyday observation of human choices and opinions as well as from various scientific elaborations. For instance, according to the CBOS report 'Poles About Architecture' [8], 98% of Poles agree with the opinion that 'nice buildings and surroundings make people feel better'<sup>1</sup>. According to the report, almost everyone (94%) thinks that it is important what kind of buildings and what surroundings we live in. Additionally, also 94% of Poles think that the building's external appearance is important or very important in the situation of choosing a place of residence. Therefore, the appearance of an object is probably an extremely significant feature which conditions the way in which this object is perceived. Anyway, this is a frequently discussed hypothesis [5]; a particularly interesting and comprehensive discussion of this problem can be found in the works by Crilly, Moultrie and Clarkson [9].

The basic features of appearance of every object, including architectural objects are colour, shape and texture. Additional and equally important characteristics which differentiate architectural objects can be, for example, cubature, structure differentiation level, occurrence of symmetry and rhythms as well as ornamentation. It is relatively possible to objectively determine and communicate these formal features of an object. Such 'raw' characteristics of a given object that coexist with one another in a particular way make the object relatively unique, distinct from others and form a general quality of a higher level, which exactly constitutes the appearance. Knowing which elements (variables) contribute to this extremely important general perceptive feature of an object's, we can attempt to examine the relation of an architectural object's appearance to its perception in a structuralised and methodical way. This means that we are able to find out in what way the objects consisting of elements of particular features of appearance (e.g. shape, colour) are or will be perceived by particular people in certain circumstances.

In the process of mutual communication we often declare our individual way of perceiving an object. In our

<sup>1</sup> The question was constructed in the following way: 'Please state if you agree or not with the following statements (opinions)'; the subjects evaluated the particular statements on a four-rate scale from 'decisively yes' to 'decisively not'. The subjects had equal opportunities to express their opinions on the proposed statements.

conversations, we tend to say that this building is 'nice', 'ugly', 'uninteresting', 'original', etc. Such expressions can be treated as partial and fragmentary – although at the same time very general – declarations of the observer's attitude elements towards an object, i.e. opinions we really need to take into consideration. If we wish to have a true insight into multidimensional relations of an observer with an object, relatively precisely determine potential emotions that a designed object shall arouse and find out whether it will be perceived as attractive or it will be preferred in particular circumstances (for example, as a place of residence or a shopping arcade), it is not enough to take into account such general statements as the aforementioned 'the building is nice' or 'I don't like it'. What we need here is a deeper analysis of a potential recipient's (observer's) attitude taking into consideration emotional, cognitive or behavioural aspects (connected with a potential behaviour towards an object). These problems shall be discussed in more detail later on in this article.

If in our designing practice we assume the importance of meeting the recipients' expectations – as we outlined before – we would certainly like to take into account reliable information concerning the most interesting issue – expectations and opinions of recipients as regards the appearance of the object that we are designing. **What would be the reception and assessment of this object** (namely, what kind of attitudes would observers have towards this object)? Can such features as colour, shape and object differentiation have connections with positive or negative perception of an object? If so, which of these features are the most significant and what is the strength and nature of these connections? Is mere appearance of the utmost importance for the perception of the building? Are there any configurations of the object's formal features which the recipients would assess positively or negatively in a statistically significant way? Is it possible that a building which has particular features can be accepted/preferred and at the same time be unacceptable depending on a specific situation?

The aforementioned questions were posed in the original research project entitled 'Conditions of attitudes towards architectural objects', which was carried out in the years 2007–2010. In this article the following issues shall be tackled: (1) attitudes of perception, (2) the notion of attitudes towards objects, and (3) research results on attitudes towards some particular architectural objects.

As a conclusion of this article, we shall present an attempt at answering the following question: **do features of appearance (shape, colour and structural diversity) have a major significance in determining the attitude towards a building?**

### *How do we perceive architectural objects?*

There are numerous factors influencing our opinion on a particular object, i.e. whether we consider a given object as nice, ugly, we prefer it or not. The process of perceiving, also in the case of architecture, is very complex. In this article, we are not going into a detailed

analysis of various concepts of perception functioning in psychology; a reader interested in these aspects can refer to, for example, Maruszewski [14]. However, we ought to mention the most significant conditions of perception and explain the nature of this process in a nutshell.

Contemporary cognitive psychologists tend to agree that perception is not merely a sum (or a simple combination) of sensory impressions. Human observations do not exclusively result from physical external stimulation, i.e. observations such as Dom Handlowy 'Solpol' in Wrocław, 'Galeria Centrum' (shopping arcades), Basilica 'Licheń' are not only literal, technical reflections of physical properties of these objects. Perception involves individually built cognitive representations – mental equivalents of real objects. It is full of additional information which is not directly observed in the stimuli, for example, in a building. What sort of information exactly? We don't know; this is what we are trying to get to know from people and it is one of the most important challenges for psychology today. What we do know is that each object in each of our minds is *something more* than an image produced by our brain through light waves comparable, for instance, with a photograph.

Certainly, the perceived reality has relatively objective properties but from the viewpoint of a psychologist, *what a particular man perceives* is more significant than anything else. The mental representation, i.e. an individually constructed and reflected fragment of the objective reality, is one of the key notions in cognitive psychology [16, p. 27]. Everybody 'carries' in their minds their own and unique representation of the world but every man still creates new representations of various situations in which he is and objects that he observes. We can see that the mind consists of 'numerous and mutually connected cognitive representations' [16, p. 27]. We manipulate these representations so that the perceived world makes sense and it can effectively function. The surrounding objects – sources of

stimuli, for example architectural ones, emanate the energy of optical waves. Each man *transforms this energy in an individual way*, the energy that carries some objective information for sensory receptors (wavelength, etc.). In this way, perception is created, namely: *an individual, unique representation of reality*, for example, architectural one. This is a relatively well documented hypothesis in psychology concerning the cognitive functioning of man [16].

Thus, perception is most probably a creative process which requires a certain kind of activity from man. It is conditioned by a kind of a stimuli and its objective properties, physical context in which the observer found the stimuli, subjective properties of the observer, culture and many other factors which shall be discussed later along with the discussion of attitudes. It is really difficult to describe this process itself – what it looks like and what its physical course is – it takes place in the mind though. However, we can observe the effects of the perception process, which can be the observer's declarations concerning an object, the observer's attitude to an object or actually observed behaviours connected with an object (e.g. approaching, walking away, purchase of a flat, architectural design acceptance, etc.).

Measurement of attitudes which are observable and enable us to make a direct comparison of perception effects is often used in such diagnoses which examine man's relations with the environment. In environmental psychology, research on attitudes, for instance, towards various sceneries or objects is often aimed at examining 'satisfaction with a particular place' which is always different or simply: evaluation of a particular environment [3], [4], [21].

### ***What is the essence of attitudes towards architectural objects?***

An attitude, i.e. the information we try to get from the subjects is always 'somebody's' [20, pp. 180–181] and can be defined as *a permanent assessment – positive or negative – of people, objects and ideas [...]. Attitudes constitute an assessment which means that they are positive or negative reactions to something [...]* [1, p. 313].

A certain kind of emanation of individual (differentiated) attitudes towards objects can be, for example, various persons' comments on a certain building. Krystian Biesiekierski, an architect, who is critical of Wrocław Dom Handlowy 'Solpol' (shopping mall) and actively opts for its demolition, says: [Solpol] *This is a glitter. The designer was certainly fascinated by the spirit of the époque but he forgot that architecture is supposed to serve generations for centuries* [6]; whereas Katarzyna Hawrylak-Berezowska, a city restorer, says: *I admit that I am not pleased with the idea of demolishing 'Solpol'. I think that the building is a symbol of its époque* [6]. Piotr Fokczyński, Wrocław city architect and a 'Solpol' defender refers to the building as follows: *This is the first time that in Wrocław in the church neighbourhood and in the strong historical context a building has been erected which gets out of line* [12] and *This is one of the brav-*

*est and most interesting designs in after-war Wrocław. It shows that we are not afraid of new solutions* [19]. Zbigniew Maćków, an architect from Wrocław, who also opposes the demolition of Solpol, said for "Gazeta Wrocławska": *If it depended on me, I would rather try to renovate the building. Solpol is an interesting example of post-modernism* [19].

Małgorzata Omilanowska, an art historian, while discussing another object – Basilica in Licheń – says: *Hotels and exclusive residences lined with marble, glittering with gold and crystal chandeliers like from 'Dallas' or 'Denver' film series make Licheń a Catholic Las Vegas, although it can also be associated with the Romanian socialist realism architecture of late Ceaușescu* [13, p. 38] and she defines the whole thing as one of [...] *the most incredible works of mega kitsch in Europe* [13, p. 39].

Attitudes may refer not only to buildings, but also to objects of street furniture or widely understood organisation of space (e.g. public space). For instance, a discussion about the city dwarfs which in fact are already a tourist landmark of Wrocław has been recently initiated. In "Gazeta Wyborcza", professor Klaus Bachmann wrote

about the dwarfs: *An average dwarf is good, kitsch and financed by a big bank [...]* [2].

The aforementioned persons in their statements reveal individual attitudes towards particular objects, thus in an indirect way they try to communicate to the readers their cognitive representations of the surrounding reality. The attitude towards a stimulus is a specific measurable result of perception and an observable opinion on this stimulus. We are not able to physically 'see' particular mental representations of Solpol, Licheń or dwarf or the process that lead to their formation; we cannot 'make a film' with a narration that comes directly from each observer's mind. We only know what each person tells us about his/her opinions on particular objects, his/her emotions towards them and finally what actions he/she would consequently take.

This three-component (three-factor) description of an attitude consisting hypothetically of the following three aspects: cognitive, emotional and behavioural is a concept in psychology that is popular and made believable in numerous research works [1, p. 314], [20, p. 181]. In spite of some controversies concerning this model as well as a concept of predicting human behaviours on the basis of declaration of attitudes, even nowadays tools which examine opinions, preferences and potential behaviours based on this three-factor model of attitudes are frequently created and methodologically accepted.

Nevertheless, it is worth mentioning some factors which *may influence* the process of building mental representations and attitudes towards objects, i.e. all the things that may cause a particular person to perceive an object in a given way and form opinions about this object in a specific way. Modern psychology has at its disposal some verified hypotheses in this regard.

Simplifying this broad issue to an absolute minimum, the formation of mental representations and attitudes can be influenced by the following factors: (1) sex, (2) age, (3) place of residence, (4) social and economic status, (5) belonging to a specific cultural circle (e.g. Euro-Atlantic, Asian, etc.), (6) individual conditions (e.g. personality), (7) knowledge, experience and beliefs, (8) current psychological situation, (9) current tasks and context (physical and situational), (10) psychological distance to an object and finally (11) evolutionary conditions<sup>2</sup>. This list must

<sup>2</sup> However, the evolutionary hypothesis is still most controversial.

be complemented by variable concentration processes or motivation. In the case of applied arts, design or architecture, a significant factor influencing the process of evaluating objects seems to be the impact of a current fashion<sup>3</sup> on the declared attitudes. By the way, one of the greatest contemporary challenges in psychology is the process of examining the influence of various kinds of contexts (external – stimuli and internal – mental ones) on cognitive processing, including building perceptions [16, p. 27].

For example, we look at a building and we build an attitude towards it from various points of view, depending who we are, where we are from, what our current situation and surroundings are (if we are sad, happy, irritated), what our knowledge about the world is, if we just 'want to see', what we are supposed to do or what our distance from the observed object is and in what situation (actual or hypothetical) the occurrence takes place. Such an attitude can be communicated to the world through, inter alia, expressing general opinions on an object or – in a more structuralized form – declarations in the form of answers to questions included in questionnaires on attitudes.

Questionnaires on attitudes are often designed on the basis of the aforementioned three-factor model and contain sets of questions concerning emotions connected with an object, opinions on it as well as declarations of potential behaviours towards an object. There are many ready tools of this type, e.g. questionnaires concerning attitudes towards other people, other cultures, touchy social issues or advertisements. After all, complexity of the world results in the fact that still new questionnaires on attitudes must be designed, which are based on similar theoretical assumptions and adapted especially to the specificity of an object or problem chosen in a given piece of research. It is not possible to use a questionnaire on attitudes in the case of believers of other religions or attitudes towards a shampoo or a drink for the purpose of examining attitudes towards architectural objects. Hence, the necessity for new tools appears quite often.

<sup>3</sup> If we talk about the influence of a current fashion on an attitude, we can say that this is a specific case of a factor influence (7), i.e. knowledge, experiences and beliefs. The perception and attitude modification by means of fashion proves that the subject knows 'what is currently considered to be nice' (knowledge) and that the subject accepts (or not) a certain way of seeing and evaluating the world (beliefs) – relatively stable in the determined time, characteristic of the particular cultural area, social and economic status and lifestyle.

## *Attitudes of Poles towards architecture – own research*

The author's research project (2007–2010), which was mentioned in the introduction of this article, was aimed at examining relations between people and architecture and particularly their attitudes towards architectural objects.

A theoretical starting point was the original scheme which structuralized hypothetical determinants of attitudes towards architectural objects and whose simplified

version is presented in Figure 1. The research consisted in testing whether a proposed scheme is probable. The following issues, inter alia, were examined: (1) whether formal features (shape, colour and diversity level) of an object can exclusively condition an attitude towards an architectural object, (2) whether a situational context, in which an architectural object with specific formal features

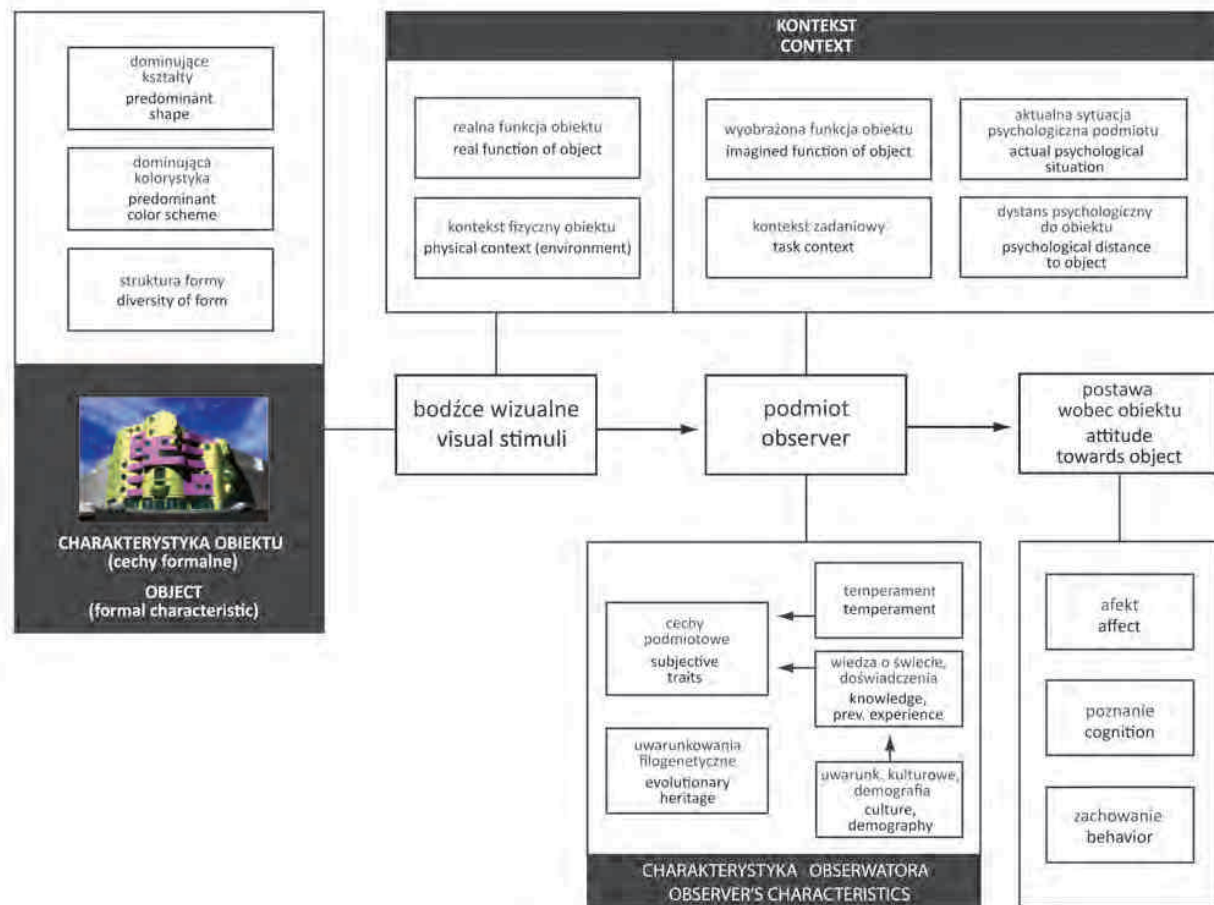


Fig. 1. The Author's Framework for Structuralizing Hypothetical Determinants of Attitudes Towards Architectural Objects

Il. 1. Autorski schemat strukturalizujący hipotetyczne determinanty postaw wobec obiektów architektonicznych

is, differentiates the attitude towards this object and finally (3) whether subjective and demographic features differentiate attitudes towards formally determined objects.

As it was outlined in the introduction, this article particularly focuses on the first aspect of the discussed research, namely trying to answer the following questions: **do features of appearance (shape, colour and diversity of an object) have major significance in determining an attitude towards a building?**

**Tools**

In the years 2007–2009 a reliable Questionnaire on Attitudes Towards Architectural Objects was designed and several models of such objects were prepared. Some pilot and initial examinations were carried out (434 persons were examined during pilot examinations).

As a result of the aforementioned preparations, twelve specially designed three-dimensional models of architectural objects were classified for the project (Fig. 2); each of them constituted a unique configuration of formal characteristics determined as significant on the basis of the pilot research. Consequently, each object has a particular dominant colour scheme (non-contrastive, contrastive or

aposematic<sup>4</sup>), is characterized by dominance of certain shapes (sharp or smooth) and it is diverse or non-diverse. The subjects looked at these objects as photographs thanks to which the same perspective was maintained (camera location control), time of day (lighting control), the same background, identical surroundings and, of course, the scale. It was really significant – thanks to this action it was possible to considerably reduce the impact of variables that disturb the results (confounders). The objects differed only as regards their colour scheme, dominant shapes and structure diversity.

In order to evaluate the significance of shape, colour and structure diversity in determining an attitude towards an object, we cannot show the subjects a Renaissance town hall or a Gothic church on the one side and a modern shopping

<sup>4</sup> Aposematic colouration – in nature it mostly refers to a danger; a type of protective colouration, bright or contrastive, which facilitates recognition (as opposed to camouflage) and performs a warning function by limiting the frequency of accidental attacks. It is employed by organisms that have efficient means of defence against predators (in the case of animals) or herbivores (in plants), e.g. toxins, thorns or inedibility. Aposematic colouration can be exemplified with yellow and black colours of bees, wasps and hornets.



Fig. 2. Twelve evaluated 3D models of architectural objects (controlled formal characteristics)

II. 2. Dwanaście badanych modeli obiektów architektonicznych (kontrolowane cechy formalne)

arcade on the other. We wouldn't be able to find out whether the real source of attitude variability (i.e., in other words: the basis of evaluation) are colours, shapes and other features of a building appearance or, for example, meanings strongly connected with the building, its scale or the existing elements of surroundings. If we wish to find out how important the object's appearance is, we need to control and possibly eliminate all the other, apart from features of appearance, potential confounders at the same time maintaining the situational reality, cf., e.g. [15, pp. 395–396], [21]. Therefore, in the photographs of the examined objects there are people and cars. And again, in order to reduce disturbances, the people and the cars were identical in all of the photographs with the same positions, colours, etc.

As it was mentioned before, for the needs of the project a Questionnaire on Attitudes Towards Architectural Objects was designed. It consisted of instructions, seven items concerning the building evaluation (see: Tab. 1, 2) and a send survey. The Questionnaire also included four additional questions the aim of which was to check whether the subjects were willing to accept a particular building if it had a specific func-

tion or if it was supposed to be situated in a particular place (Tab. 3). These were questions about alternative preferences as to an object (placing it in a determined context).

According to the concept of factors influencing attitudes outlined before, during the research proper some subjective factors were also controlled. One of the most significant was the subjects' temperament measured by means of FCZKT method. The influence of a given temperament, on attitudes towards objects was examined, however, the results of these trials go beyond the framework of this article.

Out of seven questions concerning the building evaluation, we selected two reliable subscales: F1 – emotional attitude<sup>5</sup> towards an object (Tab. 1) and F2 – cognitive-behavioural assessment<sup>6</sup> of an object (Tab. 2). In line with the three-factor concept of attitudes discussed before,

<sup>5</sup> Scale reliability is measured by means of Cronbach's alpha coefficient = 0.76

<sup>6</sup> Scale reliability is measured by means of Cronbach's alpha coefficient = 0.86



there should be three factors-scales separated here. However, for the purpose of maintaining the scale reliability, we decided to combine cognitive and behavioural factors into one scale F2.

Tab. 1. Items in emotional dimension scale (F1) – emotional attitude to object  
 Tab. 1. Pozycje wchodzące w skład skali F1 – ustosunkowania emocjonalnego do obiektu

F1 How would you describe your feelings when looking at the presented object? Looking at the presented object I feel...:						
1	Depressed	<input type="checkbox"/> Definitely not <input type="checkbox"/> Rather not <input type="checkbox"/> I don't know <input type="checkbox"/> Rather yes <input type="checkbox"/> Definitely yes				
2	Sad					
3	Angry					

Tab. 2. Items in cognitive-behavioural dimension scale (F2)  
 Tab. 2. Pozycje wchodzące w skład skali F2 – oceny poznawczej obiektu

F2 How do you evaluate the presented object? I think the presented object is...:						
1	interesting	<input type="checkbox"/> Definitely not <input type="checkbox"/> Rather not <input type="checkbox"/> I don't know <input type="checkbox"/> Rather yes <input type="checkbox"/> Definitely yes				
2	nice					
3	attractive					
	<b>Do you agree with the statement below?</b>					
4	I would often come back to such an object					

Tab. 3. Alternative preferences  
 Tab. 3. Alternatywne preferencje

Do you agree with the statements below?						
1	This building would appeal to me as my place of residence	<input type="checkbox"/> Definitely not <input type="checkbox"/> Rather not <input type="checkbox"/> I don't know <input type="checkbox"/> Rather yes <input type="checkbox"/> Definitely yes				
2	This building would appeal to me as the place where I go shopping – shopping mall					
3	This building would appeal to me as my workplace					
4	I would like to have similar buildings in my town					

The total score of F1 scale could oscillate between the values of 3 to 15, where 3 referred to strongly negative emotions, whereas 15 meant lack of negative emotions. On F2 scale where the subjects expressed their opinions and possible intentions towards an object, the total score was between the value of 4 (lack of positive opinions) and 20 (positive opinions).

### Participants

In the research proper discussed here there were 389 subjects involved: 107 men and 282 women aged from 18 to 49 ( $M_e = 21$ ). They were students of the University of Wrocław, Wrocław University of Technology and Higher School of Education TWP Department in Wałbrzych as well as employees of a Wrocław company (non-representative convenience sampling). Nevertheless, while preparing the research an ef-

fort was made to balance the groups as regards their sex, origin (geographic)<sup>7</sup> and major of studies.

The subjects were divided into 12 groups with 31–33 persons in each group. A pollster contacted each group separately. Each member of a group evaluated one object (photograph) by means of the Questionnaire. Next, the subjects filled in the Temperament Questionnaire (FCZ-KT). The whole examination took about 30 minutes in each of the groups.

<sup>7</sup> At the time of carrying out the research the subjects lived in the following places: towns with the population exceeding 500 000 residents (54% of the subjects), towns with the population up to 500 000 residents (13%), towns with the population up to 100 000 residents (12%) and villages (13%). 4% of the subjects lived in towns with the population up to 10 000 residents. At the same time, a majority of the subjects (33%) came from small towns with the population up to 100 000 residents and villages (23%).

## Results

### Appearance of an object and its evaluation

For the purpose of determining the meaning of formal characteristics in an attitude towards objects an SPSS 17 statistical package was employed. We started from a three-factor variance analysis (GLM) with the following factors: colour scheme (three levels: non-contrastive, aposematic and contrastive), shape (two levels: sharp and smooth) and formal diversity (two levels: diverse and non-diverse). Dependent variables were: emotional attitude (F1) and cognitive evaluation (F2) respectively. This analysis was aimed at finding out the answer to the following question: **does the appearance of an object itself can have major significance in its evaluation?**

As it turned out, **the colour scheme of an object does not differentiate significantly an attitude towards an object** – various colour schemes do not lead to statistically different cognitive evaluations<sup>8</sup> or diverse emotional attitudes<sup>9</sup> towards an object.

In spite of statistical insignificance, there were some cases of isolated controversies in emotional attitudes towards an object. They particularly referred to contrastive objects (pistachio-violet) where 25% of the subjects evaluated objects between 5 and 11 points (negatively and moderately) and 75% between 11 and 15 points (moderately- or totally-non-negatively). In the case of an emotional attitude, there was a number of subjects who significantly differed from the others in their assessments. Therefore, we noticed that **evaluations of external features of architecture tend to be differentiated to a large extent, however, it is not possible to define any statistical regularities here.**

In this regard, the most interesting is the result achieved for the non-contrastive colour scheme where we observed a relatively high consistency of the subjects in their emotional attitudes towards objects – the attitudes are to large extent totally non-negative, which is clearly indicated by the insignificant interquartile range ( $Q = 2$ ) around  $Me = 13$  (half of the subjects is in the range of 12–14 points, i.e. totally non-negative emotions, and almost everybody above 9 points, i.e. in the middle of the scale). It must be stated that in this case we also observed evaluations which were extremely distant from the majority of the subjects – two persons from the group of 133 persons looking at objects in this colour scheme definitely expressed their negative emotions towards these objects.

We can easily imagine that these two persons are opinion leaders<sup>10</sup> – for example, world-famous architects who do not tolerate the standard widely known (and – as proved by the discussed research – commonly accepted today) colour scheme of buildings. They can express their own separate opinion on a building – the opinion which is controversial

and different from a general opinion. If they are influential, visible and charismatic enough, after some time general opinions about the discussed non-contrastive colour scheme could start changing in the negative direction [1, pp. 322–323], [17, pp. 108–117]. This is, inter alia, how trends and fashions are started, in architecture as well.

The next examined feature, i.e. **shape – does not significantly differentiate the emotional attitude towards an object<sup>11</sup>, but it has a certain meaning for a cognitive evaluation** of an object<sup>12</sup> – smooth shapes are evaluated minimally more positively than the sharp ones (however, it is an unusually weak effect).

**Diversity of forms does not significantly differentiate either the emotional attitude towards an object<sup>13</sup> or its cognitive evaluation<sup>14</sup>**, thus – briefly speaking – it does not have any great significance in its evaluation.

It is particularly interesting that attitudes towards buildings do not depend on a determined total combination of appearance features of these buildings<sup>15</sup> (jointly, colour, shape and diversities). In other words – it turned out that none of the buildings was evaluated statistically in a different way or did not significantly arouse other emotions than any other buildings. However, each of them *did look* a bit different.

Finally, it is worth noticing that, other than in the case of emotional attitudes, cognitive evaluations were characterised by a relatively even distribution of results. Basically, there were no cases of non-typical evaluations. Cognitive evaluations are slightly more averaged than emotional attitudes. We must bear in mind that the cognitive scale (F2) included questions about an object, i.e. whether it was ‘nice’ or ‘interesting’. It seems that the subjects were more moderate in such opinions than in the assessment of their own emotions towards objects.

On the other hand, our intuition tells us that not all the objects presented to the subjects are ‘the same’; not all of them would be statistically evaluated in the same way, even using categories ‘nice – ugly’. If our research indicates that the basis for our attitudes towards an object is not its *appearance*, then we must ask what is it? Perhaps, the appearance itself is not enough for our evaluations to be statistically different. Extremely significant in this regard were the questions about alternative preferences (Tab. 3), which included hypothetical variable functions (meaning) of a building.

### Appearance of an object and its function versus preferences

During the next stage a one-factor analysis of variance was carried out, where the object’s appearance was a factor (12 levels, each object was represented separately) and subsequent alternative preferences were dependent vari-

<sup>8</sup>  $F(2, 377) = 0.400$ ; *ns*;  $\eta^2 = 0.002$

<sup>9</sup>  $F(2, 377) = 0.515$ ; *ns*;  $\eta^2 = 0.003$

<sup>10</sup> An opinion leader is a person who is perceived as an individual role model because of the post held, functions performed or prestige and knowledge, or whose information and opinions are sought for by others. People who create fashion, propagate new ways of dressing, new lifestyles, etc. can be the leaders.

<sup>11</sup>  $F(1, 377) = 0.964$ ; *ns*;  $\eta^2 = 0.003$

<sup>12</sup>  $F(1, 377) = 8.079$ ;  $p < 0.01$ ;  $\eta^2 = 0.021$

<sup>13</sup>  $F(1, 377) = 0.268$ ; *ns*;  $\eta^2 = 0.001$

<sup>14</sup>  $F(1, 377) = 1.610$ ; *ns*;  $\eta^2 = 0.004$

<sup>15</sup> Effects of factor interaction influence on emotional attitudes:  $F(2, 377) = 0.854$ ; *ns*;  $\eta^2 = 0.005$ ; effects of factor interaction influence on a cognitive evaluation:  $F(2, 377) = 0.872$ ; *ns*;  $\eta^2 = 0.005$ .



Fig. 3. Object A1 (colour: sandy/beige red) – most preferred as a dwelling place

II. 3. Obiekt A1 (kolor: piaskowy/beżowoczerwony) – najbardziej preferowane miejsce zamieszkania



Fig. 4. Object B4 (colour: light pistachio/amethyst violet) – not preferred as a dwelling place

II. 4. Obiekt B4 (kolor: pistacjowozielony/fioletowy) – niepreferowany jako miejsce zamieszkania



Fig. 5. Object C3 (colour: orange/black) – not preferred as a dwelling place

II. 5. Obiekt C3 (kolor: pomarańczowy/czarny) – niepreferowany jako miejsce zamieszkania



Fig. 6. Object A4 (colour: sandy/beige red) – preferred as a shopping mall

II. 6. Obiekt A4 (kolor: piaskowy/beżowoczerwony) – preferowany jako galeria handlowa



Fig. 7. Object C4 (colour: orange/black) – preferred as a shopping mall

II. 7. Obiekt C4 (kolor: pomarańczowy/czarny) – preferowany jako galeria handlowa



Fig. 8. Object A2 (colour: sandy/beige red) – rather not preferred as a shopping mall

II. 8. Obiekt A2 (kolor: piaskowy/beżowoczerwony) – raczej niepreferowany jako galeria handlowa

ables. This analysis was aimed at finding out whether **the preference of an object as a dwelling place, workplace, place of doing the shopping or a building ‘somewhere in the subject’s town’ may depend on its appearance.**

In other words – whether among 12 examined objects there are the ones which we would prefer as a dwelling place, etc. as well as the ones which in particular functions we would definitely not prefer.

As it turned out, **the appearance of an object is significant as long as we are to choose it as our potential dwelling place**<sup>16</sup>. The most often chosen in this regard was object A1 (Fig. 3), whereas objects B4 and C3 (Fig. 4 and 5) were the least popular. These are the only actually significant differences<sup>17</sup>.

Similarly, it turned out that **the appearance of an object is significant as long as we are to choose it as our potential place of doing the shopping**, shopping mall<sup>18</sup>. Here, definitely most preferred (and surprisingly unanimously!) were objects A4 and C4 (Fig. 6 and 7). The least preferred was object A2 (Fig. 8), although the response median here was 'I don't know'. These are the only actually significant differences.

<sup>16</sup> Statistically significant effect  $F(11, 375) = 1.875; p < 0.05; \eta^2 = 0.052$

<sup>17</sup> Games-Howell Test

<sup>18</sup>  $F(11, 375) = 1.741; p = 0.063; \eta^2 = 0.049$

On the other hand, the appearance of an object **was not significant** if we were to choose it as our workplace<sup>19</sup> or a building 'somewhere in my town'<sup>20</sup>.

It is worth adding that, as it turned out, virtually each presented object was preferred or not *depending on the hypothetical function it was given*. Not all of the objects could be 'to the same extent' a shopping mall and a flat. For instance, the greatest discrepancies were observed in preferences towards object C3 (Fig. 5). Comparison of the four alternative preferences showed a strong statistically significant differentiation<sup>21</sup> – this object was given a very low rate of preference as a flat but very high as a shop or workplace. Similar results were obtained for preferences towards object C4 (Fig. 7). Object A4 (Fig. 6), which was preferred as a shopping mall, was not accepted as a place of dwelling.

<sup>19</sup>  $F(11, 375) = 0.448; ns; \eta^2 = 0.013$

<sup>20</sup>  $F(11, 375) = 0.724; ns; \eta^2 = 0.021$

<sup>21</sup>  $\chi^2 (N = 31, df 3) = 32.85; p < 0.001$

## Discussion of results

What is the meaning of the aforementioned results? It is unlikely that a mere differentiation of formal characteristics of architectural objects such as colour, shape or diversity (including their specific interaction) could significantly differentiate attitudes towards these objects. Formal features do not significantly differentiate an emotional attitude towards objects or a cognitive evaluation of objects; therefore, in other words, statistically **it does not matter whether the colour of a building is, for example, salmon-yellow, orange-black or pistachio-violet – the subjects' attitudes towards all of these objects did not statistically differ!** The emotional attitude or cognitive evaluation in the case of all of these objects, which were obviously different, was almost identical – on average 12 points on the emotion scale (F1) and 13 points on the cognitive evaluation scale (F2). This means that all the buildings, regardless their colour (and other features) were cognitively 'medium-positive' and emotionally they definitely did not arouse negative emotions. These results are even more interesting if we take into account the fact that each object was evaluated separately, while each subject looked at one object only (thus, there were no possibilities of comparative judgments on the assumption that 'basically, all of these buildings are the same' because each participant did not see any other objects apart from the one that was shown to him). Therefore, to put it simply, we can say that **all the objects were evaluated as similarly good**. This of course does not exclude some controversies which can result from the existence of persons who distinctly 'get out of line' when compared with others (the aforementioned atypical cases of evaluation).

**An exception among insignificant features of appearance is shape**, which differentiates, although very slightly, **a cognitive evaluation** of an object. Sharp shapes were cognitively evaluated by the majority of the subjects slightly lower than smooth shapes ( $M = 12,83$  for sharp,  $M = 13,94$  for smooth). However, we must bear in

mind that such results mean that both objects with sharp shapes as well as with smooth ones are evaluated above the middle of the scale (12 points). We can conclude that both types of objects were evaluated differently, but all of them received mostly positive evaluations.

Although the appearance of a building itself does not 'decide' about attitudes towards it, we must admit that in some specific cases preferences towards differentiated (as regards the form) objects are significantly different. This is the case when an object was supposed to be a potential place of dwelling (however, this principle is not strong or unambiguous). It is similar with an object which is supposed to be a potential shopping mall. The obtained results make us suppose that whether an object is preferred or not is decided by the 'adequacy' of its appearance to its possible function and not by its appearance per se. In addition to that, we can see that acceptability of a building which has a particular appearance may differ to a large extent, depending on what this building was supposed to be in reality (place of dwelling, place of doing the shopping, etc.).

Differences in preferences seem to be connected with the level of representativeness of a given object as an example of a particular category (e.g. 'dwelling place', 'shopping mall') in the subjects' minds. This interpretation could account for the preference of a building which is the most similar to other buildings known to the subjects from their everyday life as a possible dwelling place, and objects which remind modern shopping malls as places of doing the shopping. These are simply the objects which are the most 'adapted' to what we already know.

This interpretation can be additionally supported by the fact that there is no significant differentiation in the case of alternative preferences as regards a possible workplace or just any 'building in my town'. Perhaps, such cognitive categories are relatively difficult to activate, very weakly defined and structuralized or too

broad. What should, in fact, 'a building in my town' look like? The majority of people will certainly answer: 'it depends what kind of building'. Hence, each object can be 'equally good' or 'equally bad', as an example of a category which for various reasons is not easily accessible cognitively. In other words, the subjects do not have easily accessible and concretized mental categories of a typical building – workplace, so it is hard for them to

assess which of the presented objects 'fits' in this category better and which worse. Therefore, all of them are statistically evaluated by them in the same way.

When the subjects are asked to evaluate the buildings which were not ascribed any meaning (even the simplest function), then, like in the case of the questions about emotions and cognitive evaluations, each building is assessed rather positively, regardless of what it looks like.

## Summary

The aforementioned research results indicate that aesthetic features such as **colour, shape or diversity are probably not independent and basic criteria which we use when evaluating architectural objects**. Each colour scheme and shape of a building is basically equally 'good' until these features are combined with other non-formal attributes of an object.

According to our own research, **the attribute that can decisively change the reception of a given building is its function**. The appearance can be significant two ways. Firstly, for example, particular, smoothly shaped buildings in orange-black or pistachio-violet colour scheme are less preferred as dwelling places than a simply shaped salmon-sand building. Secondly, for example, a smoothly shaped diverse building in orange-black colour scheme can be accepted and preferred as a potential shopping mall and at the same time rejected as a potential block of flats. Therefore, firstly, it is possible that a particularly looking building is more preferred in a given function than other buildings; secondly, a particularly looking building in some functions can be visibly accepted by people and at the same time in other functions it can be decisively unaccepted.

In the research conducted by the CBOS [7], Poles indicated that the appearance is important, but there are factors even more important such as safety and the price of a potential dwelling place. This seems quite probable. According to our own research, the appearance is important,

but only when we combine it with other features and even then it does not constitute a decisive criterion of the object evaluation. This can be a significant practical hint for designers that ought to be taken into account.

Of course, we must bear in mind that the results of the aforementioned research cannot be representative for the whole Polish population although they show some probable tendencies in relations man-architecture.

Our research results indicate that probably it would be difficult to assume that colours or shapes in themselves are universal as far as meaning is concerned and are (psychologically) understood inter-subjectively. We must admit that there are many limitlessly formulated colloquial hypotheses that are aimed just at this direction, for example, 'yellow colour raises your spirits', 'blue calms you down', 'green is soothing', 'black means negative things' (however, luxury goods are very often black, which adds to their elegance though!). These hypotheses enjoy constant popularity and are gladly promoted in various mass-media. Thus, we must remember that an attitude towards a colour or shape as features is probably inextricably linked with an object itself **as well as** with the semantic, physical and psychological context. It is similar in the case of attitudes towards objects that are diverse and non-diverse formally. To put it simply, we can conclude that the appearance itself is not important for us; **what is really important is the appearance in a particular context**.

Translated by  
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***Czy o ocenie i emocjach związanych z budynkiem decyduje jego wygląd zewnętrzny?  
Postawy wobec zróżnicowanych formalnie obiektów architektonicznych***

Artykuł dotyczy psychologicznych aspektów odbioru obiektów architektonicznych, istotnych uwarunkowań relacji człowiek–architektura. Przedmiotem zainteresowania autora są oceny, ustosunkowanie emocjonalne i deklaracje zachowań wobec różniących się wyglądem zewnętrznym obiektów. Omówiono tu część projektu badawczego „Uwarunkowania postaw wobec obiektów architektonicznych”, realizowanego przez autora w latach 2007–2010. Szczególny nacisk położono na możliwie syntetyczne omówienie psychologicznych podstaw spostrze-

gania obiektów oraz pojęcia deklarowanych wobec nich postaw. Zaprezentowano kluczowe elementy autorskiego schematu strukturalizującego hipotetyczne determinanty postaw wobec obiektów architektonicznych. Zasadniczą część artykułu stanowi natomiast prezentacja i omówienie wyników autorskich badań postaw wobec określonych obiektów. Ich zwięźczeniem jest próba odpowiedzi na pytanie: „Czy cechy wyglądu, takie jak kształt, kolor i różnorodność bryły, mają decydujące znaczenie w ocenie obiektu architektonicznego?”.

**Key words:** attitudes towards objects, assessment of architectural objects, evaluation of buildings, environmental psychology, perception of architecture, aesthetical preferences

**Słowa kluczowe:** postawy wobec obiektów, ocena obiektów architektonicznych, ewaluacja budynków, psychologia środowiskowa, spostrzeganie architektury, preferencje estetyczne



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## *EURO 2012 Enterprise – attempt at assessing the achieved architectural and structural effects*

### *Introduction*

In April 2012 we will celebrate the 5<sup>th</sup> anniversary of choosing Poland and Ukraine as the host of EURO 2012 tournament by the Union of European Football Associations (UEFA). Today, almost on the eve of the championship opening ceremony and taking into account these five years, we can assess the results of preparation and significance of the whole enterprise for both countries. This decision made by UEFA played a role of the flywheel which contributed to the instant development of the sport infrastructure and made it possible to make up for the distance which differed us from other European countries. It was all possible thanks to the activation of specific organizational and financial mechanisms. An overall assessment of their consequences will be possible only in 2024 when – according to the assumptions – the particular cities will have paid off their debts which in fact have burdened their citizens. In Poland new big stadiums which meet contemporary requirements of functionality and safety have been built. However, the stadiums were built

with the funds gained by means of short-term loans. They were built from scratch and in the cities in which there were neither such constructions nor traditions connected with football before. Nevertheless, it is a pity that all of them are one-function stadiums. In this situation, it is quite probable that ‘Silesian Stadium’ (‘Stadion Śląski’) – after the completion of its current stage of modernization and being equipped with athletic devices – will take over the role of the representative multifunctional stadium.

The purpose of this article is to answer the following question: are these spectacular and unquestionable achievements accompanied by equal successes in the field of architectural and constructional qualities? Did quick and protective decisions concerning the choice of foreign designers influence unification of solutions which – instead of providing unique offers with architectural icon features – became similar to many other famous constructions in the world?

### *UEFA – the status and legal requirements connected with EURO 2012*

The Union of European Football Associations (UEFA) is by definition a non-governmental and non-profit federation exempt from the obligation to pay taxes to the tax office in Switzerland where it is based. The following quote adequately describes its profits [...] *in spite of the economic crisis, the International Federation of Football (FIFA) is doing just fine, and according to*

*the financial report for 2009 it generated 1.05 billion dollars in profit*<sup>1</sup>.

On Feb. 28, 2011, the Polish Minister of Finance exempted UEFA from VAT also on all expenses and expected earnings connected with the organization of EURO 2012<sup>2</sup>. This is a very serious provision as the failure to

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<sup>1</sup> Newspaper Dziennik Gazeta Prawna, Daniel Rupiński [http://forsal.pl/artykuly/407979,zysk\\_fifa\\_za\\_2009\\_rok\\_wyniosl\\_196 mln\\_dolarow.html](http://forsal.pl/artykuly/407979,zysk_fifa_za_2009_rok_wyniosl_196 mln_dolarow.html), 22.03.2010.

<sup>2</sup> Directive of the Minister of Finance dated Feb. 28, 2011, Journal of Laws no. 52, item 267 on exemption from income tax on certain kinds of income.

execute it would violate the terms and conditions of the agreement on organization of the final tournament of the championship and it would be the basis for its termination effective immediately<sup>3</sup>.

The agreements also provide that UEFA assumes all rights to the organization the championship from the host for the period of about three weeks following the principle

<sup>3</sup> <http://biznes.wieszjak.pl/wiadomosci/podatkowe/271025,UEFA-nie-zaplaci-podatku-od-dochodu-z-EURO-2012.html>, Paweł Huczko, 31.03.2011.

that the host provides infrastructure and UEFA runs the whole event and it hires the stadiums from their operators during the event. UEFA makes the primary profits from broadcasting rights, advertising, sale of tickets and contracts with sponsors. For instance it transferred the championship broadcasting rights to Polish Television for about PLN 80 million<sup>4</sup>.

<sup>4</sup> Source: "GW", <http://www.eu-2012.pl/euro-2012-wszystkie-mecze-w-telewizji-polskiej/>, April 3, 2009.

## *Organizational and financial basis of the undertaking*

Taking into account the assumption that granting Poland and Ukraine the organization of EURO 2012 could have been a natural extension of the European Union's policy toward a strategic country, one could assume that financing costly events would be extensively subsidized from the Union. It should be kept in mind, however, that already in May 2007, still before the decision to organize EURO 2012 was made, Poland was awarded grants from the Structural Funds and from the National Cohesion Fund (NSRF) for 2007–2013. Consequently, immediately after EURO 2012 was granted to Poland and Ukraine, an assessment was made of the possibility of using the funds (under the earlier agreed proposals) for the purpose of efficient organization of EURO 2012<sup>5</sup>. The following was determined in the analyses of the possibility of using the Union's funds for **stadium investments**:

- due to their high costs (over EUR 50 million), the European Commission's additional consent is required,
- due to the profits generated by the stadiums, the possibility of using the Union's funds is very small,
- the investments should depend on the rational calculation of social and economic cost and due to the difficulties connected with later generating the stadium profitability and its usefulness in achieving the goals set in NSRF<sup>6</sup>, the **possibility of using the Union's funds is very small**.

Consequently, it was recommended that public-private partnership (PPP) entities should be established for stadium investments which would use BOT<sup>7</sup> type of financing, a technique presented in the Strategy for the Development of Sport in Poland until 2015<sup>8</sup> as the dominant form of financing sports infrastructure.

Under BOT, a private company is granted a license to build and use a sports facility which normally would be built

and used by public sector. It is also responsible for the development of project and financing the undertaking. After the license expires, the company transfers the facility ownership rights to the public entity. The period for which the license is granted primarily depends on the period needed for the profits generated from the infrastructural facility to cover the company's debt and assure a reasonable rate of return for the effort made and risk taken. However, in the case of EURO 2012, no PPP investments have been made in Poland, and the reason for that may be little interest on the part of private companies in making such a risky investment during crisis in an Eastern European country where the middle class is just beginning to grow, the society has little leisure time, and the culture of spending such time is different.

Summing up, it can be said that the funds for the development of infrastructure (apart from stadiums) which would serve efficient organization of the championship were not greater or additional but, as provided in the document, they were taken from the same pool of funds which had been agreed with the Union in May 2007 still before the accession to organize EURO 2012.

As a result of a precise division of grants into five main operational programs (Human Capital, Development of Eastern Poland, Infrastructure and Environment, Innovative Economy and Technical Assistance) which would assure balancing the development of individual regions of Poland, the Union's funds redirected to the investments related to EURO 2012 had to hurt the other regions.

EURO 2012 also contributed to the acceleration of infrastructure development and these are the changes which have been evident to every citizen attributing them to that glorious event for our country. The special laws allowed for more efficient and effective actions and one can only hope that there are no concealed defects caused by the haste which will require costly repairs.

In March 2009, EURO 2012 – POLSKA Sp. z o.o., a company headed by the President of Polish Football Association (PFS) was established to control all investments connected with EURO 2012. Due to the obligations and guarantees provided by the Council of Ministers in the agreement between EURO 2012 PL and UEFA, individual stadiums were granted additional funds in 2008–2012 from the State Budget. In June 2008, the resolution No. 143/2008

<sup>5</sup> Directions of activities toward the use of the Structural Funds and Cohesion Funds to efficiently organize EURO 2012, Ministry of Regional Development, Grażyna Gęsińska, Warsaw, 09.2007.

<sup>6</sup> The National Strategic Reference Framework 2007–2013 – supporting economic growth and employment, Ministry of Regional Development, Warsaw, 05.2007.

<sup>7</sup> Build-Operate-Transfer.

<sup>8</sup> Strategy for the Development of Sport in Poland until 2015, Ministry of Sport, Warsaw, 01.2007.



Tab. 1. Stadium designers and contractors/costs and capacity. Prepared by: M. Pelczarski  
 Tab. 1. Projektanci i wykonawcy stadionów/koszty i pojemność. Oprac. M. Pelczarski

Name of facility	Designer (after 2007)	Contractor (after 2007)	Total cost with grant <sup>1</sup>	Grant from state budget <sup>2</sup>	Capacity <sup>3</sup> ('000 seats)
<b>Warsaw Stadium</b>	Consortium <i>JSK Architekci sp. z o.o., GMP International GmbH and Schlaich Bergermann Und Partner</i>	Consortium ALPINE – PBG SA – Hydrobudowa Polska SA	PLN 1.915 billion	PLN 1.915 billion	58.145
<b>Wrocław Stadium</b>	Consortium <i>JSK Architekci</i>	Mostostal Warszawa S.A., J & P Avax, and since Jan. 18, 2010 Max Boegl	PLN 855 million	PLN 110 million	44.308
<b>Poznań Stadium</b>	<i>Modern Construction Systems</i>	Consortium of Hydrobudowa Polska SA, PBG SA, AK-BUD Kurant, Alpine Construction Polska from Krakow, Alpine Bau Deutschland from Berlin and Alpine Bau GmbH from Austria.	PLN 638 million or PLN 746 million <sup>4</sup>	extension in 2007 PLN 75 million and PLN 88.5 million in 2008	41.609
<b>Gdańsk Stadium</b>	<i>RKW Rhode Kellermann Wawrowsky</i>	Hydrobudowa polska s.a, Hydrobudowa 9, Alpine bau deutschland ag Berlin, Alpine bau gmbh Austria, Alpine Construction Polska sp. z o.o.	PLN 863.5 million	PLN 144 million	40.818
<b>Kraków Stadium</b>	Not analyzed	Not analyzed	–	PLN 80,4 million	
<b>Chorzów Stadium</b>	1994–2007 <i>Zakład Projektowania i Wdrożeń TB, Katowice</i> – general designer  Construction of the roof: since 2008 GMP Architekten – from Aachen (this company was commissioned to design west stands and remodel east stands)	since July 2009 <i>Hochtief Polska, Hochtief Construction A.G., Mostostal Zabrze Holding S.A. and Thermoserr</i>	PLN 338 million	PLN 110 million	47.202 design: 60.00  55.211 <sup>5</sup>

<sup>1</sup> Article by Tadeusz Arkit, MP “Koszty budowy stadionów w Polsce” from October 14, 2011 [http://www.tadeuszarkit.pl/index.php?option=com\\_content&task=view&id=494&Itemid=54](http://www.tadeuszarkit.pl/index.php?option=com_content&task=view&id=494&Itemid=54).

<sup>2</sup> Reply no. 4919 of Minister of Sport and Tourism Adam Giersz from October 21, 2009 to the question ref. no. SPS-024-4919/09, <http://orka2.sejm.gov.pl/IZ6.nsf/main/1CB394D6>.

<sup>3</sup> [http://pl.wikipedia.org/wiki/Mistrzostwa\\_Europy\\_w\\_Pi%C5%82ce\\_No%C5%BCnej\\_2012](http://pl.wikipedia.org/wiki/Mistrzostwa_Europy_w_Pi%C5%82ce_No%C5%BCnej_2012).

<sup>4</sup> <http://sport.interia.pl/euro-2012/news/euro-2012-konsorcjum-lecha-i-marcelin-management,1700052,4324%2026%20wrze%C5%9Bni>.

<sup>5</sup> “Stadion Śląski”, [http://pl.wikipedia.org/wiki/Stadion\\_%C5%9A%C4%85ski](http://pl.wikipedia.org/wiki/Stadion_%C5%9A%C4%85ski).

signed by the Prime Minister approved additional grants for the construction of the stadiums for EURO 2012 in the amounts depending on, inter alia, the required capacity of the stadiums, with the cost of EUR 1,000 per one seat, or (acc. to another source) in the net amount of 30% of all expenditure (in relation to the number of seats included in the offer application)<sup>9</sup> (see Tab. 1).

In compliance with the *Act on Preparation of the Final Tournament of the European Football Championship*, the host cities established companies operating as project management companies for the investments connected with the construction of the stadiums. As a result of such solutions, the city budgets are not charged directly by the investments and the debt is not included in their total debt which cannot exceed 60% of their profits. Instead, the companies are indebted and the installments for their credits are paid back by the cities in annual tranches guaranteed by the provisions in the city budgets until about 2024, i.e. over 14–15 years from the end of EURO 2012.

<sup>9</sup> Response of Minister of Sport and Tourism, Mirosław Drzewiecki for the query no 401, Warsaw, 18.02.2008, <http://orka2.sejm.gov.pl/IZ6.nsf/main/1FF7479E>.

It seems that the visible improvements in the infrastructure of the cities and regions have been greatly appreciated by the society, which when combined with the general nationwide trend of organizational “elation” **made it possible to conduct extremely costly stadium investments with the taxpayers’ money** because, in spite of the efforts made by the government administration and politicians, the stadium

investments were financed totally from city budgets. Naturally, it is the objective of the stadium operators to generate as high profits from them as possible. However, as experience of highly developed countries demonstrates, it is not an easy task and already more and more often concerns are expressed as to the degree of usage of the new stadiums after EURO 2012.

Tab. 2. Financing of Stadiums and Operators. Prepared by: M. Pelczarski  
Tab. 2. Warunki finansowania stadionów oraz operatorów. Oprac. M. Pelczarski

Name of facility	Operator	Terms and conditions of operator agreement	Terms and conditions of owner agreement	Financing of the stadium
<b>Warsaw Stadium</b>	Not analyzed	–	–	100% financing from with the funds from state budget
<b>Wrocław Stadium</b>	SMG	Provision of services over 12 years for PLN 7–9 million annually paid by the city <sup>1</sup>	The city will get 85% of profits generated by SMG <sup>2</sup>	Wrocław 2012 takes credit from consortium of BRE bank, ING and Nordea in the amount of about PLN 663 million annually for 14 years <sup>3</sup>
<b>Poznań Stadium</b>	Leased for 20 years to consortium of KKS Lech Poznań and Marcellin Management		Operator will pay rent to the city about PLN 3 million annually plus variable rent, depending on income from game-day about 7.5%. Additionally, operator will pay 30% from sale of rights to the name of the stadium but not less than PLN one million annually <sup>4</sup>	Euro 2012 Poznań financed with the funds from Poznań City Council
<b>Gdańsk Stadium</b>	Leased for 10 years to consortium of Lechia Operator, SportFive, and HSG Zander <sup>24</sup> .	Modernization and extensive stadium repair work charge investor	Lessee covers the costs of facility maintenance, pays to the city net rent of about PLN 2 million and transfers net 5% of all profits <sup>5</sup>  PGE bought the name PGE Arena Gdańsk for 5 years for PLN 7 million annually <sup>6</sup>	Stadium is in 75% owned by BIEG (Biuro Inwestycji Euro Gdańsk) and in 25% by the city  Bank Pekao SA bought the claim in the amount of about PLN 384 million from the city on the basis of forfeiting agreement for 15 years

<sup>1</sup> [http://www.stadion-slaska.pl/index.php?p=1\\_13\\_Operator](http://www.stadion-slaska.pl/index.php?p=1_13_Operator).

<sup>2</sup> <http://www.portalsamorzadowy.pl/rozmowa-tygodnia/deficyt-inwestycje-i-dochody-to-mechanizm-naczyn-polaczonych,13581.html>, Agnieszka Widera, Feb. 21, 2011.

<sup>3</sup> Resolution No. LI /1486/10 of Wrocław City Council from June 10, 2010, [http://wrosystem.um.wroc.pl/beta\\_4/webdisk/136430%5C1486ru05.pdf](http://wrosystem.um.wroc.pl/beta_4/webdisk/136430%5C1486ru05.pdf) and <http://www.2012.wroc.pl/news/115/archiwum/Umowa-na-kredyt-podpisana.html>.

<sup>4</sup> [http://www.portalsamorzadowy.pl/inwestycje/stadiony-maja-na-siebie-zarabiac,16594\\_0.html](http://www.portalsamorzadowy.pl/inwestycje/stadiony-maja-na-siebie-zarabiac,16594_0.html), PAP 03.05.2011.

<sup>5</sup> <http://www.arenamarketing.pl/pl/newsy/euro-2012/191-amerykanie-bior-hal-gdasko-sopock.html>, 02.03.2010.

<sup>6</sup> [http://stadiony.net/stadiony/pol/arena\\_gdansk](http://stadiony.net/stadiony/pol/arena_gdansk).

### ***Stadium designers and contractors – investment assumptions***

In order to fulfill the covenants and meet the deadlines for completion of the facilities for EURO 2012, the reputed designers and contractors from the West were commissioned without any hesitation. Although it was connected with high pricelist rates, a successful completion was guaranteed by high insurance in case of unexpected developments. Table 1 shows that basically the same German companies designed and built Polish stadiums, and the contracts for EURO 2012 were for them a source of

income in the middle of crisis. Tables 1, 2, and Figure 1 show that the projects and their completion commissioned from those companies as well as the protective investment assumptions mentioned above resulted in designs which are neither original nor innovative. They are mere examples of already existing off-the-shelf designs which rarely can meet the local architectural or cultural identity requirements – *genius loci* and *genius saeculi*, especially taking into account the fact that these facilities will consti-

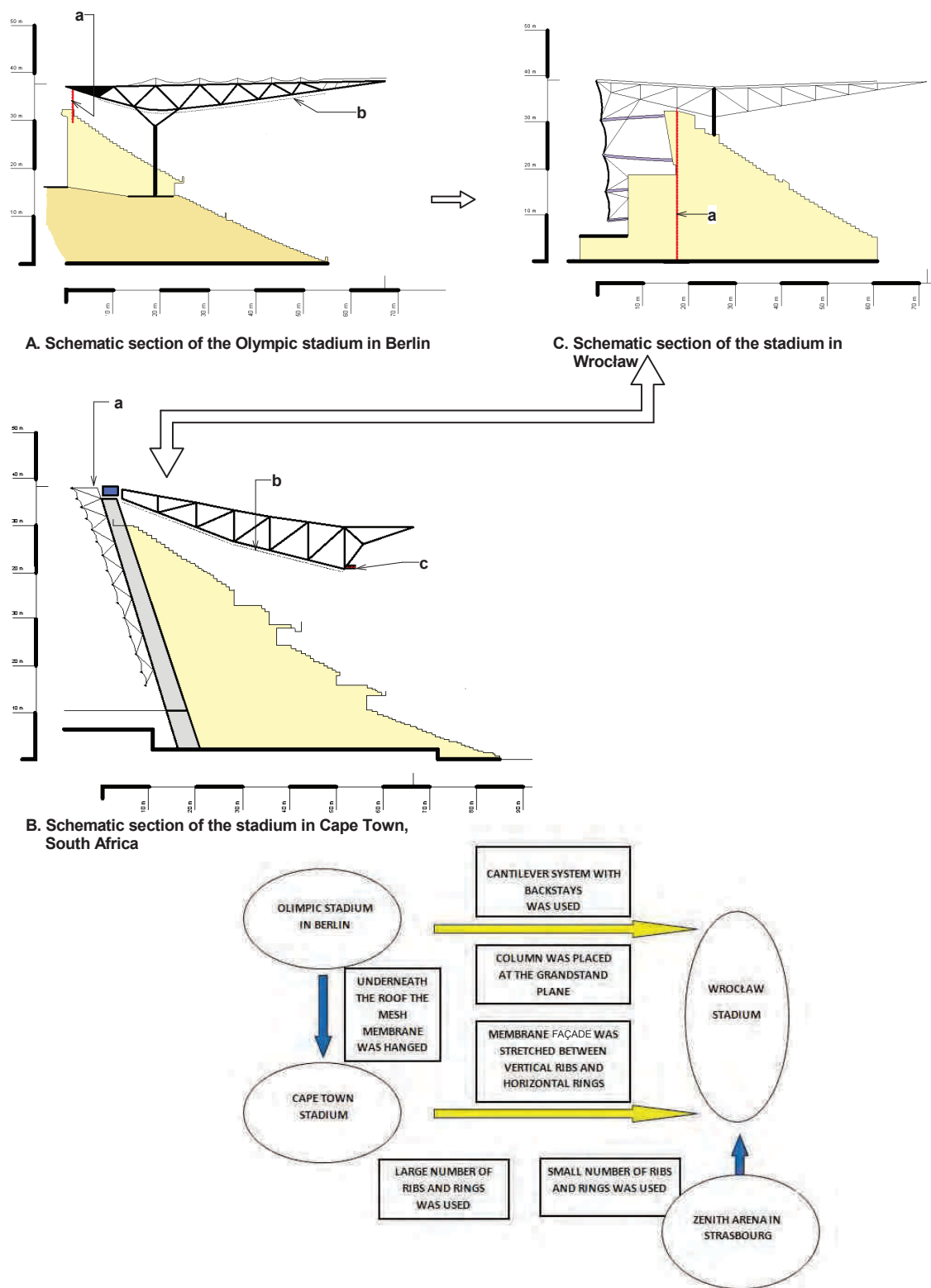


Fig. 1. The stadiums in Berlin, Cape Town and Wrocław – differences and similarities. A) Schematic section of the Olympic stadium in Berlin: a – truss girder backstay, b – membrane underneath the roof. B) Schematic section of the stadium in Cape Town, South Africa [1]: a – compression ring, b – membrane underneath the roof, c – tension ring. C) Schematic section of the Wrocław stadium: a – truss girder backstay, D) List of differences and similarities. Developed by: M. Pelczarski

Il. 1. Stadiony w Berlinie, Cape Town i Wrocławiu – zestawienie różnic i podobieństw. A) Schemat przekroju stadionu w Berlinie: a – odciąg dźwigara, b – membrana na podniebieniu. B) Schemat przekroju stadionu w Cape Town, RPA [1]: a – pierścień ściskany, b – membrana na podniebieniu, c – pierścień rozciągany.

C) Schemat przekroju stadionu we Wrocławiu: a – odciąg dźwigara; D) Zestawienie różnic i podobieństw. Oprac. M. Pelczarski

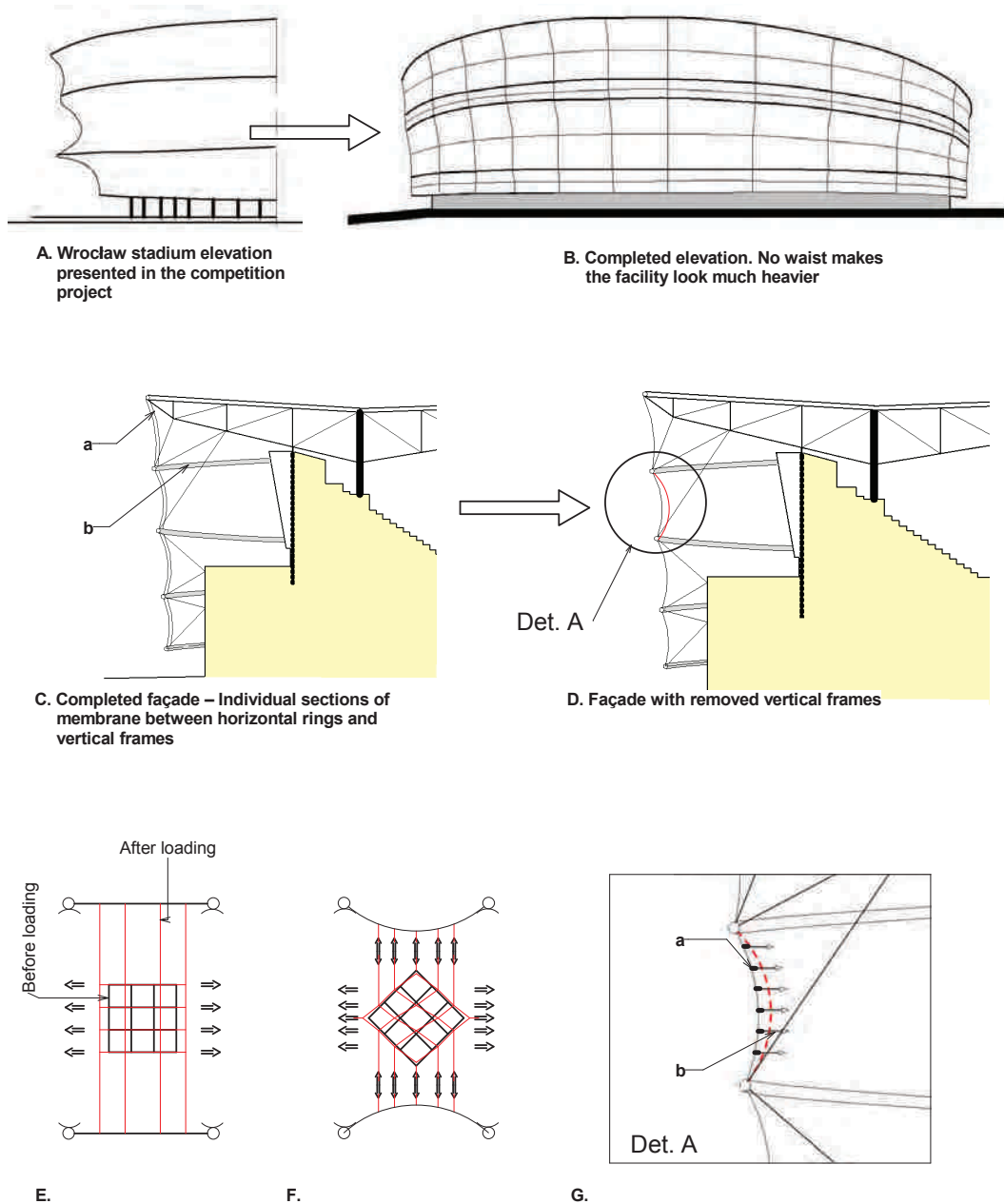


Fig. 2. The method of achieving deeper vertical and horizontal curvatures in the membrane of the façade of the Wrocław stadium. A) Elevation presented in the competition project. B) Completed elevation. No waist makes the facility look much heavier; new tension member inserted horizontally into the membrane. C) Completed façade – Individual sections of membrane between horizontal rings and vertical frames: a – vertical frame, b – horizontal ring. D) Façade with removed vertical frames. E, F) Schematic views show the supporting strips in the membrane and the load direction. Only in F), the horizontal tension caused by new horizontal tension members causes the concurrent stretch of both perpendicular strips of the membrane and its biaxial tension. G) Stretch of the membrane caused by new horizontal tension members (Det. A.) increases horizontal forces in the membrane and its deeper curvatures. In order to achieve an architecturally attractive surface with two curvilinear planes, it is necessary to generate at the same time a vertical stretch of the membrane. In order to achieve that the pattern of the supporting strips in the membrane should be diagonal as shown in the schematic below F) a – new tension member inserted into the membrane horizontally, b – tensile forces from new horizontal tension members.

Developed by: M. Pelczarski

- II. 2. Metoda nadania głębszych krzywizn południkowych i równoleżnikowych w membranie fasady stadionu wrocławskiego: A) Szkic elewacji prezentowany w projekcie konkursowym. B) Szkic wykonanej elewacji. Brak talii czyni bryłę znacznie cięższą optycznie. C) Fasada zrealizowana – poszczególne pola membrany ujęte są pierścieniami równoleżnikowymi oraz węgami południkowymi: a – węga południkowa, b – pierścień równoleżnikowy. D) Fasada z usuniętymi węgami południkowymi. E, F) Schematy przedstawiają układy pasm nośnych w membranie w stosunku do kierunku działającego obciążenia. Tylko w przypadku F) poziome rozciąganie wywołane nowymi cięciami równoleżnikowymi powoduje równoczesne napinanie obu prostopadłych pasm membrany, wywołując w niej napięcie dwuosiowe. G) Napięcie membrany wywołane nowymi cięciami równoleżnikowymi (Det. A.) wywoła wzrost sił równoleżnikowych w membranie i pogłębi jej krzywizny równoleżnikowe. Celem uzyskania atrakcyjnej architektonicznie powierzchni dwukrzywiznowej, konieczne jest wywołanie jednoczesnego naciągu membrany w kierunku południkowym. Aby do tego doprowadzić, układ pasm nośnych membrany winien być diagonalny jak na schemacie (F). a – nowe cięgno wpuszczone w membranę równoleżnikowo, b – siły napinające od nowych cięgien równoleżnikowych. Oprac. M. Pelczarski

tute permanent landscape elements of our cities for at least the next fifty years. The only exception may include the stadium in Gdańsk because of its original roof structure above the stands and the roof design of “Stadion Śląski” known as SATURN 2005 which, however, was not completed.

### Wrocław Stadium

Comparing the geometry of the existing façade of Wrocław stadium with the geometry assumed in the project that won the design competition, a significant difference can be noticed. It refers to much less visible waist concavities in the membrane covering the façade, which results in an evidently worse visual effect (Fig. 2A–D). The architectural appeal of that element was probably the decisive criterion in selecting that particular project. The membrane was made of a network fiberglass fabric Duraskin B 1865 GF (the same was employed on the façade of the stadium in Cape Town).

In the opinion of the authors of this article, in order to make the horizontal and vertical curvatures in the stadium façade deeper, a lot of horizontal tension members with a small diameter should be inserted in the membrane pockets and fused with the existing membrane (Fig. 2G) in those places. The tension members would require short protective tubes fixed to the pockets. This would allow for free movement of the tension members in the membrane. The tension members, going around the whole stadium façade, would be connected every few dozen meters with turn buckles with which it is possible to provide the right stretch and proper geometry of the membrane vertical curvature.

The vertical frames employed in the stadium façade would have to be removed for the horizontal tension members to move freely because they prevent the membrane between horizontal rings from free deformation. In order to achieve the vertical tension of the membrane at the same time, its supporting directions must go diagonally (Fig. 2E, F).

### Poznań Stadium

The structure of the roof resembles the designs with retractable roofs similar to the stadium in Amsterdam or Düsseldorf, and that was the designers' original idea which probably due to the costs was later abandoned. The facility was built in stages, and its design concepts changed, but it is difficult to precisely track the changes without talking to the designers [2].

The beam structure employed in the project required more material in the middle of the beam or extending its height. Whenever the extension of the construction height of the girders is right above the viewers' heads, an adverse and psychologically disturbing optical effect appears in an extremely exposed place. The viewers experience an impression of a heavy ballast suspended right above the stands (Fig. 3A).

One of the characteristic features of the stadium roof in Poznań is the extraordinary height of its inner edge above the arena. This results in a “water-well effect” (Fig. 3B) and an increased shaded area of the pitch, which in turn



Fig. 3A. Photo of the interior of the stadium in Poznań and the view of the primary 160m long truss with the secondary 135m long, elliptical truss supported on it. The photo shows the “optical ballast” suspended above the heads of thousands of viewers (photo: M. Pelczarski)

Il. 3A. Zdjęcie wnętrza stadionu w Poznaniu oraz widok na pierwszorzędowy, 160-metrowej długości podciąg i opierający się na nim 135-metrowy, kratownicowy, eliptyczny dźwigar drugorzędowy. Zdjęcie uwiadcza zjawisko „optycznego balastu” zawieszzonego nad głowami tysięcy widzów (fot. M. Pelczarski)

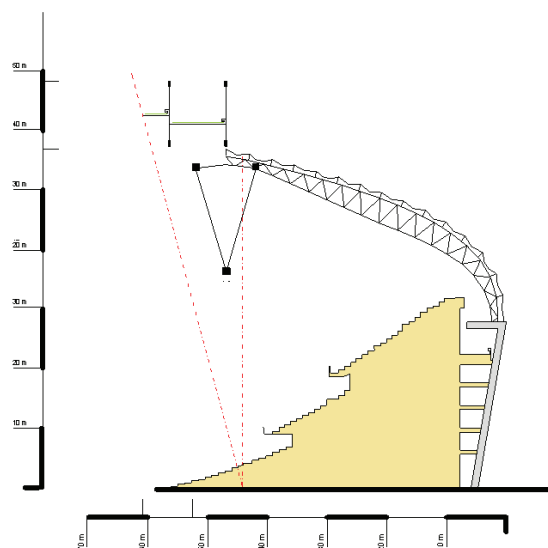


Fig. 3B. Schematic section of right wing of the stands also shows the primary truss triangular in section. Above the truss, there are additional louvers protecting the stands against rain. The area of actual protection against rain is marked with dashedline going at the angle of 15° from the vertical line. Developed by: M. Pelczarski

Il. 3B. Schematyczny przekrój prawego skrzydła widowni uwiadcza również przestrzenny kratownicowy podciąg pierwszorzędowy o przekroju trójkątnym ze ściągiem linowym. Nad podciągami widoczne są również dodatkowe żaluzje chroniące widownię przed zacinającym deszczem. Obszar realnej osłony od deszczu zaznaczono linią przerywaną poprowadzoną pod kątem 15° od pionu.

Oprac.: M. Pelczarski

reduced its sunlight exposure. This is probably one of the reasons why the grass on the pitch has already been



Fig. 4A & 4B. Photos show how the first, second, and third construction planes overlap and cause “an optical chaos”. In such a case the designer must choose whether to expose the aggressive structure to thousands of viewers and present the smooth membrane outside (see Fig. 6A, B) or the other way around. Obviously, extending the construction above the cover exposes it to the elements and their adverse effects and requires a durable anticorrosive protection, but it renders the interior uniform and peaceful. Naturally, the third but costly solution is to apply the membrane under the roof as shown in Fig. 5A, B (photo: M. Pelczarski)

Il. 4A i 4B. Zdjęcia przedstawiają nakładanie się planów konstrukcji pierwszo-, drugo- i trzeciorzędowej, co jest źródłem „chaosu optycznego”. W takim przypadku projektant musi dokonać wyboru, czy agresywną konstrukcję uwidacznia tysiącom widzów, a gładką membranową formę prezentuje na zewnątrz (patrz Il. 6A, B), czy też odwrotnie. Naturalnie wystawienie konstrukcji nad pokrycie naraża ją silnie na agresywne środowisko zewnętrzne i wymaga dobrej osłony antykorozyjnej, ale daje jednolite i uspokojone wnętrze. Trzecim, lecz kosztownym, rozwiązaniem jest zastosowanie membrany na podniebieniu dachowym jak na Il. 5A, B (fot. M. Pelczarski)

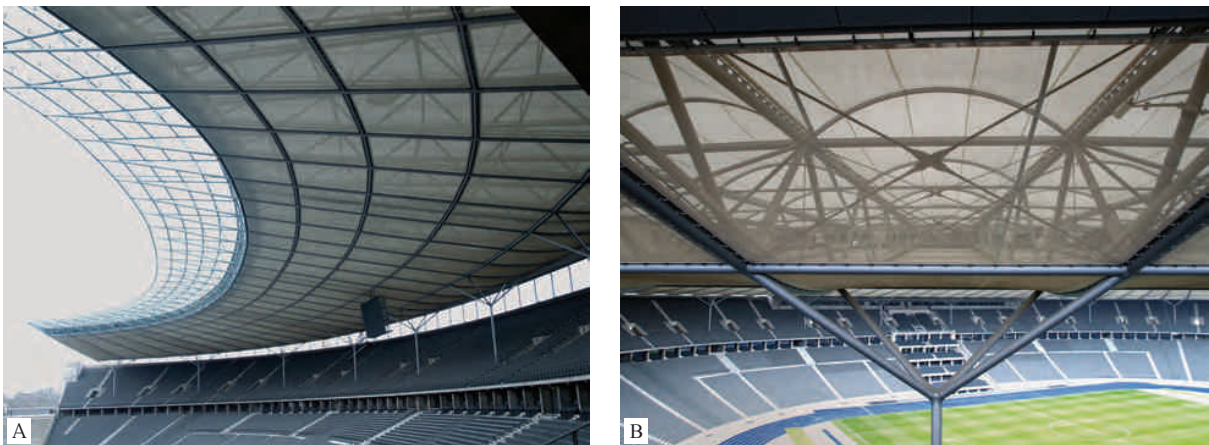


Fig. 5A & 5B. Photo (left) of the interior of the stadium in Berlin. Visible membrane stretched under the roof is an architectural cover increasing the beauty of the interior as well as acoustic barrier (photo: M. Pelczarski).

Photo (right) of the view of the internal roof space through the membrane. There is electrical, lighting, and sound system wiring there. In the case of the stadium in Berlin, Duraskin<sup>10</sup> GF B 18656 membrane was applied, whereas in the case of the stadium in Cape Town, Duraskin B 3704 membrane was used (photo: M. Pelczarski)

Il. 5A. i 5B. Zdjęcie lewe przedstawia wnętrze stadionu w Berlinie. Widoczna membrana rozpięta na podniebieniu pełni funkcję osłony architektonicznej podnoszącej estetykę wnętrza i pełniącą funkcję przegrody akustycznej (fot. M. Pelczarski).

Zdjęcie (prawe) to widok wnętrza przestrzeni dachowej poprzez membranę. W przestrzeni tej umieszczono instalacje elektryczne, oświetleniowe i nagłośnienie. W przypadku stadionu w Berlinie zastosowano membranę Duraskin<sup>11</sup> GF B 18656, a na stadionie w Cape Town na podniebienie zastosowano membranę Duraskin B 3704 (fot. M. Pelczarski)

changed several times (six times within the first year of operation) and the cost of one such replacement is at least PLN 300,000<sup>12</sup>. Furthermore, the high edge of the roof

significantly reduces the efficiency of protection against rain.

The stadium in Poznań is also a good example of how greatly its construction with substantially exposed elements can influence the architectural character of the facility interior (Fig. 4A, B). The disturbances of its internal architectural harmony caused by excessively exposed structural elements are additionally intensified as they appear against the background of a light, semitranspar-

<sup>10</sup> <http://www.zjff.net:81/showDetails.jsp?favid=164953>.

<sup>11</sup> <http://www.zjff.net:81/showDetails.jsp?favid=164953>.

<sup>12</sup> [http://www.tokfm.pl/Tokfm/1,103091,9764074,Zarzadca\\_stadionu\\_Jesli\\_kluby\\_chca\\_dobrej\\_murawy\\_html](http://www.tokfm.pl/Tokfm/1,103091,9764074,Zarzadca_stadionu_Jesli_kluby_chca_dobrej_murawy_html) Marcin Krzemiński 10.06.2011.

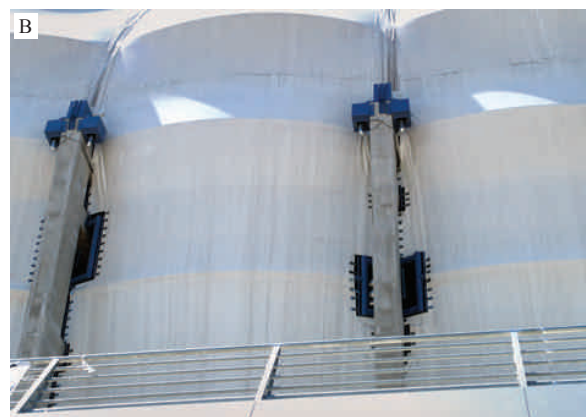


Fig. 6A & 6B. Photos of the façade of the stadium in Poznań. The photo A shows the rhythm of the supporting columns and hopper heads. Below a visible network roofed platform for protection against snow. The photo B shows the rainwater runs. In this case the designer did not design a gutter going along the lower edge, allowing it to drop freely from the edge (photo: M. Pelczarski)

II. 6A i 6B. Zdjęcia fasady stadionu w Poznaniu. Zdjęcie A uwidacznia rytm słupów podporowych oraz koszy odwodnieniowych. Poniżej widoczna siatkowa platforma pełniąca funkcję bariery śniegowej. Zdjęcie B uwidacznia smugi pozostawione po wodzie opadowej pokazujące trasę jej spływu poza korytami głównymi. W tym przypadku projektant nie przewidział realizacji rynien wzdłuż krawędzi dolnej fasady, pozwalając na swobodny jej zrzut z krawędzi (fot. M. Pelczarski)

ent membrane. Figure 5 shows the positive solution to a similar problem applied in the Olympic Stadium in Berlin. Its high girders supporting the roof were covered on the side visible from the stands with a network membrane. Another design problem which had to be solved by the designers of the stadium was the system of rainwater drainage from the surface of the roof which smoothly joins its façade (Fig. 6A, B).

#### Chorzów Stadium – back-up stadium

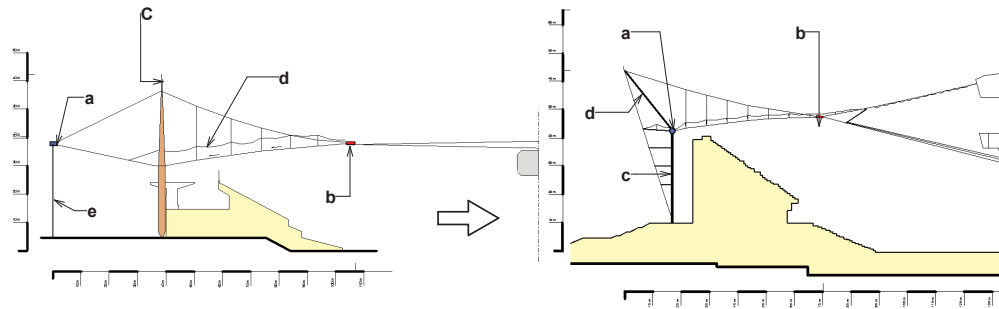
Some interesting and innovative elements are included in the design which was not completed, namely, the construction of the roof of the stadium known as “Stadion Śląski” in Chorzów designed by *Zakład Projektowania i Wdrożeń TB – Katowice* that from 1994 until 2007 was the general designer of that facility modernization (Fig. 7A, B, D).

The designers suggested eight original solutions such as:

- small number (only 20) of supporting columns,
- bicycle wheel system with compression ring located outside the axes of supporting columns, which enables it to serve at the same time as a resisting ring for radial forces as well as ballast for roof girders,
- triangular system of division of the area of the roof and supporting tension members, which was caused by e.g. rainwater roof drainage system inside columns,
- furthestmost arched frames along the columns spanning 40 m,
- system of construction which due to the flexible suspension of the ballast ring was highly resistant to possible seismic loads.

Unfortunately, in spite of those advantages and the fact that the building permit decision granted already in 2005 was preceded by numerous opinions of reputed authorities in this type of constructions, positive model tests in the aerodynamic tunnel at the Institute of Aviation in Warsaw and approvals of commissions representing the community of architects, the project was not executed. Before it was abandoned, it was a subject of two tender procedures for the development of workshop project as well as construction and assembly works; these tenders failed, which was the result of a dramatically low level of funds that the investor had for the construction. The only positive effect of those efforts was the assurance of the world reputed designers and contractors of their readiness to construct the roof in compliance with the construction design SATURN 2005 but for a little higher price. One of the companies declaring such readiness was a construction company later engaged in construction of stadiums for EURO 2012.

In 2008, probably for the reasons described in the first part of the article, regardless of the costs the investor decided to abandon the project SATURN 2005 which they already had. The decision was made despite the fact that its structure, being exceptional and daring, is similar to the construction of the roof of the stadium in Warsaw (Fig. 7) and in Stuttgart (Fig. 8). The investor commissioned the design works to the German design company GMP-Architekten which suggested a hybrid solution making use of the experience from a few projects it had completed earlier. Money was raised from the state budget grant – 110 million and from the investor’s budget – PLN 360 million (see Tab. 1).

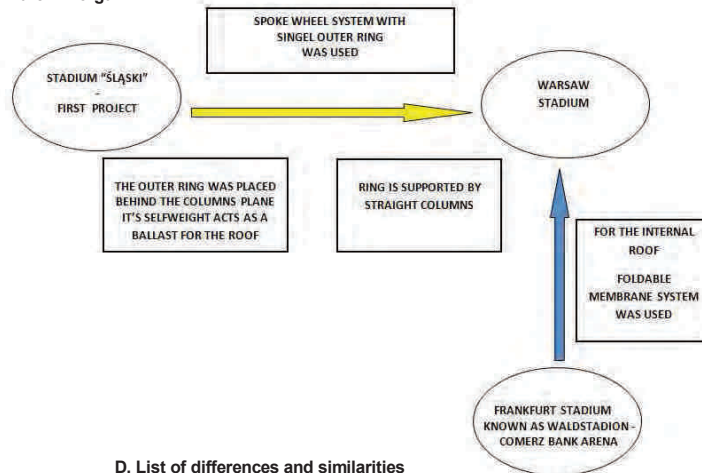


A. Schematic section of Stadion Śląski – Saturn 2005 roof design

C. Schematic section of the stadium in Warsaw



B. Aerial view of Stadion Śląski – Saturn 2005 roof design.  
Zakład Projektowania i Wdrożeń TB, Katowice.  
Visualization: Marcin Morga

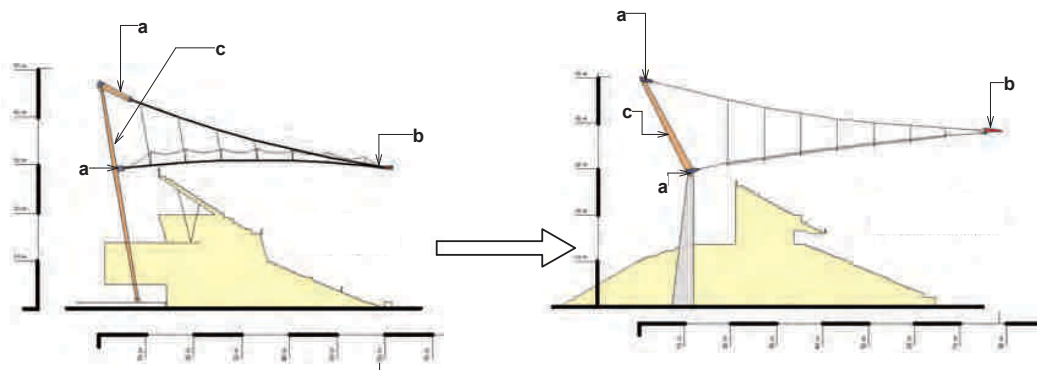


D. List of differences and similarities

Fig. 7. Stadion Śląski and Warsaw stadium – differences and similarities. A) Schematic section of Stadion Śląski – Saturn 2005 roof design: a – compression ring, b – tension ring, c – column, only 20 columns acc. to project, d – membrane placed on arches with span up to 40m long, e – V backstays. B) Aerial view of Stadion Śląski – Saturn 2005 roof design. Buckling stability of the compression ring is provided by elements of swingarms, supporting cables and V backstays. Saturn 2005 roof design of Stadion Śląski, Zakład Projektowania i Wdrożeń TB, Katowice. Visualization: Marcin Morga. Large distances between columns, large spans of arches stretching the membrane, and triangular fields of the membrane provided original geometry and architecture adjusted for the scale of the facility as well as a form without a lot of noticeable structural elements. C) Schematic section of the stadium in Warsaw: a – compression ring, b – tension ring, c – columns, in total 72 columns were applied [3], d – two backstays provide lateral stability for the deviator repeated 72 times make the view look “dense” and dominate the form of the stadium. D) List of differences and similarities. Developed by: M. Pelczarski

II. 7. Stadion Śląski i stadion warszawski – zestawienie różnic i podobieństw. A) Schemat przekroju Stadionu Śląskiego – projekt zadania Saturn 2005: a – pierścień ściskany, b – pierścień rozciągany, c – słup, projekt zakładał zastosowanie tylko 20 słupów, d – membrana ułożona na łukach o rozpiętościach do 40 m, e – odciąg typu V. B) Widok z lotu ptaka Stadionu Śląskiego – projekt zadania Saturn 2005. Stabilność pierścienia ściskanego zapewniana jest przez dochodzące do niego elementy wahaczy, kabli podwieszających oraz odciągów typu V. Duże rozstawy słupów, duże rozpiętości łuków napinających membranę oraz trójkątne pola membrany pozwalały na uzyskanie oryginalnej geometrii i architektury dostosowanej do skali obiektu oraz na uwolnienie formy od dużej liczby elementów konstrukcyjnych nakładających się w polu widzenia. C) Schemat przekroju stadionu warszawskiego: a – pierścień ściskany, b – pierścień rozciągany, c – słup, łącznie zastosowano 72 słupy [3], d – dwa odciąg poprzecznie stabilizujące dewiator powtórzone 72 razy silnie zagęszczają obraz i dominują formę stadionu. D) Zestawienie różnic i podobieństw. Oprac. M. Pelczarski





A. Schematic section of the stadium in Stuttgart

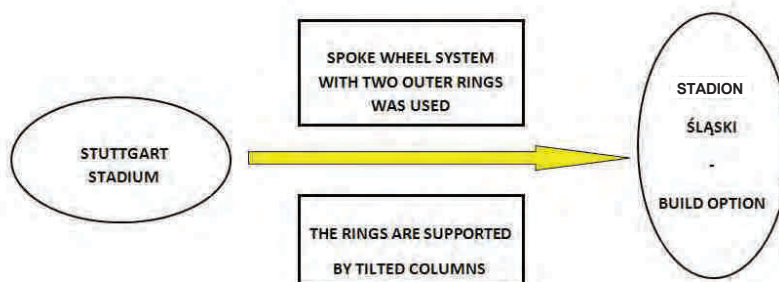
C. Schematic section of Stadion Śląski



B. Stadium in Stuttgart along the major axis of the ellipse



D. Assembly of the roof structure cable-net system in Stadion Śląski



E. List of differences and similarities

Fig. 8. Olympic stadium in Stuttgart and Stadion Śląski – differences and similarities. A) Schematic section of the stadium in Stuttgart: a – compression ring, b – tension ring, c – The radial loads in both compression rings are reduced due to the tilted columns. They are reduced because of the tensile forces generated in the rings due to their deadweight. B) Stadium in Stuttgart along the major axis of the ellipse (photo: M. Pelczarski). C) Schematic section of Stadion Śląski: a – compression ring, b – tension ring, c – The radial loads are reduced due to the tilted columns only in the upper compression ring. D) Assembly of the cabling in Stadion Śląski. Such an extensive tilt of the roof structure 30–40 m above the ground can cause an impression of instability and a subconscious concern of the users (photo: M. Pelczarski). E) List of differences and similarities. Developed by: M. Pelczarski

Il. 8. Stadion olimpijski w Stuttgarcie i Stadion Śląski – zestawienie różnic i podobieństw. A) Schemat przekroju stadionu w Stuttgarcie: a – pierścień ściskany, b – pierścień rozciągany, c – Dzięki takiemu wychyleniu słupów oba pierścienie ściskane uzyskują zredukowane obciążenie radialne. Redukcja powstaje dzięki siłom rozciągającym, jakie generują się w pierścieniach od jego ciężaru własnego. B) Stadion w Stuttgarcie wzdłuż długiej osi elipsy (fot. M. Pelczarski). C) Schemat przekroju Stadionu Śląskiego: a – pierścień ściskany, b – pierścień rozciągany, c – wychylenie słupów prowadzi do obniżenia sił radialnych tylko w górnym pierścieniu ściskanym. D) Faza montażu olinowania Stadionu Śląskiego a) Tak znaczne wychylenie konstrukcji dachu znajdującej się na wysokości 30–40 m nad poziomem terenu może wywoływać wrażenie niestabilności i wzbudzać podświadomy niepokój w użytkownikach. E) Zestawienie różnic i podobieństw. Oprac. M. Pelczarski

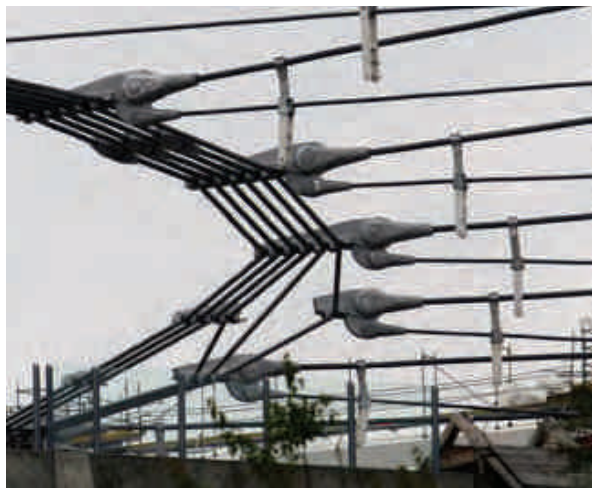


Fig. 9A. View of two clamps which broke while raising the cabling.  
Photo: Dawid WhiskeySix – forum gkw24

Il. 9A. Widok dwóch zerwanych krokodyli w fazie podnoszenia olinowania na poziom projektowany. Fot.: Dawid WhiskeySix – forum gkw24

Unfortunately also this time, despite a fairly large amount of public funds credited from Śląskie Province, the stadium was not lucky. A few clamps (Fig. 9A, B) which fasten the supporting cables to the inner tension ring broke and that is the reason for the current, long-term break in the works. These elements were manufactured in Poland and then in Spain but anyway they had defects. They broke when the cabling, which suspends the roof construction, was being raised during assembly.

Currently, after the cabling was lowered, the reasons of the failure are analyzed and further strategies of actions are agreed. For the first time in the history of its operations the Swiss company VSL, which was earlier assembling the costly roof of the stadium in Warsaw, had to lower the supporting cables, which is the opposite of the operation for which the hoisting equipment is designed. It is probable that the reasons for this situation could include the manufacturing and material defects or unequal stretch of the tension members during the hoisting of the inner ring. It should be stressed that it is one of the biggest “bicycle wheel” roofs. Its size is determined by the size of the track and field stadium (Fig. 8).

It is surprising that GMP, a company famous for covering the stadium roofs designed by it above the stands with PTFE

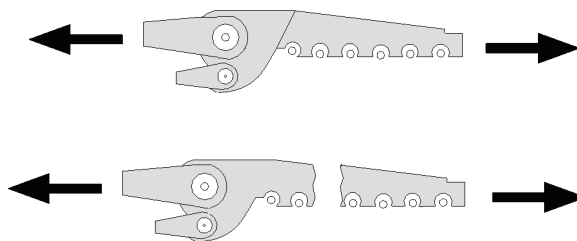


Fig. 9B. View of two clamps which broke while raising the cabling.  
Developed by M. Pelczarski

Il. 9B. Widok dwóch zerwanych krokodyli w fazie podnoszenia olinowania na poziom projektowany. Oprac. M. Pelczarski

membranes, abandoned the application of such a solution in Chorzów and upon the investor’s approval suggested covering the roof with multi-chamber polycarbonate sheets. As a result it was necessary to apply a dense steel understructure with a significant deadweight for the polycarbonate roofing. Actually, a physically and optically heavy pseudo-dome with a dense supporting structure for the roof made of 1.25m wide sheets must hang on a system of cable girders. Unfortunately, it is impossible to evaluate those assumptions as the effective visualizations of the stadium interior with the view of the roof from underneath do not show that element. A similar act of falsifying the reality can be seen in the case of renderings of supporting girders of the roof of the stadium in Poznań or tectonics of the façade of the stadium in Wrocław.

By the way, it is worth mentioning that the gaskets of the multi-chamber polycarbonate sheets wear off in time and unseal the chambers. As a result, fauna and flora develop inside them, which in turn is visible in the form of runs that look like dirt.

### Gdańsk Stadium

The analysis of the main stadiums built for EURO 2012 in respect of their original constructions demonstrate that the design of the roof of the stadium in Gdańsk is worth our special attention (Fig. 10A, B). It is one of the most interesting self-supporting structures in Poland and in the world. Searching for any possible way to reduce the costs of that design, one could only consider moving the point of support of the roof independent structure to the crown of the reinforced concrete stands, which, in the opinion of this article’s authors, would prevent the doubling of the main supporting structure of the roof and the stands.

## Conclusions

Due to the limited scope of this article, it was possible to analyze in detail only the main architectural and structural elements of the stadiums which determine their general spatial forms. They include the roofs above the stands and maybe the arenas as well as external cladding. The designs of the stands as well as the issue of comfort and safety of the viewers and other users of the stadiums as well as the issues regarding technical infrastructure were not analyzed due to their extensive and complex character. The issues connect-

ed with the organization and financing of EURO 2012 have been presented in greater detail because, in the opinion of the authors, the specific forms assumed in those scopes imposed to a large extent by the Union of European Football Associations (UEFA) have a significant and direct impact on the effects of stadium investments. However, the experience of two previous championships held in Austria and Switzerland (2008) and in Portugal (2004) demonstrates that the host countries, and their host cities, were able to

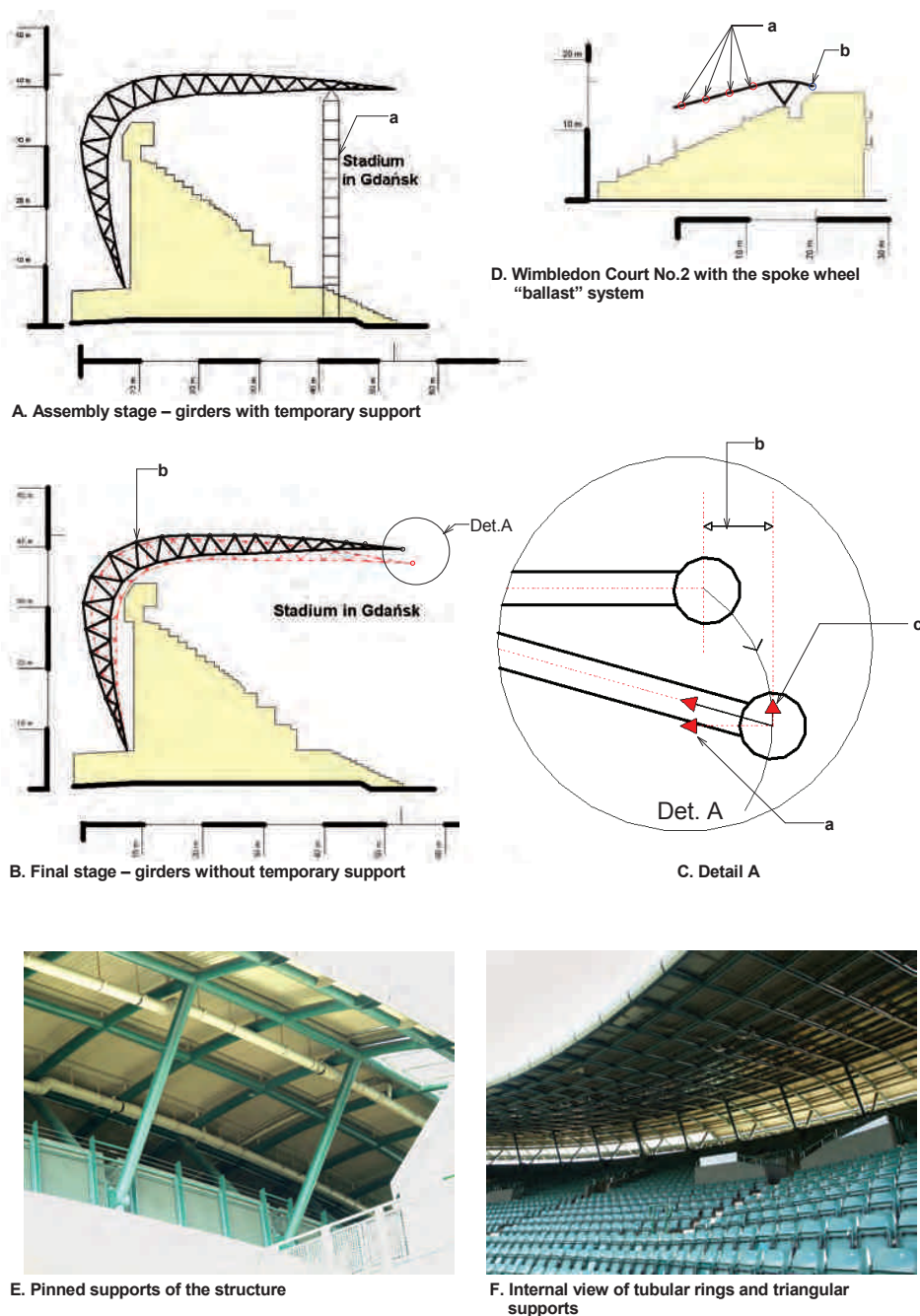


Fig. 10. Structure of the roof of the stadium in Gdańsk. A) Assembly stage – girders with temporary support: a – assembly support. B) Final stage – girders without temporary support. Self-supporting structure “sagged” about 30 cm under its own weight at the end. Such a deformation generated resistance of deformed horizontal rings [4]. The vertical components of that resistance back weighed the structure’s own weight. b) perimeter rings were placed in the upper plane of the girders. C) DETAIL A: a) The radial force is the resisting force generated in the ring when its circumference is reduced. b) The vertical component of the radial force is responsible for carrying the roof structure and the loads affecting it. c) Horizontal displacement of the ring point caused by rotation – “settlement” of the girder. D) Wimbledon Court No. 2 with a bicycle wheel “ballast” system with rigid closed rings: a – tension ring, b – compression ring. E) pinned supports of the structure. Photo: M. Pelczarski. F) internal view of tubular rings and triangular supports. Photo: M. Pelczarski. Developed by: M. Pelczarski

II. 10. Konstrukcja dachu stadionu gdańskiego. A) Faza montażowa – dźwigary podparte są podporami tymczasowymi: a – podpora montażowa. B) Faza końcowa – dźwigary zwolniono z podpór tymczasowych. Konstrukcja samonośna osiadła pod własnym ciężarem w punkcie końcowym o około 30 cm [4]. Odkształcenie takie wywołało opór, generowany przez deformowane pierścienie równoleżnikowe. Składowe pionowe tego oporu zrównoważyły ciężar własny konstrukcji. b) pierścienie obwodowe umieszczono w górnej płaszczyźnie dźwigarów. C) DETAL A: a) Siła radialna jest siłą oporu powstającą w pierścieniu podczas zmniejszania jego obwodu. b) Poziome przemieszczenie punktu pierścienia wywołane obrotem – „zapadaniem” się dźwigara. c) Składowa pionowa siły radialnej, odpowiedzialna za dźwiganie konstrukcji dachu i obciążeń na niego oddziałujących. b) Poziome przemieszczenie punktu pierścienia wywołane obrotem – „zapadaniem” się dźwigara. D) przykład obiektu Wimbledon Court No. 2, gdzie również zastosowano dach w systemie „balastowego” koła rowerowego, wykorzystującego sztywne pierścienie zamknięte: a – pierścień rozciągany, b – pierścień ściskany. E) Wimbledon. Przegub koła podporowego. Fot. M. Pelczarski. F) Wimbledon. Widok pierścieni rurowych oraz kozłów podporowych od wnętrza kortu. Fot. M. Pelczarski. Oprac. M. Pelczarski

meet the tight organizational and completion schedules as well as cope with the pressure of UEFA, achieving a lot of quality success in respect of architecture and construction – also in the case of most stadium investments. Definitely Portugal, where all but one new stadiums were designed by Portuguese architects, is an example to follow. Maybe it was possible because its parliament adopted the relevant laws, expressing the will of the society. The designers were selected in competitions on the basis of their adequately developed rules. Only at the construction stage, when advanced building technologies and experience in building such facilities were needed, were foreign companies hired.

Such an investment policy, which was reasonably assumed, resulted in a lot of individual and unique functional and spatial development designs, featuring a high architectural level. Both the country and specific places where they were completed – often earlier unknown, medium-sized cities – have been made famous for them. This is a positive example of resistance to globalization and the unification in creating stadium architecture which is connected with the monopoly of a few huge, specialist designers. Unfortunately, the examples of the investments for EURO 2012 in Poland and Ukraine demonstrate that none of the host countries followed the “Portuguese system”.

*Translated by  
Bogusław Setkiewicz*

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### *Przedsięwzięcie EURO 2012 – próba oceny osiągniętych efektów architektoniczno-konstrukcyjnych*

Celem artykułu jest odpowiedź na pytanie, czy „spektakularnym” i trudnym do podważenia polskim osiągnięciem budowlanym na EURO 2012 towarzyszą dorównujące im sukcesy na polu jakości architektoniczno-konstrukcyjnej? Czy pospieszne i asekuracyjne rozstrzygnięcie o wyborze projektantów zagranicznych nie wpłynęło na unifikację rozwiązań, które miały stanowić propozycje unikalne o cechach ikony architektonicznej, stały się podobne do wielu znanych już z innych miejsc na świecie?

Jako rozwiązanie godne naśladowania przedstawiono model portugalski, gdzie dzięki podjęciu przez parlament stosownych ustaw, więk-

szość nowych stadionów zaprojektowana została przez rodzimych architektów, a dopiero na etapie wykonawczym, gdy potrzebne były zaawansowane technologie i doświadczenie w realizacji tego typu obiektów, zaangażowane były firmy zagraniczne. Niestety Polska nie skorzystała z tego pozytywnego przykładu i nie stawiała odporu zjawiskom globalizacji, monopolu kilku wielkich, specjalistycznych firm projektowych, i wiążącej się z tym unifikacji architektury stadionów.

**Key words:** Polish stadiums for EURO 2012, stadium roof structures, stadium façades

**Słowa kluczowe:** stadiony w Polsce na EURO 2012, konstrukcje dachów stadionów sportowych, fasady stadionów



Joanna Krajewska\*

## *Dialectics of locality and globality of contemporary architecture*

Andrzej Wawrzynowicz from the Adam Mickiewicz University in Poznań in his work 'Theodor W. Adorno's negative dialectics as a rational necessity to break up with a positively established mind' presents Professor Adorno's view, who un-masks a human mind's tendency to define and identify phenomena as well as objects (the object of recognition in general). *Negative dialectics aims at thinking about an object without referring to any superior conceptual images. However, this tendency is not marked with naïve faith in the possibility of arriving at the absolute directness of a thing. Adorno knows that cognition perceives objects always in their mediated surroundings. As a result, what it deals with is also an exclusive particular play on mediations. On the other hand, negative dialectics is not to allow assuming those conceptual mediations as something permanent. Dialectic thinking should unceasingly fight the 'rampart' of positive assumptions of this kind, which as a matter of fact expresses intellectual sluggishness and reflexive powerlessness in the face of non-reducible dynamics of what is real. The thing itself constitutes something which is heterogeneous against all notions and images* [8]. Transmitting Adorno's concept regarding the essence of cognition to the ground of contemporary architecture, we can immediately assume that it misses clear definitions. In the face of post-modernity changes, architecture oscillates between its locality and global tendencies and the best way of defining it is to express it in the spirit of negative dialectics. Hence, the synthetic presentation of the problem seems impossible and the way of cognition – still open.

These reflections are to be perceived against this background only as an introduction to the discussion about the architecture identity at the time of globalisation<sup>1</sup>.

The industrial revolution and development of the mass-media along with economical, social and political changes introduced the civilisation of the West to the époque of modernity and new technologies as well as products – following the threads of global dependencies – reached nearly every part of the Earth. Dynamics of changes results in the fact that the modern world is in continuous 'movement'. Giddens compares the life in 'the world' of highly developed modernity to the 'rushing juggernaut' [5]. Along with the introduction of information technology we entered the next stage of development – post-modernity.

Those rapid changes are also reflected in the construction industry. The development of technology allowed a free structure formation and gave big possibilities in designing façades. Architecture – set free from the yoke of the so far limitations – reflects the spirit of the époque of individualism and an accelerated pace of life. A modern urbanised space constitutes a 'vibrating' collage of old and new forms, in which the discrepancy between pre-modernity and the 20<sup>th</sup> century is demonstrated.

<sup>1</sup> Mirosława Czerny quotes five most often used definitions of globalisation. For the needs of these considerations, based on her knowledge, I will understand globalisation as inter-nationalisation, universalism ('diffusion of phenomena and things all over the world') as well as a worldwide process of modernisation. I am also familiarised with the concept of identifying globalisation with the formation of 'one global area' in the context of interpersonal relationships [2].

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## *Identity and globalisation*

Differences in the construction industry existing in various regions of the world resulted from many factors such as climate conditions in a given region, availability of building materials, the level of knowledge, social system, existing religious dictates, or simply varied needs of the users. Moreover, each culture enriched its architecture with another form of decorations. Different architectural languages were created, which evolved and changed into various styles along with the changes of their époque within the range of cultures or even regions. A local architectural language – as one of the symptoms of culture – allowed emphasising the identity of place and at the same time it allowed the inhabitants to identify with it.

European architecture started to be transmitted to other regions of the globe by means of colonisation and was often included in local building traditions. This resulted in the creation of colonial styles but it did not lead to the unification of the contemporary architecture itself. At the turn of the 20<sup>th</sup> century, the civilisation of the West achieved a significant advantage in the technical development. In the meantime, the global network of dependencies among eight main civilisations was created [4] and it did not allow any of them to remain totally closed to external influences. The 20<sup>th</sup> century brought a completely new kind of architecture – formally economical, deprived of detail, in accordance with new banners such as ‘ornament is a crime’ (Adolf Loos) and ‘less is more’ (Mies van der Rohe)<sup>2</sup>. In the modernism assumptions a building was first of all to be the packaging for the function. Creators of the new trend, who did away with tradition and popularised new construction ideas, laid the foundations for the modern architecture – supra-regional and standardised. Minimalism of means of expression along with popularisation of concrete and prefabricates resulted in the appearance of the same simple residential architecture – blocks of flats – ‘nobody’s’ architecture in different parts of the world. However, strict assumptions of modernism could not be the only determinants for construction of new times. The galloping technological development allowed free form shaping, which – along with the break up with traditions – gave designers real creative freedom. Architecture, which was reduced to the cuboidal structure by modernists, could be born again and become in fact a complicated product which was first created in the vir-

tual world. As every other product, which is in great demand, ‘liberated’ modern architecture began to appear in all parts of the world. As a matter of fact, the existing rules regulate to some extent the fact of shaping the space; however, the amount of available finishing materials and a possible variety of forms often make this space incoherent. In a general approach, this phenomenon reflects a civilisation change and constitutes its result. A modern urban space imitates today’s world which leaves tradition, is aimed at getting profits, is impatient and which undergoes continuous metamorphosis...

Global business contacts and relationships made it possible to establish international architectural offices. Structures for many places in the world are designed there; however, worldwide design standards are dominating. International teams of designers watch over the final result. A French designer Jean Nouvel, a winner of Pritzker Prize<sup>3</sup> in 2008, describes his work in the following way: *Each time I try to find a missing puzzle, an appropriate building in an appropriate place. [...] When I say context, people think that I want to copy the buildings around but the context often means a contrast [...] a wind, a colour of the sky, trees around – the building does not have to be the most beautiful. The surroundings should have the advantage. This is a dialogue* [11]. Nouvel’s statement shows how much the role of an architect has changed. We can risk a comment that this kind of an attempt at searching for the architecture identity constitutes at the same time one of the symptoms of global tendencies.

In the époque of post-modernity the architectural ‘style’ stopped existing in fact or in other words – we can find several parallel tendencies. Some architects are recognisable through individual methods of solving problems of the form (see Frank Gehry, Zaha Hadid, Daniel Libeskind) (Fig. 1). Does not the notion ‘style’ itself mean a human tendency to classify and simplify phenomena, which is criticised by the above mentioned Professor Adorno?

The full architectural globalisation can be particularly observed in big cities. Shopping centres, business districts or big housing estates are deprived of cultural features (perhaps apart from stylised details in some regions) and become similar to one another. Global shops and fast-food restaurants network, international companies and corporations need the same functional and standard visual solutions.

<sup>2</sup> Mies van der Rohe introduced a sentence from the poem *Andrea del Sarto* by Robert Browning into the world of architecture.

<sup>3</sup> The world’s most prestigious prize in the field of architecture founded by Jay Pritzker in 1979.

## *Man and space*

The notion of the identity of an individual can be considered on many levels. An individual defines his/her identity on the basis of, among other things, his/her own biology [1] and biography [5], his/her affiliation to the region and state, culture, religion as well as to different communities. An individual also builds it according to

the following rule: I know who I am because I know who I am not [4]. The space in which the individual lives influences his/her personality, health, neighbour relationships and even work efficiency [from the preface to the Hall edition – Alexander Wallis] [3]. Besides, man perceives the world mainly through visual impressions. Space in which



Fig. 1. Structure London Metropolitan University Graduate Centre designed by Daniel Libeskind in 2004 is an expression of the designer's individual style (photo: J. Krajewska)

Il. 1. Bryła London Metropolitan University Graduate Centre autorstwa Daniela Libeskinda z 2004 roku to wyraz indywidualnego stylu projektanta (fot. J. Krajewska)

man exists constitutes the basis for gathering information about the world in which he/she lives.

Television, next the Internet gave man the possibility 'to be' in different places at the same time. Moreover, development of transport made it possible to cover long distances in much shorter time. *Time and space compression* is the result of this [Harvey, acc. 2]. Giddens mentions *separation of time and space* which are already not connected with a 'place' [5]. At the turn of the 21<sup>st</sup> century the reality has been enlarged by a virtual world. Social contacts, discussion forums, trade and bank transactions, 'virtual travels' and other activities which are possible thanks to the Internet devaluated the meaning of a real 'place'. Moreover, a creation of the virtual world and television transmission resulted in a new dimension of mediated experiences [5]. Without leaving our home we are able – using our sense of sight and hearing – to achieve information about distant regions of the Earth, i.e. their architecture, organisation of space and history. In this context the world 'outside the window' is only one of the two worlds in which we participate gradually plunging in a global cyberspace.

Transformations of the urban space, which have taken place for the last several years, make us consider the meaning and essence of its identity as well as its connections with a human being. Does the space identity change along with social and cultural changes or is it always equally strong? Can it be preserved in the modern and globalised world? And who needs 'a place'?

The new époque is characterised by local dependencies which are transferred to global conditions [5]. In connection with the notion of a 'global village' in the awareness of contemporary man, there has appeared a feeling of belonging to one big human community. As Giddens writes: *Late modernity [...] creates conditions, in which mankind means 'we' in many respects* [5, p. 46], in particular for representatives of the young generation. Some young people simply try to cover up their identity. A man, who comes from India and has been working in Poland for some time, said the following: 'I treat my fate as a balloon. I catch it and fly waiting for the place it will take me to.' Such attitudes among young emigrants, who leave their countries in search of work or look for life changes, are more common nowadays. Considering the above we can have an impression that the notion of identity becomes blurred at least in relation to a place – understood as a certain architectural space. But simultaneously, the need of emphasising a cultural identity revives, which will be mentioned later on in our considerations. According to Huntington, for most people identity has the most important meaning [4] and Castells reminds us that globalisation brought back the revival of nationalism [1].

Identity contrasts unification. Thus, it seems that the more expansive is globalisation, the greater the need to emphasise a local identity. Societies of our times do not live in such a settled way as their ancestors; however, they are not nomadic either. Even if young people change their place of living while studying or looking for a job, the moment they set up families they settle down somewhere. However, the space we can identify with and the space with strong identity do not always mean the same space.

Growing global contacts and dependencies, confrontation of different rights and values have generated world scale conflicts. In some regions a growing feeling of identity and local affiliation and first of all cultural affiliation opposes unwanted unification and foreign influences. Within the framework of a 'global village', groups are organised which are based on common cultural identity – in spite of their physical dispersion. (In the case of emigrants, cultural identity is not always connected with a sense of identification with a given space in its wider understanding (city); however, it is sometimes connected with the space in a micro scale (ghetto, district)). World metropolises are inhabited by many national minorities which often live in their 'own' districts. The architecture of these districts does not usually differ from the architecture of other parts of the city; however, there are institutions which are characteristic for a given culture (e.g. temples). Forms of visual communication (e.g. advertisements of service shops) and sometimes small architecture (e.g. gates in the Chinese style in London district of Chinatown) prove the autonomy of such a space in the most visible way.

## *Culture record*

In the world of the West, we can have an impression that tradition (in a general sense) is of secondary importance and it will finally be excluded from the course of events. On many levels tradition is obscured by a contemporary supplementary form, market brand name, and kind of 'logo'

which are supposed to give a vague idea about the original form. Customs are gradually transformed, simplified or forgotten... This phenomenon is also observed in the sphere of architecture. Globalising tendencies replaced the building tradition in many regions of the world.



Fig. 2. Model of Beijing in The Beijing Planning Exhibition Hall showing plans of the city development and illustrating the scale on which the traditional architecture is replaced by modern buildings (photo: J. Krajewska)

II. 2. Makieta Pekinu w Holu Wystawienniczym Planowania Pekinu ukazująca plany rozwoju miasta unaocznia jednocześnie skalę wypierania architektury tradycyjnej przez zabudowę współczesną (fot. J. Krajewska)

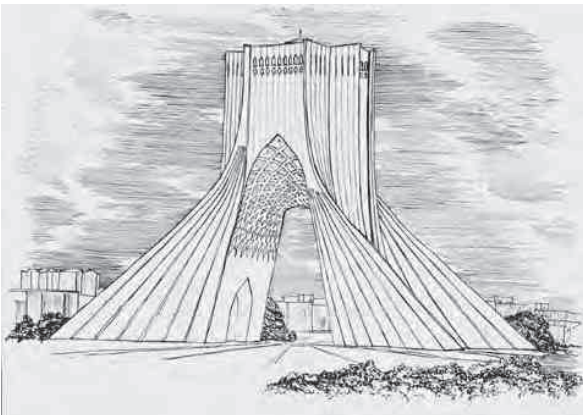


Fig. 4. The Azadi Tower, designed by Hossein Amanat, Tehran, 1971 – symbolic gates of the capital city; example of symbiosis of tradition and modern technology (by J. Krajewska)

II. 4. The Azadi Tower, proj. Hossein Amanat, Teheran, 1971 r. – symboliczna brama stolicy; przykład symbiozy tradycji i nowoczesnej techniki (rys. J. Krajewska)

The process of modernisation, which comprises the whole world, transmits the Western construction methods to the ground of other civilisations. The heritage of modernism – the form deprived of ornaments, new technologies and building materials – unified the world architecture of big cities first of all. The municipal tissue was filled with cuboidal skyscrapers built of steel, glass and concrete (Fig. 2).

Revolution in China, in spite of the fact that it introduced the state into the system of reforms, constitutes a cultural leap and a Chinese civilisation, which was not prepared for modernity, had to accept many ready solutions from the outside, including modern architectural solutions; similarly to other civilisations which did not find their own answers to the problems



Fig. 3. Example of combining the modern architectural form with stylised detail, Beijing (photo: J. Krajewska)

II. 3. Przykład łączenia współczesnej formy architektonicznej ze stylizowanym detałem, Pekin (fot. J. Krajewska)

of modernity. However, after the time of non-reflective adoption of western patterns and fascination with new possibilities, there will be a turn in the direction of one's own identity. Huntington persuades that modernisation and the inflow of foreign products will not lead to westernisation of non-western cultural circles; non-western civilisations discover again the value of their cultures [4]. The architectural language – as one of the 'records' of culture – will develop again.

The Ju'er Hutong in Beijing by Liangyong Wu complex (1992) inspired by a courtyard arrangement of residential structures constitutes a good example of an attempt at the building tradition continuation [12]. Two- and three-storey building, cosy common spaces as well as the reminiscence of old forms in a new edition allowed to compose modern architecture into the old municipal tissue; a complex became a model example for the further development of this type of architecture in the capital city of China. At the same time, a wrong direction in Beijing's architecture – and not only in this – can be exemplified by 'sticking' a stylised ornament detail to culturally neutral forms (Fig. 3). In my opinion, this is a dead end which leads designers to theatrical solutions and makes a 'trashy' relic of the culture heritage, which does not constitute an authentic continuation of the tradition.

In Japan necessary reforms were introduced from the very beginning according to the banner: 'Japanese spirit, western technique' by erecting ultra-modern buildings but at the same time not allowing the state to undergo westernisation in the process of modernisation [4].

Djemili Abderezak and Bellal Tahar from the Faculty of Architecture from the Algerian University Sétif in their work concerning modern Arabian architecture *Contemporary Architecture in different areas of the Arab world: Redefining identity through a new building environment* wrote: *In the era of global civilisation the Arab world cannot ignore modern technology, but it has to rationalise it, readapt it and to make a tool of the culture. That means technology is in the service of the culture and not the other way around* [9]. An excellent combination of Islam and Persian building tradition with





Fig. 5. Burj Khalifa, designed by Skidmore, Owings & Merrill LLP, Dubai, 2009 – now the tallest building in the world (photo from author's archives)

Il. 5. Burj Khalifa, proj. Skidmore, Owings & Merrill LLP, Dubaj, 2009 r. – obecnie najwyższy budynek świata (fot. z archiwum autorki)

a modern technology is *The Azadi Tower* by Hossein Amanat in Teheran (1971) – a symbolic gate to the capital city of Iran (Fig. 4). The most spectacular example of the new Arabian architecture is the highest building in the world – *Burj Khalifa* designed by the American Office Skidmore, Owings & Merrill LLP, which was built in Dubai in 2009 (Fig. 5). The plan of the skyscraper refers to the shape of a desert flower so the designers derived inspirations from the building's surroundings. However, the scale of the building as well as the uniqueness of the whole enterprise makes it a kind of a manifest of possibilities of the modern technique and emirates power. And in spite of its location and due to the international character of works connected with its construction, it constitutes a world scale civilisation achievement.

Also in the regional scale we pay attention to the benefits of preserving the identity of the urban space which is, among other things, a quality of this space as well as the local culture recorded in it. In recent years in Poland there have been three open architectural competitions which were supposed



Fig. 6. Continuation of local tradition in modern architecture of London is exemplified by, inter alia, combining bricks in higher storeys with light service basement (stone, plaster) (photo: J. Krajewska)

Il. 6. Kontynuacja lokalnej tradycji we współczesnej architekturze Londynu to m.in. połączenie cegły na wyższych kondygnacjach z jasnym przyziemiem (kamień, tynk) (fot. J. Krajewska)

to choose the best designs of typical detached houses for given regions: Opolski House (Opolski Silesia, 2007), Sudeten House (Kłodzka Land, 2009), House for Warmia and Mazury region (2010)<sup>4</sup>. The aim of all competitions was to introduce into the space of regions the architecture with high quality (including aesthetic one), and a program dialogue with tradition was supposed to preserve the models for rural constructions in the regions and bring back the best features of local architecture which have been forgotten during recent decades<sup>5</sup>. It is worth noting that the interest in this type of competition has unusually increased during the last three years. Twelve works entered the 'Opolski House' competition<sup>6</sup> and 184 works entered the House for Warmia and Mazury Region competition<sup>7</sup>.

The process of incorporating new architecture into the old urban tissue in the spirit of cultivating tradition takes place in London. Old fashioned functional models are not copied there; however we can see a continuation of certain forms as well as material procedures as echoes of the Victorian architecture: jutties and risalits or a light service basement with non-plastered bricks which were used in higher storeys (Fig. 6). An industrial and austere character of architecture is also preserved and thanks to the revalorisation of post-industrial buildings, the identity of the city space is maintained.

<sup>4</sup> See: [www.a-ronet.pl](http://www.a-ronet.pl) [accessed: 30.01.2011].

<sup>5</sup> In the period of the Polish People's Republic the so called 'dice' constituted the model of detached houses – a standard, plastered building with a flat roof. After the change of the system, typical one-family architecture was catalogue houses which were built according to ready designs. This caused levelling of architectural differences between regions and introduced urban chaos.

<sup>6</sup> Information from the following website: [polskalokalna.pl/news/opolski-dom-nagrody-wreczone](http://polskalokalna.pl/news/opolski-dom-nagrody-wreczone), 989925, 4517, [accessed: 30.01.2011].

<sup>7</sup> Information from the following website: [architektura.warmia.mazury.pl](http://architektura.warmia.mazury.pl) [accessed: 30.01.2011].

## Identification

The architecture identity can be considered in two aspects: the one which comes from the building tradition and the history of place as well as the other which refers to identification and recognisability. Modern designers, who, in their works, take into consideration the issue of identity, use the means which aim at exposing at least one of these aspects.

The notion of identification, which is strongly connected with the notion of identity, in relation to the urban space can be considered as the identifiable space and the one that can be identified with. A demand for new functions, development of technology and in some cases a contracting area of life of each inhabitant led to the situation in which cities all over the world are overcrowded with skyscrapers and blocks of flats. A new generation can identify with modern architecture (not connected with a local tradition) in the same way as it imitates foreign trends or patterns of behaviour. However, the new generation grows up in the space deprived of cultural features and loses one of the aspects of its identity. Thus, we can ask a question whether the coexistence in the global network of dependencies sets us free from taking care of our own autonomy. How to treat the situation in which the whole civilisation builds its identity from scratch?

A French painter Fabienne Verdier in her book *A Passenger of Silence. Ten years in China* describes the life of Beijing residents in the 1990s: *There was a bigger and bigger dissonance between these depositaries of Chinese culture and the young people who Americanised. The wealthier visited new shopping complexes and discotheques in the Las Vegas style, while the poorer became addicted frequenters of Kentucky Fried Chicken bars; there were already several hundred bars of this kind opened in Beijing. [...] At that time aunt Xu had to ride a bicycle for two hours in order to get to work [...] "Imagine – she said to me – that we will live in a block of flats; no life in a district, no market place! We will be deprived of land marks;*

*we will be isolated and eradicated."* [...] *End of the art of life on the thresholds, walks with a bird, meetings in tea-houses. McDonald's was built at the place of a big bookshop at Wangfujing Allee* [7, pp. 272–273]. Post-revolution China, which opened to the influences of the West, builds a new image of the capital city – by metropolitan standards of the 21<sup>st</sup> century – with the help of designers from all over the world. The complex with the features of the old architecture, which is mentioned in the previous chapter, is now disappearing in the sea of scrapers built of concrete and glass. Before the summer Olympic Games which took place in Beijing in 2008, the metropolis was additionally filled with structures of high architectural quality and it is difficult to find a dialogue with tradition in them. Apart from a new stadium, a futuristic structure of *CCTV Headquarters* by a Dutch design office OMA was supposed to be a new icon of the city (Fig. 7).

Buildings-icons are in fact an architectural sign of our times. Cities all over the world seem to compete to have the most unusual building which they could be identified with. There are already some of them in the capital city of China. The office block *30 St Mary Axe* (the so called *London Gherkin*) by Sir Norman Foster built in 2004 with a characteristic shape of a cigar represents the newest architecture of London. A skyscraper with a round structure was opened a bit later in Barcelona – *The Torre Agbar* designed by Jean Nouvel. In some cases the designers derived inspirations from locations; some other buildings could be built in any city. Undoubtedly, such structures contribute to the identification of the place, providing one has the knowledge to recognise them. The identity of those buildings – as unique of a kind – also seems to be strong. However, looking ahead it is really difficult to agree that creating the identity of the modern urban space is to be based on buildings-icons surrounded by culturally neutral architecture.

## Brand quality

The icon of architecture may also serve the purpose of promoting a city by becoming its recognisable sign. Probably the most known example is *The Guggenheim Museum Bilbao* by Frank Gehry, which was opened in 1997. A characteristic form of the building, typical of this architect's style, as well as the function – a museum which belongs to the international network – attracted plenty of tourists to Bilbao. Hence, the term 'the Bilbao Effect' was created, which meant a situation in which one investment contributed to the development of the whole city. The building itself balances between its own identity and a globalized trend.

Also, cities with strong cultural identities constitute a tourist attraction. A district of Hutongs in Beijing can be an example – the area of Zhong-Gulou (the region of Drum Tower and Bell Tower from the 13<sup>th</sup> century) located in the northern part of the capital city on the axis of the palace complex – the Forbidden City situated in the very

heart of the metropolis. The maze of small streets between one-storey houses and service points is characteristic for the capital city of China and attracts tourists who look for the atmosphere of the old Beijing.

Until the beginnings of the 20<sup>th</sup> century the Beijing society lived according to the strictly established rules. General buildings principles (supported by *feng shui* rules) did not change for centuries. Guidelines for heights of buildings, applied materials, forms and colours of buildings had to be complied with. Families lived within the range of a residential complex (*Siheyuan*) and around the courtyard, whereas the world of neighbour contacts and business affairs was situated behind the wall [6]. A collapse of feudalism in China and the revolution which started in 1966 and lasted ten years led to a breach of tradition on many levels. Moreover, the Chinese buildings, which had not changed for hundreds of years, did not meet contemporary functional and social requirements. Thus, the space



Fig. 7. Seat of CCTV in Beijing under construction (February 2008) designed by OMA. Futuristic structure is one of the 'icons' of modernized capital city of China (photo: J. Krajewska)

Il. 7. Siedziba CCTV w Pekinie w trakcie budowy (luty 2008 r.) proj. OMA. Futurystyczna bryła to jedna z „ikon” zmodernizowanej stolicy Chin (fot. J. Krajewska)

of Hutongs – in spite of its indisputable strong identity – became a relic of the past époque (Fig. 8).

A luxurious complex *Medinat Jumeirah* in Dubai designed by Mirage Mille in which there are, among other things, hotels, SPA and a conference and banquet centre is on the other pole of this phenomenon. This exclusive multi-functional complex, which constitutes the whole district situated in a new part of the capital city of the Emirates, reminds an ancient Arabian citadel<sup>8</sup>. Stylised details of the buildings, high wind towers and wall facing are based on traditional local structures built of mud and wood (Fig. 9). Apart from the obvious promotional action which is aimed at attracting customers, these architectural quotations are supposed to express pride of the regional culture. Unfortunately, literal transfer of traditional forms and 'wrapping' the modern functions with them created an artificial space with 'a mask of identity' put on.

In the post-modern époque in the times when more and more spheres of human activities are perceived in the trade categories and when a city itself becomes a brand – a product whose image is shaped according to the promotion needs, the identity – built from scratch and understood as cultural heritage starts to be (in a sense) an element of marketing.



Fig. 8. New and old in Beijing – service and office buildings – top part: Sanlitun VILLAGE North Area EAST designed by Beijing Matsubara and Architects, 2007; bottom part: old buildings in the area of the Drum Tower (photo: J. Krajewska)

Il. 8. Nowe i stare w Pekinie – budynki usługowo-biurowe – u góry: Sanlitun VILLAGE North Area EAST proj. Beijing Matsubara and Architects, 2007 r.; u dołu: dawna zabudowa w rejonie Wieży Bębnów (fot. J. Krajewska)



Fig. 9. Complex Medinat Jumeirah in Dubai (the first stage was opened in 2003) – the author of the concept Mirage Mille as his model took the traditional Arab buildings (photo from author's archives)

Il. 9. Kompleks Medinat Jumeirah w Dubaju (pierwszy etap otwarto w 2003 r.) – autor koncepcji Mirage Mille wzorował się na tradycyjnej arabskiej zabudowie (fot. z archiwum autorki)

<sup>8</sup> See: [www.jumeirah.com](http://www.jumeirah.com) [accessed: 30.01.2011].

## Heritage

The pace of changes in the modern world makes us think about the future image of the urban space. Will new local styles be created on the basis of the universal language of post-modern architecture? Does the modern architecture construct the space which has a strong identity on a different level of associations? Although centres of Tokyo or New York full of skyscrapers are similar to each other at first glance, it cannot be denied that they are also unique.

Chaos of the modern space is the chaos of our apparently ordered life. Multiplication of forms and overlapping of subsequent stylistic calques in the urban tissue reflect nervous pulsing of the global network of invisible connections. We are building our cities as if they were pop-art collages, impatient, fussy and longing for immediate effects.

Contemporary man is like a small cogwheel in the rushing machine of civilisation. Man's life was shred-

ded into small sections of time and assigned for particular activities; the space 'flows around' man like a stream of information...

Paul Auster in his novel *The New York Trilogy* describes the main character's walk along the streets of the metropolis: *Each time he took a walk, he felt as though he were leaving himself behind, and by giving himself up to the movement of the streets, by reducing himself to a seeing eye, he was able to escape the obligation to think, and this, more than anything else, brought him a measure of peace, a salutary emptiness within... By wandering aimlessly, all places became equal and it no longer mattered where he was. On his best walks he was able to feel that he was nowhere. And this, finally, was all he ever asked of things: to be nowhere* [10].

Translated by  
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## Dialektyka lokalności i globalności architektury współczesnej

Architektura współczesna oscyluje między tendencjami lokalnymi a globalistycznymi. Dynamika zmian w epoce ponowoczesnej sprawia, że trudno jednoznacznie ocenić to zjawisko, dlatego proponuje się rozpatrywać je w duchu dialektyki negatywnej.

Wiek XX przyniósł nowe technologie, a świat zaczął się „kurczyć”. Istniejące sieci globalnych zależności nie pozwoliły żadnej z cywilizacji pozostać obojętną na podnoszący się poziom wiedzy i rozwój techniki. Modernizacja, począwszy od Zachodu, objęła cały świat. Kompresja czasu i przestrzeni oraz zaistnienie rzeczywistości wirtualnej zmieniły znaczenie realnego „miejsca”. Nowe materiały budowlane i wzrost

możliwości konstrukcyjnych oraz nowa filozofia architektury – modernizm dały podstawy do wykształcenia się jednego języka architektury nowoczesnej, w ramach którego zaistniała duża swoboda projektowa. Tożsamość architektury rozumiana jako jeden z przejawów kultury, w niektórych rejonach świata zaczęła przechodzić kryzys. W obliczu niepewnej oceny swojej tożsamości w stosunku do otaczającej przestrzeni urbanistycznej stanął też współczesny człowiek. Tymczasem, jak dowodzą specjaliści, im bardziej ekspansywna globalizacja, tym silniejsza potrzeba podkreślenia własnej kultury. Pozostaje zastanowić się zatem, jakimi językami przemówi architektura przyszłości.

**Key words:** architecture, identity, globalisation

**Słowa kluczowe:** architektura, tożsamość, globalizacja



Wojciech Januszewski\*

## *Between Europe and the East – draft on architectural landscape of Bucharest*

### *Introduction*

Bucharest – the capital city and the most important center of industry and services in Romania – is in many respects an exceptional city compared to other Central European metropolises. One of the most interesting aspects of Bucharest is its architecture and the land-

scape created by it. Its beauty defies conventional aesthetic criteria, creating a special *genius loci*. This paper presents an outline description of this extraordinary landscape and the factors which affected its development.

### *“Savage hotchpotch”*

This is how Ferdinand Lassale – the 19<sup>th</sup> century socialist activist – described Bucharest and its social inequities in his writings from Romania. This comment seems correct also in regards to the spatial plan of the capital city. What distinguishes that city is the exceptional diversity of its architectural elements. Bucharest’s architecture is a melting pot of contrasts of scale, shapes, style and function (Fig. 1). The city’s architectural forms are grandiose. The local characteristic features are spectacular and they include eccentric forms and abundance of details. *The architects of Bucharest always wanted to create something exceptional. The most daring attempts were not only typical of eminent masters, but a standard of architectural designs. [...] Bucharest drew without any qualms from all sources and adopted all patterns only to astonish and show diversity* – wrote the Romanian architect, Marian Celac [1, p. 14].

The origin of this special surrealism lies in the specific Romanian culture developed as a result of mixture of the motifs of the East and the West over the centuries. Bucharest’s urban plan and architecture demonstrate

a myriad of directions which formed under the influence of Western European ideas. On the other hand, the picturesque disorder of Bucharest and the magnificence



Fig. 1. Neo-Romanian style, modernism and eclecticism in architecture of Piața Romăna (photo: W. Januszewski)

Il. 1. Styl neorumuński, modernizm i eklektyzm w zabudowie Piața Romăna (fot. W. Januszewski)

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Fig. 2. Diversified architecture of Bucharest center (photo: W. Januszewski)

II. 2. Zróznicowana zabudowa śródmieścia Bukaresztu (fot. W. Januszewski)

of architectural forms resemble the spirit of the Levantine cities (Fig. 2). The specific natural features of the city also affect its special landscape. An increased seismic activity of that area results in a faster technical degradation of the city structures. The buildings which were damaged, or the ones which did not meet the growing needs, were replaced with bigger or more imposing ones – erected in line with currently fashionable stylistic conventions.

Despite the complexity of the architectural landscape of the city, it is possible to analyze and systematize it. In the seemingly chaotic architecture of the city, there can be distinguished a few main “layers” such as indigenous style, architecture of the “Little Paris,” modernism and socialist realism. This division is rather stylistic than chronological in its character because these layers often overlapped and mixed in time, creating hybrid forms or they reappeared as “neo-styles.”

### *Indigenous style*

The original Romanian architecture is an account of the complex historical process which shaped the culture of Romania.

In this respect 106 AD is an important turning point when the area of Romania, inhabited at that time by Indo-European tribes Thracian by origin – Getae and Dacians – was conquered by Emperor Trajan. Consequently, Romania was incorporated into the Western culture. In around the 9<sup>th</sup> century, after the period of the Barbarian Invasions, the lands by the Danube became part of the Bulgarian state and the Thraco-Roman people inhabiting that area were converted to Eastern Christianity and subjected to the influence of the Byzantine culture.

In the 14<sup>th</sup> century, two independent Romanian principalities were founded: Moldavia and Wallachia. In the 15<sup>th</sup> century, after the fall of Constantinople, they fought against Turks but lost and accepted the suzerainty of the

Ottoman Empire. The first mention of Bucharest dates back from that time (1459). Until the middle of the 19<sup>th</sup> century, the city was the capital of Wallachia and the seat of hospodars (*local rulers*) [2].

The peak development of the Romanian national style is associated with the reign of Constantin Brâncoveanu (1654–1714) who became famous as an excellent political leader and patron of the arts. Consequently, that style is often termed the Brâncovenesc style. A number of buildings in the Brâncovenesc style have been preserved in their original form – especially orthodox churches and monasteries from the 17<sup>th</sup>–18<sup>th</sup> century scattered over the area of the center of Bucharest (Fig. 3).

At the beginning of the 20<sup>th</sup> century, after a period of uncritical fascination with the Western European patterns, these buildings inspired the architects who wished to express the national ideas (Fig. 4). One of the most prominent repre-



Fig. 3. Kretzulescu Orthodox Church (1720–1722) in the Revolution Square (photo: W. Januszewski)

II. 3. Cerkiew Kretzulescu (1720–1722) na placu Rewolucji (fot. W. Januszewski)



Fig. 4. Town Hall in Bucharest (1906–1910) designed in the Neo-Romanian style by Petre Antonescu (photo: W. Januszewski)

II. 4. Ratusz w Bukareszcie (1906–1910), zaprojektowany w stylu neorumuńskim przez arch. Petre Antonescu (fot. W. Januszewski)

sentatives of that group was Ion Mincu (1852–1912) who first designed a series of public buildings, townhouses and other Neo-Romanian houses.

The Brâncovenesc style and its Neo-Romanian interpretation use artistic motifs of various origin. That architecture features the Renaissance harmony of elements, rhythmic articulation and frequent repetition of arcaded loggias and porticos. The Byzantine motifs are visible in the forms of full arches, short columns – sometimes with spiral twisted shafts – and abundant floral decorations of archivolts and friezes. Some Islamic motifs such as Moorish arches and stone ornamented openwork in balustrades are also used. The style's characteristic feature adopted from the Medieval Romanian architecture is its “defensiveness”: a stable main body of the building, strengthened base course and the presence of oriels and towers. However, the most characteristic element is the steep roof with overhanging eaves [5].

The indigenous style has numerous variations which vary depending on the moment of origin and the architect's ingenuity. Apart from academic examples of the Neo-Romanian school, the indigenous elements were introduced selectively into eclectic architecture and even modern designs from the 1930s (Fig. 5).



Fig. 5. In the foreground, Neo-Romanian city house; in the background, modern building with details inspired by indigenous style (photo: W. Januszewski)

Il. 5. Na pierwszym planie dom miejski w stylu neorumuńskim, w głębi budynek modernistyczny z detalem inspirowanym stylem rodzimym (fot. W. Januszewski)

### *Architecture of the “Little Paris”*

The turning point in the growth of the city was the incorporation of Wallochias with Moldova in 1859 and then the emergence of the Kingdom of Romania in 1881 with its capital in Bucharest. Romania broke free from the political influence of Turkey. The second half of the 19<sup>th</sup> century was the period when Romania widely opened to Western Europe. This is when the European patterns were adopted in many aspects of life. The re-latinization of the language, consisting in replacing the words with Slavic, Hungarian, and Turkish origin with the words borrowed directly from Italian or French, was symbolically significant and it was supported by the authorities [2].

Consequently, it is not surprising that the expansion of Bucharest, triggered by the necessary modernization of the capital city, followed the then popular French patterns. Specifically, the plans made by Georges Haussmann for Paris were applied. The design included broad avenues going north-south (N. Balcescu and C. Brătianu boulevard) and east-west (Regina Elisabeta and Carol I boulevard) crossing at the “grand intersection” (grande croisee) at the University Square (Piața Universității) [1] (Fig. 6).

Over the last two decades of the 19<sup>th</sup> century, a number of representative buildings of public utility and government administration were erected in the area of the



Fig. 6. Eclectic architecture of Piața Universității (photo: W. Januszewski)

Il. 6. Eklektyczna zabudowa Piața Universității (fot. W. Januszewski)



Fig. 7. City house with rich decorations from the period of the “Little Paris” (photo: W. Januszewski)

Il. 7. Dom miejski o bogatej dekoracji z okresu „małego Paryża” (fot. W. Januszewski)

new center. They were designed by Romanian architects educated in École des Beaux Arts in Paris and often by French designers themselves.

The buildings from that period are monumental and they feature sophisticated details as well as impeccable workmanship. The style of the new buildings was cosmopolitan and generally followed the trends popular then in French architecture. The dominant conventions included

neo-classicism, eclecticism, and French neo-renaissance as well as Art Nouveau around 1900.

The expansion of the city, which was carried out on a grand scale, followed the idea of transforming Bucharest into "Little Paris." The fashion for imported architecture affected not only huge public investments but also individual buildings such as palaces of aristocracy and rich bourgeoisie, townhouses and city houses [6] (Fig. 7).

### Modernism

The next stage of the city's rapid growth was the period between the wars when Bucharest was the capital of so called Great Romania which significantly expanded to include new territories. A new literary and art movement inspired by the ideas of European avant-garde played an important role in the

cultural life at that time. Its advocates gathered around *Contimporanul* – a magazine published between 1924 and 1934. It was a forum for the young generation of designers who adopted the ideas of architecture of the Bauhaus, Le Corbusier or de Stijl. Hundreds of new buildings in the



Fig. 8. Modern architecture of Boulevardul Magheru – ARO insurance building from 1929 – designed by Horia Creanga (photo: W. Januszewski)

Il. 8. Modernistyczna zabudowa Boulevardul Magheru – budynek towarzystwa ubezpieczeniowego z 1929 r. – arch. Horia Creanga (fot. W. Januszewski)



Fig. 9. Coexistence of modernism and eclecticism (photo: W. Januszewski)

Il. 9. Współistnienie modernizmu i eklektyzmu (fot. W. Januszewski)



Fig. 10. Examples of modern houses in Bucharest (photo: W. Januszewski)

Il. 10. Przykłady modernistycznych domów w Bukareszcie (fot. W. Januszewski)



Fig. 11. Modern body of the building and historicizing detail (photo: W. Januszewski)

Il. 11. Modernistyczna bryła i historyzujący detal (fot. W. Januszewski)



International style, including monument office buildings, residential buildings and houses, were designed in Bucharest especially in the middle of the 1930s, when, after the great crisis, the building investments became the best means to save the capital [4] (Fig. 8, 9).

Despite the fact that the Romanian modernism was an imported idea, the avant-garde architecture of Bucharest is extraordinary on the European scale and its modern designs are remarkable. It is surprising how easily the interwar society adopted the completely new style of architecture. On the other hand, the activities of the state in respect of social housing – so typical of modern ideas – were insufficient. The new style was mainly applied in private building. Modernism was perceived separately from its original, social principles and consequently it was only a kind of fashionable modern costume (Fig. 10, 11).

That is why the specific features of Bucharest avant-garde focus on the external form of the buildings.

### *New Socialist City*

The modern movement ended with the outbreak of the Second World War which resulted in the substantial destruction of the city. After 1947, Romania became a Socialist Republic. New authorities considered avant-garde bourgeois formalism and it was doomed to artistic void. Instead, there was a return of the spirit of neo-classicism. It did return but in a distorted form.

This is when socialist realism began, which was also known in other countries of so called Eastern Bloc. The temporary turn towards so called socialist modernism in the 1960s–1970s did not stop an urban catastrophe. The huge earthquake in 1977, which did a lot of damage in the historic fabric of Bucharest, became a pretext for party decision makers led by Nicolae Ceaușescu to implement the plans to remodel the capital city and turn it into a propaganda flagship of socialist Romania. In 1980, the cleaning of the area for the “new socialist city” which was planned on the south side of the existing city center by the Dâmbovița River in the area of the oldest medieval part of Bucharest began. In order to execute that undertaking the area of about 7 km<sup>2</sup> of the city, that is about 1/3 of the area of the city center, was leveled. About 40 000 residents were relocated. The old street network, the hummocky landscape, a dozen or so of orthodox churches and monasteries as well as numerous other valuable, historic buildings were completely destroyed [1].

The plan of the new design was based on extremely simplified layout. It had two main elements: the “People’s House” and the “Avenue of Victory of Socialism” (Fig. 12).

The construction of the People’s House – one of the biggest buildings in the world, which was built in the years 1984–1989 according to the plans prepared by a team of a few hundred architects – required a lot of effort. The complex which was built reminded the Babylonian zikkurat in its proportions and Versailles in its architecture. The scale and grandeur of the structure defies all classification.

Architects freely and skillfully used all resources of modern formal means. New architecture used asymmetrical composition, horizontal rhythms, band and round windows, loggias and balconies, brise-soleil, ship balustrades, rounded corners resembling the designs by Erich Mendelsohn, etc. The minimalist solutions were not popular – on the contrary – the buildings were composed of many sections and they had a lot of details (cornices, frames, etc.) [3].

This way modernism of the capital city falls in line with the long tradition of extravert and decorative architecture of Bucharest. Frequently, this continuity can be perceived literally when the functional architecture includes pointed arches, Byzantine columns or pseudo-Moorish bars as well as warm colors. These surprising deviations from stylistic purity testify best to the uniqueness of the Romanian avant-garde (Fig. 11).

The “Avenue of Victory of Socialism” is a five-kilometer-long axis, a few dozen meters longer – which was a source of its builders’ pride – than the Avenue des Champs-Élysées in Paris. A number of government and apartment buildings were designed with rows of trees and tens of fountains along the sides of the Avenue. The monumental Unirii Square with commodity warehouses was located in the area where the Avenue crosses the existing south-north axis.

The schematic and monumental architecture of these buildings is a combination of socialist realism, a sort of Ricardo Bofill’s European post-modernism and the style of official building in North Korea, with which the dictator maintained close relations (Fig. 13).



Fig. 12. The Palace of the Parliament (former People’s House) at the closing of the viewing axis (photo: W. Januszewski)

Il. 12. Bryła Pałacu Parlamentu (dawniej Domu Ludowego) na zamknięciu osi (fot. W. Januszewski)



Fig. 13. View of former “Socialist City”  
(photo: W. Januszewski)

Il. 13. Widok dawnego „Miasta Socjalistycznego”  
(fot. W. Januszewski)

Ceașescu’s activities resulted in irreversible changes in the face of Bucharest. The diverse historic landscape of the city was replaced with a monotonous and oversized urban design. The only remains of the destroyed district are its historic orthodox churches and monasteries which for ideological reasons were blocked by new buildings or hidden inside the quarters (Fig. 14).



Fig. 14. Historic Orthodox Church hidden among socialist architecture around Piata Unirii (photo: W. Januszewski)

Il. 14. Zabytkowa cerkiew ukryta wśród socjalistycznej zabudowy w okolicy Piata Uniri (fot. W. Januszewski)

### *The present*

In December 1989, Bucharest became an arena of bloody clashes as a result of which the Nicolae Ceaușescu’s dictatorship was overthrown. The revolution stopped the building program of the regime in its prime. The construction of the People’s House was not fully completed.

The buildings from Ceaușescu’s time have remained useless and unfinished in Bucharest until today.

Romania adopted the market economy. The People’s House – currently the Palace of the Parliament – became tourist attraction and former commodity warehouses were



Fig. 15. Controversial investments by the Catholic Cathedral and Armenian Church (photo: W. Januszewski)

Il. 15. Kontrowersyjne inwestycje przy Katedrze Katolickiej i Kościele Ormiańskim (fot. W. Januszewski)

converted into shopping centers. The huge walls of the former “socialist city” are covered today with motley advertising banners.

Today’s Bucharest suffers from a lot of problems connected with the maintenance of its heritage. Its existing urban fabric, which demonstrates high architectural value, often deteriorates because of neglect of conservation work or intentional devastation.

The city lacks an effective space planning policy. The face of the capital city is heavily affected by powerful investors who force construction of more and more high-rise buildings, usually with no regard to their surroundings. Public opinion was on many occasions appalled at suggested locations of commercial architecture. In 2008, street protests were held during the debate on the shape of one of the most symbolic places in Bucharest – Revolution Square in the vicinity of the Royal Palace. The construction of skyscrapers right next to such temples as the Catholic Cathedral or by the historic Armenian Church caused huge scandals (Fig. 15). Paradoxically, free mar-

ket today – just like socialism in the past – causes the degradation of historic sites and devastation of the cultural landscape of Bucharest.

Contrasts have always been the defining elements of Bucharest’s urban landscape and its unique character. However, diversity does not mean complete lack of any principles. The architecture of the capital city of Romania had impassable limits – the limits of human scale – and because of those limits the streets and squares of old Bucharest offer true public spaces. However, since the second half of the 20<sup>th</sup> century, this natural border has been breached more and more often. Glass skyscrapers, just like socialist boulevards, are the most evident examples of that violation. New architecture also breaks the limits of schematism beyond which form becomes cliché. The architecture of glass boxes whose presence in Bucharest has become universal today does not match the artistic value of the interwar modernism. Maybe the contemporary builders of Bucharest should learn more from their great predecessors.

Translated by  
Tadeusz Szalamacha

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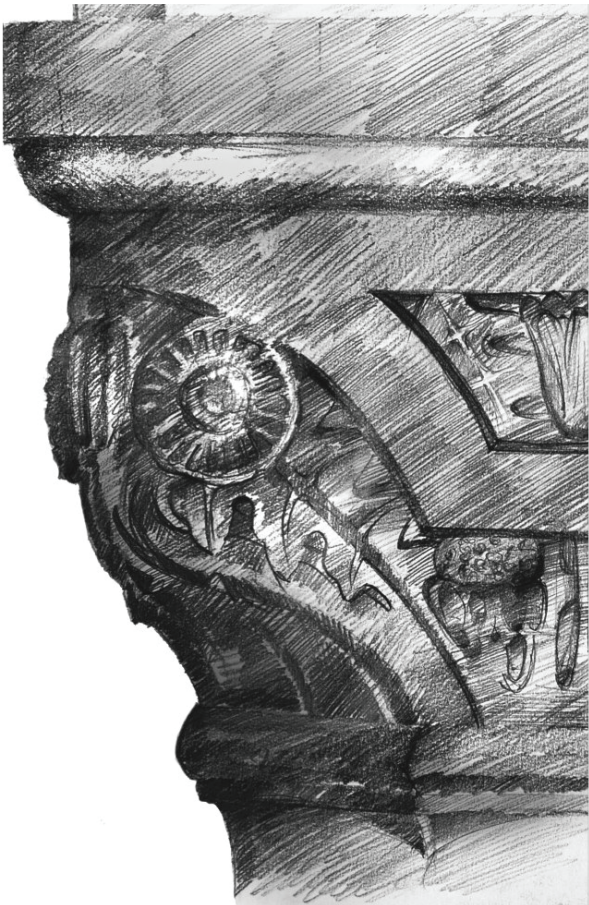
### *Między Europą a Wschodem – szkic o krajobrazie architektonicznym Bukaresztu*

Krajobraz miejski rumuńskiej stolicy stanowi szczególnie interesujące zjawisko w aspekcie urbanistyki i form architektonicznych na tle wielkich metropolii Europy Środkowej i Południowej. Oryginalna kompozycja przestrzenna jest zapisem specyficznych uwarunkowań

kulturowych, historycznych i naturalnych. W artykule przedstawiono zarys warstwowej struktury przestrzennej miasta, tworzonej przez poszczególne grupy stylistyczne: styl rodzimy, „mały Paryż”, modernizm, socrealizm i współczesność.

**Key words:** Bucharest, urban space, modernism

**Słowa kluczowe:** Bukareszt, przestrzeń miejska, modernizm



Drawn by Mateusz Olczyk



Barbara Misztal\*

## *Dynamic parameters of the free vibrations of various wood species*

### *Introduction*

Wood used for the construction of prestigious building facilities has to show high strength parameters taking into account the required durability of the building. The wood selection and choice is a difficult task. Such wood selection is required that out of the mass of planks the best wood is selected in order to build it into the most strained sections whilst the elements of a worse quality should be used in less burdened zones, or rejected. In the daily practice the wood choice follows against visual inspection. For instance, the Japanese company, Miyazaki Prefectural Wood Utilization Research Center, in charge of the accomplishment of the Konohana Dome in the city of Miyazaki made, in 2002, the choice of the best planks according to the measurement of the spacing between wood fibers. Figure 1 shows the sections of planks cut out in 45-year-old Sugi trees (*Cryptomeria japonica*) used for the construction of the carrying element. Those planks

were picked out for the elements of the structure so that the spacing distances between the fibers are included in the range of 4 mm through 14 mm.

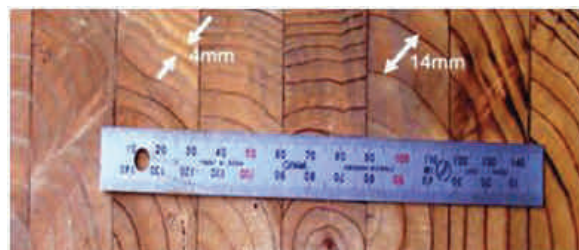


Fig. 1. Planks selected against the criterion of the spacing distance between the fibers [7]

Il. 1. Deski wyselekcjonowane na podstawie kryterium odległości pomiędzy włóknami [7]

### *Bibliography research*

In order to develop the method to select the planks for the construction of carrying elements, the author called the attention to the potential selection of wood basing on the dynamic testing.

To recognize the issue, the author conducted the bibliography research in the field of the dynamics and theory of viscoelastic materials. In Poland, several authors dealt with the issues of the viscoelastic construction dynamics. The first problem in the theory of viscoelastic materials was formulated and resolved by Kowal in the 60s of the 20<sup>th</sup> Century. In his paper [1], he studied the vibrations: of a viscoelastic beam and a rigid beam on the supports: viscous, viscoelastic and rigid. He determined the dynamic

coefficients to determine the maximum vibration amplitude and maximum forces in the system. In his paper [6], Nowacki presented the mathematical rudiments of the dynamics of linear viscoelastic constructions. In his paper [3], Langer specified the solutions related to the dynamics of viscoelastic system and the propagation of viscoelastic waves. He demonstrated that the model of an elastic body was insufficient to describe the state of stress and strain of the majority of building structures. The method of dynamic vibration coercion was applied by Kowal et al. [2] in practice, to detect damaged girders in the ceiling roof having a construction of pre-tensioned pre-stressed girders. Upon the induction of vibration in successive girders, the frequencies of their vibration were measured, and their values showed the girders of a lower rigidity. The girders of a reduced rigidity due to mechanical damages demonstrat-

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ed a lower free vibration frequency than the non-damaged girders. Those data allowed to conclude on the need for their replacement or strengthening. The hypotheses on the use of dynamic testing for the evaluation of the strength properties of wood were first formulated in the papers published by the author [4], [5]. The author suggests recognizing

the features of wood in the dynamic testing that yields clear results, instead of visual inspection or long-term testing used to date. Short dynamic tests are recommended for the selection of wood chosen for the building of elements of prestigious structures, also to detect damaged elements in the already constructed wooden structures.

## Description of experimental testing

This paper describes the dynamic testing of beams made of two wood species: oak tree and pine tree. The testing was conducted on both dry and wet models. For formal reasons, this paper depicts the testing of models in the air-dried state of oak and pine wood. The plank models, of a 10×40 mm section, 1200 mm long, were prepared for the testing. Before the testing experiment, the planks were weighed in the air-dried state. The load at the end of the support was applied perpendicularly to the plane of the beam's lower rigidity (Fig. 2).

In order to eliminate the second-order vibration the mass of  $m = 250.0$  g at the end of the support was introduced.

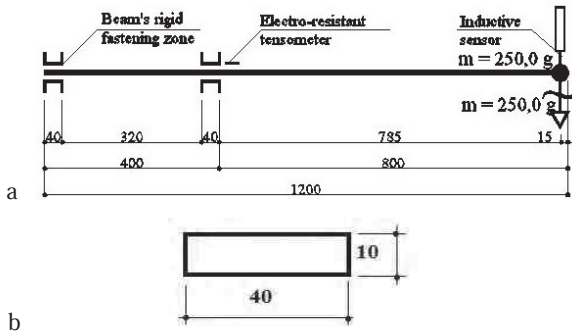


Fig. 2. Model of beams being tested: a) Schematic of a beam for dynamic testing, b) Section

II. 2. Model testowanych belek: a) schemat belki do badań dynamicznych, b) przekrój

The frequency  $n$  and the damping  $\rho$  of free vibration coerced by the force  $P = 250.0$  g suspended on a thread at the end of the support was tested. In all the cases the damped free vibration, regardless of the wood species, is well described by the function (1) pursuant to [3]:

$$y_t = y_0 e^{-\rho t} \cos(t\sqrt{\alpha^2 - \rho^2} + \varphi) \quad (1)$$

Specified below are the parameters of the vibrating movement measured on the models made of oak and pine wood planks, assessed according to the formulae as below:

– the vibration period  $T$  was measured in [s],

– vibration frequency:  $n = 1/T$  [1/s] (2)

– the circular velocity of the damped free vibration was calculated from the formula:  $\omega = 2\pi n$  (3)

– the dimensionless logarithmic damping decrement  $\Delta$  was calculated from the formula:

$$\Delta = \ln \frac{A_n}{A_{n+1}} = \rho T \quad (4)$$

the damping coefficient  $\rho$  is:

$$\rho = \Delta/T [1/s] \quad (5)$$

Figures 3 and 4 show the exemplary charts of damped free vibration of the plank models: oak wood plank and pine wood plank, during the first 10 s. For each grade of dry planks the following was calculated: The elastic rigidity  $K$  is measured using the vibration velocity  $\omega$  and the damping  $\rho$  from the paper [1]:

$$\alpha^2 = \omega^2 + \rho^2 = K/m_{zr} \quad (6)$$

$\omega$  = free vibration frequency measured [radians],

$\rho$  = free vibration damping measured,

$\alpha$  = specific vibration (non-damped) measured [radians],

$K_{ef} = m_{zr} \omega^2$  – effective rigidity of the beam, as measured on the model,

$y_0 = P/K_{ef}$  – immediate displacement under load  $P = m_{zr} g$ .

The circular velocity of non-damped free vibration, required to assess the rigidity of both dry and wet planks, was calculated from the formula pursuant to [1]:

$$\alpha = \sqrt{\omega^2 + \rho^2} [1/s] \quad (7)$$

where:  $\omega$  – specific vibration,  $\alpha$  – free vibration,  $\rho$  – vibration damping.

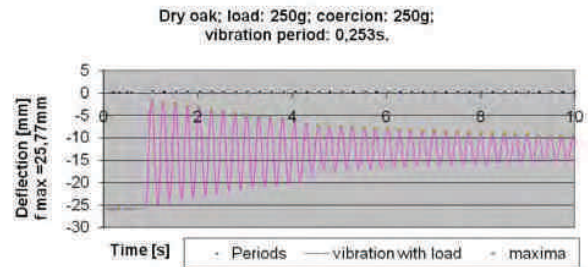


Fig. 3. Schematic diagram of the dry oak model vibration

II. 3. Wykres drgań modelu z suchego dębu

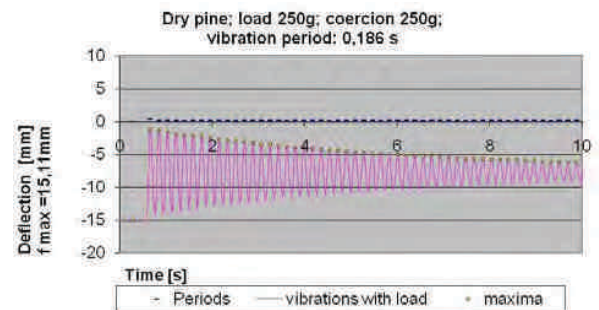


Fig. 4. Schematic diagram of the dry pine model vibration

II. 4. Wykres drgań modelu z suchej sosny

Tab. 1. Parameters of the vibrating movement of the dry oak model loaded with a mass at the end

Tab. 1. Parametry ruchu drgającego modelu z dębu suchego obciążonego masą na końcu

$T_s$	$t_0$	$y_0$	$\rho_s$	$n_s$	$\omega_s$	$\varphi$	$\Delta_s$
[s]	[s]	[mm]	[1/s]	[1/s]	[1/s]	[°]	
0.253	0.11067	25.77	0.1673	3.953	24.835	2.251	0.0423

Tab. 2. Parameters of the vibrating movement of the dry pine model loaded with a mass at the end

Tab. 2. Parametry ruchu drgającego modelu z sosny suchej obciążonego masą na końcu

$T_s$	$t_0$	$y_0$	$\rho_s$	$n_s$	$\omega_s$	$\varphi$	$\Delta_s$
[s]	[s]	[mm]	[1/s]	[1/s]	[1/s]	[°]	
0.186	0.5733	13.68	0.14	5.38	33.8	11.15	0.026

Table 1 specifies the parameters of the vibrating movement of the models made of oak wood, Table 2 specifies those for the model of pine wood, in the air dried condition.

Table 1 comprises the parameters of the vibrating movement as measured on the dry oak model, and assessed as follows:

- the vibration period measured is:  $T_s = 0.253$  s,
- vibration frequency:  $n_s = 1/T_s$   
 $T_s = 0.253$  s,  $\rightarrow n_s = 3.953$  [1/s],
- the circular velocity of free vibration, as measured from the formula:  $\omega_s = 2\pi n_s$  is: 24.835/s,
- the dimensionless logarithmic damping decrement of a dry plank  $\Delta_s$  is:  $\Delta_s = \rho_s T_s = 0.04233$
- the dimensional damping  $\rho_s$  is:  
 $\rho_s = \Delta_s/T = 0.04233/0.253 = 0.1673$  (8)

Table 2 comprises the parameters of the vibrating movement as measured on the dry pine model, and assessed as follows:

- the vibration period measured is:  $T_s = 0.186$  s,
- vibration frequency:  $n_s = 1/T_s$   
 $T_s = 0.186$ s,  $\rightarrow n_s = 5.38$  [1/s],
- the circular velocity of free vibration, as measured from the formula:  $\omega_s = 2\pi n_s$  is: 33.8/s,
- the dimensionless logarithmic damping decrement of a dry plank  $\Delta_s$  is:  $\Delta_s = \rho T = 0.026$
- the dimensional damping  $\rho_s$  is:  
 $\rho_s = \Delta_s/T = 0.026/0.186 = 0.14$  (9)

### Conclusions

The comparison of the formulation of the vibration of planks made of various wood species shows evident differences in the vibration period, damping, circular frequency and logarithmic damping decrement. The following conclusions were drawn on the basis of the testing performed:

1. There is a potential for drawing conclusions about the mechanical properties of the constructional wood basing on the dynamic testing.
2. The free damped vibration as shown in Figures 3 and 4 is well described with the function (1), regardless of the wood species.
3. Dry beams of a coniferous tree species, as represented by pine wood, have a lower period of specific

vibration than beams made of deciduous trees, as represented by oak tree.

4. An oak wood beam has a significantly higher damping  $r$  of free vibration than that of pine wood, and a higher period of free vibration damped.

5. The dimensionless logarithmic decrement  $\Delta = \rho T$  of free vibration damping of free beams made of deciduous trees is significantly higher than for those made of coniferous trees.

6. The conclusions drawn from the analysis of the experimental testing can be a basis for the dynamic diagnostics of wooden elements, both monumental and modern, for the use of qualifying them for replacement, repair or application in prestigious facilities.

Translated by  
Barbara Misztal

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### *Parametry dynamiczne drgań swobodnych różnych gatunków drewna*

W publikacji obliczono parametry ruchu drgającego belek z dwóch gatunków drewna: dębu i sosny w stanie powietrzno suchym. Pokazano, jak na podstawie częstotliwości drgań swobodnych oraz tłumienia drgań

można dokonać wyboru gatunku drewna do budowy konstrukcji z drewna. Zaproponowano zastosowanie pomiaru drgań swobodnych do wyznaczania właściwości mechanicznych elementów.

**Key words:** wood, wooden constructions

**Słowa kluczowe:** drewno, konstrukcje drewniane





## Presentations

### *Intrigue of Infinity on the Border of Two Worlds on the basis of 'The Street of Crocodiles' by Bruno Schulz, i.e. a metaphor of Bruno Schulz's prose in Izabela Cichońska's concept*

Author: Izabela Cichońska\*, Jacek Kotz\*\*, Roman Czajka\*\*

#### **Izabela Cichońska:**

We can talk about Drohobych in two ways: we can talk about a provincial town with its present culture and sociology with reference to the existing space or read Bruno Schulz's prose and talk about today's 'Real Drohobych' which is not even aware of its own existence, although it contains 'Transcendent Drohobych'.

This specific parallelism of the town – as an undoubtedly interesting phenomenon – causes conflicts, paradoxes and misunderstandings in the modern town, but it also raises the image up to the level of another reality. That which is unreal and was described by Schulz also constitutes a reality and the imagined world has a right to exist and sends out signals of its existence.

The purpose of the project was to generate space on the basis of the literary texture (features of prose, deformed time, multidimensionality) of *The Street of Crocodiles* (lit. *Cinnamon Shops*) by Bruno Schulz. The relations between the two towns such as their common elements, differences and characteristic features constitute a foundation of the strategic project leading to the formation of 'Antiquarter' idea, i.e. a square which changes the assumptions of the accepted formula of forming space in Real Drohobych and gives possibilities of the multi-faceted opening. The place of the project becomes a sphere between a myth and the truth, immensity and finiteness, reality and dream, i.e.

a border between Real and Transcendent Drohobych. In this way, it is a very concrete place; it's just that it simply 'did not manage to fit in time'.

My formal quests were concentrated around the following notions: multidimensionality, mobility and infinity. I made an attempt at materializing a word through an image. I looked for methods how to achieve a certain pretense of infinity by means of matter.

One of the first assumptions was to create a multi-threaded public square within the limits of the town near the market square and on the border of disintegration of a quarterly shaped town tissue. I did not think about shaping the objects as forms which strictly marked out the public and private border, but rather about forming public space with liquid borders so that a human being walking in this territory could freely move from a completely opened place to a closed one and a substitute of the object formed on a plot of land could constitute a culmination of closing space and create a sort of an urban set design.

*Antiquarter* is organized along two axes resulting from an analysis of both towns – Real Town axis maintaining the synagogue view and Transcendent Town axis resulting from the Topographic Combinatorial Analysis of places described in *The Street of Crocodiles*. A designed function, which is formed in the land cubature and development, is often not fully expressed or has several variants of using space. In the area of elaboration the following functional zones intermingle: *free transformations, enigmatic functions, markets, cognition of intrigue of infinity, a concrete function* as well as *a zone of theatrical transformations*, inspired by the activities of Grotowski's experimental theatre.

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Fig. 1. "Intrigue of Infinity on the Border of Two Worlds on the basis of *The Street of Crocodiles* by Bruno Schulz", author: Izabela Cichońska  
 Il. 1. "Intryga nieskończoności na Granicy Dwóch Światów w oparciu o *Sklepy cynamonowe*, Brunona Schulza", autorka: Izabela Cichońska

The square development is distinguished by three intermingled objects: *Theatrical Object*, *Gallery Object* and *Object of Recognising Intrigue of Infinity*.

The zone of Recognising Intrigue of Infinity is the object strictly connected with Bruno Schulz's prose. The building constitutes my spatial interpretation of the family house described by Schulz in *The Street of Crocodiles*. The object is situated on the Transcendent Axis which runs through the plot of land. The building is a place for one person who decides to undergo multi-faceted experiences. A visitor will have an opportunity to confront his/her own images concerning the Transcendent town with the existing space as well as recall his/her own childhood memories and dreams like the main character of *The Street of Crocodiles*. The building constitutes real concentration of Schulz's 'fermentation matter'. Spaces are hidden in it, not fully expressed and mobile, stimulating all senses.

Schulz in his descriptions moves vertically and horizontally – which for me constituted a significant determinant in the formation of space. Viewing the world from different angles: bird's, frog's, child's, adult's and free touching of micro-, macro- and mega scales imbues the world of his prose. Constructions undergo destruction and stratification, multiform matter is condensed and then escapes, whereas forms are doubtful, problematic and border-like. 'Intrigue of Infinity' is a notion introduced by Emmanuel Levinas and refers to repeatability of the world, its schemes and processes, cosmogony of the Universe, God, macro- and micro-cosmos, which participate in a continuous act of creation and permanent action. Action which is from end to end creative, repeatable and creates a transcendent entirety. The Universe disintegrates, transforms and then it again assumes its original form. Władysław Panas compares this infinite action of cosmos to the elusive and difficult to imitate style of Schulz. Schulz wants to hand out his picture of the world to us and it is possible that he wants us to follow the plots of his unique work and participate in his intrigue of infinity, take up plots, develop them and come back again to their beginning. This infinity is also a plan that goes far beyond the human cognition view and architectural space. Schulz simply encourages us to look for sense and for 'infinite intrigue' of the enigmatic world.

**Comment to the project by D. Eng. Arch. Jacek Kotz and D. Eng. Arch. Roman Czajka:**

The object or as a matter of fact the subject of the author's elaboration is, clad in space and architecture, the border of two towns – the same and simultaneously extremely different, each of which cannot do without the other one: the existing, until today provincial Drohobych and the imaginary Drohobych, in her elaboration named as *Transcendent Drohobych* which constituted the background of the metaphysical drama described by Bruno Schulz in his work *The Street of Crocodiles*. In other words, the said *Transcendent Drohobych* – a small provincial Galician town in Schulz's story constitutes the *locus*, background and the entire universe in which normal boundaries between time, space and personal roles ascribed to everyday life are suspended – similarly to a mythical tale. This universe-town keeps re-updating all the time – it is broken into fragments and built up anew – similarly to the language matter of Bruno Schulz's stories.

The border between these two Drohobyches became materialized and was interpreted by the author in the presented diploma project.

The author in her considerations, which are contained in the written part, arrives at such understanding of the town as Władysław Toporow outlined in his works. He understands the town in the possibly most developed way – as a 'semiotic cauldron'. It is not only the matter and space that constitute the town but also – created by various previous and present communities living in this town – images, different kinds of myths connected with them, stories, heroes as well as totally private and collective memories – those newly created, existing and the past – forgotten ones. All of them – partly personified by various people – overlap, come into inevitable conflicts and partly materialize and in this way they cause its constant transformation. Last but not least, the town is transcendent in the sense that at the brink of its beginnings it always possessed its non-earthly model contained in the mythical tale, according to which it was created. In the presented work, this *Transcendent Drohobych* by Bruno Schulz fulfills a parallel role oscillating between the present, contemporary times and the past.

However, contemporary Drohobych, similarly to contemporary Wrocław, as opposed to prewar Drohobych in which Schulz lived, is a completely different town. The community living there is different, its statehood has changed as well as the culture and language which is spoken there; also its space and architecture has undergone changes. Finally, the attitude of its residents towards Bruno Schulz and his creative activity differs significantly from ours by oscillating – according to the author – between rejection, incomprehension and total indifference. Schulz and his short stories are known only by the cultural elite of the town. Therefore, the author's intention is to recall from oblivion the figure of Bruno Schulz and his short stories; the presented project consequently constitutes a widely understood tool aimed at achieving this purpose.

For the needs of the project the author constructed several methodological tools taken partly from structuralism and partly from post-structuralism. They are collections of relations connecting the places of those two Drohobyches, *topographic combinatory analysis of places described in 'The Street of Crocodiles'* and the idea of *antiquarter* – a 'quarter the other way round' which is one of the foundations of the project. This idea taken from the features of *Transcendent Town* and the language itself of Schulz's prose is confronted with contemporary Drohobych, which was previously described in its broad meaning, where both of these towns are understood in a deep semiotic sense. All these tools formulate a particularly logical strategy which enables the author to take up the project activities. At the same time, the author considers her project as an event which does not have temporal characteristics and which – similarly to the events in Schulz's prose – did not find its place in time, being somewhere *in between*.

The urban space of contemporary Drohobych has its own character which was greatly changed after the war. The city centre has a mono-centric character based on the square-shaped Market Square along with the town hall with full frontages changing to quarters of the development. Outside the centre a compact development system is defragmented and spreads in the direction of Lviv on the basis of two struc-

tures, i.e. housing estates with great-slab blocks of flats built in the years 1960–1980, which destroyed the scenery and dispersed development of single-family houses.

The author locates her project with the particular square-sculpture character in the area of the Old Town near the Market and the so called Small Market – on the border of disintegration of the quarterly arranged Old Town tissue. The author situates it on the plot of land surrounded by disorganized development which does not form uniform frontages and comes from various historical periods, mainly from the 1990s. Concurrently, the area of the development is situated near an important pedestrian street. A vista closed by the Synagogue dominant goes through this area, whereas the Town Hall tower can be seen from the western side. A further part of a broadly understood context consists of the abovementioned dominants, i.e. trade streets, the market square and – enormous in the scale of the town – residential districts.

The author accepted, among other things, the following project assumptions: maintaining view axes (vistas), respecting cultural landscape by selecting an appropriate scale of the development, which does not exceed three floors as well as a perception of the entire complex from the streets leading to the square. The designed development was based on partly mutually entwined functional zones of *theatrical transformations*, *free transformations*, *functional mysteriousness*, *marketplace*, *perception of intrigue of infinity as well as a particular function*. The author used here the aforementioned tools. In this respect, a particular role is played by *The Sphere of Theatrical Transformations* which constitutes, firstly, a stage-scene that works based on Grotowski's ideas, i.e. eliminating the difference between the actor and the spectator and secondly, entwining the market function with the aforementioned one, similarly to a mediaeval town.

The designed square consists of three intermingled objects: *Object of a theatrical character along with the stage*, *Gallery Object with the entrance to the garage*, *Object of Recognizing Intrigue of Infinity*. The entire complex is built according to the idea of *antiquarter*.

*Object of a theatrical character* consists of a café which opens to *The Sphere of Theatrical Transformations*, a small forum with a mezzanine and a rehearsal room on the first floor, at this level connecting to *the Gallery Object*. *The Gallery Object* consists of a city information point on the ground floor, a box office and a staff room,

whilst on the first floor there is a small art gallery; the whole object is connected with an underground garage.

*The Object of Recognizing Intrigue of Infinity* is strung on *The Axis of Infinity* that is derived from Topographical Combinatorial Analysis of the places described in *The Street of Crocodiles*. Having been designed for a stay of one person who can be confronted here with some experiences, it constitutes a spatial metaphor of Bruno Schulz's family house according to the author's interpretation. Symbolic meanings of the particular storeys of Schulz's house find their analogy here. The concept of *intrigue of infinity* – by Emmanuel Levinas as it is used by the author when translating the fragments of his works which had never been published in Poland into the native language – refers to the constant process of surround creation, transformation, disintegration and reactivation of macro- and micro-cosmos. This concept that was the basis of his vision of cosmogony was transferred to the area of philosophical and literary studies on Schulz and his prose by Władysław Panas. The life of Schulz also makes a certain metaphorical circle. The author refers this concept to the imagination and she uses it in her project as a sort of strategy.

The author's quest, which intentionally refers to the categories derived from Bruno Schulz's short stories: multi-dimensionality, mobility and infinity, constitutes an attempt at making their spatial images and she assumes a changeable, labile and uncompleted functional programme, and consequently advanced changeability of the proposed spaces which constitute both exterior and interior of forms. Similarly, the entire complex which is supposed to constitute a multi-thread town square – public space with liquid boundaries – is smoothly connected with labile interior spaces. The opposition interior/exterior like in the anthropological category of boundary is eliminated here. Everything is in constant dynamic movement with internal spaces being transformed while people move within them. Similarly, the dynamic character of deconstructing structures – sculptures oscillates on the brink of explosion being consciously contrasted with the provincial (in a positive sense) nature of 'this real' Drohobych.

In conclusion, it must be said that the presented diploma project constitutes a remarkable study which goes far beyond the scope of requirements for MA theses. The discussed project is characterised by remarkable consistency and logic of the project activities based on an equally deep logical foundation – and as a consequence – perfectly designed spaces and architecture having the features of almost certain virtuosity.

Translated by  
Bogusław Setkowicz

### ***Intryga Nieskończoności na Granicy Dwóch Światów w oparciu o „Sklepy cynamonowe” Brunona Schulza, czyli metafora prozy Brunona Schulza w ujęciu Izabeli Cichońskiej***

Artykuł jest prezentacją pracy dyplomowej Pani Izabeli Cichońskiej, studentki Wydziału Architektury Politechniki Wrocławskiej. Praca dyplomowa została wykonana pod kierunkiem dr. arch. Romana Czajki i obroniona w 2010 roku. Tytuł oryginalny pracy dyplomowej: „Intryga

nieskończoności na Granicy Dwóch Światów w oparciu o *Sklepy cynamonowe* Brunona Schulza”. Dyplom jest architektoniczną metaforą *Sklepów cynamonowych* Brunona Schulza, osadzoną w realiach współczesnego Drohobycza.

**Key words:** metaphor of Bruno Schulz's prose

**Słowa kluczowe:** metafora prozy Brunona Schulza



## Presentations

### *The complex of monastic buildings with St. Michael the Archangel Orthodox Church in Jaroszkówka*

*Author: Adam Stafiniak, M.Eng. Arch.*

*Supervisor: Stanislaw Lose, D.Eng. Arch.*

#### *Introduction*

This work is a summary of diploma project at the faculty of Wrocław University of Technology – Architecture and Urban Design. It has won the prestigious Zbyszek

Zawistowski Main Award by The Polish Architects Association – Diploma of the year 2010.

#### *Monasticism*

Although the term monasticism (monastery) derives from Greek *monachos* meaning alone and *monasterion*, hermit's cell, the essence of that form of religious life is a community which combines the human desires to achieve a spiritual perfection, chastity, modesty and poverty. Consequently, a mon-

astery is not only the bricks protecting the monks. A monastery is the monks – people who devote their lives to God in prayers and work. However, what's monastic will not form in man without the atmosphere, without seclusion, without architecture, without sacred space.

#### *Guidelines*

It can be assumed that a great majority of Eastern Orthodox monasteries were not originally designed as complexes of buildings. They rather evolved in the process of development driven by need and restricted by possibilities. Some patterns, however, can be identified in the way of creating monastic spaces, which are repeated both in the case of designing new monasteries and extending old ones. Most monasteries have central of semi central layout where the sacred space (church) is 'protected' by surrounding buildings or monastic walls. The reasons why such solutions are used include a necessity to maintain the defensive character of monastic buildings. Although it was indeed the underlying reason, monastic walls defended monastics not so much against the attacks of conquerors but against the human psyche.

Spiritual growth, as a human need, is one of the highest needs and in order to satisfy it the most strict conditions must be met. All lower needs, especially the basic ones such as physiological needs and security must be satisfied. Pilgrims are offered meals and a place to stay. The defensive character of the walls evokes a sense of safety in them as well as makes what is protected by the walls more noble. When you do not need to care for everyday life necessities, you can join the life of a monastery, prayers and work. What is significant at this stage of cognition is architecture which should create an atmosphere of peace and order inside of that secluded from the 'turmoil' of everyday life outside. That separation is the idea behind the development of every monastic space. In order to create such a specific borderline that can be crossed, and

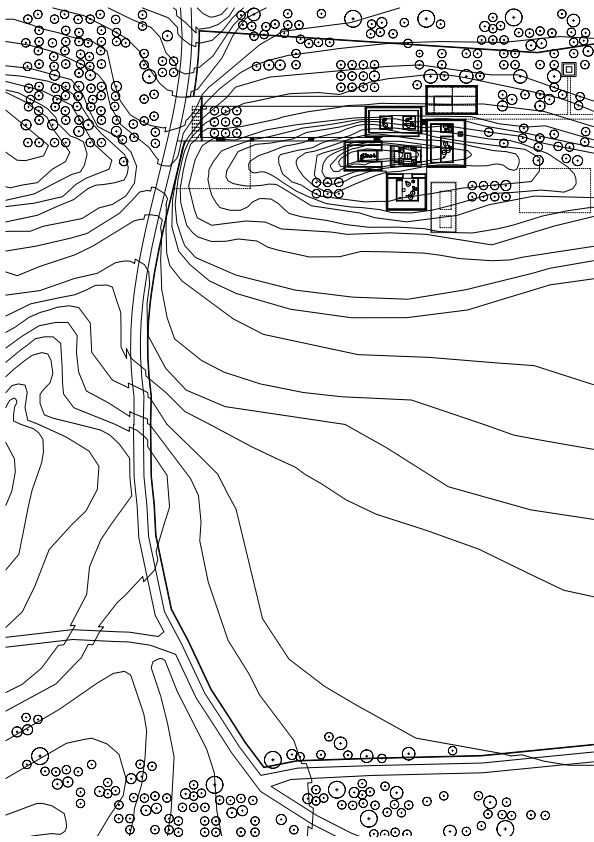


Fig. 1. Site  
II. 1. Sytuacja

must be felt, by anybody, a lot of patterns of ecclesiastical buildings were worked out. What is their common denominator is the walls (that borderline).

The most important place in a monastic complex is the space for prayers and as such it must be archetypically 'protected' by the other buildings. For the same reason the design with a centrally located temple was preferred. Pil-

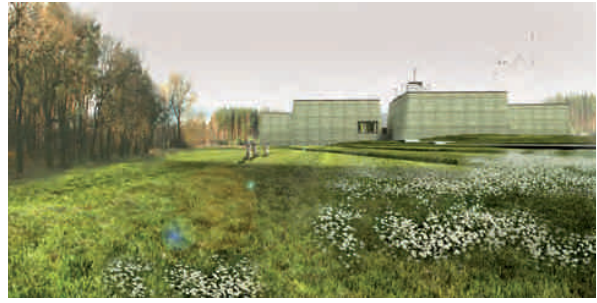


Fig. 2. View from access road  
II. 2. Widok z drogi dojazdowej

grims should subconsciously realize that they approach the heart of the design.

Apart from corporal inviolability, the sense of security also requires the assurance of the possibility to satisfy future physiological needs. That is why the designs of monastic complexes include internal gardens and water wells which, in spite of being insufficient to provide enough food, due to their size or kind, do demonstrate the subconscious human desire to live in a place that can satisfy their needs. The internal gardens should seem diverse, rich, abundant and natural.

The windows of the house for guests as well as other rooms which pilgrims can visit should look out east (where the sun rises) and provide the view on the church. The building itself should be as far away from the monks' cells as possible and their windows should also look out east yet not onto the publicly accessible court. Furthermore, pilgrims should have an easy access to refectory and chapter house.

One of the main guidelines which were defined at the origin of the design was its simple construction and technology. All elements of the complex were developed in such a way that they could be built without technologically complicated materials and machines. It should be possible to build the whole design in traditional technology by people who are not experienced constructors and must learn how to do it themselves.

### *Monastery – town*

By analogy, the design suggests directly the same approach as the one applied in urban planning as in fact a monastery is a miniature town (Fig. 1, 2). It is enough to mention such notions as self-sufficiency, borders, entrance-gate, a group of buildings or a number of events to see a small city or a suburb. Consequently, what should be designed is not a finished work or composition where adding or taking away any component elements would prevent its further operation or decrease its aesthetic qualities. What should be done is provide a rule – an algorithm – which

while developing would create from the very beginning through all successive stages a space adequate to the needs which would correspond in order and harmony to the context.

The urban design should be clear but at the same time it should seem complicated in its harmony. While providing a number of possible actions and arrangements of micro-events, it should create a soothing atmosphere of peace. Its inhabitants should perceive it as diverse and as a result they should feel safe there and in the right place.

### *Idea*

Seclusion is a characteristic feature of every monastic design. The easiest logical way to separate a given area is to build a wall and locate all activities in the buildings enclosed

by it (just like the first Christian hermits in Egypt). The problem arises when, due to the costs and size, that wall cannot be built at once and until its completion a monastery must

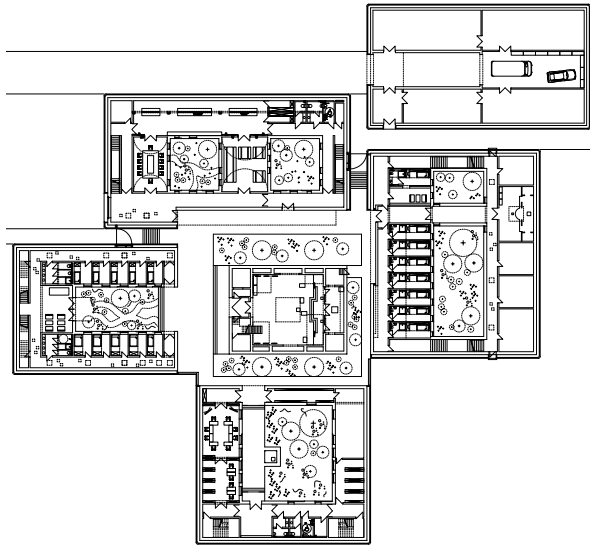


Fig. 3. Plan of ground floor

II. 3. Rzut parteru

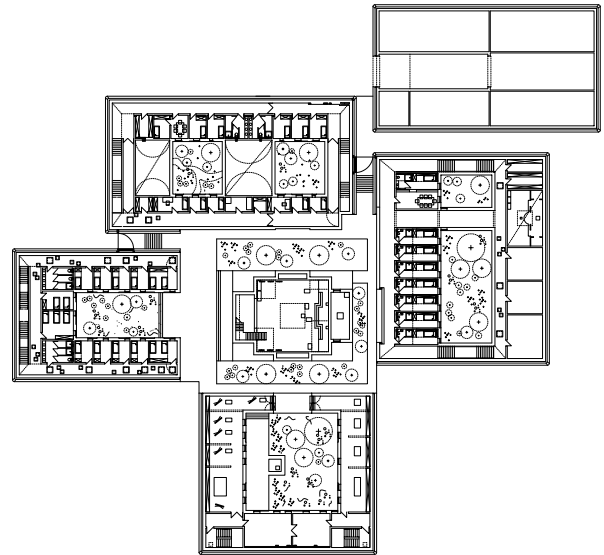


Fig. 4. Plan of upper floor

II. 4. Rzut piętra

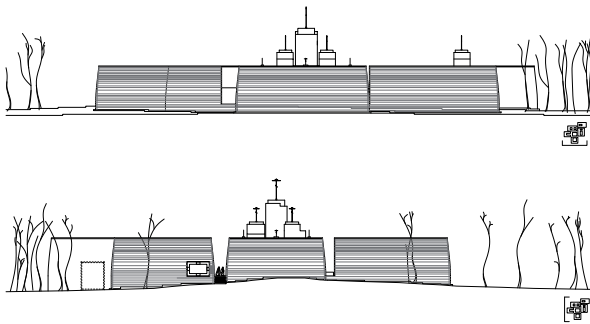


Fig. 5. Elevations

II. 5. Elewacje

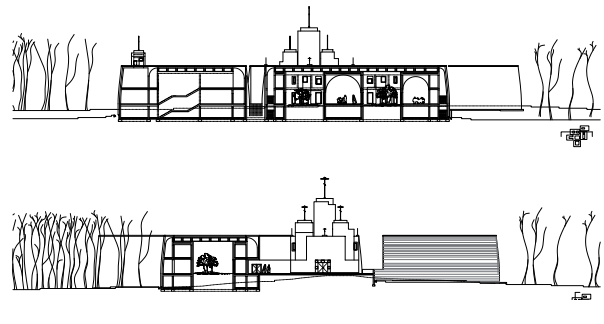


Fig. 6. Sections A

II. 6. Przekroje A

operate provisionally. The idea is to divide the enterprise into stages in such a way, however, that after completion of each stage of development the buildings would constitute a complete monastic complex. Treating the buildings as the fabric of the “wall” would prevent the necessity to build a separate outside enclosure of the complex. The size of the functional design would result in a monumental complex with uniform external walls. That is why functions were planned in six separate buildings, each of which was protected by external walls without significant perforations, opens only to its internal courts with diverse, abundant gardens. The functions were planned in them in such a way as to reduce movement between individual buildings to a minimum. Different shapes of buildings and different kinds of division of elevations were analyzed. It was decided to choose the design with a centrally located church surrounded by the first monastic building from the north, the second monastic building from the east, library and workshops building from the south and the house for guests from the west (Fig. 3, 4).

The proportions, relations between individual buildings, their location, shape, material are an attempt at escaping the monotony and repulsive character of sim-

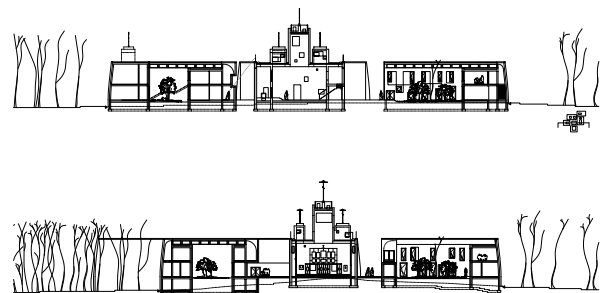


Fig. 7. Sections B

II. 7. Przekroje B

plicity. In order to achieve an effect of lightness as well as a strong connection of these buildings with earth at the same time, the thickness of their walls slightly decreases upwards. It has a symbolic significance – faith grows from people who are inseparable from earth. It is also a formal act of dematerialization of a solid vertically. Most forms of ecclesiastical architecture, and not only, demonstrate such a quality (Fig. 5–7).

## The sacred

The sacred space was created by building up borders to be crossed over by pilgrims. The first of them was a low concrete wall at the edge of the monastery painted white. White color, in stark contrast with the grass of the meadow and forest surrounding the monastery, shall be seen and recognized from far away as an ideological representation of the sacred. That passage is allowed in a designated place that is through an entrance gate which, though it is open all the time, marks a mentally perceived border (Fig. 8). Next pilgrims, approaching the bare walls of monastic buildings covered with larch shingles, begin to feel a kind of dread, discomfort, and fear. Their eyes, however, focus on a large glazing

through which they can see the life going on inside and on crosses glaring in the sun which extend above the walls. Finally, they get to the monastery gate which is as narrow as the “eye of the needle.” The uncertainty about what they are going to see builds up in them. This is when they go across the border of the walls and this is when they are dazzled by what seemed from outside austere and cold, is clear, elevated, and fresh inside (Fig. 9–11). The next border is the orthodox church building. When they enter it from the daylight court the pilgrims are surprised by a dimmed and quiet interior with bright candle flames and light flowing from the openings in the ceiling and walls (Fig. 12, 13).



Fig. 8. View at front gate

Il. 8. Widok na furtkę wejściową



Fig. 9. View at orthodox church entrance

Il. 9. Widok na wejście do cerkwi



Fig. 10. View at orthodox church main court

Il. 10. Widok na dziedziniec główny klasztoru



Fig. 11. View at garden in workshops and library section

Il. 11. Widok na ogród w części warsztatowo-bibliotecznej



Fig. 12. View at iconostas inside orthodox church

Il. 12. Widok na ikonostas wewnątrz cerkwi

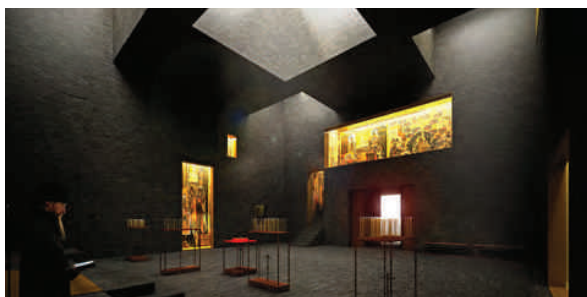


Fig. 13. View at choir inside orthodox church

Il. 13. Widok na chór wewnątrz cerkwi



## *Aesthetics*

Beauty is the distinctive feature of the Eastern Orthodox Church and its theology is full of mysticism; it is a legacy of Hellenistic culture, Platonism and Neo-Platonism which developed until the fall of Constantinople. It is clear in Eastern Orthodoxy that God is revealed in art and art without the sacred space quickly dies or it is not possible at all. The liturgy affects the faithful with beauty in every possible way. All human senses are affected. Hearing – the beauty of choral signing, intonations, diversity; vision – icons, iconostasis, theatricality of rites; smell – incense, aromatic oils. Architecture must conform to that thought too. Architecture is per-

ceived here in a similar way to that by Peter Zumthor or Herzog & de Meuron. Historically, the aesthetic simplicity was imposed by limited means and that restriction forced designers to apply well-thought-out solutions. An objective must have been achieved despite unfavorable circumstances – frequent robberies and damage. The aesthetic effect was supposed to be intensified and built up in the inhabitants through different simple measures. Today, the aesthetic simplicity, which is achieved through incomparably huge means, is the result of the development of art that achieved what the “spiritual artists” created then and what proved timeless.

## *Symbols*

Due to their symbols, all ecclesiastical buildings tend to direct the eyes of the viewers upwards, maximizing the perception of vertical divisions. Logically, one could come up with the idea to use only those. However, the space cannot be described only with the use of vertical direction. Let's take for instance a vertical line. One such line will not create space but if two lines are used, their ends will mark horizontal direction (the lines must end somewhere). The way an architect copes with that uppermost horizontal direction determines the quality of the ecclesiastical architecture. The most original result of that thinking is the use of barrel vaults or domes where the vertical directions shaped by the curvature of arches meet. They also symbolize the heavenly vault by analogy of shape. However, both of these shapes cause significant formal and aesthetic problems which have been addressed over the centuries by using different kinds of vaults (cloister, ribbed) and arches (pointed, flamboyant arches.) The barrel must be closed by a wall, which causes a formal disturbance in the place where the arch meets the wall. Termination with an apse offered a kind of solution,

however, it caused a problem with the functioning of the interior of the sanctuary (altar is a rectangular prism to the left of which there should be a table of Preparation – a place of preparation of the Holy Gifts). The dome placed on a square base requires pendentives. This problem can be avoided by using a circular base but then it makes it difficult to expose the sanctuary and iconostasis.

The designers of the church decided to use a rectangular plan with elongated sides for the sanctuary and narthex with a choir above it. The design of the towers, typical of the Eastern Orthodox Church, four corner ones and one in the middle, symbolizes Christ and four evangelists. Each tower is a little different just like the Biblical accounts of the apostles slightly differ from one another. The elevations refer to the universally known graphic symbol: the Golgotha cross where the mount is symbolized by a pedestal. On top of the elevation, in the shape of a stepped pedestal, there is a cross. The church ceiling has five openings, additionally lit through the towers, symbolizing the stellar heavenly vault. At the bottom of the central opening there is a mandylion (holy face of Christ).

## *Finishing elements*

Two finishing materials were used on the elevations: white cream Venetian plaster and oak or larch shingles. The materials were selected in such a way as to contrast the passage between different spaces. The edges of the shingles straight, the cuts in the white plastered planes with full boarding and the elevation timber impregnated against water and fire. The color applied corresponds to the windows and doors.

The interior of the orthodox church has stone cladding. The interiors of the other buildings were designed as plastered and with finish coat (Fig. 14). Mineral gray and white paint to correspond with plastered elevations.

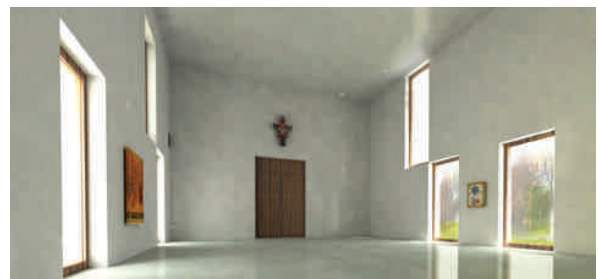


Fig. 14. Refectory  
Il. 14. Refektarz

### ***Zespół budynków monasteru wraz z Cerkwią Św. Archaniola Michała w Jarosławce***

Problem projektowy klasztoru można ogólnie opisać trudnością w wykreowaniu przestrzeni *sacrum*, przestrzeni, która ma uspakajający, ale ułatwiający skupienie wpływ na użytkownika. Analiza istniejących

rozwiązań, jakkolwiek pomocna w zrozumieniu zjawiska, nie jest podstawowym źródłem wiedzy. Skupić by się bardziej należało na człowieku, na jego psychice, sposobach poznawania przestrzeni i jej odczuwania.

**Key words:** monaster, cloister, sacral architecture, orthodoxy, *sacrum*, Orthodox theology

**Słowa kluczowe:** monaster, klasztor, architektura sakralna, ortodoksja, *sacrum*, teologia prawosławna



## Presentations

### *Re: WUWA by Maria Kiesner*

*Author: Karolina Jaklewicz\**

Maria Kiesner is famous for paintings presenting the People's Republic of Poland époque architecture, industrial structures, pre-war architecture or Katarzyna Kobro's sculptures. The life itself prompted her with the topic of a city – she was an eye witness of a terrorist attack in New York. The atmosphere of emptiness, silence and bringing the fast metropolis to a standstill became the motive of her diploma thesis which was awarded for searching for a new form of artistic expression. Architecture appeared again in Kiesner's creative activity in her series of industrial landscapes inspired by the 19<sup>th</sup>-century postcards. In her paintings she presented factories, chimneys and steelworks. Kiesner painted pictures by means of a classical egg technique which was mainly used in the Middle Ages. The author hit a hand-mixed paint against the objects symbolising the technological revolution. On the surface of canvas she left the paint trickling down and in this way she emphasised the role of passage of time. This method of shaping the painting surface came back in the Wrocław series. Following the tracks of antiquarian quests, Kiesner found travel magazines from the 1970s. The topic of empty city spaces illuminated by the specific, contrastive, side light came back. The postcards from the 1960s and 1970s, pre-war Warsaw views and the development of Saska Kępa constituted her subsequent inspirations. The first works devoted to sport structures, swimming pools, towers are created – a series called 'Warsaw Vedutes'. In the paintings belonging to the Wrocław series, Kiesner again 'discovers' classicism of modernism, she uses the best sources in Wrocław, namely, the structures of the Housing Estate WUWA.

I have been observing Maria Kiesner's creative activity for years. I am fascinated by her method of obtaining a clear form out of the chaos of cityscapes. Or the way she enlivens buildings from old photographs covered with dust and faded travel albums. I appreciate the fact that the main characters of her paintings are the objects themselves, while she stays in the background. However, her painting creation does not disappear from her paintings – they have this special type of tact that prevents her from artistic exhibitionism (if we were to look for her emotional attitude to the painted objects, we could



Fig. 1. Maria Kiesner, *Terrace* from cycle Re: WUWA, 140 × 110, 2010, acrylic on canvas

Il. 1. Maria Kiesner, *Balkon* z cyklu Re: Wuwa, 140 × 110, 2010, akryl/plótno

\* Faculty of Architecture, Wrocław University of Technology.



Fig. 2. Maria Kiesner, *Entrance* from cycle Re: WUWA 150 × 110, 2010, acrylic on canvas

II. 2. Maria Kiesner, *Wejście* z cyklu Re: WUWA 150 × 110, 2010, akryl/plótno

perhaps find it in the fragments of flaming underpainting showing through here and there from under the top layer of paint. Kiesner can derive a lot from tradition – she has regard for the best ‘portraitists’ of architecture – Edward Hopper, David Hockney or Jacek Modzelewski. However, she quickly comes back to her own characteristic style and her paintings can be easily recognised. The choice of the topic itself has an impact on her style – a simple, modernist structure whose age of glamour has long been a thing of the past – expressive, however not dominating artistic gesture subject to the architectural form. We can see a sophisticated range of grey, beige, toned down green colours set against lively splashes of blue colours or orange accents. And the light – bright and constructive – because Kiesner builds the form of a building as well as a disturbing atmosphere of her works by means of this light.

As opposed to the previous paintings, in which monumental depictions of architecture dominated, the Wrocław series is characterised by the intimate atmosphere of the composition. From an objective observer’s and documentary writer’s view, Kiesner moves on



Fig. 5. Maria Kiesner, *Villa* from cycle Re: WUWA 110 × 80, 2010, acrylic on canvas

II. 5. Maria Kiesner, *Dom* z cyklu Re: WUWA, 110 × 80, 2010, akryl/plótno



Fig. 3. Maria Kiesner, *Sanatorium* from cycle Re: WUWA, 140 × 110, 2010, acrylic on canvas

II. 3. Maria Kiesner, *Sanatorium* z cyklu Re: WUWA, 140 × 110, 2010, akryl/plótno



Fig. 4. Maria Kiesner, *Hotel for single...* from cycle Re: WUWA 100 × 80, 2010, acrylic on canvas

II. 4. Maria Kiesner, *Dom samotnych* z cyklu Re: WUWA, 100 × 80, 2010, akryl/plótno

towards a subjective relation with architecture. A distance disappears. Wide panoramas give way to portraits



Fig. 6. Maria Kiesner, *Hotel for single...* from cycle Re: WUWA 110 × 80, 2010, acrylic on canvas

II. 6. Maria Kiesner, *Dom samotnych* z cyklu Re: WUWA, 110 × 80, 2010, akryl/plótno

of houses. Kiesner observes buildings at close range, presents fragments of forms, peers inside. On the basis of archival photographs she composes forgotten views of WUWA Estate, pays homage to innovative architectural solutions and brings to mind the authors of the design. Although the paintings are simple and determined in their formal aspect, they have intimate character of the observed fragments of the reality. Her previous works were characterized by a certain sort of austerity which was typical of monochromatic compositions. In the Wrocław series this austerity disappears, the palette of colours is enriched and the light becomes more natural and soft. Kiesner depicts architecture without people, but it is by no means empty. We do not deal here with sterile houses not lived in yet or melancholy of the aban-

doned ones. Kiesner paints the form of the house while its owners are temporarily away. There are not many traces of the inhabitants, however, we can feel their presence. A sensual atmosphere of Balcony and Deck Chair is a totally new face of Kiesner. The artist admires not only aesthetic values of the building but also its functionality. In the geometrical system of planes she discovers their purpose.

The artistic gesture of the author is at the same time a gesture of protection. The protection against oblivion and destruction. The protection of a simple architectural form against the excess of ornaments or richness of form. The protection against dirt: the author cleanses her buildings – she tears off unnecessary posters, advertisements, sign-boards – pity that only in paintings.

*Translated by  
Tadeusz Szalamacha*

### **Re: WUWA**

Cykl obrazów Re: WUWA to dialog młodego pokolenia z klasyką modernizmu. Autorka prac, warszawska malarka Maria Kiesner, sięgnęła do najlepszych źródeł, które biją we Wrocławiu, do obiektów Wystawy Mieszkaniowej z 1929 r. Ideą cyklu jest ponowne „odkrycie” myśli modernistycznej, zwrócenie uwagi na bogactwo kulturalnego dziedzictwa Wrocławia, powrót do dobrych wzorów. Re: WUWA to hołd złożony nowatorskim rozwiązaniom sprzed lat. W odróżnieniu od dotychczasowych obrazów Kiesner, na których

dominowały monumentalne ujęcia architektury, cykl wrocławski charakteryzuje kameralność kompozycji. Z pozycji obiektywnego obserwatora i dokumentalisty, Kiesner przesuwa się w stronę subiektywnej relacji z architekturą. Znika dystans. Szerokie panoramy ustępują miejsca portretom domów. Kiesner przygląda się budynkom z bliska, ukazuje fragmenty brył, zagląda do wnętrza. Na podstawie archiwalnych fotografii komponuje zapomniane widoki osiedla WUWA, przywraca pamięć o twórcach projektu.

**Key words:** WUWA, painting, Kiesner

**Słowa kluczowe:** WUWA, malarstwo, Kiesner

