

ARCHITECTUS

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Ewa Łużyniecka *

Architectural examinations of the parish church in Dobrzyki

Dobrzyki is a village situated in the Warmian-Masurian Voivodship on the territory of Iława Lakeland District. Not far from the village there are two small lakes Ewingi and Jeziorko. A bit farther to the south there is a big lake Płaskie. St. Apostles Peter and Paul Church is located not far from the fork of roads which go from Zalew to Susz (Fig. 1. a, b). The terrain, on which the church is situated, constitutes the local upland and it slopes from the east to the west. It is surrounded by a wall built of stones. At present, there are two functioning entrances in the southern part of the wall – the

first one from the east side and the other one from the west. Probably the terrain to the north of the church was originally a cemetery. Nowadays, there is park greenery at that place. A parish building with conference rooms also constitutes an important element of the land development.

Architectural examinations were carried out on the initiative of the Warmian-Masurian Voivodship Restoration Officer in Olsztyn and with the help of the priest Mariusz Pawlikowski as well as the Dobrzyki community, for which the author would like to express her most sincere gratitude.



Fig. 1. Church in Dobrzyki: a) village location b) view from the south, 2010 (photo by E. Łużyniecka)

Il. 1. Kościół w Dobrzykach: a) lokalizacja wsi b) widok od południa, 2010 (fot. E. Łużyniecka)

History of the village

The origins of the village go back to 1287 when the Dzierzgoń komtur Sighad Schwarsburg granted 60 feuds to the sheriff of the village. The proof of this grant was a location document of Dobrzyki village on Chełmno law (which was called Weisdorf in the Prussian times)

issued in 1304 by the master Konrad Sack [8]. By the law of this document, the sheriff received six feuds free of rent along with one third of receipts from judiciary of lower instance. Four feuds were designated for building the church. Peasants were let off any services for ten years. Afterwards, they had to pay the tithes which were given to the church and the tax which was given to the state in the amount of 16 coops and two hens per one

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feud annually. They were also obliged to work in the castle press in Przezmark. All the inhabitants of the village got a privilege of fishing in the nearby lakes Ewingi and Jeziorko. At the beginning of the 15th century in the village there were windmills and two inns, about which there is a mention in the rent books from the years 1410–1411. In these years there were 36 settled and 12 free feuds in the village. Some time later, the pastures – located in the place of the lost Prussian village Kabity situated on the western Ewingi lakeshore – were included in the village terrains.

As a result of the Reformation the church became protestant and since the 16th century Polish service was celebrated there, in which plenty of inhabitants of the Polish nationality from the surrounding villages took part. In the 17th and 18th centuries the church in Dobrzyki was a branch of Zalew and Polish deacons looked after it. According to the register from 1818 the following villages belonged to the Dobrzyki parish:

Bukowiec, Czaplak, Jerzwałd, Jeziorce, Kiemiany, Kiemiańskie Nowiny, Likszany, Matyny, Najka, Polajny, Rucewo, Rudnia, Siemiany and Stare Swale – 1626 persons in total. All the time it was strongly connected with the Polish people. Around the year 1890 there were still circa one hundred Polish parishioners there.

A tax book from 1939 gives us information concerning sources of living of the village inhabitants. At that time Dobrzyki village along with Koziny village comprised 172 farms and 732 inhabitants; out of this number 467 earned a living by farming and forestry, 134 by working in industry and craftsmanship and 21 by working in trade and transport.

After 1945 the village was already within the limits of the Polish state and Catholics regained the church. The church architecture was appreciated and in 1968 it was entered in the monument register under the number A–1053. Four years later in 1972 a Roman Catholic parish was established.

State of examinations

The church in Dobrzyki was of great interest to researchers probably because of its interesting eastern façade. A. Boetticher [1] described it for the first time in 1893 and specified the time of its construction before the year 1320. Fifty years later B. Schmid [7] confirmed this date and he also presented the inventory of the eastern façade of the church.

A more detailed analysis of the building is in the monument catalogue of DEHIO-HANDBUCH series, which was published in 1952 and 1993. It was determined that the chancel was built in the years 1320–1330 and the nave was built in the years 1360–1380 [2]. It was also stated that the Gothic crucifix made of rood arch was made at the beginning of the 15th century. On the basis of historical sources it was ascertained that the church was renovated in the years 1776 and 1864. The time of the wooden tower construction was ascertained to be 1796. It was also assumed that at the turn of the 18th century the western wall of the church was rebuilt and stairs to the attic were placed there. It was connected with building the western and southern matroneum in 1776 which along with the patron's pew was made by Jan Marschall. The organ was built in 1776 by Obuch from Morąg and it was made bigger in 1910 during the repair works of the church.

A good point of W. Hubatsch's [4] study is the presentation of the church with the emphasis on the post-Refor-

mation times. In his book there is a photograph from the 1960s, which shows the church interior before the repair works. At that time the arrangement of the pulpit stairs was different. There was also a different arrangement of the chancel and nave niches. At the end of the last century a short description of the church appeared in the work concerning brick architecture by D. Loyal [6].

A good compendium of knowledge from the beginning of our century constitutes the evidence card of architecture and construction monuments prepared by D. Chodakowski [5] in 2002. A location plan of the building, a draft of the basement projection, a description of the structure and dating the church for the years 1320–1330 were presented in it.

The church in Dobrzyki was also mentioned in the catalogue concerning the mediaeval architecture in the territory of old Prussia. Ch. Herrmann [3] is the author of the catalogue and it was published in 2007. Herman dated the construction of the building for the years 1320–1340. He described sizes of bricks, presented technological features of the building, placed an archival drawing of the eastern façade from 1941 and two photographs from 1999. He paid attention to the western wall which was rebuilt as well as the chapel and the porch which he dated for the 19th century.

Description of examinations

The team working on the subject headed by Professor Ewa Łuzyniecka consisted of students of The Faculty of Architecture of Wrocław University of Technology: Katarzyna Dorosz, Karolina Cichoń, Natalia Jagielska and Agnieszka Rabęda (Polish acronym ZWAPWŹ).

Several research methods were used during the preparation of the topic. The search of literature, written sources, iconographic and cartographic sources was car-

ried out on the basis of a classical method of the historical examinations. Field architectural examinations in situ consisted in the measurement of the building material (see table), analysis of the wall and detail structure, comparison of stratigraphic and technological measurements as well as functional and constructional analysis of the building. In two cases some measurements were made by means of a simplified analogue photogrammetry correlated with computer graphic programmes, including

mainly applications of AutoCad interface. The final stage of analytical examinations is an attempt to date a building, to undertake architectural reconstructions of particular structures and whole complexes. In this case, a method

of relative dating was employed, which allowed putting a given artifact in a certain time period by means of comparison as well as typological, synchronic and historical methods.

Table 1. Brick sizes in various parts of church walls

No	Location	Arrangement	Size	Type
1	Western façade	block block	28.0 × 14.2 × 6.8	machine
2	Western façade	block	28.5 × 12.0 × 8.8	finger
3	South-west buttress	block	29.3 × 14.1 × 6.5	machine
4	Southern façade of nave (by buttress)		28.8 × 14.5 × 6.1	machine
5	Southern façade of nave	mixed*		
6	Southern façade of nave	mixed	28.5 × 14.0 × 9.1	finger
7	Southern porch	block	28.4 × 13.5 × 9.3	finger
8	Southern porch	block	30.1 × 13.5 × 6.5	machine
9	Southern façade presbytery	Vedic	31.3 × 14.0 × 6.8	machine
10	Vestry	block	28.7 × 13.6 × 9.2	finger
11	Vestry vestibule	block	28.6 × 13.0 × 6.5	machine
12	South-east buttress	Vedic	29.0 × 13.8 × 6.2	machine
13	South-east buttress	block	29.4 × 8.6 × 13.2	finger
14	Eastern façade presbytery	Vedic	25.2 × 15.4 × 6.2	machine
15	Eastern façade presbytery	Vedic	29.0 × 14.6 × 9.0	finger
16	North-east buttress	Vedic	29.5 × 13.8 × 9.5	finger
17	Western extension	block	26.5 × 12.2 × 6.1	machine
18	Western extension	block	29.5 × 13.2 × 9.5	finger
19	Northern façade of nave	block	26.5 × 12.2 × 6.0	machine
20	Northern façade of nave	mixed	28.5 × 13.2 × 9.0	finger
21	North-west buttress	mixed	28.4 × 13.5 × 9.2	finger
		block	29.5 × 14.0 × 6.6	machine

*irregular and Vedic arrangement

Architectural transformations

The church in Dobrzyki is now a building 29.90 m long, which consists of the chancel with the dimensions 11.90 × 7.0 m and by the name with the projection dimensions 18.0 m × 13.70 m. An additional element of the building is its northern extension as well as the porch built in the south and the sacristy. The church is not built homogeneously and formal and technological differences of particular parts of the construction allowed us to distinguish five main building phases (Fig. 2).

Probably at the beginning of the church building process the chancel was erected (Phase I – Gothic). Its walls were built of bricks mainly in a Vedic arrangement and founded on the wall base made of cobble stones. Façades are arranged according to one principle. A high pedestal part, which formed the plinth, was made separate. The central part of the façade is the wall deprived of articulation with ogival windows surmounted by the belting frieze. Two massive buttresses, which support pinnacles, were placed in the eastern corners of the chancel. The chancel's eastern façade with three-axis panel gable is the most decorative (Fig. 3a). The panels in the lower part of the gable are filled with tracery decorations. In the upper part there is a panel in the form of an oculus.

As opposed to the flat external fronts, the internal chancel walls are divided into bays by means of arcade blind windows. Passages of vaults were situated between arcades. In the corners of the chancel they have a form of straight cantilevers but they were destroyed between bays. Massive ribs of the cross and ribbed vault are based on the cantilevers. The rib section is not complicated – it reminds a belt rib with slanting corners.

Probably at the same time a sacristy was converted from the chancel also in the north. Its northern façade was completely rebuilt.

The construction of the northern wall of the chancel proves that originally it was the sacristy. In the basement of the northern front, in the eastern bay there is still a semicircular arcade blind window. In the chancel interior we can see an ogival blind window situated higher. These elements show that the sacristy was planned. We cannot exclude the fact that originally it was two-storey with a small choir matroneum. Perhaps, the tunnel barrel vault along with polychrome relicts discovered recently is also original.

Probably, it was destroyed during fires and changed during later repair works. And perhaps at that time inter-bays buttresses at the southern and northern façades were also eliminated.

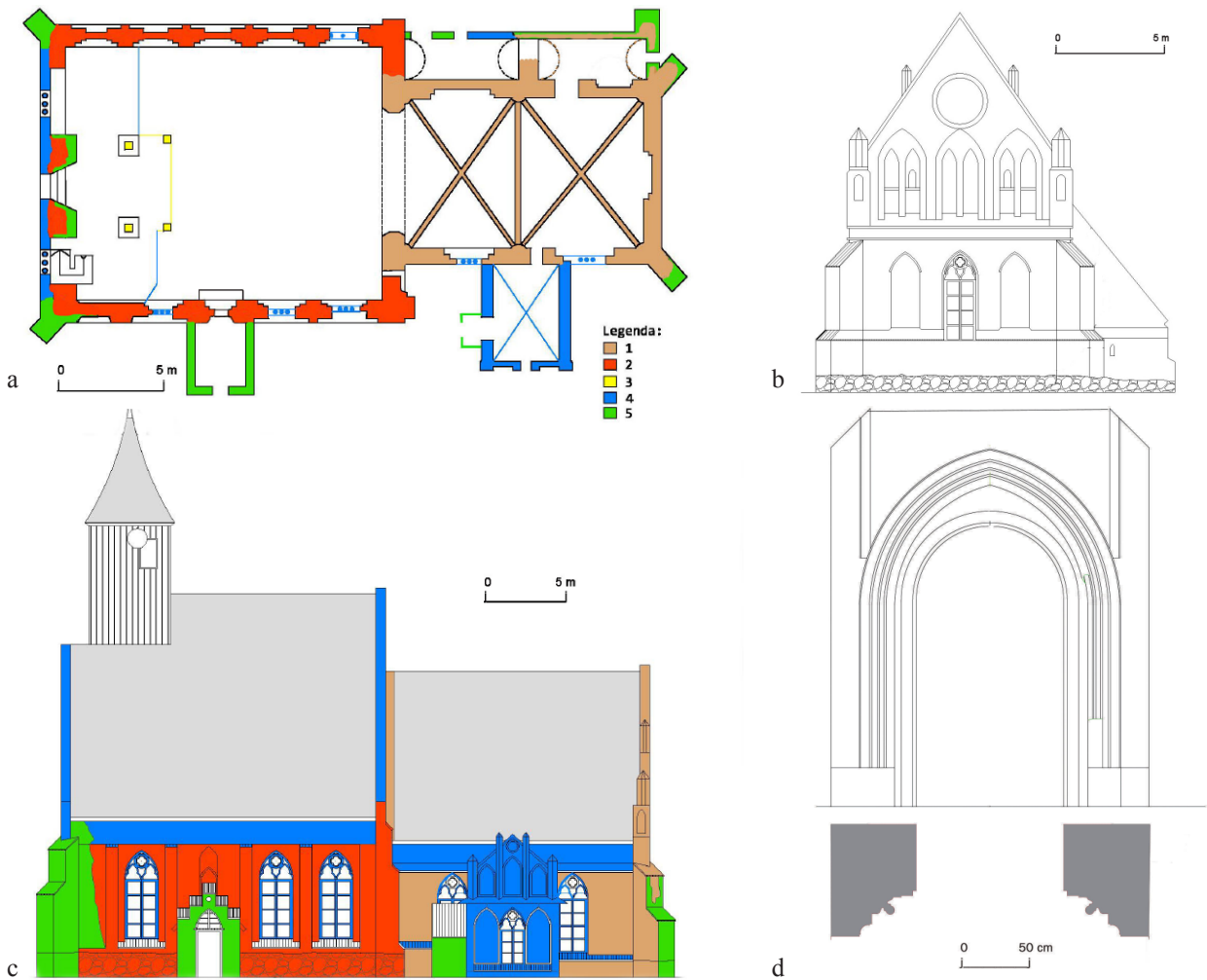


Fig. 2. Dating suggestions and measurements of the particular parts of the church: a) projection; b) eastern façade; c) southern façade; d) southern portal; 1. beginning of the 14th century; 2. first part of the 14th century; 3. circa 1776; 4. circa 1864; 5. circa 1910 (by ZWAPWr)

II. 2. Propozycja datowania i pomiary poszczególnych części kościoła: a) rzut; b- elewacja wschodnia; c) elewacja południowa; d) portal południowy; 1. pocz. XIV w.; 2. 1. poł. XIV w.; 3. ok. 1776; 4. ok. 1864; 5. ok. 1910 (oprac. ZWAPWr)

At the beginning of the chancel construction the nave was probably taken into account in the design (Phase II – Gothic), since the nave was added on the line of the rood arch. If the chancel had functioned independently for some time, diagonal buttresses would have probably survived – similarly to Mariane.

The southern and northern walls as well as eastern corners of the nave have been preserved in their original forms until today. Their walls are different from the chancel walls. The arrangement of ogival constructions can be seen both outside as well as on the interior of the structure. These are ogival windows in the southern façade,



Fig. 3. Church façades; a) eastern of the presbytery; b) northern of the nave, 2010 (photo: E. Łuzyniecka)

II. 3. Elewacje kościoła; a) wschodnia prezbiterium; b) północna nawy, 2010 (fot. E. Łuzyniecka)

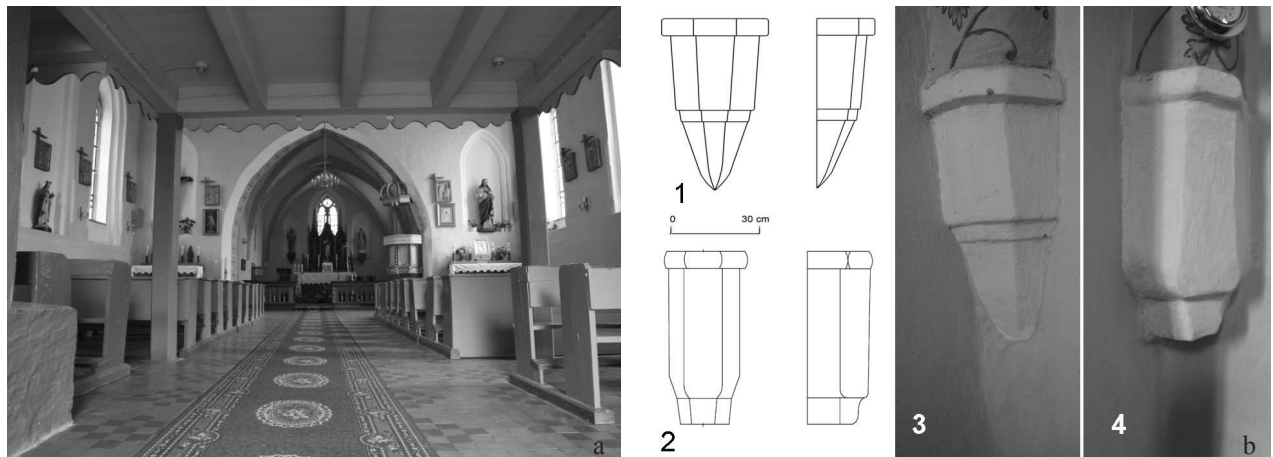


Fig. 4. Church interior: a) nave and presbytery ; b) cantilevers in the presbytery: 1, 3 north-east; 2, 4 north-west, 2010 (photo: E. Łuzyniecka)
 Il. 4. Wnętrze kościoła: a) nawa i prezbiterium; b) wspomniki w prezbiterium: 1, 3 północno-wschodni; 2, 4 północno-zachodni, 2010 (fot. E. Łuzyniecka)

while in the northern façade there are arcade blind windows of the same size. Façades were additionally segmented – between gothic arches vertical ledges (German: *lisene*) were placed and along with cornices they form a frame system (Fig. 3b)

The decision to build such diversified walls of the nave had an influence on the arrangement of the building material. It is irregular in many places but at the flat places it often has the Vedic arrangement. We can also state that the nave walls were built in two stages. Initially, the wall was built up to the height of four meters. At that time, profiled corners were made in the arcades. In the later period, higher parts of the walls were without these profiles. A really interesting technological aspect is the construction of the top part which separates the nave attics from the chancel. The eastern front of the gable was built of bricks with the gothic arrangement, while the western front – with the Vedic arrangement.

The nave interior was covered by the ceiling from the beginning but we are not sure whether the present ceiling, which is painted from the bottom, is also original. We do not know whether the present form of the rood arch is authentic and if it was not changed during further repair works (Fig. 4).

The main entrance to the church was situated in the southern façade, while nowadays it is covered with a later porch. It is decorated with a perspective portal with a separated pedestal part. Its reveal consists of hollows and a roll moulding. Sides of the portal are arranged in vertical ledges (German: *lisene*) among which two ogival panels are situated above the portal. They correspond to the internal ogival slender arcade blind window. In its interior there is an entrance hole which is surmounted by a section arch. Above there is a bricked-up arcade – perhaps the remnant of the window.

At the moment, it is difficult to describe the appearance of the western part of the church. The present façade was built later. The entrance to the attics was probably situated in another place than it is today. Perhaps, its remnants constitute two levels of arcade blind windows and a bricked-up window which is preserved in the western bay of the northern wall.

Construction changes in the baroque times were connected with the interior reorganization and adaptation to the requirements of the Protestant church (Phase III – Baroque). All this was connected with building a wooden western matroneum and the organ in 1776. The matroneum, which is protruding towards the nave, is sup-

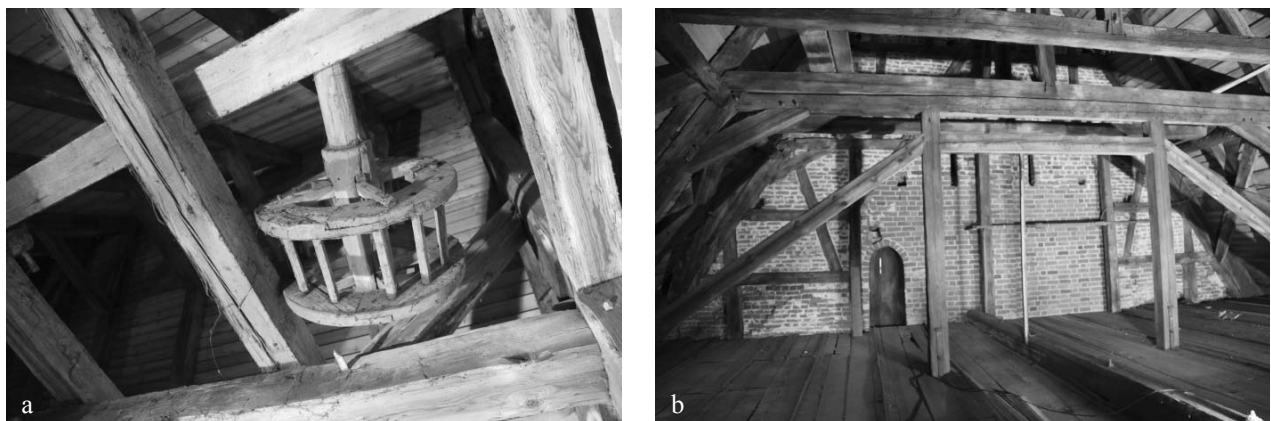


Fig. 5. Church attics: a) near the construction crane in presbytery; b) nave, 2010 (photo: E. Łuzyniecka)

Il. 5. Strychy kościoła: a) koło dźwigu budowlanego w prezbiterium; b) nawa, 2010 (fot. E. Łuzyniecka)

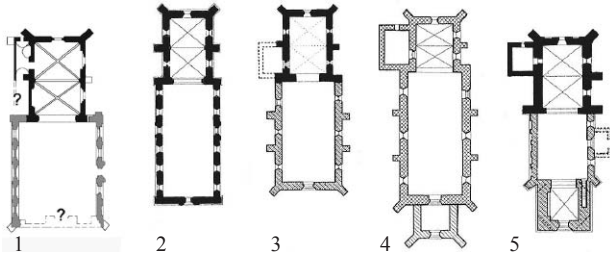


Fig. 6. Churches with similarly planned presbyteries: 1) Dobrzyki; 2) Grutta; 3) Papowo; 4) Grzywno; 5) Niedzwiedź (by ZWAPWr)

Il. 6. Kościoły o podobnie rozplanowanych prezbiteriach: 1) Dobrzyki; 2) Grutta; 3) Papowo; 4) Grzywno; 5) Niedzwiedź (oprac. ZWAPWr)

ported by four columns which reach the ceiling. It is possible that in this period the wooden roof framing of the nave was built, which was based on the built up eastern top with timber framing (Fig. 5). Probably the pulpit also dates from the Baroque times. We can also assume that at that time the sacristy interior was extended to the west direction. However, in order to confirm this thesis some additional examinations are necessary.

We do not know the reasons behind such extensive repair works of the church, which probably took place in 1864 (Phase IV – neo-Gothic). The repair consisted in changing or building from scratch the whole western wall and making new window tracery. This part was built of machine bricks with a block arrangement. Concurrently, a new main entrance was built which led under the choir matroneum.

At the same time a new sacristy in the south was built, which had the form of a house extension and was covered with a gable roof. Its southern wall corresponded to the arrangements of the gothic façades of the church. In the lower part three ogivals were placed, the middle of which was a window, while the side ogivals were blind windows.

Higher, there is a top which is separated with a cornice and divided into three parts by means of pilasters changing into pinnacles. Between pilasters there are arcade blind windows. The sacristy interior is covered with a cross vault and in its corner there is a relict of the heating stove. The chimney of this stove is visible outside at the chancel wall until today.

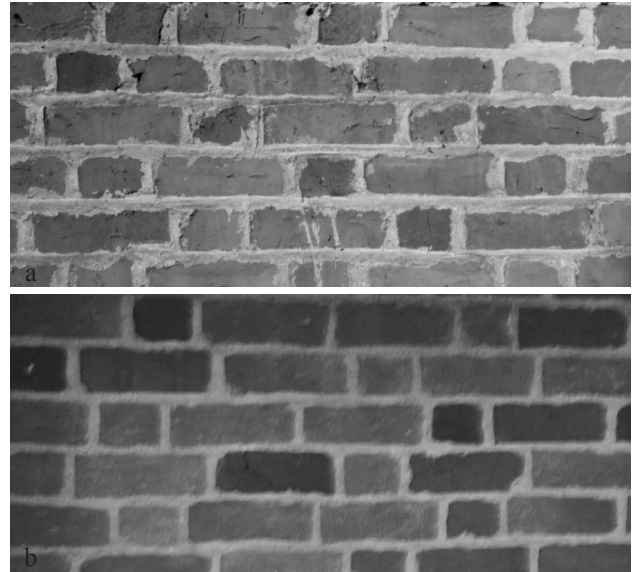


Fig. 7. Brick arrangement in gable between nave and presbytery; fronts: a) eastern, b) western, 2010 (photo: E. Łuzyniecka)

Il. 7. Układ cegieł w szczycie między nawą a prezbiterium; lica: a) wschodnie, b) zachodnie, 2010 (fot. E. Łuzyniecka)

The recent most important building works in the church are connected with the repair works in 1910 (Phase V – neo-Gothic). Then the walls were built of bricks in the block arrangement. Probably at that time the southern porch was built obscuring in this way the gothic portal. It has the form of an extension with a gable roof. Its southern wall along with the portal does not have a separate top as it was in the case of the sacristy. Also the top has a different form and it consists of pinnacles arranged in a stepped way which are covered with small gable roofs.

Probably the wall of the northern extension was renovated simultaneously with the porch. The church buttresses were reinforced and the sacristy vestibule was built. In the walls of these parts of the church the building material is identical and with the same arrangement. Moreover, the porch portal has similar proportions and it is built in the same way as the entrance to the vestibule.

Summary

The church in Dobrzyki is a structure which reflects the history of the terrain on which it was built. The idea of its construction should be connected with the times of the village location in about 1304. However, it is difficult to define unambiguously when building of the chancel started. Its simple forms may indicate that it might have started soon after the village had been settled. Analogously arranged chancels also appear in four earlier village churches in the Kujawsko-Pomorskie Voivodship (Fig.6). The church in Grutta has no tower and it has a two-bay chancel closed straight and dates from the years 1290–1295. The church chancel in Papów is also closed straight and dates from the years 1295–1298. It is thought that the church chancel in Niedzwiedź

and the church in Grzywno were built some time later, i.e. at the turn of the 14th century.

Therefore, the chancel might have been built at the beginning of the 14th century. We can also assume that the break between building the chancel and the nave was not long. The eastern part was erected while designing the western part. Approximately, the time of building the nave dates from the first half of the 14th century. Perhaps, it will possible to specify this date more accurately in the future by using absolute dating methods, e.g. by means of a still improved method of dating mortar by a C¹⁴ carbon dating method.

An interesting technological feature is worth noticing as well. The Vedic arrangement of bricks, which in par-

ticular often appears in southern Poland, is considered to be earlier than the gothic one. In the case of the church in Dobrzyki both techniques of placing the building material were used at the same time. The top, which separates the nave attics from the chancel, constitutes the proof of this. The eastern face of the top was built of bricks with the gothic arrangement, while the western front – with the Vedic arrangement (Fig. 7).

During the architectural research in 2010 it was possible to reconstruct partially the stages of building the church. However, we still do not know the original

appearance of the western part of the church and whether there was a brick tower at that time. The question whether the sacristy had one floor and if there were stairs inside is still waiting for an answer. We do not know the original colour of the interior and recently discovered polychromy may indicate the existence of preserved painting.

All these issues can be addressed during future exploration and research to be carried out, for example, along with future reconstruction works and maintenance of the church.

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Badania architektoniczne kościoła parafialnego w Dobrzykach

Badania architektoniczne prowadzono w 2010 r. w Dobrzykach, wsi położonej w województwie warmińsko-mazurskim, na terenie Pojezierza Iławskiego. Zespół opracowujący ten temat, kierowany przez prof. Ewę Lużyniecką, składał się ze studentów Wydziału Architektury Politechniki Wrocławskiej (Katarzyna Dorosz, Karolina Cichoń, Natalia Jagielska, Agnieszka Rabęda). Badania zostały przeprowadzone z inicjatywy Warmińsko-Mazurskiego Wojewódzkiego Konserwatora Zabytków w Olsztynie i dzięki pomocy księdza proboszcza Mariusza Pawlikowskiego oraz mieszkańców Dobrzyk, za co autorka składa serdeczne podziękowania.

Na podstawie badań stwierdzono, że kościół nie jest zbudowany jednorodnie, a różnice formalne i technologiczne poszczególnych części budowli pozwoliły na wydzielenie pięciu głównych faz budowlanych. Zamyśl jego budowy należy zapewne wiązać z czasami lokacji wsi około 1304 r. Trudno jednak jednoznacznie określić, kiedy zaczęto wznoszenie prezbiterium. Jego proste

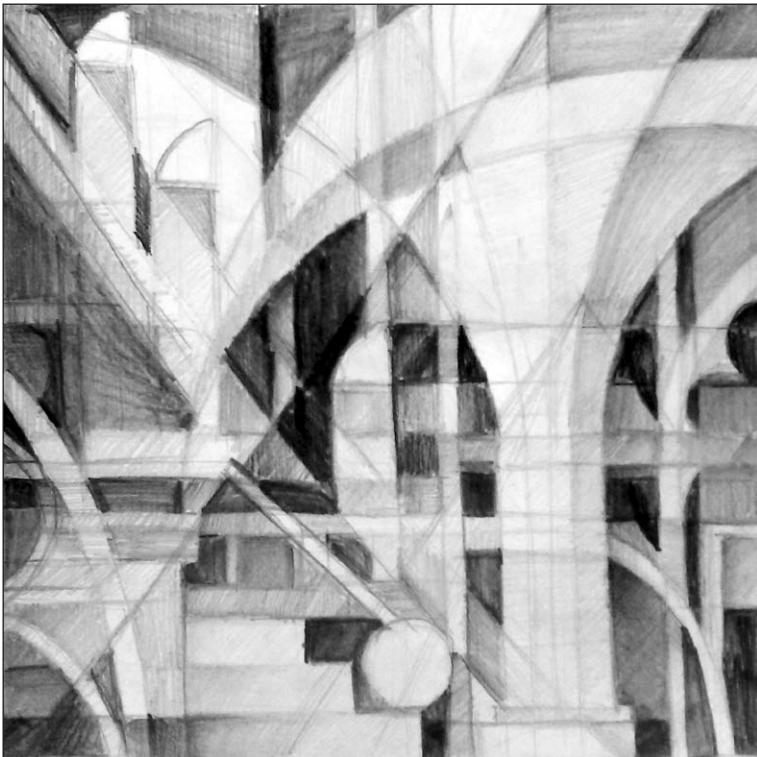
formy mogą wskazywać na to, że mogło to być wkrótce po zasiedleniu osady, czyli na początku XIV w. Można także przypuszczać, że przerwa między budową prezbiterium i nawy nie była długa. Przypuszczalnie nawę wzniesiono w 1. poł. XIV w. Kolejne przebudowy miały miejsce ok. 1776, 1864 i 1910 r.

W czasie prowadzonych w 2010 r. badań architektonicznych udało się częściowo odtworzyć etapy budowy kościoła. Nadal jednak nie wiadomo jak wyglądała pierwotnie część zachodnia kościoła i czy istniała w tym czasie murowana wieża. Na odpowiedź czeka także pytanie, czy zakrystia była piętrowa i czy w jej wnętrzu były schody. Nie jest także znana pierwotna kolorystyka wnętrza, a odkryte ostatnio polichromie mogą wskazywać na istnienie zachowanych malatur. Na wszystkie te pytania można będzie odpowiedzieć podczas przyszłych badań i obserwacji, prowadzonych być może podczas kolejnych remontów oraz napraw kościoła.

Key words: architektura, church, community, Dobrzyki

Słowa kluczowe: architektura, kościół, parafia, Dobrzyki

Translated by B. Setkowicz





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The Wall Painting in the Franciscan Church of St. John the Baptist in Holszany: History and Conservation Works

History

Holszany is a town located on the territory of today's Belarus which was originally known as the estates of Lithuanian Dukes of Holszany, and since the 16th century – the Sapieha family. Initially, it belonged to Bogdan Sapieha who granted the local Catholic church to Evangelicals but when he got converted to Catholicism he took it back.

In 1618, the Great Deputy Chancellor of Lithuania Paweł Stefan Sapieha granted the foundation to the Franciscans in Holszany; he also built the Church of St. John the Baptist and a residential building for them. In 1774, the church was remodeled for the Franciscans' money. Its main facade was decorated with paintings of scenes from the life of its patron – St. John the Baptist, and new altars were added in about 1790. The preserved copies of the foundation documents and information from inventory records and inspection certificates from the end of the 18th century and the 1st half of the 19th century testify to those changes [6], [7], [9], [22–24]. After the failure of the November Uprising whose goal was to restore the Polish-Lithuanian Federation, many monasteries in former Grand Duchy of Lithuania were considered centers of rebellion by tsarist authorities and they were closed. Such a policy applied also to the Franciscan convent in Holszany. It was closed in 1832 and the residential buildings were handed over to the Russian army that demolished some of them. The church was the only building that was preserved for the parish (Fig. 1) [8], [14], [15], [18], [20].

In the 1930s, the Soviet authorities closed the church in Holszany and turned it, just like many other churches, into workshops. It was given back to the believers only in 1990, and at the very end of the 20th century, the Franciscan monks returned there too. However, they found the temple, which once was famous for its excellent pieces of sacred art, destroyed and devastated. There were no altar paintings, wooden pews, confessionals, Rococo ornaments, carved in wood figures of four Evangelists and St. John the Baptist that once decorated the pulpit, or the pulpit itself, which was earlier located by the side altar of St. Anthony. The wooden elements of its interior decoration were probably burned down by the workshop workers. The Belarusian muse-



Fig. 1. Church in Holszany (photo by B. Wójtowicz, 2007)

Il. 1. Kościół w Holszanach (ot. B. Wójtowicz, 2007)

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Fig. 2. Holszany interior of the church with side altars (photo: J. Szczepańska, 2008)

Il. 2. Holszany widok wnętrza kościoła z perspektywą ołtarzy bocznych (fot. J. Szczepańska, 2008)

um employees saved the marble tomb monument of the founder of the Franciscan estates in Holszany – Paweł Stefan Sapieha and his two wives (Regina and Elżbieta) from total destruction. It was moved to the Museum of Early Belarusian Culture in Minsk. What remained of



Fig. 3. Side altar of St. Anthony in the church of Friars Minor in Budslaw (photo: G. Trimakas, 1997)

Il. 3. Boczny ołtarz św. Antoniego w kościele bernardyńskim w Budslawiu, (fot. G. Trimakas, 1997)

the rich interior of the Church of St. John the Baptist and Evangelist was only marble side altars decorated with polychrome and monumental, two-stage composition: illusory painting taking up the whole wall of the presbytery with centrally located scene of Jesus's baptism in Jordan with the figure of St. John the Evangelist where the stages meet. It can be only assumed that this illusory composition of exceptional beauty and monument character was not recognized by the workers of local workshops as the altar decoration and that is why it was not destroyed (Fig. 2).

The Baroque, illusory paintings of retables in the architecture of the churches in the Grand Duchy of Lithuania became popular in the 18th century. That fashion already in the Neo-Baroque form was still widespread in the 1st half of the 19th century, and its individual examples, usually in the form of folk paintings, were still created in the 2nd half of the 19th century or even at the beginning of the 20th century. In the Grand Duchy, painted altars were not only a version of wall paintings, though most examples that have survived until today are such paintings. The archival documents of the churches, chapels and monasteries as well as original altars and research conducted by experts in polychrome have enabled the identification of over a thousand examples of painted altars, which proves that most popular among them were painted on boards made by carpenters with outline decorations. Unfortunately, only few of them have remained in their original form until today. They were painted also on plastered walls of the buildings as well as directly on bearing walls of wooden structures and on canvas spread directly on the walls of the buildings, on wooden boards or on wooden stretchers. In the relatively small church buildings in the Grand Duchy of Lithuania which were supposed to be decorated with effective altars that would meet the requirements of post-Tridentine liturgy, which was special and full of theatricals, the retables were presented with the use of illusory, perspective paintings. They did not take much room, provided a better space order, and at the same time created a sense of splendor. Such altars fulfilled the popular Baroque ideas of an "infinite world" and "universal theater". A Baroque man was not at all embarrassed by the simple materials and poor techniques which were applied to make such painted altars, because what was in fact fascinating was primarily the possibilities provided by perspective and an art of imitation, which made it possible to complete seemingly highly ambitious designs with the use of rather limited means. In the 18th century, painted altars were equally often built in the chapels of Lithuanian magnates' palaces, in the churches founded by them, in monumental monastic complexes and in simple parish and branch churches¹.

¹ The monographs by Dalia Klajumienė provide comprehensive information on the 18th century Baroque illusory painting in the churches in the Grand Duchy of Lithuania and on painted altars [11], [12].



Fig. 4. Side altar of St. Francis in the church of Friars Minor in Budslaw (photo: G. Trimakas, 1997)

Il. 4. Boczny ołtarz św. Franciszka w kościele bernardyńskim w Budslawiu (fot. G. Trimakas, 1997)



Fig. 5. Interior of the monastic orthodox church of the Basilians (currently eastern orthodox), Liady. Behind the iconostasis on the sanctuary wall, the upper section of painted altar. (photo: D. Klajumienė, 2000)

Il. 5. Wnętrze cerkwi klasztornej bazylianów (teraz prawosławnych), Liady. Za ikonostasem na ścianie prezbiterium widoczna górna część namalowanego ołtarza. (fot. D. Klajumienė, 2000)

The painted altars in the Grand Duchy of Lithuania were created by masters of different origin and class. Few original altars evidently show such differences. The main altar in the Church of St. John the Baptist and Evangelist in Holszany is a good example of “high art”. Since the moment of its creation that painting masterpiece has been described as exceptional. During the general inspection of the church in 1797, the main altar surprisingly drew a lot of attention and recognition². The same document describes the side altars in much less detail than the main one, however, it seems that the inspector was positively impressed by them³. Such a comprehensive and full of admi-

ration description of the altar (especially the main one) is rather rare and it is not a typical account. Most of the descriptions of painted altars in the 18th century and the 1st half of the 19th century were usually short and simple; by and large they included a note that the altars were built with the use of mortar or of wood, but painted with the mention of the type of substrate, sometimes indicating colors⁴.

In respect of professional painting workmanship, the main altar in the Franciscan Church in Holszany ranks among those created at that time in late Baroque style and early neoclassical altars in such churches on the territory of today’s Belarus as the Church of Friars Minor in Budslaw (Fig. 3, 4) or former monastic Church of the Basilians in Liady (Fig. 5). The chronicle written by Friars Minor from Budslaw in the years 1769–1782 states that in the years 1778–1782 their church was decorated with a group of nine painted altars

² Ołtarz Wielki Świętego Jana Chrzciiciela y Ewangelisty obtycznie na Murze Włoską Architekturą y Ręką cale doskonałą Metrowską naywyborniey y naygustowniey malowany, Osobliwą a rzadką widzianą calemu Kościolowi Czyni ozdobe; tego Ołtarza Wzobrażeń nieopisuję w szczególach, bo jako iest rzeczą nieporuszoną, tak chyba pozne Wielki lub jaki nadzwyczajny przypadek tą piękną Pamiątkę Kosztem niemającym Konwentu Holszanskiego, a Staraniem w Bogu Przewielebniejo Jmę Xiędza Kazimierza Chrapowickiego Gwardyana udziałana, Zawsze, Ucmić y ten naywyspalnieyszy zmnieyszyz potrafi widok [23, l. 109v].

³ Ołtarzow pobocznych przy Filarach umieszczonych Sześć, jako to: Świętey Anny, Sgo Antoniego z Sukienką na obrazie Srebrną, Sgo Jozefa z Kopertyna, Nayswiętey Panny Niepokalanego Poczęcia, Świętego Franciszka Serafickiego, Sgo Tadeusza z mensami murovanemi. Każda z nich o iednym Gradusie. Takowe Wszystkie Ołtarze Uniformem dzialane naylepiej w Kolory falszmarmurowane, z różną w gurze Sztukaterę; Caley tej Bazyliki iedyń staie się Osobliwością [23, l. 109v].

⁴ For instance: *na murze w optykę malowany, na muru w różne kolory malowany, na scianie płótnem wybitey optycznie malowany, z tarcic wystawiony i pod optyką malowany, optycznym sposobem na płótnie malowany, pod optyką farbą szafirową malowany*. More on descriptions of painted altars see: [12, p. 53–87].

by master Kazimierz Antoszewski (b. ? – died after 1805), whose biography indicates that he made decorations in the Franciscan Church in Dziśna (1790), the Jesuit Church in Łuczaj (cir. 1783–1795)⁵, the cathedral in Minsk and in other churches near Minsk [4]⁶. The original frescos by Kazimierz Antoszewski as well as the descriptions of his works included in sources indicate that he was an excellent painter who mastered the possibilities offered by illusory painting. Most often, he used *en grisaille* technique, and the architectural structure of his illusory altars was composed with the use of Corinthian order columns with decorated, gilded capitals. In 1940, professor Marian Morelowski, who tremendously contributed to the research of forms and artistic influences in the capital city of the Grand Duchy of Lithuania – Vilnius, put forth a hypothesis that the presbytery of the Franciscan Church in Holszany

was decorated by the famous artist from the 2nd half of the 18th century – Franciszek Niemirowski (1734–1795). He decorated churches and monasteries of the Marians as well as reformed and conventual Franciscans [17]. However, neither Morelowski nor other 20-century researchers could verify that hypothesis for rather objective reasons. One of the circumstances that made the determination of authorship difficult was that the church in Holszany was refurbished at the turn of the 19th and the 20th centuries [21]. The compositions on the interior walls were seriously overpainted, covering the original painting layer. Another renovation of the church and its bell tower was conducted in 1927 [19], however, there is no information on whether it involved the wall paintings or not.

When in 1930 the ecclesiastical buildings in the Oszmiański District were photographed, the interior of the church in Holszany was also photographed. In the picture by J. Łoziński, the main altar looks evidently “renovated” [5]. The other circumstance is the fragmentary character of the original archives of the Franciscans in Holszany. It can be only assumed that the name of the author of the main altar, praised in the inspection certificates from the end of the 18th century, must have been noted in the revenue and expense ledger from 1706–1830 which has not been found to date⁷.

⁵ At the beginning of the 20th century, the interior of the church in Łuczaj was cleaned, and at the end of the 20th century, the wall paintings inside the church were ineptly “renovated” again and that is why it is difficult to determine their original composition and colors. The elements of ornamentation and composition principles testify to the fact that they were made by Antoszewski.

⁶ The frescos in Budzław and the question of their authorship as well as other works by Antoszewski have been on many occasions discussed in Polish, Lithuanian and Belarusian scientific publications: [1]–[3], [10], [11, p. 47, 97, 206, 217, 219, 248], [12, p. 13, 46, 69, 91, 92, 188, 191, 209], [16].

⁷ That ledger is mentioned in the church and monastery inspection certificate in 1830 [23, l. 127v].

Conservation works

In 2003, a preliminary survey was conducted of the situation and the condition of the original decoration of the church in Holszany⁸. In 1992, after the period of inappropriate use of the very building of the temple during the Soviet rule, its original purpose as a place of worship was restored. The long-lasting neglect and the commercial use of the interior of the church resulted in the deterioration of its fabric⁹. That state is still visible in the adjacent monastery despite the fact that the building was only partially used (until recently there was an exhibition in a few of its rooms).

In 2003, the technical condition of the church itself was satisfactory. Its roof and the system of rainwater disposal were repaired; the gutters and downspouts were properly installed, especially taking into account the places earlier exposed to water penetration. Chipped plaster was repaired on the outside and the facade was painted. Unfortunately, not all repair works were conducted properly. The windows which were installed in the church in massive, metal frames have no horizontal pivoting system and cannot be opened that way. Furthermore, very simple stained-glass windows are

inconsistent with the interior decoration characteristic of the period. What proved more dangerous for the condition of the church, however, was the very thick, cement floor on which marble plates were placed. Raising the level of the church floor resulted not only in losing the architectural proportions of the altars which did not have any steps¹⁰ but it also brought to the church large amounts of water and soluble salts whose efflorescences are visible on the walls and altars.

The painted decoration covers the whole surface of the wall enclosing the presbytery. It shows an illusory architectural perspective. The colonnade provides a frame for the painting of the baptism of Christ in Jordan with a monochromatic figure of St. John the Evangelist above. These are not the only painted decorations of the church – right aisle is closed with a wall painting of shields with coats of arms and drapery around them. Stone altars were also painted. Their columns and other architectural elements were covered with a coat of paint imitating marble veins, and above upper cornices there are scenes difficult to interpret today as they are seriously damaged and were drastically overpainted. Probably, originally, the whole interior of the church with its architectural furnishings was covered with polychrome which must have created an amazing illusion of a uniform

⁸ The author began research commissioned by the Department of Heritage Protection at the Ministry of Culture. A few-day-long stay in the building (29 IX – 2 X 2003) enabled her to determine the condition of the painting and develop guidelines for conservation works plan

⁹ According to the accounts of the parishioners the church building was used as a warehouse, including a storage of fertilizers, which caused the salinity of the walls.

¹⁰ The archival description provides information that there was one step made of wood before the altar. At present, after the floor was raised, there are two steps.

interior with the altar scene fusing with the rows of side altars built with the use of mortar in the same tonality.

The scaffold which was set in 2003 provided access to the decoration in the section of the painting and architecture surrounding it on the north side. It was possible with its use to assess the condition of the painting in its lower section; already during the preliminary inspection it was possible to determine that it was to a large degree overpainted. The whole wall was overpainted most probably during the complete refurbishment of the church in 1927 [19]. In close inspection, however, some traces of the original painting were discovered under the overpaint. Both the forms of the figures of angels and the way the capitals were painted seriously deviated from the artistry level of the composition of the whole architectural illusion. Some differences in application of colors unjustified by *chiaroscuro* were also visible. The upper section of the decoration above the capitals of the monumental columns was clearly divided by a vertical line, poorly rendering the border between light and shadow. During the initial inspection some small fragments of overpaint were removed, which is seen in the photograph, and the preliminary findings were confirmed. Furthermore, it turned out that the original coat of paint was well preserved and its condition was very good. Overpainting resulted in losing a lot of details; the original outline was to a large extent lost, and in some places the colors of the composition were largely changed. The ornate frame was overpainted by extending the central painting sideways; the basis of the altar was built from red instead of white marble; the colors as well as the form of columns were also changed. Due to moisture and a distinct smell of mold, a few samples of paint coat were collected while making the initial inspection for laboratory tests as well as material for microbiological tests¹¹.

The information which was gathered was used to develop a plan of conservation works that was carried out in the summer seasons in 2006 and 2007.

Stage one included technical works¹². At the moment when the team of conservators came, the scaffold was already in place. Its traditional structure built with the use of wooden beams and boards was so dense that it was practically impossible to see the composition from the level of the floor or the choir. It turned out to be a serious difficulty in visual inspection of the condition of the whole painting. However, the scaffold enabled the conservators to examine all details of the monumental decoration. Before the works began, due to the results of microbiological tests, Lichenicide in alcoholic solution was sprayed in the air. The process was repeated twice in order to reduce the hazard caused by the presence of microorganisms. The agent was also sprayed in the areas close to the altar wall and in places where the traces of mold were evident. The condition of substrate seemed surprisingly good and only after

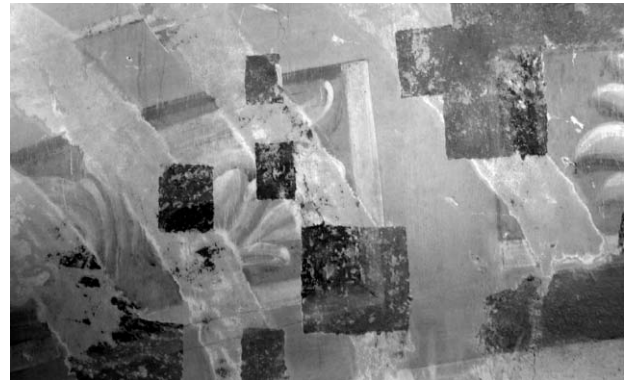


Fig. 6. Holszany; uncovered patches of the original painting in its uppermost section (photo: P. Lisowski, 2006)

Il. 6. Holszany, odkrywanie wykonywane w najwyższej partii malowidła (fot. P. Lisowski, 2006)

the overpaint was removed it was possible to repair the chipped plaster. Anyway, the surface was uniform and the number of lacunae which needed puttying was really small. There were a few longer and shorter cracks in the wall but the plasters were not extensively chipped or incoherent. The main task was the removal of overpaint.

Most coats of the overpaint could be removed dry with the use of stiff brushes. Over the years, inside the interior which was exposed to a lot of moisture and differences in temperature, the binding agent of the overpaint disintegrated. The original layers of fresco remained in a very good condition and in many places, after they were uncovered and cleaned, they did not need any additional procedures. The best proof of their mechanical strength is the fact that the original painting was first uncovered during putting out fire inside. After a coat of overpaint was removed, some traces of earlier repairs of damaged fresco were uncovered. The lacunae in the upper section of the painting were significant. The middle section above the dome was almost completely whitewashed and then covered with a thin filler of a very hard fine grain mortar. The coat was white but its texture was similar to a smooth cement filler. The uppermost section of the wall, in the place where it meets the vault, some quite large patches of original painted decoration in the form of golden panels in a gray and green arch were found. It was very difficult to remove the layer of hard filler to expose the original fragments (Fig. 6). The outline of the overpaint coat did not match the original at all. In order not to lose the original outline of the composition, in case it is seriously damaged, it was uncovered by removing small strips by grinding off the hard mortar and applying the architectural composition on its surface; only after it was sure that the original was preserved to the sufficient degree guaranteeing reconstruction were the next fragments further cleaned with the use of scalpels¹³.

The nature of damage indicates that the roof of the church must have been damaged for an extended period of time in the section directly above the altar as the painted decorations, which were made in such a durable technique, were so

¹¹ The Laboratory of the National Museum in Warsaw also conducted chemical tests (Elzbieta Rosłonec) and microbiological tests (Iwona Pannenko).

¹² In that stage, the works were conducted by the following conservators: Renata and Piotr Lisowski, Barbara Wołosz, and the author of that paper, directing all works.

¹³ The method was developed by Piotr Lisowski who also uncovered this section of the painting.



Fig. 7. Holszany, original signs with a pink cloud in the background pose an interesting riddle for researchers. It is possible that it is a form of signature and date (?) (photo: P. Lisowski, 2006)

Il. 7. Holszany, znaki zachowane na tle różowej chmury stanowią interesującą zagadkę dla badaczy. Możliwe, że jest to forma sygnatury i data (?) (fot. P. Lisowski, 2006)



Fig. 8. Holszany, originally a crown was painted under the cartouche and then a pope's tiara and keys of St. Peter appeared in two successive layers (photo: P. Lisowski, 2006)

Il. 8. Holszany, ponad kartuszem namalowano pierwotnie koronę, a następnie w dwóch kolejnych warstwach pojawiła się tam tiara papieska i klucze Piotrowe (fot. P. Lisowski, 2006)

severely damaged¹⁴. There were more fillings like that. The same mortar was used to fill the cracks in the uppermost sections of original fragments of the decorations. Today, it is difficult to say to what extent the last paint coat repeated the original composition which did not survive but a rather primitive outline of angels and simple architectural forms seem to indicate that their painters had to create them anew.

Fortunately, the original division of the panels, the window with the sky, and a small fragment of an angel's arm remained, which enabled the determination of its scale. Right next to it, a sign was discovered which could be a kind of signature and some writing which could be a date – unfortunately, it was partly damaged by a crack in the wall (Fig. 7). Underneath the pope's tiara and St. Peter's keys, which were painted twice, in the last and earlier coats, there is an original cartouche for the coat of arms whose field was removed with the use of a sharp tool before overpaint was applied (Fig. 8). Unfortunately, at present the existing documents do not provide sufficient information to determine the moments when those changes were made. Maybe the earlier overpaintings were made during the complete refurbishment referred to above which was conducted at the turn of the 19th and the 20th centuries [21]. The last overpainting should be connected with the renovation conducted in 1927 [19].

Some overpaint had to be removed with distilled water, and in the lower sections with the use of machines. Deeper cracks in the plaster were glued with hydraulic mortar PLM, and smaller flakings with acrylic emulsion Primal AC 33. In general, the condition of the substrate of the whole painting should be considered rather stable. Deeper lacunae and cracks were filled with lime and sand putties, whereas shallow ones were filled with whitewash.

In the following summer, after the whitewashes sea-

soned, putties cured, and the wall dried, artistic works began and they included filling the lacunae in the painted coat, paint dotting and reconstruction¹⁵. After a detailed analysis of the situation, gouache technique was applied to paint dots. As original paintings are resistant to water, the fillings could be easily removed if necessary. Due to the great amount of work as well as limited time the paint dots imitate fillings without distinct optical variations.

Large lacunae were relatively easy to fill in the composition outline as it is symmetrical. In the case of larger lacunae the outline was corrected on digital photography printouts. It was, however, difficult to maintain the right balance in *chiaroscuro*. The scaffold blocking the view of large sections of the decoration prevented viewing the whole composition from a distance, which was needed to keep the chromatic balance.

The reconstruction of the upper section of the composition was based exclusively on last overpainting. The architectural divisions were maintained according to the drawings made on hard mortar which was left. The colors of architecture were slightly corrected; the secondary, bright blue sky was not retained in all clearings. The figures of angels were painted correctly anew on the basis of the original ones which survived in the uppermost section and an angel which did not survive, by left edge of the composition. Lacunae filled and the central scene with St. John the Evangelist was corrected. After many years of overpainting, the original architectural composition was restored.

The altar painting did not undergo conservation. The preliminary stratigraphic tests indicated a number of layers. Probably, the composition was originally painted in fresco

¹⁴ As mentioned earlier, the monastery's documents do not cover all periods.

¹⁵ Ewa Świącka (director of works) and Anna Stepkowska conducted paint dotting. Aleksandra and Edgar Pill made the reconstructions.

technique. Thick, oil overpainting maybe is not the first layer of paint applied on the original painting. The next overpainting, which is visible now, consists of two phases: masterly painted figures – probably in technique of lean tempera which lost some of its binding properties and only after its surface is slightly wet can the high level of tonality of the painting be fully appreciated (Fig. 9). It is difficult to say if the painter did not finish the painting or the sections of its background disintegrated, but surely the mechanically painted landscape elements and the waves of Jordan were not painted by the same hand. However, the composition of the scene is too big for the original “gilded” frame and it was extended to cover the columns. The conservation of the altar painting is a very complex problem for conservators. A lot of observations must be made in various kinds of light as well as many places must be uncovered and chemical tests must be conducted. It is unlikely that the original composition can be recovered because oil overpaint resulted in a deep penetration of the plaster layer with a greasy, blackened binder (a number of runs visible on the frame). These works will have to be performed in the future to select the best solution. It seems that the exposure



Fig. 9. Holszany, wet fragment of the painting shows the way tonality was modeled (photo: E. Świąćka, 2007)

Il. 9. Holszany, zwilżony fragment obrazu ukazuje sposób modelowania karnacji (fot. E. Świąćka, 2007)

of a rather primitive oil overpainting which has survived under the current painting next to it would benefit the illusory altar currently restored to its original form. Maybe only a delicate correction of the visible overpainting will be the best solution.

Conclusions and prospects

The whole uncovered painting as well as its individual elements point to the great master Kazimierz Antoszewski and similarities between the altar in Holszany and his other works (Fig. 10). The lower composition which is a retable of the main altar demonstrates a number of similarities to the altars at the Church of Friars Minor in Budślów, whereas the neoclassical decorative ornaments of the illusory vaulting and the dome above the presbytery – to the decorative ornaments of the Jesuit Church in Łuczaj. Furthermore, it is easy to see the letter “C” – in the top section of the composition, next to the cartouche with a crown, in the original paint coat by the sign resembling a signature [13, photo 55] – which is the first letter of the name *Kazimierz* written in Latin. It is quite probable as in the documents of the monasteries where he decorated churches, his name appears in its Latin form: “Casimiro Antoszewski” [4, I. 37].

Although these notes do not provide the final resolution of the issue of the authorship of the wall paintings in the Franciscan Church in Holszany, they are, however, encouraging for further research. Apart from that, the synthesis of research and conservation works on this building again demonstrated that it is necessary to combine scientific research with the ones applied in the name of a better understanding and maintaining the heritage.

The painting in the church in Holszany, despite being surely the nicest, is just a small part of the conservation works. The preliminary plan of restoration of the original polychrome on the marble altars was developed; conservation of a part of one of them was the subject of a master’s thesis¹⁶. It



Fig. 10. Holszany, painting after conservation (photo: E. Świąćka, 2007)

Il. 10. Holszany, malowidło po konserwacji (fot. E. Świąćka, 2007)

¹⁶ Justyna Szczepańska, M.A. is the author of the thesis which was written in the class of Professor Tytus Sawicki at the Academy of Fine Arts in Warsaw in 2009.

will be necessary to clean the remains of oil painted wainscots from the interior and paint the vault as well as the walls with the right paint which not only will unite the interior elements in respect of colors but it will also demonstrate proper physical and chemical parameters. The emulsion paint which was applied earlier creates a film that comes off in sheets and furthermore, when contrasted with white lime, it is too

bluish to maintain the effect of illusion. The interior ventilation system will need to be improved too.

Another important issue, which goes beyond the scope of this text, involves improvement of the monastic building regained by the Franciscan fathers. The way in which the monastic buildings will be used will be the key to further works, maintenance and proper care for the historic church that demonstrates great artistic values.

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Malowidło ścienne w kościele franciszkanów p. w. św. Jana Chrzciciela w Holszanach: historia i prace konserwatorskie

W artykule omówiono historię i konserwację reliktów bogatego wyposażenia we wnętrzu dawnego kościoła franciszkańskiego św. Jana Chrzciciela w Holszanach. Kościół ten ufundował w 1618 r. podkanclerz wielki litewski Paweł Stefan Sapieha. Później ze środków franciszkanów dokonano w 1774 r. przebudowy kościoła. Jego fasada główna została ozdobiona malowidłami przedstawiającymi sceny z życia patrona – św. Jana Chrzciciela, a nowe ołtarze dostawiono ok. 1790 r. W latach 30-tych XX w. władze sowieckie zamknęły kościół, jak wiele innych zamieniając go na warsztaty. Dopiero w 1990 r. zwrócono go wiernym, a pod sam koniec XX w. powrócili tu także zakonnicy franciszkańscy. Dawniej słynącą bogactwem dzieł sztuki sakral-

nej świątynię bracia znaleźli zniszczoną i spustoszoną. W latach 2006-2007 na zlecenie Departamentu Ochrony Dziedzictwa Ministerstwa Kultury RP i w porozumieniu z Akademią Sztuk Pięknych w Wilnie przeprowadzono prace konserwatorskie, którym towarzyszyły prace badawcze. Pracami objęto zdobione polichromią ołtarze boczne i monumentalne, dwukondygnacyjne iluzjonistyczne malowidło. Zajmuje ono całą ścianę prezbiterium z centralnie umieszczoną sceną chrztu Jezusa w Jordanie i postacią św. Jana Ewangelisty na łączeniu kondygnacji. Dzięki tym pracom ta iluzjonistyczna kompozycja, charakteryzująca się wyjątkowym pięknem i monumentalizmem, odzyskała swą świetność.

Key words: paintig, church, Holszany, consreation

Słowa kluczowe: malowidło, kościół, Holszany, konserwacja

Translated by B. Setkowicz



Zygmunt Świechowski*

“The Ladder of Virtue” in Bath Cathedral

Among about thirty English cathedrals the cathedral in Bath is in every respect outstanding. It was founded by John of Tours in 1090 in violation of applicable legal regulations. That newly consecrated bishop from Normandy moved the headquarters of the diocese from its traditional seat in Wells to the Benedictine abbey in Bath. It was possible only because of an insolent act of simony “anointing the king’s hand with silver” [1, p. 261]. This was the beginning of a few-decade-long dispute over the cathedral status between the main chapters of both cities, which was over only after the Salomon’s decision was made to grant them both a status of cathedral governed by the same bishop. It can be assumed that the motivation of translocation to Bath was not so much the prestige of a city with Roman roots as the intent to take over the hot water springs which possessed healing qualities and were a source of significant revenues. The fact that the resort created by the Romans was the favorite meeting place for British high society in the Middle Ages was equally important for the resourceful bishop, and it remained popular until the beginning of the 20th century. During the times of John of Tours, King William II was one of the visitors of Bath who listened to the medical advice of the prelate. In order to authorize the controversial translation the construction of a huge cathedral basilica with a large choir in the presbytery and a circular ambulatory open to the transept began immediately. The building which was constructed consistently in line with the grandeur typical of the early Norman period survived until the end of the 15th century when Olivier King – the bishop of Bath and Wells – made a decision, unusual in English conditions, to demolish the Romanesque building [1, p. 508]¹. Due to both the respect for the past and the practicality of the people inhabiting the British Isles most interven-



Fig. 1 Cathedral in Bath, west front 2009 (photo: Z. Świechowski)

Il. 1 Katedra w Bath, elewacja zachodnia 2009 (fot. Z. Świechowski)

tions in the ecclesiastical buildings included extensions, conversions, sometimes architectural style updates, preserving the earlier structural elements. In this case, however, it seems that Bishop King’s foundation which used only the footings of the earlier cathedral’s nave was much smaller. It can be assumed that in this case the point was to develop architecture which would fit the refined tastes of the elegant resort’s clientele (Fig. 1). In 1500, Bishop King commissioned that task to two royal architects Robert and William Vertue [7, pp. 197–201]. They were famous for their boast, typical of Renaissance,

* Polish National Committee of International Council on Monuments and Sites ICOMOS

¹ Cannon J., o.c. p.508, note 6, after unpublished doctoral dissertation by L. Moncton, 1999: *Late Gothic Architecture in South West England: Four Major Centres of Building Activity at Wells, Bristol, Sherborne and Bath*



Fig. 2 Cathedral in Bath, west front, fragment of the ladder of virtues on the north side 2009 (photo: Z. Świechowski)

Il. 2. Katedra w Bath, elewacja zachodnia, fragment drabiny cnót po stronie północnej 2009 (fot. Z. Świechowski)

of their own capabilities and they declared that the quality of vaulting designed by them for the new cathedral would surpass everything that had been designed earlier in England and France (*"Ther shal be noone so goodeley, neither in England nor in France"*). Indeed the fan vault designed in the nave by the Vertue brothers in Bath significantly exceeds in its scale and affluent ingenuity the previous attempts at application of this kind of vault limited to Lady Chapels – Marian chapels designed on the axis of presbyteries as well as so called chantry-chapels – small chapel annexes frequently erected over the burial-place of the founder. An adequate or maybe even a higher level of perfection was achieved by the same team of architects in the construction of royal chapels founded by Henry VII designed at the same or around the same time at Westminster Cathedral and King's College in Cambridge [7, pp. 197–201]. Their vaults, which are considered to be the most important masterpieces of court school at that time (the 1st quarter of the 16th century), are the pinnacle of sublimation of fan vaulting forms that were constructed after the 1360s. The most original part of the cathedral in Bath is, however, the west front dominated by a huge window with moderate tracery. Most of them feature vertical accents in line with the Perpendicular style – the last great style in English Gothic². Two polygonal turrets at the height of clerestory

² The tracery window lights and divisions of the walls of the chapel in the residence in Windsor designed by William Vertue provide a close analogy. Its nave was vaulted in 1503 and the presbytery in 1506-11; com. Webb G. ,o.c. tabl. 181 B

roofs above the aisles provide the architectural frame for the window which allows the light into the nave with its exquisite fan vault. In the upper section of the gable, on its axis, above a window opening, there is a figure of Christ Enthroned and fairly damaged reliefs below. Most probably they presented the angelic host or a gallery of saints as in many other English cathedrals such as for instance its rival in Wells [1, p. 199]. However, the program of figural reliefs has no equal not only in the English architectural sculpture but in the European context as well. The frontal face of the turrets on the sides, beginning from the height corresponding to the base of the big window, features ladders with twelve figurines climbing toward the terms set above the topmost step (Fig. 2). If looked at from up close, the figurines on the ladders represent winged angels and that is why the authors of British studies, including the latest ones, tend to describe the iconography of those illustrations as Jacob's Ladder as we read in Genesis 28:11–14 that while wandering to Mesopotamia Jacob *had a dream in which he saw a ladder resting on the earth, with its top reaching to heaven, and the angels of God were ascending and descending on it. There above it stood the Lord and he said: "I am the Lord God of Abraham..."* The reliefs of the west front of the cathedral in Bath indeed feature all basic elements of the vision of Jacob's ladder such as a ladder between the earth and heaven where God is king or angels climbing the lad-



Fig. 3 Montenegro, Pivski Monastyr, fresco with the ladder of virtues on the north wall of the narthex 2009 (photo: Z. Świechowski)

Il. 3 Czarnogóra, Pivski Monastyr, fresk przedstawiający drabinę cnót na północnej ścianie narteksu 2009 (fot. Z. Świechowski)

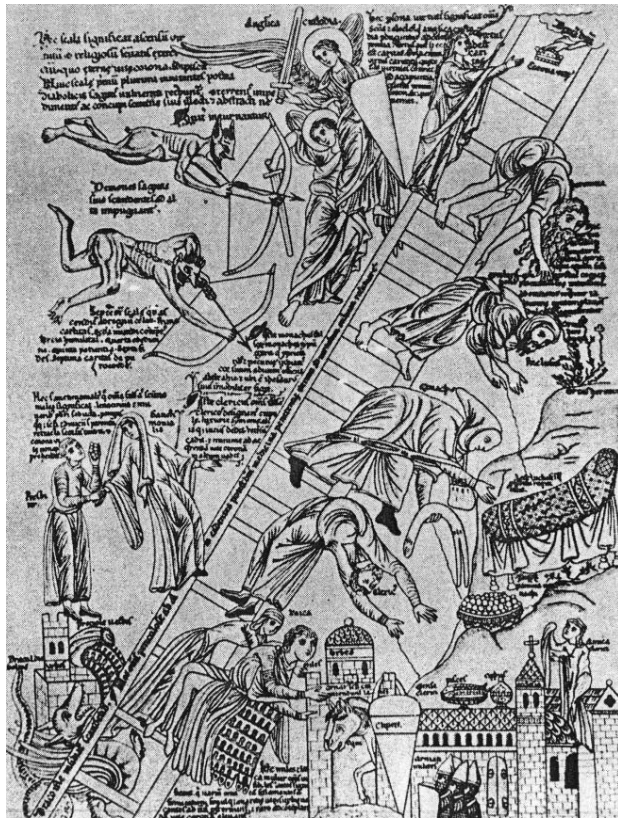


Fig. 4. The ladder of virtues in Hortus Deliciarum by Herrad of Landsberg, 2nd half of the 12th century

Il. 4. Drabina cnót w kodeksie Hortus Deliciarum Herrady z Landsbergu, 2 poł. XII wieku

der's steps. However, there is a significant difference between the vision from the books of Moses and the sculptures in Bath. Not all of the lively angelic figures on the west front climb steadily upwards, seldom looking downwards to check how high they have climbed so far. Two angels who climbed quite high, especially the one on the north side, despite still holding tight of the steps are evidently falling down. This is why it can be presumed that the reliefs decorating the front of the cathedral are not just a simple illustration of the text from the books of Moses but they refer to the iconography related to quite a large group of moralizing works. They apply the imagination stimulating motif of a ladder used to get from the misery of this world to the happiness of heavens. First of all the treatise on perfection by the Greek monk, John Climacus (died in cir. 600) titled the Ladder of Divine Ascent should be mentioned in this context [4, p. 631] where he describes the ascetic steps compared to the rungs in a ladder called the "ladder of virtues". The treatise was addressed primarily to monastic communities and therefore the oldest manuscript illuminations from the 11th century present monks climbing thirty steps of the ladder with the support of angels and under attack of devils with spears, hooks, arches, pulling them down with ropes as in the 12th-century icon from the Monastery of St. Catherine at Mount Sinai [3, p. 329]. The preserved copies of the treatise and other works borrowing its metaphorical illustrations as well as the composition of a ladder with thirty

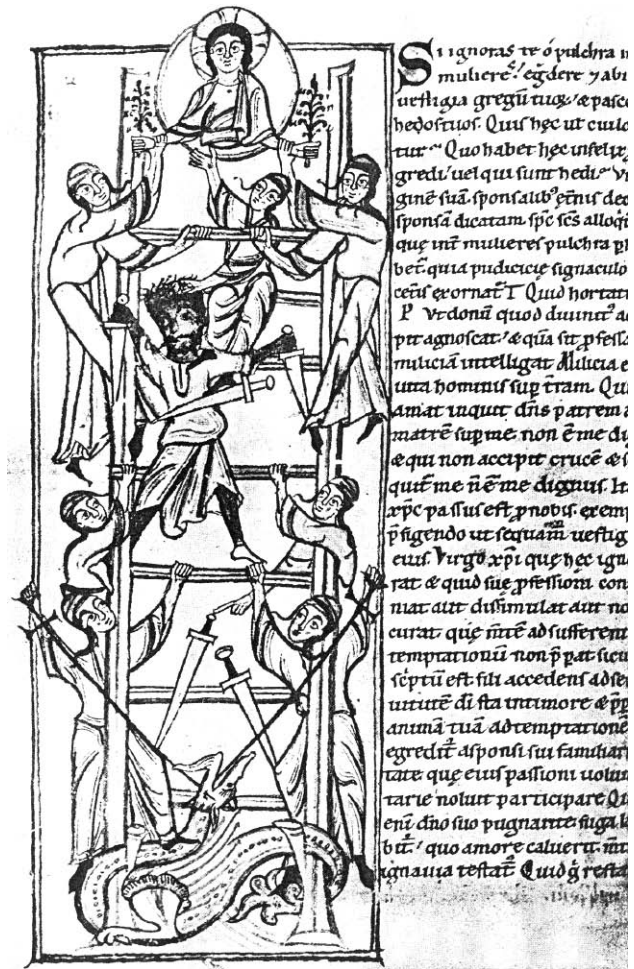


Fig. 5. The ladder of virtues, treatise Speculum Virginum, 2nd quarter of the 12th century

Il. 5. Drabina cnót, traktat Speculum Virginum, 2 ćw. XII wieku

steps along its diagonal suggest that the identification of climbers of the ladder of virtues or the personification of the demonic evil forces, sometimes reduced to an image of a dragon at the bottom section, were not closely followed. This regards not only the works by monastic scriptoriums but the painted decorations of monumental interiors of Greek churches as well (Fig. 3). Even greater freedom and creative imagination in approach to the prototypes derived from the works by Climacus prevailed in the West. The subject of the ladder of virtues is also used in one of the illustrations from *Hortus Deliciarum* by Herrad of Landsberg [6, pl. LVI]. (Fig. 4) addressed to the nuns in the convent. Apart from the attacking demons it also depicts representatives of various social estates, members of laity and clergy, combining ethical issues with social ones [2, p. 24]. This is the meaning for instance of the figure of a young cleric seducing a nun with a pouch full of money. Similar motifs of the ladder of virtue appear in the copies of very popular *Speculum Virginum*³. According

³ [5]The author describes here a.o. a large series of illustrations from the manuscript Arundel 44 in British Museum.



Fig. 6. Cathedral in Bath, west front, relief symbolizing Bishop Oliver King 2009 (photo: Z. Świechowski)

Il. 6. Katedra w Bath, elewacja zachodnia, relief symbolizujący bp. Oliviera Kinga 2009 (fot. Z. Świechowski)

to that treatise, whose main subject is the battle of virtues with vices, among the accompanying illustrations there are scenes of hand-to-hand combat along with static confrontations of the tree of virtues and the tree of vices or the Wise and Foolish Virgins. They present a female personification of Humility piercing fallen Pride with a knight's sword [5, pl. 10]. These battle scenes are completed by an image of the ladder of virtues with holy martyr Perpetua reaching the topmost step with a Christ bust set there despite her ravaging Egyptian pursuer armed with misericords and swords. Her example is followed by the nuns climbing the ladder's edges (Fig. 5). In Bath, where there was no reservation of destiny for a specific group of people, the motif of fallen angels that joined the forces of hell was used. The ones that remained faithful to the Savior are going to heaven where there is a place for them. Usually the illustrations in manuscripts depict Christ who is waiting for the climbers. It is different in Bath where there are busts of bearded saints – undoubtedly the cathedral's patrons, apostles Peter and Paul. There is one more aspect of the unique composition of architectural sculpture of the cathedral in Bath, namely the hidden personal motif of the authors. Instead of a boring inscription on a commemorative plaque, the originator of the building – Bishop Oliver King – is honored by a unique pictorial rebus on the west buttress of north nave corner (Fig. 6). The bishop's mitre is nicely embraced by an olive tree, surrounded by a crown on the main branch under abundant leafy canopy. The two ladders of virtues are the evident allusion to the last name of the authors of the program, most probably of Norman origin. *Vertue* in French means virtue. Obviously both brothers – Robert and William – while trying to achieve perfection, virtually reached the topmost step of the ladders of virtues – one ladder for each of them.

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„Drabina cnoty” katedry w Bath

Katedra w Bath której założenie a właściwie przeniesienie z Wells w 1090 r stanowiło przedmiot prawie stuletnich sporów była ogromną bazyliką wczesnoromańską. Rozebrana została na początku XVI wieku, a na jej miejscu wzniesiono z inicjatywy biskupa Oliviera Kinga świątynię zaprojektowaną i w znacznej mierze zrealizowaną przez budowniczych królewskich, braci Roberta i Williama Vertue. Najbardziej oryginalnym rozwiązaniem tej budowli, zliczanej do największych osiągnięć gotyku angielskiego, jest elewacja zachodnia. W ścianie szczytowej, po bokach z eleganckim maswerkkiem perpendykularnym dominuje rozległa kompozycja rzeźbiarska z motywami figuralnymi. Jest to unikalne w architekturze

europejskiej przedstawienie drabiny cnot, dotychczas nie rozpoznane. Źródłem jest traktat Klimakosa, jednego z ojców Kościoła Wschodniego, a dokładniej ilustracji tego dzieła oraz iluminowanych rękopisów moralizatorskich nim inspirowanych. Po drabinie, której szczeble oznaczają stopnie doskonałości wspinają się aniołowie, zmierzając ku popiersiom Piotra i Pawła, patronów katedry i postaci tronującego Chrystusa. Niektóre spadają do piekielnej otchłani. Na reliefach fasady zostały ponadto zakodowane wątki związane z fundatorem i architektami: drzewo oliwkowe z koroną pod infulą uwiecznia imię i nazwisko biskupa, a dwie drabiny cnot nawiązują do tandemu braci Vertue (franc. cnota).

Key words: cathedral, Bath, Anglia

Słowa kluczowe: katedra, Bath, Anglia

Translated by B. Setkowicz



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The Late-Gothic Town Hall in Zielona Góra and Its Remodelings in the 16th and 17th Centuries

The town hall in Zielona Góra is located in the middle of the elongated market square (Fig. 3, 4) Its present shape is defined by of a few buildings of different sizes erected at different times; it has a dominant tower topped by a neoclassical spire and its elevations indicate its Gothic origin. The town hall has three wings of which the middle single-storied one, whose façade features neoclassical decorations, is its oldest and main part (Fig. 1, 2)

Until the 19th century, one of the characteristic features of Silesian towns was concentration of commerce and administration in the buildings around the market square which created structures divided by passages. At first, different products were sold from wooden sheds and benches

grouped in rows. In bigger towns, the first masonry buildings were the town hall and the merchants' house – the cloth hall. Later designed masonry buildings used by the members of various trades included a hall with sales stands owned by the commune and a private town-



Fig. 1. View of the town hall from the south-west (photo: A. Legendziewicz)

Il. 1. Widok ratusza od południowego zachodu (fot. A. Legendziewicz)



Fig. 2. View of the town hall from the south-west (photo: A. Legendziewicz)

Il. 2. Widok wieży ratusza od wschodu (fot. A. Legendziewicz)

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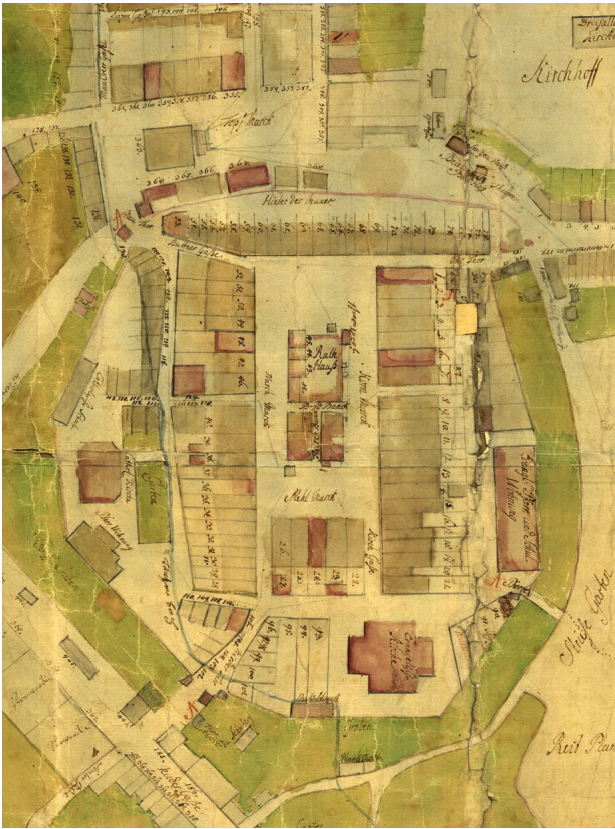


Fig. 3. Fragment of Büttner's plan from 1784 (original in the Museum of Ziemia Lubuska in Zielona Góra, file MZL-H-ZG-223)

Il. 3. Fragment planu Büttnera z 1784 r. (oryginał w Muzeum Ziemi Lubuskiej w Zielonej Górze, sygn. MZL-H-ZG-22)

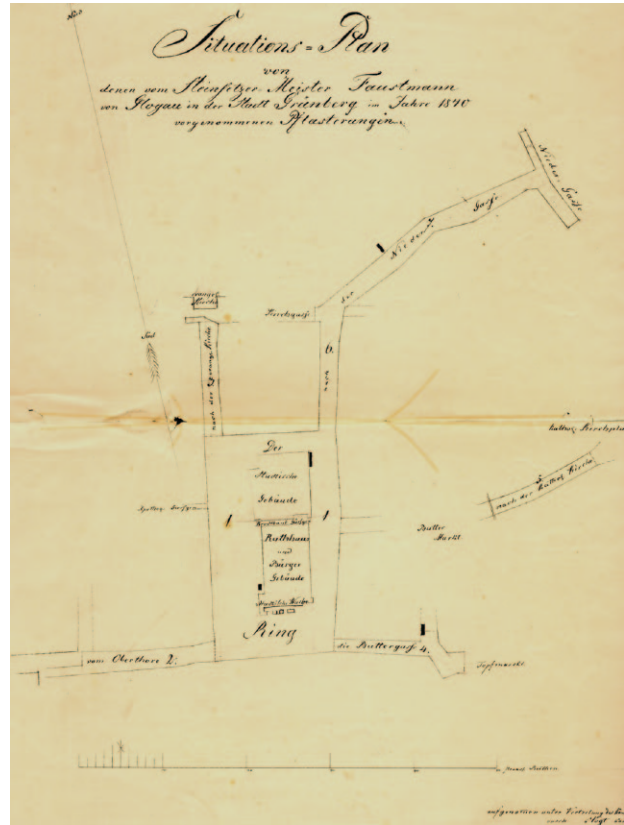


Fig. 4. Site plan of pavement works of the middle of the town in 1840 by Taustmann from Głogów (original in APZG, file 2683)

Il. 4. Plan sytuacyjny brukowania środka miasta w 1840 r. przez Taustmanna z Głogowa (oryginał w APZG, sygn. 2683)

house, with the ground floor for commercial purposes and residential upper floor [6, pp. 13–166]. Sources with layouts and view of the block in the middle of the market square in Zielona Góra show the commercial section from the final years of its existence. The plans made in 1784 and 1840 (Fig. 3, 4) show that it consisted of three complexes of buildings divided by passages, including the town hall on the south with four burgher's houses adjoining it from the east. The buildings on the north side were divided by a north-south passage. A later plan also shows that when it was made the buildings on the south side were already fully owned by the town and there was a guardhouse adjoining the town hall from the south. The drawings from the 19th century show the west side, probably a nicer one, of the block in the middle of the market square with three buildings in the form of townhouses adjoining the town hall with a neoclassical façade from the north [3, p. 70, 71]. The emergence of the capitalist economy in Silesia at the beginning of the 19th century eliminated the commercial operations controlled by the city authorities on the basis of legal norms which derived from the medieval times from the buildings in the middle of the market square. In 1857, the north part of the block of buildings in the middle of the market square in Zielona Góra was demolished except for the townhouse adjoining the town hall from the west which the city bought from a burgher in 1827 and located the City Treasury there. The

town hall was decorated with neoclassical motifs in the years 1788–1790. At the same time when it was remodeled, the guardhouse was extended. Further investments involved side wings of the town hall. Its south wing was built by adding an upper floor to the guardhouse in the 1870s. Its north wing with the City Treasury on the ground floor and the Council Room upstairs was built in 1885–1886 and one more floor was added to it in 1925 [1], [3, pp. 72–74]. From the burgher houses adjoining the east wall of the first building of the town hall, only those located at its ends were preserved in their original form. The one from the south adjoins the town hall and the one from the north, around the lower section of the tower, have a separate system of circulation.

The date when Zielona Góra was granted a town charter with a regular layout is unknown. Sources from the first quarter of the 14th century suggest that it took place in the previous century. The document of Henryk Duke of Głogów from 1302 mentions Zielona Góra as the capital of weichbild – district [5, Bd. 16, no. 2700], and the one published in 1317 mentions Commune Head Henryk [5, Bd. 18, no. 3682a]. In 1323, Henryk IV Duke of Żagań confirmed that the townsmen had the same rights as in Krosno Odrzańskie [11, no. 1]. The oldest accounts about local authorities, councilors or mayor and councilors come from 1416 and 1421 [5, Bd. 24, no. 5, p. 19], [11, no. 5].

Accounts about the town hall in Zielona Góra from the period in question regard mainly its fires and in general building activities¹. According to the account quoted from the oldest town chronicle by Johann Nippe which was lost, the town hall was built in 1321 [5, Bd. 18, no. 4122], [15, p. 315]. In 1582, it was destroyed by fire [11, no. 38]. In his historical monograph of the town, Hugo Schmid assumed, on the basis of the parish chronicle known to him, that the rebuilding of the town hall was completed eight years after that event [13, p. 175]. In 1609, the imperial commission ordered the council and the mayor to rebuild the damaged buildings, including the town hall [11, no. 52, 54]. A clock and a small bell were located in the tower in 1613–1615. Schmid mentioned that on the basis of Soviet reports quoted in Nippe's chronicle [13, p. 176]. Next damage of the town hall took place in 1627 as a result of warfare [APZG, file 1] and next year it was repaired. Then, according to the monographs of the town and notes of the recorder known to the author, new clocks and a ball were installed [13, p. 176]. The fire that broke out in Zielona Góra in 1651 burned down the town hall with archive records kept in the basement [13, p. 176]. The information about its rebuilding quoted by Schmid from the records which have not been preserved regards such construction activities as: four dormers, whole roof and floor; expenses made in 1664 on the town hall and the tower; installation of a new clock on the tower in 1666; renovation of the tower in 1669; installation of a ball and a vane on the tower in 1670; renovation of the floor of the town hall and the clock in 1679 [13, p. 176, 177]. According to a source that has been preserved the Town Council commissioned in 1677 a masonry master to rebuild the town hall and the buildings which were burned down at Niedergasse [APZG, file 14, k 159v].

Otto Wolf and Schmid, the authors of historical monographs of Zielona Góra, assumed the date of construction of the first town hall mentioned in Nippe's chronicle [13, p. 175]. [14]. The opinion expressed by Schmid about erection of a masonry town hall, after the town hall made of timber was burned down in 1582, and completion of the construction of the tower in 1604 [13, p. 175] was repeated in publications in Polish [2, p. 16, 17], [8, pp. 156–160], [12, p. 69, 70] even though there existed evidence indicating their Gothic origin. Only Gwido Chmarzyński drew attention to the blanks with pointed arches in the elevation of the upper, octagonal section of the tower, dating its construction to the 16th century [7, p. 420]. The basis for the right chronology of the town hall was provided by the graphic panorama of Zielona Góra viewed from the south-east which shows its crow-stepped gables².

The Gothic origin of the first, masonry town hall was

confirmed by the examination of the elevations conducted by Stanisław Kowalski in 1989 in connection with their renovation. The removal of damaged plaster from the neoclassical façade of the middle wing revealed a Flemish bond of the wall and blanks with cross division on the upper level, which were preserved in various degrees. The Flemish bond was also found on the upper level of the short east elevation of that wing which was revealed after demolition of the middle of the row of old burgher houses. The construction of the town hall was dated to the second half of the 15th century. The walls in Flemish bond without plaster inside the tower indicated that it was built at the same time or around the time when the town hall was built [9]. The results of these examinations were taken into account in the publication on historic sites in Zielona Góra [3, p. 69, 70]. One of the Gothic blanks was revealed in the façade. In 2005, different parts of the wings of the town hall and old burgher townhouses adjoining it as well as inside the tower were examined. These examinations were conducted in renovated rooms with brick walls as well as in the attics and a blank revealed in the façade³. The results of these examinations indicated that the Gothic town hall did not have basements; it was built with a tower and a commercial structure was designed along its east wall. Furthermore, they revealed articulation of the north elevation and the original part of the gable, elevation colors, layout of the ground floor and appearance of some interiors on that level. The information gathered about the remodelings of the town hall in the 16th–17th centuries mainly regards changes in its layout [4]. In 2008, the south elevation ground floor of the first building of the town hall was surveyed [10].

The town hall built in the Late Gothic period was a building designed on a plan of an oblong with one upper level and outside dimensions of 34×13.5 m. The height of the ground floor as well as of the upper floor was about 3.5 m. The tower, located 4.7 m from of the town hall's north end, and buildings designed for commercial purposes adjoined its east side. The walls of the town hall, placed on footings from erratics, were built as *opus emplectum* in Flemish bond made of bricks with the dimensions of 25.4–27.6×11.5–13.5×8.2–9.5 cm. The walls were filled with pieces of bricks and erratics which were detected in the lower sections of the walls in the south part of the town hall. The building material in the footings and walls was bonded with fairly hard, light gray mortar with visible lime particles. The joints in the walls from the inside were formed flush, more diligently in elevation planes, horizontal ones – as struck joints and vertical ones – as V-joints. The recesses which were discovered as well as window and door openings were topped by half brick thick segmental arches. It is worth noting that the walls on the ground floor have different

¹ Archive records regarding the town have been preserved only partially. They were damaged in the 19th century and during the Second World War. T. Dzwonkowski, *Akta miasta Zielonej Góry 1538–1945, stan zachowania i zawartość zespołu, Studia Zielonogórskie*, 1, 1995, p. 35.

² Etched plate by Johann Benjamin Brühl (in:) *Allgemeines und vollständiges Evangelische Gesang-Buch*, Sprottau, Grünberg. Beuten, Beuten 1744.

³ Apart from the authors of the paper, the following specialists participated in the examinations: architect J. Burnita, M.Sc. and archeologists: P. Janczewski, M.A. and P. Kraus, M.A. Examinations were directed by Cz. Lasota, Ph.D.

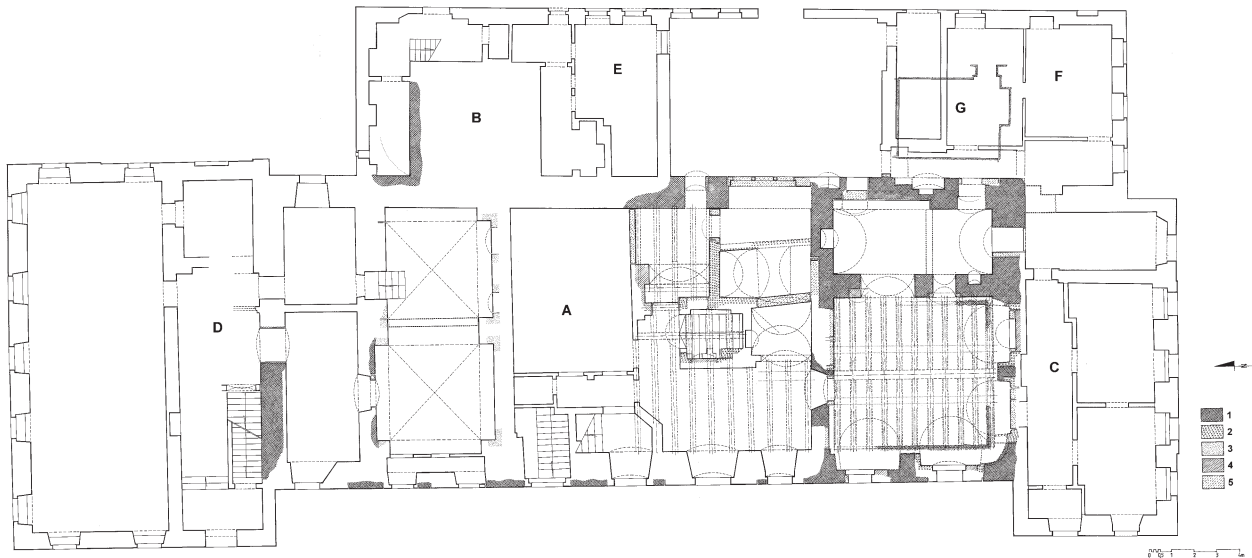


Fig. 5. Plan of ground floor of middle wing of the town hall and the tower with layers of the examined walls: 1) walls from the 15th century, 2) walls from the 1540s, 3) walls from the 1660s–1670s, 4) walls from 1788–179, 5) walls from the last third of the 19th–1st half of the 20th century, A) middle wing of the town hall, B) tower, C, D) side wings of the town hall, E, F) old burgher townhouses, G) location of Gothic basement of the chamber-shop in the commercial building (by J. Burnita, C. Lasota, A. Legendziewicz)

Il. 5. Rzut parteru skrzydła środkowego ratusza i wieży z rozwarstwieniem zbadanych murów: 1) mury z XV w., 2) mury z lat 40. XVI w., 3) mury z lat 60–70. XVII w., 4) mury z lat 1788–90, 5) mury z 3 tercji XIX–1 połowy XX w., A) skrzydło środkowe ratusza, B) wieża, C, D) skrzydła boczne ratusza, E, F) dawne kamienice mieszczańskie, G) lokalizacja gotyckiej piwnicy komory-sklepu budynku handlowego (oprac. J. Burnita, C. Lasota, A. Legendziewicz)

thickness. The thicknesses of the outer walls are as follows: the south wall – 1.5 m, the east wall from the south end to the tower – 1.38 m, the west section of the north wall – 1.15 m. The thickness of the partition walls is 80 cm – 1 m.

The level of the market square declining from south to north changed only slightly from the moment of construction of the town hall. It declines along the Gothic structure by about 80 cm. Its detected foundation ends at the most 30 cm below and above the current level of the market square.

The layers of the walls on the ground floor in the middle wing of the town hall detected during examination



Fig. 6. Ceiling from the 15th century in the south-west room wing of the town hall (photo: A. Legendziewicz)

Il. 6. Strop z XV w. w pomieszczeniu południowo-zachodnim skrzydła środkowego ratusza (fot. A. Legendziewicz)

indicate that originally that level had four rooms (Fig. 5) Two rooms adjoining the south gable wall, just like today, could be accessed from the biggest room in the middle, with the dimensions of 19.3×10.9 m. The height of the door opening, splayed to the middle room, was about 2.2 m. The Gothic character of the south rooms was revealed after almost complete removal of plaster from the walls and the soffit in the west room, still before construction works began. The west room has a beam ceiling with top boarding, installed during the construction of the town hall supported originally on two girders whose positions are marked by the seats, maximum 30×25 cm in cross section, discovered in the north and the south walls as well as the grooves in the beams supporting the top boarding. The ends of those beams have chamfered edges with grooves and are maximum 29×25 cm in cross section, are set in shallow cuts in wallplates laid on offsets of the east and the west walls. The grooves before the walls and along the removed girders go transversely, which is typical of Gothic. The boards on the ceiling which are placed close to one another indicate their tongue and groove or overlap joints. When examination began, the paint coat on the ceiling was completely removed (Fig. 6) The west room was connected with the east room by a 1.82 m high door opening with straight jambs and a door stop. North of it, there was a recess whose original fragment enabled the determination of its width and height respectively as 90 cm and 44 cm. A fragment of window jambs and an edge probably of a recess with a full brick thick arch was discovered in extensive cuts made most probably in the 20th century in the walls of the west room. An arch was detected from the window which was in the north wall of the west room in the elevation plane. Most probably

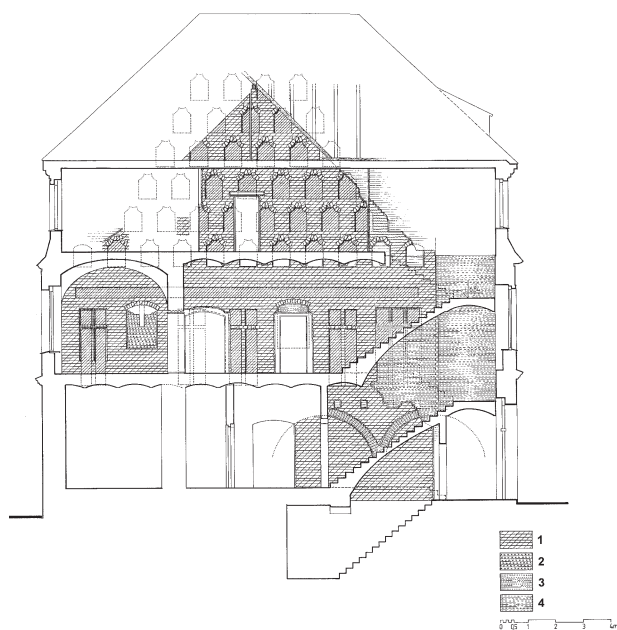


Fig. 7. The north elevation with part of gable of the building of the town hall: 1) wall from the 15th century, 2) wall from the 1540s, 3) wall from the last third of the 17th century, 4) wall from 1885–1888 (by J. Burnita, C. Lasota, A. Legendziewicz)

Il. 7. Elewacja północna z częścią szczytu pierwszego budynku ratusza: 1) mur z XV w., 2) mur z lat 40. XVI w., 3) mur z 3 tercji XVII w., 4) mur z lat 1885–1888 (oprac. J. Burnita, C. Lasota, A. Legendziewicz)

another window was located in the south section of the wall. There is a fragment of a jamb and arch edge probably of a recess at the west end of the south wall. It began about 90 cm above the footing of the wall and its arch extended above the ceiling covering the room. The brick walls were only whitewashed. Still before the first remodeling of the town hall in question, the walls were covered with thin plaster and painted white again. Some remains of that plaster were found in some of the openings mentioned above. The east room adjoining the south gable wall of the town hall was covered with a full brick thick semicircular barrel vault built some time after construction of the walls with vault blocks. It was detected that a vault with a different arch was supposed to be laid on side wall offsets about 50 cm below the one actually installed. The offsets were lifted with cladding made of vault blocks reaching the dirty brick joints. A window in the east wall provided ingress of light into the east room. An original fragment of its west splay was discovered in the plane of the examined ground floor of the elevation. Recesses were detected in the remaining walls. The heights of the wholly preserved recesses in the north and the west walls are respectively 1.35 and 1.22 m. Only one 80 cm high jamb has been preserved in the recess in the east wall. Local removal of plaster in the north part of the ground floor of the first building of the town hall revealed existence of a fourth, narrow room along its north gable wall.

Comparing the layout of the Gothic partition walls on the ground floor with the contemporary layout of the upper floor, one can come to the conclusion that both levels could have been designed together. The upper level

is divided mainly by thin walls and partitions. The layout of thick partition walls indicates two rooms adjoining the south gable wall, one spacious in the middle and the other narrow parallel to the north gable wall. One of the vaults on the upper level covers two rooms divided by a partition which is above the south-east ground floor vault with a barrel, whereas the other, corresponding to the north room on the ground floor, comprises three rooms divided by thin walls.

Based on knowledge of functional solutions of the town halls in Silesia in the 14th–15th centuries [6, pp. 49–94], one can say that the seat of municipal authorities as well as administration and court bodies were located on the upper level. The operations of the Council on the upper level are indicated by its connection with the upper section of the quadrangle of the tower above prison dungeon. The room, which is at present in the middle part of the ground floor, was probably the place where the meetings of townsmen were held and commercial activities conducted, and the rooms at its sides could have been occupied by institutions connected with administration and control of commerce – office of weights, beer and

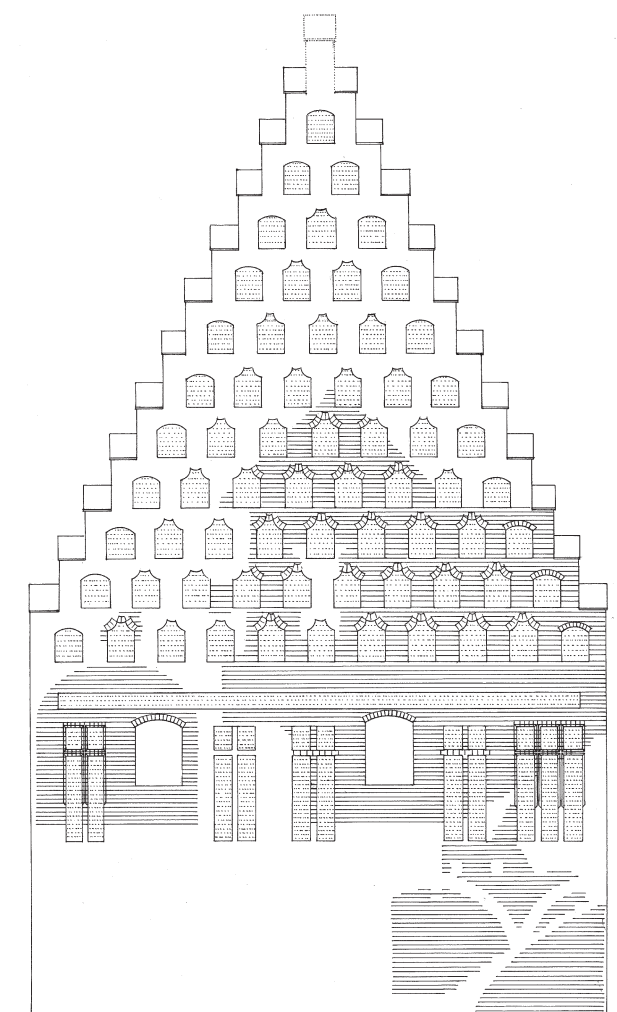


Fig. 8. Reconstruction of the upper floor in the north elevation and gable of the Late-Gothic town hall (by A. Legendziewicz)

Il. 8. Rekonstrukcja piętra elewacji północnej i szczytu późnogotyckiego ratusza (oprac. A. Legendziewicz)



Fig. 9. The west elevation of middle wing of the town hall with the wall from the 15th century (marked) (by J. Burnita, S. Kowalski)

Il. 9. Elewacja zachodnia skrzydła środkowego ratusza z zaznaczeniem muru z XV w. (oprac. J. Burnita, S. Kowalski)

wine license, etc. The different functions of the ground floor and the upper floor were manifested by rich decorations of the upper level. The upper level of Gothic town halls in Silesia, housing the town's authorities, was acces-

sible through separate circulation. In some buildings which underwent architectural examination the upper level was accessed through an external staircase. In the case of the town hall in Zielona Góra, the entry to the upper level must have been from the south side.

The upper level of the Late Gothic town hall north, west and most probably also south elevation was divided by blanks and windows located very close to one another. More is known about articulation of the upper level of the north elevation which had two window openings topped by half brick thick segmental arches and five rectangular blanks with the Latin cross. The elevation has a 40 cm high and 5 cm deep frieze panel (Fig. 7, 8.) The elongated 2.8 m high blanks, with four and six compartments at the east end, began directly from above the ground floor. Window openings started in the middle of the height of the blanks. The line of parapets of the blanks provided an imaginary border between the ground and the upper floor. Three of them in the middle had straight edges, whereas the edges of the ones on the sides, from 1/3 of the height, had three kinds of molding: with one or two hollows and with cornice with eaves. The frames of the blanks were made with the use of the first kind of molding and their mullions and transoms were made respectively of the second and third kind of molding. The wall was burned through in the fire, except for the blanks in which some red paint coat was preserved on brick wall. It was discovered in the walled-up east window opening that it had splayed jambs narrowed from outside with reveals covered with red painted plaster. This opening was walled up during the first remodeling of the town hall. On the upper floor of the west elevation there were eight blanks with four compartments and one – penultimate from the south – with six compartments, all with molded edges made of three types of molding used the same way as in the blanks of the north elevation (Fig. 9.) The location of window openings is unknown. The ones which exist now have edges made during modern remodelings of the town hall. The location of original windows in relation to blanks was

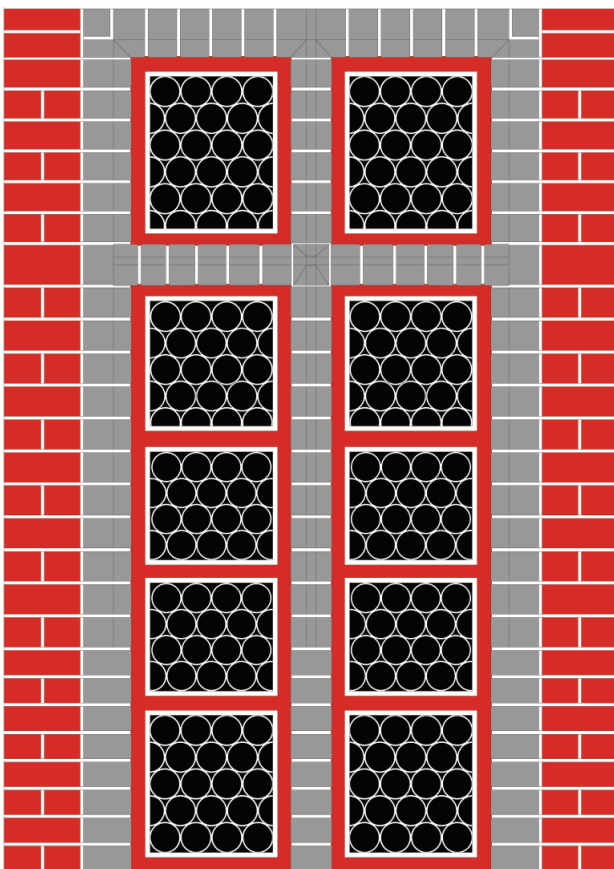


Fig. 10. Reconstruction of the colors of a fragment of the upper floor with blank on the west elevation of the first Late-Gothic building of the town hall (by A. Legendziewicz)

Il. 10. Rekonstrukcja kolorystyki fragmentu piętra z blendą elewacji zachodniej pierwszego budynku późnogotyckiego ratusza (oprac. A. Legendziewicz)



Fig. 11. The east elevation of the middle wing of the town hall and part of the tower with marked examined walls from the 15th century:
1) original Gothic face, 2) damaged Gothic face (by J. Burnita, S. Kowalski, C. Lasota)

Il. 11. Elewacja wschodnia skrzydła środkowego ratusza i części wieży z zaznaczeniem rozpoznanych murów z XV w.: 1) lico gotyckie zachowane, 2) lico gotyckie zniszczone (oprac. J. Burnita, S. Kowalski, C. Lasota)

the same as in the north elevation. While examining the piece of Late Gothic elevation revealed in the facade of the town hall it was found that the plaster covering the blanks extends beyond its edges where it formed a frame. The plaster with polychromy was cast on brick wall painted red. The painted decoration of the blank presents ten quarters, including eight in lower sections filled with imitation of crown glasses painted with white lines on black background. The frames of the quarters formed red bands extending to the compartments' molded edges. The front planes of the cross as well as the band framing the blank had a gray paint coat with white horizontal lines corresponding to the joints, also painted white, in the brick section of elevation. The exposed Late Gothic piece of elevation revealed that the white joints were reaching the blank band (Fig. 10)

The crow-stepped north gable was divided by small tightly spaced blanks with straight edges topped by draped and segmental arches. Its original part has six levels of blanks, including one with segmental arch on the first level, closing a series of draped ones from the west (Fig. 7) It is possible to demonstrate, on the basis of the articulation of the original section of the gable, that it had nine levels of blanks with the ones topped by segmental arches flanked by the draped ones on its sides (Fig. 8) One of the four examined blanks has original plaster with polychromy, including black background and fragments of white line of an unidentified motif.

Two of the detected window openings on the ground floor of the south and the west elevations had straight edges. Probably one of the openings on that floor had a distinctive portal, a fragment of whose jamb's edge and a slightly

pointed arch was found in the west elevation of the town hall's middle wing. Identification of that remnant with the entry on the ground floor of the original town hall is based on the comparison to the window opening with a segmental arch through which light was allowed to the room with original Gothic ceiling (Fig. 10) While examining the ground floor of the south elevation, remains of three openings were found. A fragment of a full brick thick segmental arch and vertical edge were revealed in the west corner which most probably are the remains of a door opening leading to a staircase. The second – most likely a window opening – topped by a half brick thick segmental arch, was located on the axis of the west room, and the third one, allowing more light to the east room, probably had a pointed arch with splayed jambs. The middle opening had stucco with lines made in wet plaster, corresponding to the arch curve. The grooves mark the borderlines between the colors of the band with white primer and colors: red and black with white in between. The plasters were applied very early, maybe still in the Gothic period as bricks painted red with white joints were detected underneath.

In respect of the general issue of texture and colors of the elevations, it can be noted on the basis of revealed facts that in the first stage of their decoration the bricks of the walls were painted red with white joints, including the blanks and probably frieze panels which then were plastered. The monochromatic bands were most likely applied around the blanks on the upper level of the elevations and the openings on both floors could have polychromatic frames with grooves in plaster. The last stage of the elevation decoration process included application of polychromy on plasters and lime milk on the wall face joints.

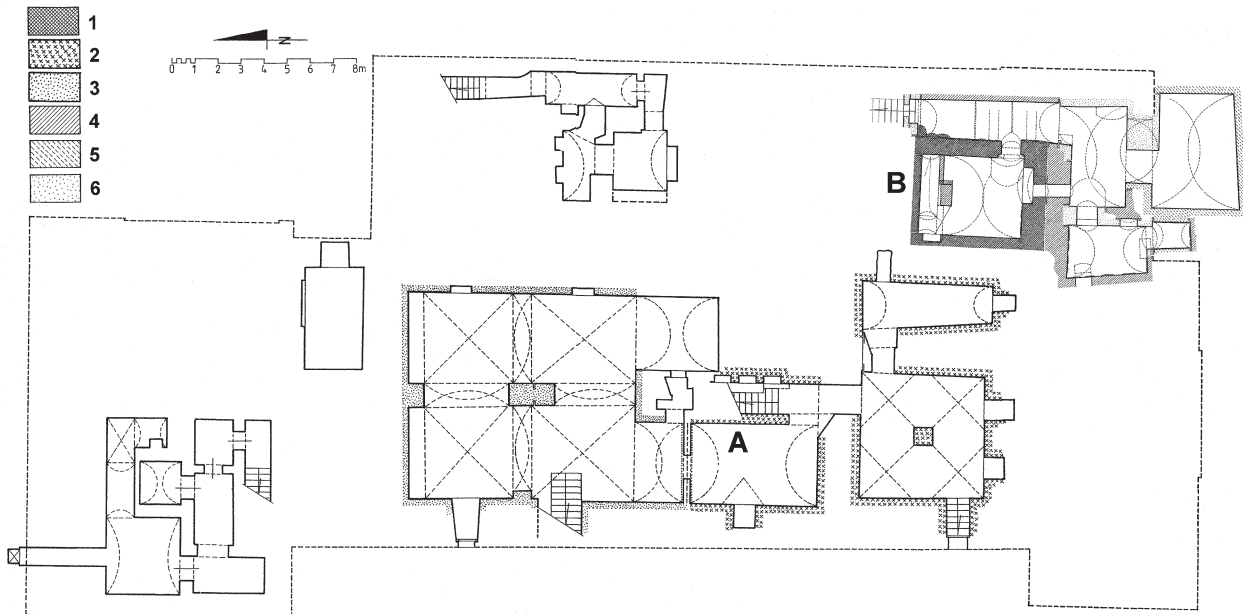


Fig. 12. Plan of basements of the middle wing of the town hall and old burgher townhouses with layers of the examined walls: 1) walls from the 15th century, 2) walls from the 1540s, 3) walls from the 1660s–1670s, 4) walls from the 17th/18th century, 5) walls from the 18th century, 6) walls from the end of the 19th century, A) basements of the first town hall building, B) basement of the chamber-shop in the commercial building (by J. Burnita, C. Lasota, A. Legendziewicz)

Il. 12. Rzut piwnic skrzydła środkowego ratusza i dawnych kamienic mieszczańskich z rozwarstwieniem zbadanych murów: 1) mury z XV w., 2) mury z lat 40. XVI w., 3) mury z lat 60–70. XVII w. 4) mury z XVII/XVIII w. 5) mury z XVIII w. 6) mury z końca XIX w., A) piwnice pierwszego budynku ratusza, B) piwnica komory-sklepu budynku handlowego (oprac. J. Burnita, C. Lasota, A. Legendziewicz)

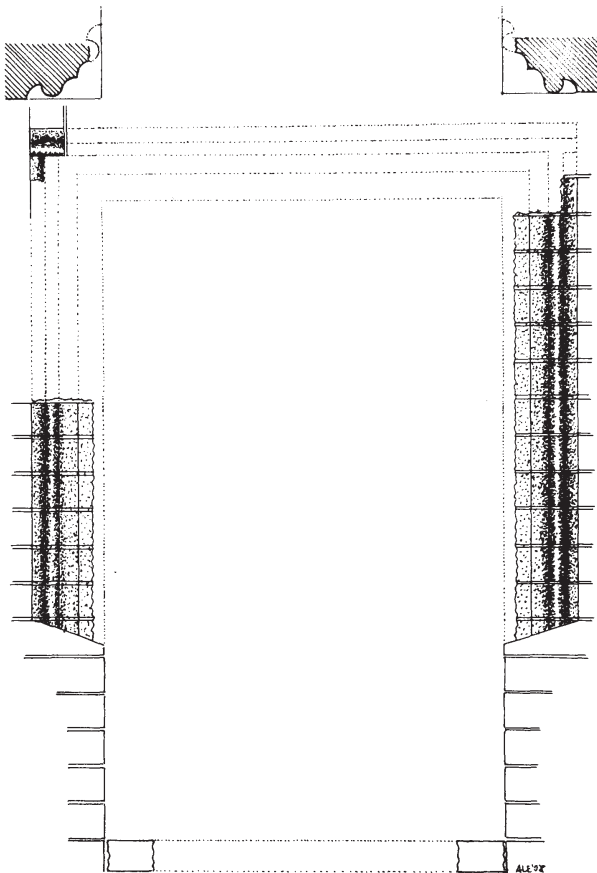


Fig. 13. Survey of the remains of the frame of a window of the ground floor in the south elevation of the original building of the town hall (by A. Legendziewicz)

Il. 13. Inwentaryzacja reliktów obramienia okna parteru elewacji południowej pierwotnego budynku ratusza (oprac. A. Legendziewicz)

The tower and the building used for commercial purposes divided into chambers-shops, which were designed as one investment, adjoined the east wall of the town hall. A wall of the town hall with a frieze panel at its top extended above the roof of the chambers. The revealed face of that wall in its section of the demolished middle part of the row of old burgher houses was severely burned through in fires (Fig. 11)

The connection of the walls between the tower and the town hall revealed in the north room on the ground floor of the building surrounding it from three sides testifies to their simultaneous construction. The dimensions of the plan of lower quadrangular part of the tower on the outside and its height measured from the level of the ground are respectively 5.1×5.9 and about 16 m. The dimensions of the bricks laid in Flemish bond with flat joints in the face of the walls of the quadrangle are as follows: 27.5–28.5×12.5–13.2×8.7–9.5 cm. The walls of the upper, octagonal part of the tower, with the same face as above, made of bricks with the dimensions of 26–27.5×12.5–13.5×8–9 cm, have been preserved up to the height of 9.2 m. All detected openings in both its parts have half brick thick segmental arches.

The quadrangular part of the tower was divided into four stages, first of which, at present inaccessible, was a prison dungeon which was probably covered with a vault with an opening. Next stages had ceilings with beams laid simultaneously with the construction of 1.5 m thick walls. The tower was connected with the upper floor of the town hall by an opening with stairs built within the thickness of its wall leading to the level above the prison dungeon. The height of that room, assuming that its floor was at the

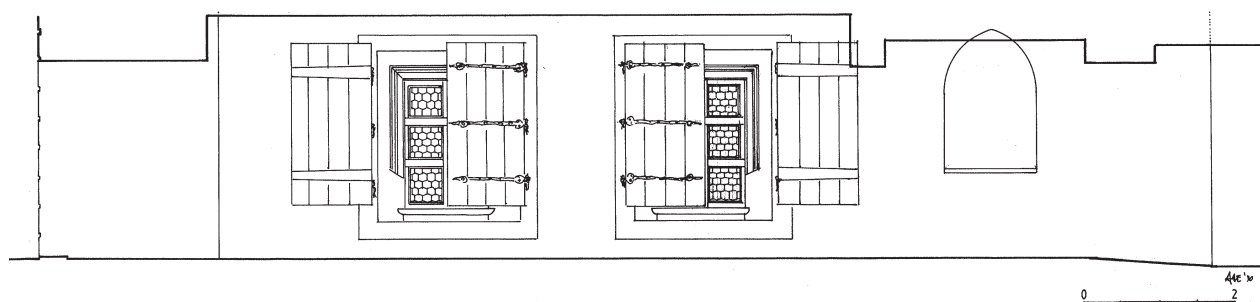


Fig. 14. Reconstruction of a part of the ground floor in the south elevation after remodeling in 1547 (by A. Legendziewicz)

Il. 14. Rekonstrukcja partii parteru elewacji południowej po przebudowanie w 1547 r. (oprac. A. Legendziewicz)

same level as on the ground floor of the town hall, was about 5 m. First of the stages covered with a ceiling was 4.1 m high, whereas the last of them, and the lowest, was 3.4 m high. The ingress of light into the quadrangular part of the tower was allowed through windows built in the north and the east walls. The jambs of the window openings were slightly splayed. The elevations of the quadrangular part of the tower had different articulations, which was demonstrated by the revealed sections of the east and the north elevations, accessible from the attic of the building surrounding it. In the case of the east elevation, two levels of blanks with segmental arches were detected, lower one with three blanks and upper one with one much bigger blank, with walled-up window clearance, located on axis. Above it there is a blank which was walled up still during construction of the tower (Fig. 11) One level with two blanks in the examined part of the north elevation does not correspond to the vertical layout of the ones detected in the east elevation. The octagonal part of the tower with 1 m thick walls and rectangular window openings was placed with the whole circumference on the walls of the quadrangle. It had two stages divided by a ceiling supported on stone corbels. Four windows were located in the walls of the 5.2 m high lower stage, one in the north and one in the south wall and two, one above the other, in the east wall. The upper stage, with openings in all walls, was covered with a ceiling whose beams were fused into the walls. The windows located in all of its walls indicate that it was the last stage of the tower designed for observation of the area. The original division of the interior of the octagonal part of the tower corresponds to two levels of elongated blanks with pointed arches in elevations. The ones located on lower level have recesses topped by two arcades springing from a corbel (Fig. 2)

Three recesses discovered in the wall of the town hall, on the ground floor facing outside (Fig. 12), the absence of decoration with blanks on the upper level wall and no window from the south in the quadrangular part of the tower testify to the plan of the construction of a building for commercial purposes divided into chambers as one investment together with the town hall adjoining it from the east. The half brick thick segmental arches of the recesses were built almost on the same level. The width and depth of the recesses were respectively 1.05–1.4 m and 45–60 cm. It was found that the 2 m high north one

started directly from the foundation wall made of erratics. The locations of three detected recesses seem to indicate that four chambers-shops adjoined the east wall of the town hall, south of the tower. One of the examined basements of an old townhouse connected at present with the town hall comes from the Gothic period. It belonged to the furthest chamber from the south (Fig. 6, 13) The walls of the 4.5×3.5 m basement originally covered with a ceiling were built from bricks and erratics. The entrance in the east wall, the recess in the south wall and upper section of the west wall in Flemish bond were built only from bricks with the dimensions similar to those used in the Gothic walls of the town hall. It is likely that retail merchants traded in cloth in the chambers. The merchants who had a monopoly in cloth trading created the elite of the Late Gothic town communities. The merchant houses – cloth halls in Silesian towns were some of the earliest masonry buildings used for commercial purposes; in some they were built even before construction of massive town halls [6, pp. 13–43].

Some Gothic structure adjoined the east wall of the town hall, north of the tower. The remains of the original abutment of the barrel vault with revealed bricks in the wall of the town hall in the north room on the ground floor of old townhouse surrounding the tower testify to that. The abutment of the barrel was placed in the groove cut in the wall of the town hall.

Changes in the layout made during the first remodeling of the town hall included basements in its south part (Fig. 12) and introduction of vertical circulation inside (Fig. 5) New walls were built from vault blocks, bricks with the dimensions of 25×30×11.4–13×8.5–9.6 cm and hard cream color mortar with lime particles after curing. The joints in the revealed brick walls of the basements are damaged. The joints in the walls on the ground floor, in Flemish bond, were smoothed for plaster. With the exception of one basement, the bricks in the face of the walls were laid in irregular bond.

The biggest of the three basement rooms, within the foundation of the town hall, located below the ground floor room with original Gothic ceiling, had a groin vault with four cells, supported on walls and a centrally located pillar. This groin vault and the barrel vault covering the neighboring room from the north were built from curved blocks. The east room is vaulted with a full brick thick barrel and its walls are built from single erratics and bricks mostly

laid in Flemish bond. The basements could be accessed from the ground floor of the town hall and from the market square. Their entry from the ground floor, which is located in the place of the existing stairs, was given the form of a vaulted tunnel. The east wall of the tunnel has three recesses with parapets at different levels, corresponding to the design of the steps of the stairs, topped by half brick thick segmental arches. The original entry to the tunnel was in the west wall of the circulation section located in the south-east corner of the biggest middle room on the ground floor. A 1 m wide opening with steps as thick as the wall, cut out in granite, led from the market square to the room with the pillar in the middle. Most likely barrels were transported to the basements where liquor was sold from the ground floor of the town hall on the ramp in the tunnel which was put on the stairs when needed. Light was allowed to the basements from the south and the west through two windows in the basement with the pillar in the middle and through one window in each of the adjacent basements.

In the circulation section built on the ground floor, there were three rooms, with the west one, covered with a barrel vault, open from the west with a wide arcade (Fig. 5). It is unknown when the arcade opening and the vault were constructed. The middle room was connected with the west one by an arcade with a full brick thick segmental arch. Its barrel vault, whose rise is below the one in the vault in the west side, is horizontal in the north part, and it rises in the south part, which suggests that upper steps of the stairs leading from the ground floor to the upper level were supported on it. What has been preserved from the south section of the wall between the middle and the east rooms is its upper section supported on a steel beam. An original fragment of the west jamb has been preserved in the door opening which was in the north wall of the east room. The spacious middle room on the ground floor of the town hall was covered with a ceiling. The south part of the beam ceiling with top boarding supported on girders was discovered before examination and the paint coat which covered it was completely removed. The chronology of the ceiling was not determined because there was no access to the ends of the beams with chamfered edges. While renovating the south-west room on the ground floor of the town hall, two girders were replaced with one (Fig. 7) and new window openings were built and painted. It should be noted that the internal jambs of the openings were built from curved blocks which were plastered and decorated probably with squares painted with black line – imitating rustication. The ends of the girder beam with chamfered edges, 42×40 cm in cross section, were inserted into the sockets cut in the walls. The appearance of the room was changed substantially by the recesses of rectangular windows cut out in the walls. These 2.15–2.20 m high and 2.40×2.80 m wide recesses in the south wall, with splayed jambs and topped by half brick thick segmental arches, started at the level of about 1 m from the floor. There is a small original fragment of frieze with floral ornaments under the ceiling in the north wall.

In order to examine the changes made in elevations of the town hall, information was collected about the south elevation ground floor and the north elevation upper

floor. The edges of the reveals of the 1.7 m high and 1.1 m wide rectangular window openings on the south elevation ground floor, from the level of 50 cm above parapets, were built from blocks with renaissance molding (Fig. 13). Some sections of the elevation wall were plastered and two paint coats, white primer and ochre, were applied on brick, molded edges of window openings⁴. The recess, located at present between the windows on the ground floor, which was created as a result of walling up Gothic window, was not revealed (Fig. 14). The east window opening on the upper level of the north elevation was reduced to a 15 cm wide slot window. Fragments of plaster with two paint coats, white and light gray, have been preserved in blanks and frieze panel.

The traditions of Gothic craftsmanship in Silesia (brick size, Flemish bond) were maintained until the end of the 16th century. The molding of the edges in window openings on the ground floor of the south gable wall of the town hall and one brick revealed in one of the jambs with impressed inscription to read: “GEORGE SCHV-BART: 1547 [T]VTT” enable dating its first remodeling to about 1547⁵.

The second remodeling of the town hall included construction of the north part of the basements (Fig. 12) and separation of a new room on the ground floor from the bigger one in the middle (Fig. 5). The north basements, just like the south ones, constitute a structure independent from the foundation from the Gothic period. The walls and vaults of the new rooms were built from bricks with the dimensions of 27.4–29.2×13.4–14.2×7–7.8 cm and fairly hard mortar with sand and addition of pulverized lime. The vaults are a full brick thick.

The basements of the town hall reached the line of the Gothic wall on the ground floor separating a narrow north room. The bigger of the younger basements, where most probably liquor was sold, is covered with a groin vault with four cells supported on walls and transverse arches springing from a centrally located pillar. The face of the walls is made from bricks laid in irregular bond which locally changes into Flemish bond and few erratics. The window located in the west wall and the wide entrance from the market square are original. While connecting the basements of both construction stages, the one adjacent to the tunnel entrance was extended to the new one with the pillar in the middle. The south wall, with bricks laid in Flemish bond, of the room separated on the ground floor goes along the transverse arches, separating the cells of the vault covering the basement with the pillar. This room is covered with two cells of the groin vault, with groins articulated in plaster, divided by a transverse arch and supported also on arcades dividing the walls. The arcades, except for the south ones, were added to Gothic walls.

According to the accounts referred to above, the town hall burned down in 1651 and the construction works con-

⁴ We are grateful to Ms. P. Celecka, M.A. who conducted stratigraphic research in 2010 for the information about the colors of renaissance frames.

⁵ *George Schubart (in year) 1547 made* transl. by A. Górski, Ph.D.

ducted in it and in the tower continued until 1679. The form of vault groins articulated in plaster in the room built on the ground floor chronologically corresponds to that period. Analyzing the information from the rebuilding period of the town hall, it can be assumed that the installation of the ball and vane on the tower in 1670 took place at the end of the period when construction works were conducted. Most probably when they began, the town hall was secured and at least some of its interiors were restored for use.

While rebuilding the tower, it was extended to reach 25 m and the layout of its stages was changed. The extension of the tower was built from new and recovered bricks in Gothic format in Flemish bond. All walls of the 2.1 m high topmost stage had rectangular recesses with circular windows topped by half brick thick segmental arches. The thickness of the walls right above the recesses was increased from inside of the tower. Their thicker sections

were supported on double half brick thick segmental arches springing from corbels.

The construction of the townhouse adjoining the town hall from the north, known from 19th century representations of the west side of the block in the middle of the market square, can be connected with the rebuilding of the town after the fire in 1651 [3, p. 70, 71]. While adding a townhouse to the town hall, the windows, blanks, and frieze panel were walled up on its upper floor, and a groove, in which the vault was set, was cut out on the ground floor (Fig. 7) It covered the passage through the block in the middle of the market square which until then was a small street dividing it into building complexes: south – with the town hall, and north – for commercial operations. The bricks used in the individual construction works had a similar format to that of the bricks used in the walls built during the second remodeling of the town hall.

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Gotycki ratusz w Zielonej Górze i jego przebudowy w XVI–XVII w.

Według zapisu kronikarskiego ratusz w Zielonej Górze powstał w 1321 r. Przeprowadzone badania architektoniczne wykazały, że ratusz wzniesiony z cegiel w XV w. był bez piwnic, jednopiętrowy, o wymiarach w obrysie zewnętrznym 34×13,5 m i wysokości ścian około 7 m. Na parterze znajdowały się cztery pomieszczenia, z których środkowe, największe miało 19 m długości i 10,9 m szerokości. Do południowej ściany szczytowej dochodziły dwa pomieszczenia, nakryte do dziś zachowanymi stropem i sklepieniem, a do północnej jedno, wąskie. Prawdopodobnie tak samo zostało rozplanowane piętro mieszczące siedzibę władzy municipalnej, organów administracyjnego i sądowiczego. Środkowe pomieszczenie parteru stanowiło zapewne miejsce zgromadzeń mieszczan i doraźnie prowadzonego handlu. Rozróżnienie funkcjonalne parteru i piętra zostało zamianifestowane bogatym wystrojem elewacji kondygnacji górnej i odrębnym rozwiązaniem wejściem do niej z placu rynkowego. Elewacje rozczłonkowane na poziomie piętra gęsto rozmieszczonymi blendami prostokątnymi, podzielonymi krzyżem łacińskim na cztero- i sześciopłowe, wieńczyła pływca fryzu. Wiadomo, że szczyt północny ratusza był uskokowy, rozczłonkowany jedenastoma poziomami małych blend nakrytych łękami kotarowymi i odcinkowymi. Fakturę z kolorystyką elewacji oraz szczytu tworzyły ceglany, pomalowany wążek ścian, na czerwono z białymi spoinami, i otynkowane, czterobarwne blendy.

Razem z ratuszem zostały zbudowane, przylegające do jego ściany wschodniej, wieża i budynek o funkcji handlowej, podzielony na komo-

ry – sklepy. Wnętrze dolnej, czworobocznej wieży, o wymiarach w obrysie zewnętrznym 5,9×5,1 m, wysokości 16 m, pierwotnie dzieliło się na cztery kondygnacje, z których dolną tworzył loch więzienny. Kondygnacje nad nim oświetlały od wschodu i północy niskie okna zawarte we wnękach z rozglifionymi ościeżkami. Zwieńczenie górnej, oktogonowej części wieży nie zachowało się. Podział jej wnętrza tworzyły dwie kondygnacje, z oknami zawartymi we wnękach prostokątnych, mające łącznie 9,2 m wysokości. Światło do kondygnacji niższej wpadało trzema oknami. W kondygnacji wyższej, przeznaczonej do obserwacji terenu okna zostały zlokalizowane we wszystkich ścianach. Dekorację elewacji czworoboku wieży tworzyły małe blendy nakryte łękami odcinkowymi. Elewacje jej części oktogonowej rozczłonkowały dwie kondygnacje blend wysmukłych, ostrołucznych.

W trakcie pierwszej przebudowy ratusza, przeprowadzonej w okresie wczesnego renesansu, wymurowano piwnice pod jego częścią południową i układ komunikacji pionowej zlokalizowano we wnętrzu. W największej z trzech piwnic, dostępnych z placu rynkowego i parteru ratusza, nakrytej sklepieniem opartym na centralnie zlokalizowanym filarze, był prowadzony wyszynk. Węzeł komunikacyjny, zawierający tunelowe zejście do piwnic i schody prowadzące na piętro, powstał w części południowej środkowego pomieszczenia parteru. Przebudowując ratusz, zmieniono także wystrój wnętrz i otynkowano oraz pomalowano elewacje, w tym blendy monochromatycznie. Zmiany

dokonane w rozplanowaniu ratusza przeprowadzone w czasie odbudowy po pożarze w 1651 r. polegały na powiększeniu piwnic i wydzieleniu nowego pomieszczenia w części środkowej parteru. Jedna z nowych

piwnic, największa ze wszystkich, nakryta sklepieniem opartym na centralnie usytuowanym filarze, została przeznaczona do prowadzenia wyszynku.

Key words: architektura, Śląsk, Middle ages, Town Hall, Zielona Góra,

Słowa kluczowe: architektura, Śląsk, Średniowiecze, ratusz, Zielona Góra

Translated by B. Setkowicz



Ewa Cisek*

Archetype and community character of the nest residential building development

A creative process – as long as we are able to follow it at all – consists in reviving the old symbols of mankind existing in unawareness, in their development and transformation into a complete work of art.

C.G. Jung [11, s. 41]

Nest arrangements of the residential building development constitute one of the possible concepts of a habitat, which in its deepest layer takes into account psychology, sociology as well as history. One of the reasons why people in the past focused on central arrangements was their archetype and community character. This form with the emphasized centre – *sacrum*, a community forum, ensured the feeling of safety and stimulated social bonds. A round and archetypal shape of the structure expressed one of the most significant symbols – the image of the world – *Imago mundi*, which exposed the place by separating the internal ordered micro-cosmos from the external, chaotic and amorphous surroundings.

Carl Gustaw Jung – a Swiss psychiatrist and psychoanalyst finds origins of the concentric form of an arrangement in the mandalic archetype (circle and centre) – a supra-personal image which has a strong ordering impact and is independent of external factors. This scheme of disintegration of one into many and integration of many into one constitutes the prototype which is part of the collective unawareness content – reflecting common human thoughts which exist in all cultures [15]. Jung compares the form of fore-image to the axis system of the crystal structure, which pre-forms it in the crystal solution although the system itself does not have any material form of existence. This form is revealed only in the way of crystallisation of ions and consequently also molecules. The archetype itself is an invisible factor; however, it instinctively pre-forms thinking, feeling and acting of the psyche. Its content appears during an individual's life when personal experience is acquired in this form. The way of psychical functioning is inherited – *pattern of behaviour*,

hence the essence of an archetype is transcendental – psychoid: its existence cannot be proved until it is activated *in concreto*, similarly to the instinct. Jung as the first one discovered collective unawareness in which archetypes exist [14]. The existence of this spiritual heritage of human development, which is revived in each individual structure, was proved by the contemporary research on fractals and by defining the so called Mandelbrot collections.

The word archetype originates from Greek and means the first form or original model, which constitutes the basis for further variations and combinations. This notion was used for the first time in the domain of architecture by Paul Zucker in *Town and Square* in 1959 and then by Aldo Rossi in *Architecture of the City*. It also appears in the works by M. Graves, Rob and Leon Krier as well as Mario Botta [17]. Jean Piaget introduces the notion of interpersonal organizational and topological schemes of the place of living. They serve the purpose of being orientated in the space and geometrical scheme are developed from them, which in turn serve the purpose of more detailed goals. One of the basic patterns consists in establishing centres, i.e. the places – nearness (near directions, i.e. roads – as the continuity and terrains, i.e. zones – as the limitation). Christian Norberg-Schulz classifies places, roads and zones as constituent elements of the existential space. The nest arrangement symbolises 'the need of ascribing to the place'. Piaget's topological schemes resemble the concepts of space which were earlier represented by a philosopher Martin Heidegger, a historian of art Dagobert Frey, architects Rudolf Schwarz and Kevin Lynch [16].

Gestalt psychology shows that complementarity is perceived as a feature which is strongly distinctive, superior to the factors of nearness and continuity. Complementarity is a feature of the space corresponding

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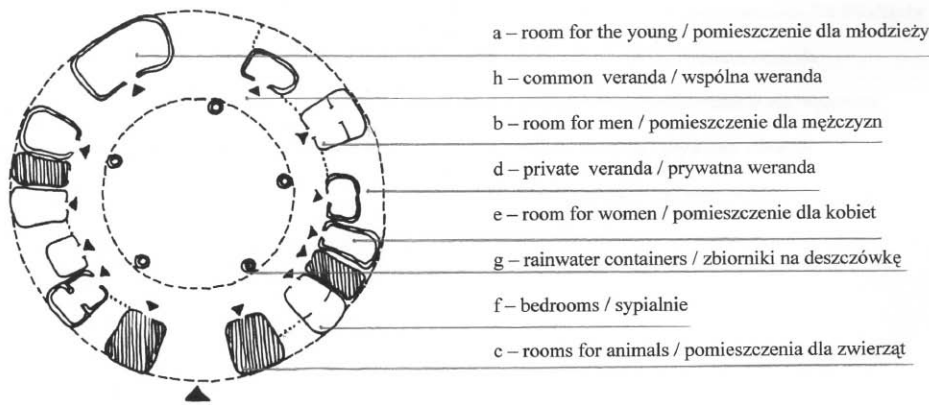


Fig. 1. A functional scheme of the residential complex of Tokolor tribe, South Sahara, Africa; prepared by the author on the basis [6, pp. 213]

Il. 1. Schemat funkcjonalny zespołu mieszkaniowego plemienia Tokolor, pld. Sahara, Afryka, opracowanie autora na podstawie [6, s. 213]

to the human subconscious need of feeling safe, which was defined by Oskar Newmann in *Defensible Space* as one of the most important behavioural factors [5], [17].

Jung's psychology gathered many experiences with regard to various mental processes and resulting actions thereof, which may be created in a human being through the contact with a symbol. It has many layers of a human experience, which stimulate appropriate associations and feelings. Archetypes are a sort of intentions – momentary and original models of energy, which shape images. They are universal for all people and are commonly expressed in mythology, architecture and art.

In the light of the above statement, the nest arrangement of residential units appears as a dynamic process which was given a physical form and each time it creates another combination of 'chaos' and 'order'. A spatial structure always develops from the centre which symbolises a multitude in oneness. The well-ordered interior has a numinotic character – originally understood as the reality of another kind and the axis around which the existential space of the society living in the complex is built. That which is 'internal' – well-ordered, constitutes the opposite of that which is 'external' – amorphous. Diverse relations between elements in the nest structures result from the character and level of dynamism of these two fundamental components of space.

The most original form of manifesting *internal sacrum* in the residential complex with the nest arrangement is the **empty space** of the square. It appears in the oldest tribal settlements with a matriarchal system, which is known from excavations. Its dynamism manifests itself in the possibility of taking on various shapes and sizes. At the same time it is also a multifunctional and common space not belonging to anyone and being under a direct impact of Nature. The internal square functions as an island – a different territory with an ordered character which is part of an amorphous ocean of the surroundings.

An empty archetypal space of the square can be seen in African habitats among settled tribal communities, among other things, in *impluvia* of Jola people in southern Senegal (Fig. 1). In these structures each residential unit is open to the internal yard – a regenerating place where four basic elements of creation impinge: air, earth, water and light. The plan of the complex constitutes 'a family life map' and imitates the act of creation – known from the western African Cosmogony – in which natural factors stimulate creation as a result of which a human friendly environment

is formed. The interior of the house is divided into male and female parts. Each residential unit, apart from a bedroom part and an attic, is equipped with a rice granary and a storage place – pantry. The rice granary image is the element which plays an important role in religious rituals delivering the power of a divine soul and ensuring the existence of the community. Among residential units there are enclosures for animals, while the internal yard is surrounded by a covered veranda – a place of common work – which is connected with the community rooms [4].

The Nomad settlements also constitute an interesting group in this type of solutions. In the case of the Australian people Achilpa each time a settlement is established the surroundings are given cosmic features – 'a place is created' by sticking a sacred pole into the ground around which temporary houses are built. This pole is carried by the tribe during wanderings and the way it is slanted shows the direction of the further march. A residential structure becomes in this way a spacious Cosmic-diagram [10].

The internal yard – in these most archetypal nest arrangements – represents the space which totally belongs to Nature and is sometimes emphasised by a centrally situated element: trees (as a sacred grove or garden), stones (as a single monolith or several stones) or water (as a spring, stream, pond, rainwater container). These elements constitute *Hierophany* (*revelation of sacrum*) thanks to which it is possible to experience *internal sacrum*. The arrangement of the whole structure develops from this internal core which unchangeably symbolises the essence of life and allows looking at the nest structure as at the mosaic of components complementing and permeating one another, in which a residential development constitutes only a part of the bigger whole [16]. Ruth Ammann – a Swiss architect and psychologist defines the nest arrangement of residential units in the following way: *these are individual spaces of life combined in a collective structure. Whereas the open yard constitutes an opposition of the house closed space – this is 'not-a-house' surrounded by houses, a free space attracting people in order to act together and create a new quality* [1, p. 164]. This corresponds to the original feelings of man by giving a feeling of safety in a group in a physical and psychological sense as well as a free and open space which makes it possible for an individual to develop creatively. Thanks to this the nest arrangements become a reflection of a Psycho-cosmic-diagram – a symbol of the human personality completeness, a universe reflected in Self. In later

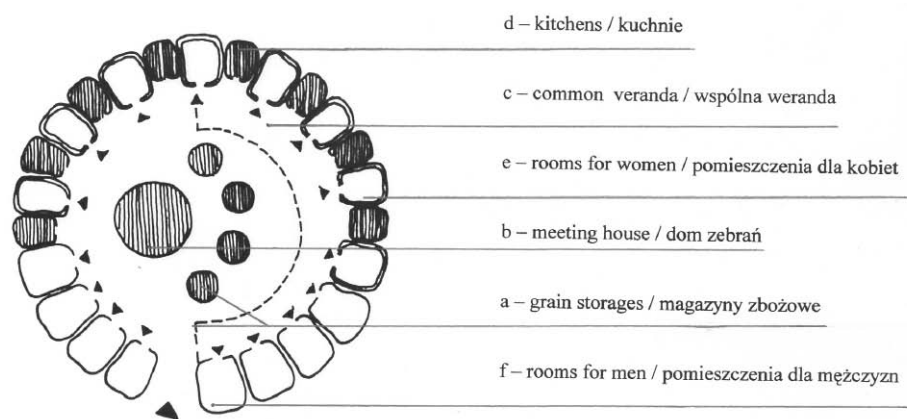


Fig. 2. A functional scheme of the residential complex of Pigmies, Cameroun, Africa: prepared by the author on the basis of [6, pp.83].

Il. 2. Schemat funkcjonalny zespołu mieszkaniowego Pigmejów, Kamerun, Afryka: opracowanie autora na podstawie [6, s.83].

solutions a temple structure as a place of prayer and contact with transcendence appears in the central part of the square.

Along with the change of the matriarchal system into the patriarchal one, the residential development constitutes a spacious frame for the superior function – symbolising the world power – the place of meeting for the elders or the head's house – the chief with storage houses for food. A spacious structure, similarly to a galaxy, still develops from its centre. In the solutions of this type a common part, which is situated centrally, is built as the first one and then a residential part. A tradition of building round huts around the square, which serves the purpose of the society integration and patriarchal authority emphasis, exists until today in the arrangements of Pygmies settlements. In the centre of the square there is a common veranda – a place of work, grain storages and a meeting house. Men live in huts in the zone of the main entrance to the complex, while women and children live in the complementary part of the circle.

Kitchens are located among houses. What is really worth noticing is the fact that huts' entrances often face one another, which shows harmony of neighbourhood (Fig. 2).

The contemporary nest settlements respect the basic elements of bonds which are pointed out by social ecologists and are visible already in the earliest archetypal settlements, i.e. *a limited size of the group of inhabitants, clearly defined and guarded area of activities (territory), integration point (centre) and organised children care* [9, p. 108]. An internal yard with a garden, which constitutes an integral part of the settlement – *integral sacrum* – additionally enriched with a community function, more and more often appears in the solutions.

The form typology of small residential complexes prepared by Gerhard Bickenbach allows us to perceive a specific character of structures in the suburbs and in the city, which proves the principle that 'Evolution teaches us to live in a group.' [2, p. 1]

Internal backyard

The form with an internal backyard constitutes a fundamental form connected with landscape. Until today, it is one of the basic forms of farmer development in many countries, in particular in the Scandinavian ones. It was used in housing estates in the suburbs as a quiet courtyard with a common or mostly private garden as well as an open recreation square of common use.

The form of the internal backyard – courtyard is associated with the following residential arrangements built nowadays: Traube form – grapes with more or less loose arrangement of residential units around a common area; Hof, Platz form – backyard, square – a regular structure built on a circle, ellipsis, tetragons and multilateral shapes; Prospekt, Hof form – semi-open with a shape similar to a horseshoe and with a bigger or smaller narrowing of a common area – Prospekt, Sack, Strasse – a dead-end street and Prospekt, Sack, gasse – a cul-de-sac. Analysing the above forms of the nest building development we can see certain form inclinations closed in two directions: opening and direct contact with the landscape or a contrary tendency – consequent closing as regards contacts with the surrounding reality. In this way, an archetypal form is adjusted to the parameters of a given place – natural conditions, the existing building development and traditional building models. The form of backyard and square evolves in

the direction of a limited space often crossed by a wheel transport – backyard, street/avenue or pedestrian precinct – backyard, shopping arcade/gallery. William C. Ellis classifies this form of the extended courtyard to the one out of two configurations of a traditional street; the other constitutes continuous development. A street or pedestrian precinct is closed from three sides and seems to be a limited space. Such a space is perceived first of all as the place and then as traffic route. The increasing opening is manifested in form of Prospekt, Hof, where the internal space intermingles with the external one allowing direct contact with the surroundings. It evolves in the direction of weak forms – linear: a dead end street and cul-de-sac [2].

A tendency to close and separate a common space from the external environment and then to open it to the surroundings – which is perfectly seen in the group systems – is a phenomenon in accordance with human *soma* – a model of behaviour. *The inhabited area is furnished similarly to the divine cosmos, an organism that lives with cyclic returns of creation time and inevitable recurrence of situations which appear again and again in the life of individuals and generations. However, cosmos is also an active organism, which during its development absorbs that which must have been taken out from chaos, a domain beyond the limits of rational*

and cosmic order. The experience of chaos and cosmos constitutes an original image of behaviour of a creative life [3, p. 127]. The nest arrangement symbolises the need of belonging to a place. When the place enters interactions with its surroundings, the problem of the interior appears (ordered *sacrum*, Cosmos) and that which is outside (amorphous *profanum*, chaos). Christian Norberg-Schulz calls this relation a fundamental aspect of the existential space. In order to enter a closed form, the element of the road is introduced – a direction thanks to which it is possible to connect the interior with the exterior. A longitudinal movement symbolises here the openness to the world – dynamism both physical and spiritual as well [16].

The psychologist Kurt Koffka claims that models which are totally or almost closed seem to be self-sufficient and stable organisations. Openings in limiting areas, which are visually connected with adjacent spaces, give a spatial or visual possibility of getting to know the surroundings of the closed space. The space does not have to be closed completely in order to be perceived as such because human visual perception is characterised by a tendency to close spaces in man's imagination [17].

Analysing particular forms of the group residential development connected with the landscape, we can see their inclination in the direction of closing the space along with concurrent discrete opening towards the natural environment – forest, park, meadow or water. Such settlements, which originate from the farmer arrangements, in their forms are usually openwork and constitute freely arranged detached structures which are connected or not with additional elements or they create a concise nest with a regular square or rectangular form of the internal courtyard with one opening.

The nest structures belonging to the other group are those which were created from the city squares performing representative and facility functions. They certainly form closed interiors.

The city square – Focus constituted a good landmark and at the same time it also performed an ordering func-

tion in relation to the city tissue. In the 18th century it was transformed into a quiet residential square, first becoming a playground and finally a central point – the space of social life for a limited group of families. Among the modern forms of housing estates with the group arrangement originating from the city square, we can differentiate the following types: Ring form – concentration of residential units around a common space additionally surrounded by buildings – mostly terraced houses; Juwel, Fokus form – underlies the complexes with a visibly exposed centre of the internal courtyard in form of dominant: small/street architecture or high green. The former is exemplified by a complex of family detached houses development in Małlice Małe at Braniewska Street in Wrocław. This development follows the principle: 'residential nest' + 'residential street'. The other form, which is arranged on solid figures, performs the function of a unique element in the urban design. The complex of family detached houses development on Monte Cassino Street in Wrocław is situated in a culminated point of Sepolno housing estate which was mainly shaped by terraced houses development. This solution shows positive aspects of the unique element: it is at the same time the ordering element which introduces a space order and complements other parts of the urban development. It also eliminates monotony and homogeneity as well as a close functional similarity of the development.

Each place is connected with a cultural factor which allows achieving a variant character in formal and functional solutions in accordance with the climate, features of the landscape and a local building tradition. It is also associated with the notion of a cultural space understood as the tradition and memory of spatial models which are determinants of the building process and identification of the safe space. The basic archetype – ring and centre becomes enriched with local building models and filled with the content which is specific for a given cultural circle. It is directly reflected in the occurrence of two models – creating a social space of communities and associations.

Social conditions

Integration of space by means of urban structures built on the basis of the group arrangements makes it possible to shape space in a more diverse way and at the same time to adapt it to the needs of man in a better way. Cosy and intimate urban interiors of different characters, kinds and functions are designed on the basis of the arrangement models known for centuries which are in accordance with principles of proportion and visual perception. They create a residential space of a new quality, enriched with elements integrating the community and specific for the particular natural environment and cultural circle. This space ensures the sense of safety and possibility of identification with a particular unique place and with a limited group of people – community of neighbours. In this way natural frames are created in which a habitat can originate and develop.

The housing estate ought to facilitate the process of establishing positive relationships among people and

meet the requirements which are formed in the process of social evolution. Primitive communities lived in groups consisting of up to 50 persons and thus establishing a settlement of a reasonable size. In such a small demographic unit all its members maintained mutual contacts and in this way they were a social community. Hunting groups and their settlements were a part of a bigger population unit which usually comprised up to 500 people who lived within a distance of about five kilometres in order to communicate quickly. There are few contemporary tribes which still live in primitive conditions until today and they have the same number of people. Social anthropologists use the numbers of 50 and 500 people to define groups which are typical of the existence of non-class societies which are deprived of organisational forms. If this number exceeded 500, the community would have to break up, separate or establish

a social hierarchic structure [6]. Despite the existence of modern means of communication, the number and structure of social groups are still influenced by the models which functioned in the past. Thanks to the evolution a human being was shaped so that s/he feels a biological need to belong to a group as well as to identify with a particular place whose size can be managed. Therefore, there is a need to create units which can be understood by humans, i.e. the units whose sizes enable identification and reinforce social bonds.

Spatial models

Contemporary studies carried out on the nest form of the residential development proved its archetypal and psychoid character, which made it possible to create a big variety as regards formal and functional solutions within one topological scheme. A big variety of variants of the urban interiors, their character and kinds of the development create richness of the scenery in which various individuals can shape their lives in a particular way and which constitute a cradle of different talents.

A limited number of residential units which are a part of the development – usually from three to twelve, which means a community not exceeding 50 people – form the social environment: the space of communities or associations.

A community model, which is based on strong family, clan, tribal, ethnic, religious or national bonds is a feature of closed and stable social groups. Territorial bonds, which result from the fact of common subordination of an individual to tradition and common good, constitute integrating factors. This model exists in the arrangements of residential developments of people who live in communities: tribal (African Pygmies, tribes of southern Senegal, Australian Arunta – Achilpa tribe, American Indians from Kansas tribe), religious (e.g. Flemish Beguines), family (e.g. traditional Norwegian developments) and neighbour (e.g. Dutch and Dannisch complexes of the *cohousing* type), where habitants resign from individual plots of land for the space which is collectively used.

Associative model – characteristic for open communities, it is based on the balance of integrating and isolating factors, harmony of individual and community interests, with a different character and weakened territorial bonds at the same time. This model appears in most of the nest developments where the common space – the internal courtyard coexists with a private space – individual gardens.

A social organisation has a great influence on land development of the complex inhabited by a tribe community – a space scheme of the settlement is a diagram of the tribe system. In communities based on matriarchy the internal square of the settlement usually remains empty and gives room for *sacrum*. In patriarchal communities there are functions connected with the world power – a chief house or a place of meeting for the elders appear in the central part of the settlement.

A settlement of a polygamous tribe in Kasuliyili in Ghana is the example of a modern patriarchal African habitat. A basic structure of such a farming settlement

At the beginning of the 1970s behavioural sciences were developed according to which a human being was perceived as a social and psychic individual whose behaviour was studied in the following domains: anthropology, sociology, psychology, ethology). The problems of a territory (studies by E.T. Hall [11], [12]), privacy (research by R. Sommer), safety and control (studies by O. Newman), cognition and orientation (research by E. Król-Bač) and finally symbolism are inextricably linked with the scale and form of the residential development [4].

constitutes a complex with a group system inhabited by a family community. It consists of several residential units, rooms for animals and food storages which surround oval squares. The enclosed area of the irregular settlement is divided into three zones: for the family elders, women with little children as well as for the chief and young men. The biggest square – the square of women is the main area of the community life: the place of meetings, ritual dances and preparing meals. Stone hearths are situated in its centre. In the elders' square there is a tomb of the family founder, which emphasizes a significant meaning of the ancestors' cult. An entrance to the complex goes through the biggest house which serves the purpose of common receptions. The chief, young men and women with children live in separate huts. Concentration of many such households creates the structure of the village 'organism'. Architecture is organic – mud and clay – and resembles forms of hives and termitaries.

Mutual accuracy of spatial and social structures (clan or tribe) is readable in residential complexes of the Oceania people. In settlements of Triobriands from Papua New Guinea, the chief's wives' huts surround his houses situated around the square for gatherings and ritual ceremonies. Ancestors' tombs and granaries are situated in the centre of the arrangement.

The Australian tribe Arunta builds its settlement in the shape of a circle which is divided into four quarters; one phratry lives in each of them. Within the settlement there is a separate common space – the place of community meetings. In this way, the circle settlement is inhabited by several families living in phratris [6].

In settlements built by Bedouins – shepherd's Arabian nomads – access to water plays a fundamental role – a source and place of prayer. These two elements accumulate a residential structure around themselves. The smallest social unit is a family, then – as regards the size – a group of relatives (they usually graze their cattle on the common pasture). In these settlements residential and farming developments are situated around the square with a place for prayers – a mosque (before Islam was created, Bedouins practiced polytheism as well as the cult of stones and stars) and the sheik's house. In the close neighbourhood of the complex there is usually a well which is connected by 'the love way'. Traditional settlements of Bedouins have a periodical character. They are characterised by changeability, variety and impermanence. Cosmos-like creation of the place confirms imperma-



Fig. 3. Two-courtyard farm Bjørnstad in an open-air ethnographical museum Maihaugen in Lillehammer, Norway. The courtyard with farm extensions (photo: E. Cisiek)

II. 3. Gospodarstwo dwu – dziedzińcowe Bjørnstad w skansenie Maihaugen w Lillehammer, Norwegia. Dziedziniec z zabudowaniami gospodarczymi (fot. E. Cisiek)

nence of all phenomena in the Universe. Changeability of the surrounding reality, including also a general experience of our body changeability means that they depend on specific reasons. The residential environment is created and then it falls apart depending on particular conditions. Its existence is a dynamic process: it is created, developed and then dies.

The form of traditional Norwegian group settlements, which are built in the eastern part of the country, is designed on the basis of one or two internal courtyards. In the past, these complexes were inhabited by family communities. The 18th-century farm Bjørnstad, which is now situated in the open-air ethnographical Maihaugen museum in Lillehammer, is a classical example. The farm has a two-courtyard arrangement. Around the first one there are three houses: two seasonal ones (winter and summer) and the so called chimneyless cabin with a cen-



Fig. 5. Nest residential development in Lillehammer, Norway (photo: E. Cisiek)

II. 5. Zabudowa mieszkaniowa gniazdowa w Lillehammer, Norwegia (fot. E. Cisiek)



Fig. 4. Farm development with a nest arrangement in Lom, Norway (photo: E. Cisiek)

II. 4. Zabudowa farmerska o układzie gniazdowym w Lom, Norwegia (fot. E. Cisiek)

trally located hearth. The following structures were also built in this part of the settlement: a granary – traditional *loft*, workshops – with residential parts upstairs, a stable, forge and henhouse. Around the other courtyard there are only facility buildings: a barn, storages, hiding places, a shed, sheep shed and sty (Fig. 3). In the close neighbourhood of the settlement there was a sauna. In the past, the farms were located in the cut off from the world valleys. Therefore, their organisation assumed self-sufficiency and autonomy. A traditional settlement plot was inhabited by one family. The complex extension was connected with a small society development – each member when achieving maturity built a new house around the common square. The farms in Gudbrandsdalen valley resemble living budding structures which are unique in their forms. Some of them comprise even several buildings [6]. Modern Norwegian nest settlements in their form refer to the old traditional solutions (Fig. 4, 5).

For old religious communities the house and settlement were not only buildings with the developed area, but also the space which was organised spiritually. Religion and architecture are two domains and two ways of human commune with eternity. In the past, they were organically connected with one another, sometimes they became separated from one another, and they became antagonistic in order to come closer nowadays. The result of this approach is not a comeback to the original unity which was natural in the pre-modern closed sacral cultures but a relation which could be defined as *a conjunction of internal harmony* (according to Janusz Bogucki) [3, p. 127]. Its beginnings are connected with small communities of friends where loving for others and the internal life are reflected in activities, signs and spatial images. The excellent examples of this type of settlements are Netherlander begijnhofs of Beguines, which constitute an attempt of personification of a spiritual experience and ethical reflection.

Hoffes – these are group arrangements with an internal and natural garden – sacrum, which form particular ecosystems in a regular city tissue. These cosy and quiet

courtyards, which are surrounded by houses whose gables are facing the centre of the arrangement, were built as early as in the 13th century in the northern provinces of what is now Belgium and Holland on the initiative of charity institutions for the poor and the elderly. Such secluded places were also inhabited by women – Beguines. Their life was simple, based on prayer and work: they cultivated the common garden within the courtyard and looked after the sick and poor people. *Hofies*, which were inhabited by them, were called *Begijnhofams*. Beguines were a religious congregation of unmarried women who lived in a catholic community; however, it was not a religious order. This form of a religious life probably originated from widows of crusaders, who devoted themselves to asceticism and charity. The areas of beginhofs were called beginages. The settlement usually consisted of individual houses built around the internal courtyard – a garden, chapel and rooms of common work. A characteristic feature of the complex was a diversity of residential units within the whole settlement – each of the houses is different and unique with regard to the formal as well as functional solution. Until today over 20 such beginages have survived. These are settlements in Brugia, Diksmuide, Kortrijk, Gent, Oudenaarde, Aalst, Dendermonde, Antwerp, Hoogstraten, Turnhout, Herentals, Lier, Mechelen, Tongeren, St. Truiden, Hasselt, Diest, Zontleeuw, Tienen, Leuven, Aarschot and Amsterdam [8].

The backyards of Beguines have a shape of an irregular tetragon which is combined with the city tissue and forms a design with the hierarchical arrangement. It constitutes a unique element, a form which dominates over the surroundings, along the streets which complement the entire arrangement. The entrance to the complex was emphasized with a stone portal of a unique form, which gave each hofje an individual character. It led to another world – a separated and ordered sacral space – *sacrum*. A human being, who crossed this border, entered a carefully cultivated garden. Inscriptions on the stone gates gave the information about the things which were situated behind them. Above the entrance to *begijnhofu* in Brugia in Flandria there is a meaningful name: ‘Mary’s Vineyard’. The association garden – *sacrum* constitutes the basis of the whole spatial arrangement of the development. A garden space of the courtyard was the place of prayers – contact with transcendence and work for the good of the whole community. A circle which is composed of residential units expresses the idea of circulation. On the one hand, it means establishment and concentration, while on the other hand it means separation of the holy area – *sacrum* from the amorphous surroundings – *profanum*. This border was often exposed by a stone bridge over the moat – a channel or river which had to be crossed in order to enter the complex. The space of the internal courtyard was not homogenous; it has visible cracks, which is further emphasized by upward opening by means of a vertical component – *axis mundi*, which constituted the so called *mythical hierophany* (according to M. Eliade [10]). The exposed central point became the place of



Fig. 6. Begijnhof in Brugia, Belgium (photo: E. Cisek)

Il. 6. Begijnhof w Brugi, Belgia (fot. E. Cisek)

cosmic planes crossing – the tunnel which connected the world reality with heaven. Forms of this holy axis, which appeared in begijnhofs are as follows: a sculpture, tree – garden or chapel – *begijnhofkerk*.

The settlements with a centrally situated element of the chapel – church are preserved, among other, in Mechlin Diest and Dutch Amsterdam.

In *begijnhofie* in Amsterdam a common garden part was placed higher in relation to the adjacent space of half-private pre-gardens connected with residential units. A restored settlement is arranged around the 15th-century church. At present, this complex is inhabited by single women. The settlement, which in the past was built for a religious community, was gradually transformed into the space of a neighbour community. E. Neff’s theory seems to prove this process: ‘Later development preserves the original arrangement’.

In certain solutions the internal *sacrum* is arranged only by means of a garden with a vertical rhythm of trees. In *begijnhofie* in Brugia situated on Minnewater Channel (Flandria, Belgium) *begijnhofkerk* is hidden in the development frontage, while in the complex interior there is a green ‘carpet’ with high elms among which a ‘stream of daffodils flows’ in spring making a particular and unique climate of the settlement. Distinct zoning of the space can be seen within the courtyard: the square centre is a common garden; moreover, some buildings have fenced pre-gardens. Gates leading to individual houses constitute a spatial threshold between the semi-public zone of the garden and the semi-private one which is connected with particular residential units. Nowadays, a part of the settlement was given to St. Benedict Order sisters, while the rest of the houses with more diverse and richer forms of gables are inhabited by old single women (Fig. 6). *Begijnhof* in Antwerp had a similar arrangement (Fig. 7).

A part of preserved *begijnhofs* lost readability of the central point as a result of intensive rebuilding works. In Lier settlement the space of the internal courtyard was almost completely developed and in this way it created



Fig. 7. Begijnhof in Antwerp, Belgium (photo: E. Cisek)

Il. 7. Begijnhof w Antwerpii, Belgia (fot. E. Cisek)

the complex resembling a little city: with stone-paved streets, a church, workshops for artists and private enclosed gardens situated in different places of the development. At present, this complex is inhabited by old people and artists.

Hofjes are not only adopted mediaeval settlements which maintain the idea of original *sacrum* and the community space. The closed form, individualised residential units and a human scale additionally make a unique climate of each settlement and fully correspond to the primitive feelings of man – they ensure the feeling of safety in a physical and psychical sense. In fact, as time

goes by, the complexes change their external appearance – they are completed by terraced houses developments and are gradually rebuilt; however, they still inspire modern architecture in a magical way.

The Netherlander *hofjes* constitute the beginning of the Dutch system of social welfare. Nowadays in Holland and Belgium residential complexes based on the neighbour community are built on the basis of the concentric arrangement with an internal garden. In these settlements the semi-public space is located in the central part of the square and constitutes a voluntarily donated private space in order to have a more representative common part [7].

Modern examples of the nest residential development

Neighbour communities with the nest arrangement of the development have become widespread mainly in Finland, Sweden, Denmark and Holland.

Norwegian nest developments are built with the use of great amounts of wood. Forms and structures which are in harmony with nature are thus built from wood. Courtyards have an irregular shape; therefore each development acquires the only and unique appearance. Norwegians are called ‘people of trees’ and they create architecture which is a sort of interpretation of the native environment. The forest landscape specifies dynamic neighbourhood of horizontality and verticality: the mountainous and rocky landscape with numerous fiords. The mountain ridge – a typical substructure of Norwegians – usually underlies a stone or concrete wall which is a basis for wooden scaffolding containing a residential space. In this way Sverre Fen defines ‘a Norwegian house’ which is connected with the ground and has a far reaching opening. The structure develops organically from the ground surface, which shows a dependence of a dynamic and vertical type taken from the world of plants. Particular

structures containing a residential or facility part are arranged in a free way as ‘small separate worlds’ and then are combined in a collective building.

The Netherlander nest developments, which are built in Belgium and Holland, are mostly unique elements – they form cosy, quiet and green spaces in the regular city tissue. The houses façades are simple and austere because of the construction requirements and employed materials – mainly brick. The Gothic verticalism dominates in shaping the compact development, which emphasises the shape of the internal courtyard and points out to typical urban roots.

Swiss group developments by Pierre Dorsaz, which are built in the open mountainous landscape, also show dependencies of the vertical type on shaping the form of the complex. The Alpine housing estate La Hameau de Verbier (built in 1990) consists of three residential nests built around a natural mountain pond. This development with its form corresponds to the surroundings: the complexes in the background imitate the shape of a water basin, while residential units: openwork and spatial in

their forms – with a wooden construction on the stone substructure – bring to mind branching trees strongly embedded in the mountainous landscape. The central part of the internal square is lowered by one storey in relation to the main pedestrian precinct for the residential units. The explicit arcade created in this way – taking into account tourists – with galleries, workshops and services constitute a spatial frame for the open courtyard on the axis of which there is a chapel – for people of all religions. Residential complexes of agro-tourist character have underground car parks which use the natural slope of the terrain. The arrangement of roofs, wooden galleries and extended facility arcades, which are characteristic for this region, contribute to a unique climate of the whole development [6].

The Finnish group complexes are mostly based on the rectangular internal courtyard which constitutes the space directly connected with the community function. Residential complexes arranged in this way result from the fact that the Finns have the sense of social bonds, but they need isolation at the same time, which allows having a real contact with nature. This originates from the village culture tradition which is still present in modern residential architecture. Therefore, forests and parks constitute direct neighbourhood. The residential development creates an internal space in the green tissue and thanks to the openwork form full of clearances and openings, it allows nature to permeate the interior of the arrangement. R. Pietila calls his compatriots ‘people of forest’ who create their own settlement in the limits of their territory. The way of functioning of these developments in the forest environment resembles the one of autonomic ecosystems. These complexes are characterised by moderation, simplicity, skilful connection with the ground, purposeful use of materials and constructions. The Finnish nest developments are arranged horizontally. They correspond to the surroundings – flat landscape with numerous lakes and spruce-birch forests.

A tetragon-like enclosure of the settlement, which commonly appears both in the Finnish and Swedish developments (Fig. 8), constituted an unattainable model on the basis of which a model of the settlement for a limited number of families with a rich social program was created.

Very often, a starting point for building a residential complex is the process of creating a common part – this is usually a community house or a sauna. This place constitutes a sort of ‘a cornerstone’ for the future development – for the inhabitants it is their shelter and their first house during the building process of the entire development. Thus, we can see that the creation process is started from the inside and not from the outside and it is conducted by the people who are bound by a common idea and the intention to put it into practice. A powerful need to integrate the inhabitants is reflected in the formation of the internal courtyard space and strongly developed common utility parts, accessible for all of the social groups living there. Model examples of such solutions are Finnish group settlements which were built in

the 1970s in Lahti (architects K. Virta, M. Rotko, implemented in 1976) and Tapioli (architect Pentti Aholi, implemented in 1964). The complex of single-family development with the group arrangement in ‘Forest Town’ Tapioli presents an example of the technique called ‘building in touch with nature’ by not destroying rocks or plant compositions but exposing the features of the landscape. When comparing architecture with natural forms of the landscape we observe the principle of the moderate contrast – the arrangement of white houses skillfully blends in with the terrain and like a rocky monument stands out of the forest surroundings.

The idea of having a sauna in the complex is a manifestation of the Finns’ devotion to tradition and culture – for them it is indispensable almost from the cradle until the very old age. The Finnish word for sauna – ‘*zoyly*’ expressed the notion of spirit or life as well. In the old times the Finnish people perceived this place as *sacrum* space – the point where it was possible to get in touch with ‘the source of existence’. In our times the fact of inviting a guest into a sauna is a gesture of hosts’ friendship and hospitality. It constitutes a common space which serves the purpose of inhabitants’ integration. A good example here is the settlement of Kapykyla in Lahti (architects K. Virta, M. Rotko, completed in 1976). The nest complexes are literally immersed in the forest tissue, therefore it is almost impossible to tell the difference between internal courtyards and spaces between the buildings. This effect is additionally intensified by numerous clearances. A common part is in the development frontage of each complex and consists of a sauna, hiding places, garages, laundrette, thermal centre, power distribution transformer station and storage room near the common garden, which are integrally connected with the courtyard space.

A community house is an element which also appears in Dutch and Swedish group developments. It can be located within the complex as a detached building – in the development frontage and line or within the range of the internal courtyard, which closes the internal space of the



Fig. 8. Residential complex with the nest arrangement in Ystad, Sweden (photo: E. Cisek)

Il. 8. Zespół mieszkaniowy o układzie gniazdowym w Ystad, Szwecja (fot. E. Cisek)



Fig. 9. Complex of *Cohousing* type in Middelburg, Holland
(photo: E. Cisek)

Il. 9. Zespół typu *cohousing* w Middelburgu, Holandia (fot. E. Cisek)

complex and is in the close neighbourhood of the complex often as a house – sculpture.

A community house in Egely Complex in Denmark (arch. NOVA 5, completed in 1996) was designed for old people. The building is situated within the boundaries of the complex with an entrance directly from the internal courtyard. Within its limits a common kitchen for meetings was designed as well as rooms for the medical and physiotherapy staff.

In residential complexes of Egebjergtoften and Egebjerggard III in Denmark a community house is a separate detached building situated in the close neighbourhood. In the first example, it is situated on the northern side of the residential development. It is partly located on water and constitutes a unique element in the arrangement of the whole complex. Inside the courtyards of three nests there are additional common facility rooms. A community house in Egebjerggard III was also designed as a separate building; however, it can be entered from the green interior of the complex. It constitutes a closure of the common courtyard space and at the same time it is an attracting element to which attention



Fig. 10. Complex of old castle stables connected with the residential development in Książ (photo: E. Cisek)

Il. 10. Zespół dawnych stajni zamkowych, połączonych z zabudową mieszkaniową w Książu (fot. E. Cisek)

is drawn. In a one-storey building there are the following rooms: a meeting room, kitchen, game room and toilets.

Moreover, the community house can also perform the function of a spatial sculpture. In the close neighbourhood of Egebjerggard II residential complex in Vingebo in Denmark an unusual building was erected which combines a community function with the form of great artistic expression. ‘The wing house’ – the result of cooperation of the architect Jan Gudman-Hoyer and sculptor Niels Guttormsen – has a one-space interior – the place of meetings and facility rooms such as a kitchen, two rooms and a toilet, which are situated under the entresol. The form of the building is in perfect harmony with natural surroundings, while its uniqueness and originality makes it possible to perform the role of a unique element and work of art at the same time.

In Bruket housing estate in Sandviken in Sweden (arch. Ralph Erskine) the community part is located in the central part of the green courtyard. This is a community house used by inhabitants for different ceremonies, games and meetings. It additionally serves the purpose of the space for children during bad weather. Moreover, there are a laundrette and a shower which are willingly used in summer by both young people and adults [6].

Neighbour communities are mainly based on the community-neighbour space location within a limited territory. This quality of the space was used in the system of ‘Neighborhood Watch’ employed in Canadian and American complexes of residential developments. The main goal of arranging this type of space is safety of residents and protection of property, which are based on the sense of mutual responsibility for one’s own space.

A particular example which meets the above criteria comprises neighbour communities which represent a trend of comunitarism. *Collective housing (cohousing)* cooperatives, which are mainly widespread in Denmark, Holland and North America, belong to this trend. The basis idea of this type of developments is as follows: *Forming a community connected with a distinctly specified territory whose members are in close contact and organize themselves in order to achieve common goals* [13, p. 76]. The main goal of these developments is to reduce the operating costs of buildings by means of common management and to make common decision as regards repairs and investments. A residential complex in Middelburg in Holland constitutes a good example here (Fig. 9).

In New Zealand, where 95% of population live in complexes of a community character, a group development consisting of not more than six residential units in a nest is a popular form.

Ropata Village (arch. Roger Walker) complex can be a good example, where the strong sense of residents’ safety made the designers resign from individual gardens for the good of a common space within the complex. This tendency can be also observed in the Australian complexes.

Each of the above mentioned models can be enriched with a presumption function. The complex model which at the same time constitutes the place of living, recreation

and work became popular in the 1980s after the study by Alvin Toffler 'The Third Wave' had been published. According to Toffler, prosumption means every production which aims at direct fulfilling one's own needs. Such actions range from cultivation of fruit and vegetables in adjoining to the house hotbeds to the service of energetic devices (windmill, solar panels) which belong to the complex. Moreover, within the limits of the development there are places of work [3, p. 124–126]. Prosumer complexes are built mainly in the United States, Great Britain and Denmark.

A complex of multi-family development in Hulme in Great Britain combines a place of living with a place of work. The internal courtyard with a recreation garden constitutes a complement of many-functional activities of the residents. A half-open form of the development and a functional-spatial character has programmed mobility as well as adaptation to the changing needs in the scope of surface and general space.

The old complex of the castle stables in the close neighbourhood of Książ Castle is a rare example of combining the farmstead development with the residential part (completed in 1844). The buildings were erected on the plan of a closed tetragon with a roofed manège in the north side. They have features of 'The Third Wave' habitat. Within the development there are stables, workshops, warehouses, offices and a coach house as well as a flat for the staff families. An orchard was planted in the close vicinity of the complex. Each family living there was given two fruit trees within the limits of the common garden (Fig. 10).

The associative model definitely dominates in the Polish solutions. It is based on the harmony of the general and individual good at the same time weakening territorial bonds. This model appears in the majority of nest developments where a common space coexists with a private space which is most often represented by private gardens.

We can differentiate three basic models in this group depending on the proportional share of the individual and common part: the one with the advantage of a private space, dominance of a common space and with a proportionally equalled share of both spaces.

Solutions as regards wheel transport, which was introduced to the complex, reduce a percentage share of the private space within the courtyard. It is usually designed on the external side of the complex. Solutions of this type appear in simple or hierarchical Cul-de-sac arrangements and also at the endings of dead end streets.

Reducing the private space in favour of the common territory can also be noticed in arrangements with internal garden or walking courtyards and small, separate, private gardens within their limits. In these solutions on the external side there is only a public zone of the thoroughfare. Entrances (through ones) and small services are usually located on this side of the development. As an example we can mention the complex situated on Jaracza Street in Wrocław (architect Andrzej Miech, completed in 2000) (Fig. 11).



Fig. 11. Complex of multi-family development with the garden courtyard on Jaracza Street in Wrocław (photo: E. Cisek)

Il. 11. Zespół zabudowy wielorodzinnej z dziedzińcem ogrodowym przy ul. Jaracza we Wrocławiu (fot. E. Cisek)

In the solutions in which the internal courtyard is filled only with private gardens where the residential units are accessible from the outside, we can notice that there is more private space than the commonly used space.

The balance between the common and private space is characteristic for two types of developments. The first one is the arrangement with a visible division according to the following principle: an integrating common space – in the internal space of the courtyard, while an intimate private part – individual gardens – outside the complex. The other arrangement refers to the solutions where the area of private gardens within the courtyard is similar to the common space – recreational or garden-like. This is illustrated by a Danish example – Skotteparken (arch. Hanne Marcusse, Peter Stengaard, completed in 1992 r.)

Recently, the number of concepts which are based on organic models by imitating functional biological mechanisms or forms created by nature has increased. Group arrangements can be autonomic developments where contact with the surroundings or other complexes without disturbing their own internal structure as a whole is still possible. The way of functioning of one element – 'a residential nest' – in a bigger urban structure shows its biotic character, the principle of centralization and miniaturisation which exists in living organisms. This organic character should be considered in connection with the context of time and space, environment, function as well as structure. A concentric form is not organic in itself or by association with an egg or nest, but it is organic at the place where it is reasonable. The essence of an organic character is the logic of nature – not its lack.

Nest developments with an archetypal and abstract form are a kind of architecture which is always perceived together with the life for which it creates frames only. This spectacular form of living in accordance with human *soma* – a pattern of behaviour – has accompanied man's development for thousands of years and constitutes useful heritage thanks to which an individual learns how to coexist with a group and natural environment in harmony.

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Achetypowy i wspólnotowy charakter zabudowy mieszkaniowej gniazdowej

Układy gniazdowe zabudowy mieszkaniowej uwzględniają w swojej warstwie ideowej zarówno psychologię, socjologię, jak i historię. Jednym z powodów, dla których, chętniej zwracano się ku założeniom centralnym w przeszłości, był ich wspólnotowy i archetypowy charakter. Forma ta z zaakcentowanym centrum – sacrum i forum wspólnoty, zapewniała poczucie bezpieczeństwa i stymulowała więzi społeczne, stanowiąc równocześnie Kosmogram i Psychokosmogram. Obraz świata – *Imago mundi* – znajdował odniesienia w archetypowym kształcie zespołu, podkreślającym miejsce przez wydzielenie wewnętrznego, uporządkowanego mikrokosmosu od zewnętrznego, cha-

otycznego i amorficznego otoczenia. Funkcjonujące po dziś dzień modele wspólnotowe i asocjacyjne zabudowy gniazdowej posiadają odmienną koncepcję bezpieczeństwa jednostki i inaczej definiują granice jej wolności. Kompozycja architektoniczna w obu przypadkach ma jednak za zadanie: ułatwiać kontakty, stwarzać warunki dla kontroli ludzkich zachowań lub spod tej kontroli wyzwalać, bronić prywatnej własności przestrzeni i wzmacniać interesy grupy społecznej. Łączy się z tym pojęcie przestrzeni kulturowej, rozumianej jako tradycja i społeczna pamięć archetypów przestrzeni, które są elementem budowania i identyfikacji przestrzeni bezpiecznej.

Key words: archetype, residential development

Słowa kluczowe: zabudowa mieszkaniowa gniazdowa

Translated by B. Setkowicz



Magdalena Baborska Narozny*

Exposed or disguised? the hierarchy of form and function in case study analysis of recent industrial architecture in Lower Silesia

Introduction

The gradation of architectonic setting, i.e. formal hierarchy according to representative or utilitarian character of a space is quite common for all architecture. In the architecture of manufacturing plants and warehouses such hierarchy does not always exist. The whole build-up area of a site can be regarded as strictly utilitarian and receives most pragmatic standard form with no will to seek for Venustas (beauty), one of three factors constituting architectural work according to Vitruvius. What is more there are many reasons for locating large scale industrial buildings in bigger clusters. Most of new industrial premises in Poland are located in special economic zones. If deprived of any individual character and functional diversity they create insipid, inanimate zones – a backup alienated of urban context. In Poland it is quite unique to set in a master-plan and then enforce any challenging requirements as to the appearance of buildings in special eco-

nomie zones. Local authorities searching to acquire investors who would provide employment to local communities tend to avoid discouraging obstacles. In some cases however enterprises themselves show the will to achieve some aesthetic value in their buildings. Only then an architect may strive for difficult to define but obvious to observe quality within specific constraints of industrial architecture.

The article presents typology of industrial layouts in terms of hierarchy of their form and function. The hierarchy in question is a gradation of external form of different functional parts and their exposed or disguised location on site in terms of visibility from the main road or the entrance zone. It is based on the analysis of selected recently built factories and warehouses in Lower Silesia. It encompasses layouts of new greenfield investments and expansions to existing factories.

The typology

The author distinguished six layout types in terms of exposing and disguising different functional parts of an industrial building.



type 1 – none of the functions formally exposed
The arrangement of buildings on site, the shape and proportions of each building, the disposition of window and door openings are all subordinated solely to functional requirements. Pure pragmatism of intentions behind the design is clearly legible. There is no compositional gradation of architectonic setting.



type 2 – individual office exposed - typical production hall disguised

Typical hall offered as a ready product in the back (an architect does not influence the form, detailing and finishing, he may choose colour) - exposed, highly individual interior and exterior office - social building tends to hide the hall behind, at least as seen from the entrance zone. Severe contrast in form, finishing material, detailing, no formal links between the two parts.



type 3 – dialogue between exposed office and modest hall

Both the production hall and the office/social building are included into architectural design. The hall is functional modest industrial architecture; few

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distinctive architectural features on its exterior. More individual but rarely extravagant front office/social building with echoes of industrial style (often the use of steel as a finishing material but different than the one used for the hall). Faint formal links between the two parts.



type 4 – formal symbiosis of different functions
Both functional parts: the hall and office-social building follow common aesthetic guidelines - together they create a visibly coherent whole.

Office in front does not hide but rather supplements the production hall.



type 5 – all functions in a single cuboid
All functions are accommodated within a box-like building. Eternal legibility of different functions is blurred. Main entrance and the office function are in the most exposed location. The introduction of such a simple form is particularly demanding. It requires discipline in layout and facade design.



type 6 – production hall exposed – office part disguised, it is the production/storage hall that is the exposed, distinctive and dominating architectural element of the whole. Office part is in a less exposed location and designed in a more modest form.

Case studies

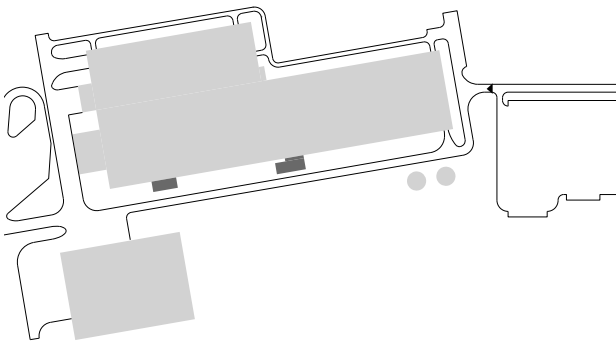


Fig. 1. Electrolux in Świdnica. Buildings layout on site (by M. Baborska-Narożny)

II. 1 Electrolux w Świdnicy. Układ budynków na działce (rys. M. Baborska-Narożny)



Fig. 2. Electrolux in Świdnica. View from the main employees parking towards the factory entrance (photo: M. Baborska-Narożny)

II. 2 Electrolux w Świdnicy. Widok w kierunku fabryki z głównego parkingu dla pracowników (fot. M. Baborska-Narożny)

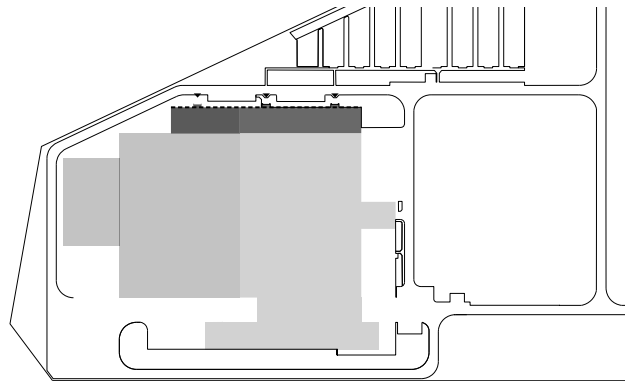


Fig. 3. Bosch in Mirków. Buildings and communication layout on site (by M. Baborska-Narożny)

II. 3 Bosch w Mirkowie. Układ budynków i dróg na działce (rys. M. Baborska-Narożny)

type 1 – none of the functions formally exposed

An example of such investment is a recent (2008) expansion of Electrolux plant in Świdnica subzone of Wałbrzych Special Economic Zone. Electrolux is an international appliance company who owns three plants in Lower Silesia. All of them were designed by PM Group Polska - international project and construction management company, with 1700 employees worldwide. The site in Świdnica is on the northern outskirts of the city. The hilly surrounding disguises the buildings located in a gentle syncline. The site can be reached from two opposite directions: the employees from the south and the deliveries from the north. Approaching from the city one passes by suburban blocks of flats and notices in the distance a light gray assembly of industrial volumes blending with the background of cloudy sky. The



Fig. 4. Bosch in Mirków. Entrance building with social and administration functions (photo M. Baborska-Narożny)

II. 4 Bosch w Mirkowie. Widok na budynek wejściowy socjalno-administracyjny (fot. M. Baborska-Narożny)

py. Administration, social and technical parts are all finished with horizontally mounted sandwich panels. Production hall, warehouse and all the separate technical backup volumes on site are all covered with trapezoidal sheet steel vertically mounted. The difference in finishing material seems subordinate to the unifying factor of single colour use. The overall appearance of the factory is thus unified. The factory's close vicinity is also offered for industrial development as a part of the Special Economic Zone.

A rational unified architectonic setting for all the functional parts of the complex industrial building is characteristic for Rober Bosch plant in Mirków near Wrocław. The international Bosch Group is represented in Poland by four companies. One of them is Robert Bosch Sp. z o.o. who owns an almost 20 ha greenfield site in Mirków. The first stage of investment there was designed in 2002 by arch. Krzysztof Tetera form TKS architectural office. It was further extended in 2009 by the same architect. TKS has a vast experience in industrial architecture design. Bosch has developed its own architectural standards that all its plants over the world follow. The standards cover in detail various issues like modular system for construction and facades subdivisions based on a six meter unit, buildings' hight, company colours, the use of materials and detailing, the use of light, technological layout, shared building entrance and indoor spaces for both office and production employees. The construction technology used for external walls and floor slabs are different in administration-social part and production hall. These differences are not visible outside. The finishing material and window openings detailing is characteristic and unified all around the building. So is the attic hight (but in the technical superstructure over part of the hall). Only the two (three after extension) equivalent entrance doors receive different setting and thus become focal points in the 84m (132m) long entrance facade. Though windows disposition responds primarily to functional requirements the result is not random as it complies with legible structured guidelines of facade layout.

The staging of this investment is an interesting case of predominance of time factor over compositional prerequisites in economy driven industrial architecture. The oblong shape of the plot is irregular. Its short north side is exposed to the busy state road Nr 8. As most halls are rectangular the architect allocated the parking lot in the irregular eastern part to allow maximum future expansion of the hall volume to the south. The employee on site entry was designed from the north with a view on most exposed hall facade with generous glazing within eye level. The entrance facade with the same architectural detailing is next to the parking so it turns towards east. The extension presumed to expand towards the south in result covered the north already developed part of the plot shutting off the external views from the hall and redirecting the entry to the south of the plot. The reason was an unexpectedly time consuming procedure of relocating an underground gas pipe crossing the site. In result it is the blind wall of the logistics hall that is exposed towards the neighboring road.

type 2 - individual office exposed - typical production hall disguised

So called "typical" or "system" steel halls are supplied by numerous mostly international enterprises, ex. Atlas Ward,

Frisomat, Astron, Llentab, Remco, Hupro, Polonex, Borga, Budberg and many others. Their popularity reflects entrepreneurs expectations: reduction of design cost - the cost of hall design is included into the price of steel structure, fast on site building process, experience in design solutions resulting in extended guarantee for the product. The service offered usually covers the design and construction of steel structure and external envelope of the hall. The design is often specified without an architect, between the investor and contractor. An architect is than commissioned coordination of all disciplines needed to equip the hall with installations and also the design of social and administrative part of the building. Highly individual architectonic setting is sometimes given only to this exposed part of the building.

Such was the design process of Forma factory in Świdnica Subzone of Wałbrzych Special Economic Zone and Sto distribution Center in Wrocław.

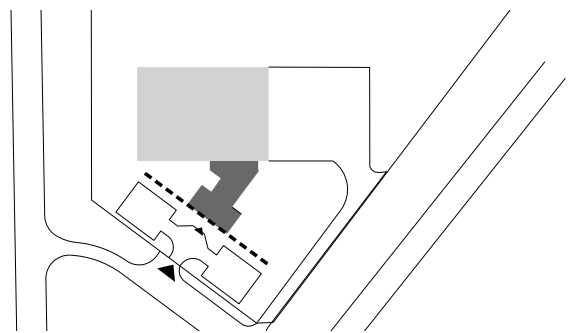


Fig. 5. Forma in Świdnica. Site plan (by M. Baborska-Narożny)

II. 5. Forma w Świdnicy. Plan zagospodarowania teren (rys. M. Baborska-Narożny)



Fig. 6. Forma in Świdnica. Administration building with main entrance (photo M. Baborska-Narożny)

II. 6. Forma w Świdnicy. Budynek administracyjny z wejściem głównym (fot. M. Baborska-Narożny)



Fig. 7. Forma in Świdnica. View towards production hall and entrance office building from the main road (photo M. Baborska-Narożny)

II. 7. Forma w Świdnicy. Widok na halę produkcyjną i wejściowy budynek administracyjny od strony drogi głównej (fot. M. Baborska-Narożny)

Forma factory in the Świdnica subzone of Wałbrzych Special Economic Zone was designed by S+M architectural office in 2008 and then built in 2009. The leading architect was Paweł Spychała. The site is at the edge of a currently developing industrial cluster next to a street junction. It's only c.a. 1 km away from the historic center of Świdnica but the view towards it is obscured by neighbouring blocks of flats. This is the only manufacturing plant of the Polish-Danish company specialising in production of composite and granite tops. The hall was built within Atlas Ward building system without design participation of the architect. The architect was commissioned the coordination of design of required installations and joint between the typical hall and individually shaped social-administrative building. The Danish co-owner of Forma expected quality representative architecture for this part of the building. He also expected individual entrance zone interiors and shared functions for administration and production employees. Concept design included double height sky lit lobby, recreation roof terrace and spacious cafeteria with an exit to recreation area outside. Only the terrace was given up in later design stages. The will to achieve impressive entrance form led to towering the office functions in a two story building. Such decision was purely compositional and not pragmatical as the building's footprint was not limited by the plot size and what's more

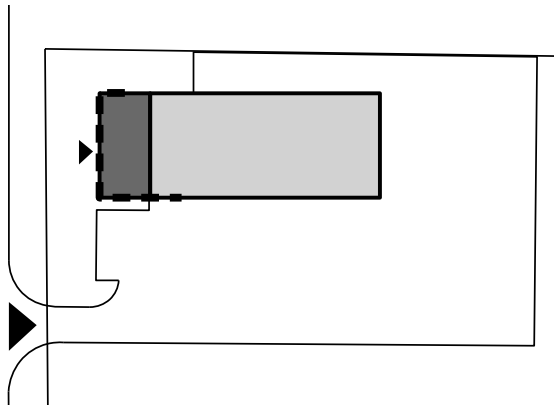


Fig. 8. Labor in Bielany Wrocławskie. Site plan (by M. Baborska-Narożny)

Il. 8. Labor w Bielanych Wrocławskich. Plan zagospodarowania terenu (rys. M. Baborska-Narożny)



Fig. 9. Labor in Bielany Wrocławskie. Exposed towards the adjacent road entrance building comprising social and administration functions (photo M. Baborska-Narożny)

Il. 9. Labor w Bielanych Wrocławskich. Ekspozowany od strony drogi budynek administracyjno socjalny głównym (fot. M. Baborska-Narożny)

the additional floorspace on the first floor is excess so far. In result a person approaching the entrance does not see the production hall. To strengthen the effect a 2,2 m high concrete wall continues the line of the main facade at its both ends. As the size of the disguised hall is in fact larger than the exposed office building the illusion does not work all around the building – when approaching the plot by the main neighbouring road the hall is the only visible structure.

The Sto distribution center in Wrocław was designed by Prace Projektowe Vetter Danuta in 2003. The hall was built according to the Frisomat building system. And the scope of responsibility of the architect was the same as with Forma plant.

type 3 – dialogue between exposed office and modest hall Labor is a small Polish company specialising in conveyor belt service. Its workshop located at the edge of Bielany Wrocławskie is very well exposed to the national road 8 in the direction to Wrocław. It is the first building in the village. It's 55 m long side elevation is visible from a long distance. The building was designed in 2008 by Wojciech Jarząbek from A+R architectural office. Simple rectangle plan ca. 20x55 m is divided into two parts separated by a firewall: workshop hall and a two storey office-social building. Each of them received a different architectural setting that emphasises hierarchy of functions. The office-social part facing the adjacent national road is a complex composition in terms of colour, shape and the precisely planned layout of alucobond cladding. It's attic height is slightly higher in the claret section. In the grey part it's the same as the hall's attic. The hall is a monochrome metal clad cuboid punctured with steady rhythm of gates and a window strip. The change of setting on the elevations doesn't line up with the change in plan. On the exposed south elevation the "office setting" stretches a few meters onto the hall part, and on less exposed north elevation the "hall setting" stretches over the social part on the first floor. The entrances for administration and workshop employees are separate, and legibly hierarchical. White collars entrance is located right by the parking and sheltered by cantilevered conference room. The blue collars must go round the building to get to their more modest but also sheltered entrance. Here too, like in the Forma plant, the administration building has some excess floorspace but as it was deliberately dedicated for rent it has a separate entrance and social backup.

A modest exterior and quality interiors both in administration and manufacturing hall characterise the Wezi tec plant in Legnica subzone of Legnicka Special Economic Zone. It was designed in 2003 by Krzysztof Tetera, the leading architect from TKS architectural office. TKS specialises in industrial design. Wezi tec Sp. z o.o. is a German owned family enterprise. It is a daughter company of Weber GmbH who specialises in plastics processing. The owner was very much involved in design process and interested in quality architecture and solutions enhancing work environment throughout the building. Two storey administration and single storey social volume form together the front building exposed ahead of the hall, as seen from the adjacent road and the entrance zone. It is distinguished through parts with full height glazing, different cladding (alucobond on the front building

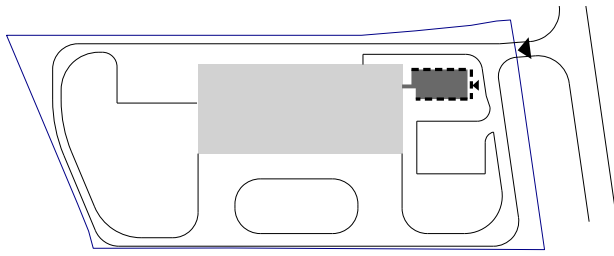


Fig. 10. Adeo in Złotoryja. Site plan (by M. Baborska-Narożny)

Il. 10. Adeo w Złotoryi. Plan zagospodarowania terenu (by M. Baborska-Narożny)



Fig. 11. Adeo in Złotoryja. View towards the administration buildings (photo M. Baborska-Narożny)

Il. 11. Adeo w Złotoryi. Widok na budynek administracyjny (fot. M. Baborska-Narożny)

and corrugated plates on the hall) and lower attic height from the manufacturing hall. There are however legible formal links between the two: simple rectangular forms, grey shades of the metal cladding, proportions and colour accents of window-strips. Both the front building and the hall are equipped with atria. One atrium creates visual link between the lobby, administration and the production. The other is located inside the production hall. It admits daylight and functions as outside recreation area for production employees. Special care was given to daylight distribution in the hall. A shed roof with north inclined glazing admits into the hall dispersed daylight without glare. There are also additional windows at eye level allowing external views. A separate entrance with hierarchical setting usually suggesting hierarchy of blue and white collars seems to be misleading in this plant, as other architectural features prove their equal status. Both parts of the building were extended in 2007. The extended part of the hall is equipped with dome skylights instead of a shed roof. The extension was also designed by Krzysztof Tetera.

A layered formal relation of manufacture and administration building characterises Adeo Screen plant with headquarters in Złotoryja subzone of Legnicka Special Economic Zone. The Italian owned company manufactures projection screens. It was designed in 2006 by Ozone architectural office. The elongated rectangular greenfield site is by a local road facing to the north the outskirts of the town in a distance of c.a kilometer. The whole premise is well exposed so far as the neighboring plots are still not built up. The privileged location by the road, next to on site

entry is reserved for offices. The architecture sets undoubted hierarchy of functions. Social and technical backup is included into the main hall. The social part is deprived of windows. Seen from the car park its architecture is purely rational and modest with no visual reference to the office building. Vertically mounted metal sandwich panels and glazed employee entrance door with metal canopy constitute the façade. The administration is a separate three storey volume with more complex and lavish design: generously glazed double high lobby, cantilevered conference room on the first floor, double facade of steel mesh screening covered walkway. In between the two buildings there is an external staircase and a glazed link on ground level. The hall and administration cuboid differ in height, finishing materials, detailing, opaqueness, colours applied. When observed from the south however the contrast moderates. The front building's south facade less is complex in terms of finishing: its opaque parts are covered with corrugated steel only. The manufacturing hall on the contrary becomes more elaborate: sandwich metal panels coexist with vertical strips of corrugated steel and glazing. A unifying factor of same materials sets a formal dialog between the exposed administration building and withdrawn hall.

type 4 – formal symbiosis of different functions

All three plants illustrating formal symbiosis of different functions are Italian greenfield investments located in Jelcz Laskowice Subzone of Wałbrzych Special Economic

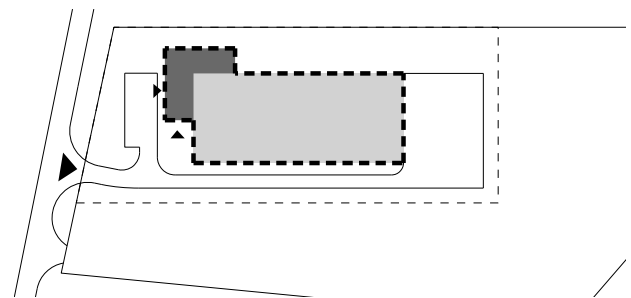


Fig. 12. Cri-val in Jelcz Laskowice. Site plan (by M. Baborska-Narożny)

Il. 12. Cri-val w Jelczu Laskowicach. Plan zagospodarowania terenu (rys. M. Baborska-Narożny)



Fig. 13. Cri-val in Jelcz Laskowice. A smooth blend of administration-social building with production hall (photo M. Baborska-Narożny)

Il. 13. Cri-val w Jelczu Laskowicach. Płynne przejście pomiędzy budynkiem administracyjno socjalnym a halą produkcyjną (fot. M. Baborska-Narożny)

Conclusions

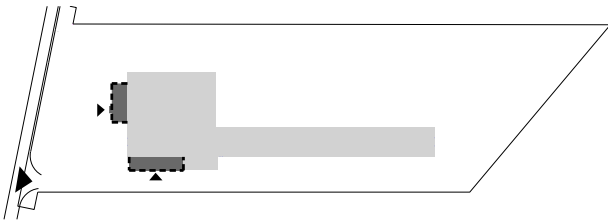


Fig. 14. EPP in Jelcz Laskowice. Site plan (by M. Baborska-Narożny)

Il. 12. Cri-val w Jelczu Laskowicach. Plan zagospodarowania terenu (rys. M. Baborska-Narożny)



Fig. 15. EPP in Jelcz Laskowice. Production hall with adjacent separate functional parts: administration and social (photo M. Baborska-Narożny)

Il. 15. EPP w Jelczu Laskowicach. Hala produkcyjna z przyległymi odrębnymi częściami: administracyjną i socjalną (fot. M. Baborska-Narożny)

Zone. The analyzed plants are c.a. 3 km away from the center of town. Cri-val and Epp plants, both designed by Paweł Mikołajczak and Arkadiusz Sumisławski from S+M architectural office are located on neighbouring sites. Italmetal plant designed by Ozone is c.a. 150m north of EPP.

Cri-val was designed in 2005. The Italian owned company manufactures metal parts for home appliances. All functions are distributed in a one storey building. As in most industrial plants the body of the production hall outweighs the volume of the administration and social building. The smaller building located in most exposed part of the plot is less than half the height and only a fraction of floorspace of the hall. This disproportion is disguised by smart design. There is no formal distinction of blocks housing different functions. Instead they blend. The plinth of the hall reaches the height of the attic of administration/social building. Both are rendered in white plaster. The upper planes of hall walls are anthracite grey sandwich panels. The colour and material contrast of the two levels becomes the main visible feature and thus the lower one becomes united: the front building turns to be a part of a strip continued around the hall.

EPP plant designed and constructed in 2006 specialises in injection moulding of plastic materials for home appliances. The Polish branch belongs to the Italian company Europlastica Group. The site in Jelcz Laskowice is an elongated trapezoid adjacent to a local road with its

short western edge. The most exposed location on site adjoining the hall's western facades is devoted to administration. Almost as well exposed is the social building by the hall's southern wall. Each of the two functions is housed in separate but very similar double storey volume. They are both framed with the bulk of the hall. One storey technical backup is hidden by the social building. Southern naves of steel hall are 170 m long. The two northern ones are 49 m long and are planned to be extended. The design of the factory is based on deliberate contrast of size, colour, shape of window openings and finishing materials. External walls of the dominating volume of 10 m high hall are vertically mounted green sandwich panels. The two smaller volumes are finished with anthracite grey horizontally mounted trapezoidal sheet the ground floor level and plaster white on the upper floor. The only visible unifying feature are rounded vertical edges of each cuboid.

Italmetal was designed in 2003 and began production in 2004. In 2006 its manufacture hall was further extended by the same architectural office. The company is a part of Italian family owned Girardini Group s.r.l. Its main scope of activity is metal processing for automotive and

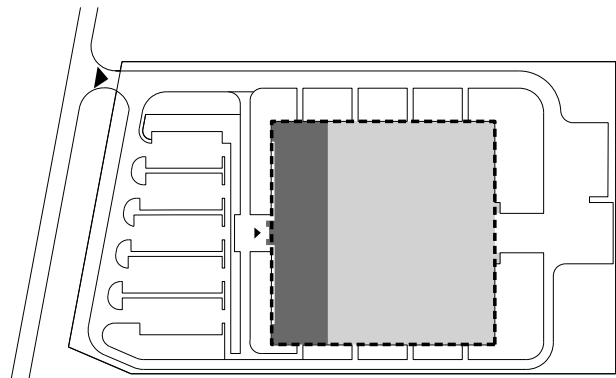


Fig. 16. Eto-magnetic in Wrocław. Site plan (by M. Baborska-Narożny)

Il. 16. Eto-magnetic we Wrocławiu. Plan zagospodarowania terenu (rys. M. Baborska-Narożny)



Fig. 17. Eto-magnetic in Wrocław. The entrance facade (photo M. Baborska-Narożny)

Il. Ryc. 17. Eto-magnetic we Wrocławiu. Elewacja frontowa (fot. M. Baborska-Narożny)

household branch producers. The well exposed almost square Italmetal site is adjacent to local roads junction. The building is surrounded by other industrial halls. All functions are housed in two volumes of the similar attic high. Near the corner there is a three storey high administration, social and technical building with exposed external steel staircase. This vertical communication element is treated as a sculpture. Enclosed into a steel frame reaching the attic level, covered with polycarbonate canopy, partly shaded by Luxalon metal panels, equipped with wooden railings it signifies the importance of the upper floors. Indeed the administration is located on piano nobile. Ground floor is reserved for social and technical backup with entrances on opposite facades. Finishing materials used are: curtain glazing and plaster in the front building, horizontally mounted metal sandwich panels and polycarbonate panels in the hall, and metal cladding and Luxalon panels in both parts. Prevailing colours are different shades of grey and orange. All of these combine to result in a layered composition of two volumes with mutual references of color and material use.

type 5 – all functions in a single cuboid

All functions enclosed in a monumental cuboid form – such is the Eto Magnetic plant in Wrocław subzone of Wałbrzych Special Economic Zone. It was designed in 2006 by Krzysztof Tetera from TKS architectural office in collaboration with German AIP Consulting GmbH at concept design stage. Eto magnetic Sp. z o.o. is a division of German based international manufacturer of electromagnetic components for vehicle and industry. It is a part of Eto Gruppe. Its factories in Germany show emphasis placed on achieving quality individual architecture. The site in Wrocław is within currently developing industrial cluster right next to housing developments and the boundary of the city. A master plan for the cluster was based on the winning entry by A+R architectural office to an urban competition. Among others the master plan indicated car park location, the prevailing facade material, building height and built-up area borderlines, the requirement of planting trees. The site's location is privileged within the cluster as it is adjacent to the north to a planned public recreation area. Eto Magnetic plant won the first prize in "Beautiful Wrocław" competition for the best industrial building delivered in 2007. Its uniqueness among other plants built in Poland derives from out of the ordinary interpretation of mandatory fire protection standards. The prevailing interpretation regards administration part as a fire zone separate from the production – storage. That enforces the placement of fire wall in between the two parts. It restricts the mutual contact and most often leads to external visual allocation of administration building. In Eto Magnetic plant all functions constitute one fire zone. The social – administration – workshop double storey section is inserted as a separate structure into the main volume of steel hall. In between this insert and generously glazed front façade there is a double height communication space and lobby. All adjacent functions are fully glazed with openable windows. The main entrance is on the symmetry axis of the front facade. The external appearance of ca. 90×90×11m cuboid is monumental and coherent: unified colour, finishing material, subdivisions, precise detail-

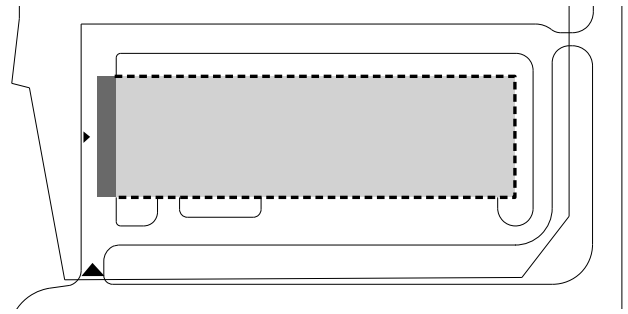


Fig. 18. IMP Comfort in Świdnica. Site plan (by M. Baborska-Narożny)

Il. Ryc. 18. IMP Comfort w Świdnicy. Plan zagospodarowania terenu (rys. M. Baborska-Narożny)



Fig. 19. IMP Comfort in Świdnica. Production hall seen from the main road (photo M. Baborska-Narożny)

Il. 19. IMP Comfort w Świdnicy. Hala produkcyjna – widok od drogi głównej (fot. M. Baborska-Narożny)

ing characterises all façades. Mirror symmetry is the eminent design guideline of clear functional layout in plan and façade design. The location of border between production and social-administration zone is blurred as seen from the outside. The symmetrical back façade with delivery docks echoes the shape of front glazing through slight recoil of metal cladding. Its symmetrical disposition proves there was no intention to disguise this section of the building. The adjacent plots are not built-up yet and so the Eto Magnetic plant is well exposed from distant views and different directions. Although building permits are already handed for new factories around there is a new road planned parallel to the existing one at the back of the plot. Thus the back of the building will be as exposed as its front.

type 6 – production hall exposed – office part disguised
 IMP Comfort plant in Świdnica subzone of Wałbrzych Special Economic Zone is a rare example of layout where production hall with technical backup is exposed and the office part is disguised from the view of a main road passer by. The plant manufactures textiles implementing innovative sustainable production processes. It was designed by Piotr Lewicki and Kazimierz Łatak from Lewicki Łatak architectural office in 2006. The site is within the urban area of Świdnica in a currently developing industrial cluster c.a. 1 km away from the Peace Church inscribed into the Unesco List of World Heritage Sites. Making the best of the attractive view towards the Świdnica old town was the decisive factor in

functional disposition of the building on site. IMP Comfort belongs to Italian Industrie Maurizio Peruzzo company. Peruzzo Group owns also Betonex in Bielsko Biala – manufacturer of prefabricated concrete buildings. The construction of IMP Comfort, textile plant in Świdnica, was a chance for Betonex to gain reference building presenting the scope of products offered. The building is a cuboid 55×190×10m with lower additions at southern and northern facades. Its frame structure, external walls, roof slab and floors in two storey social – administration – laboratory building are made of precast concrete. External walls are smooth precast panels insulated with EPS foam – modular and repetitious. Never the less the concrete building's appearance is far from dull and ponderous. Its concrete surface is covered with strips of vivid colours arranged in miscellaneous sequence. The configuration was elaborated in collaboration with graphic designer Konrad Glos. The colour scheme applied perfectly disguises the repetitive pulse of equal size panels and window openings. Only the administration and social part of the building is monochrome, with “rinse stone” finish of the concrete panels. In result the entrance part is the least lively. It is however obscured from a random observer. The rectangular plot is next to street junction with its short side adjacent to the main road and long side adjoining a blind alley. The investor preferred to see the skyline of Świdnica old town from the office part instead of the traffic on the main road. The main entrance is thus located in the backmost part of the plot with main entry and parking next to the blind alley.

Roman Kluska once a very successful Polish businessman claims that utmost pragmatism is the most beautiful thing in real business [Tygodnik]. That idea is shared by most industrial building investors. Strong market of typical catalogue industrial halls seems to prove it. On the other

hand some successful architects like Livio Vacchini and Luigi Snozzi define architecture as a useless thing that emerges only if boundaries of trivial usefulness are crossed [Vacchini]. Architecture as a whole but in particular industrial architecture embodies the tension between economic guidelines and an aesthetic drive to escape the utmost pragmatism. The brief, the budget and legal requirements are starting points in establishing order, deliberate composition, individual form and detailing. The presented typology distinguishes six different design strategies in terms of exposing and disguising certain functional parts. There are significant differences in the number of buildings that could be ascribed to each of them.

Economical guidelines only exceptionally allow the dominating halls design to be more complex than the necessary minimum. In most cases the halls appearance is industrial common and more complex design (if it exists at all) concentrates on smaller administration. Thus type 1 and 2 cover most of constructed buildings. Type 3 and 4 requires exceeding the threshold of minimum design effort put into architectural setting of the hall, and thus is less common. In Polish industrial architecture economically based allocation of form and function is reinforced by the dominating interpretation of mandatory fire safety rules as it distinguishes administration as a separate fire zone. In result there are very few type 5 buildings in Poland. An interesting fact is that most of these are exceptional quality architecture (eg. Eto Magnetic in Wrocław by Tetera Industrial Design, Fraba in Stubice by BeL, Ostervig near Warsaw by APA Kuryłowicz). Type 6 is rare both in Polish and world architecture and usually is a result of a spatial context sensitive design (ex. IMP Comfort in Świdnica by Lewicki Łatak, Erco P3 in Ludenscheid by Schneider+Schmacher, Trevision in Groshoflein by Querkraft).

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Ekspozowane czy ukryte? Hierarchia formy i funkcji w najnowszych realizacjach architektury przemysłowej Dolnego Śląska

Artykuł prezentuje typologię założeń przemysłowych pod kątem hierarchii ich formy i funkcji. Omawiana hierarchia wyraża się w różnicowaniu formy zewnętrznej odmiennych funkcjonalnie części budynku oraz ich ekspozowanej lub ukrytej lokalizacji na działce, z punktu

widzenia przylegających dróg i strefy wejściowej. Typologia bazuje na analizie wybranych, ostatnio wybudowanych na Dolnym Śląsku fabryk i magazynów. Obejmuje ona układy powstające na terenach dotąd niezabudowanych, jak też rozbudowy zespołów istniejących.

Key words: industrial architecture, industrial architecture typology

Słowa kluczowe: architektura przemysłowa, typologia architektury przemysłowej



Marek Konopka*

About the quality of the Prudnik and Gogolin railway landscape

One of the definitions of the landscape says that landscape is a physiognomy of the world that surrounds us. Using a comparison we can say that the landscape can be modified by means of different stylising activities in the same way in which the face is decorated with make-up.

When the railway entered the panorama of the world, nobody expected that it was going to become a significant element of the landscape within the next forty years. Today we can agree that it constitutes an indispensable part of the cultural landscape. At the place where there was an intensified man's activity, sooner or later iron horses arrived at that terrain on the iron railways. Unfortunately, when we observe the regression of the railway which has lasted on the Polish land, we cannot resist the impression that the face of the railway world is getting deep wrinkles. Thus, the question arises what next? Does this face have to die in the course of the natural cycle development?

In December 1896 a private Prudnik-Gogolin railway started functioning. It was built as a one-track secondary rail and it was supposed to facilitate the sale of crops of local farmers and to run the transit traffic to some extent [3]. Originally, the track had 11 stations (Prudnik, Lubrza, Józefów, Biała, Krobusz, Łącznik, Zielina, Strzeleczyki, Łowkowice, Krapkowice, Gogolin) and three passenger stops (Moszna, Steblów, Otmęt)¹. Prudnik and Gogolin were contact stations with the primary tracks of the Upper Silesia Railway, while in Biała a technical station was located where there were steam engines as well as passenger and cargo wagon sets. There were also a two-stand roundhouse and a water tower. Each of the stations had a loading platform or loading place, weighing machine and additional tracks which provided cargo wagons with a parking place and enabled trains to pass each other. In

small railway stations the ticket offices and small waiting rooms were situated on the ground floor and since the 1930s signal boxes as well. On the upper floors there were flats. These buildings had basements. Some of them had warehouses which were built later – Biała, Zielina, Łącznik, Łowkowice, while in Krapkowice a separate warehouse building with a loading platform was built. The exception was the station buildings in Moszna and Krobusz where small one-storey pavilions with a ticket office and waiting room were built. The only station without buildings was Józefów; in Steblów only a brick shelter was built which was similar to the bus stop [2].

The preserved station buildings were mostly built from red clinker brick and were not plastered. They have concise two-storey forms, sometimes supplemented with small warehouse extensions or signal boxes. They were surmounted by wooden two-slope roofs with small pitch



Fig. 1. Krapkowice Otmęt passenger stop. In the foreground the hole after a removed track. The railway station building has been completely transformed into living quarters and is preserved in good condition. It is one of the few modernist stations in the Opole region (photo: M. Konopka, 2009 r.)

II. 1. Przystanek osobowy Krapkowice Otmęt. Na pierwszym planie widoczny dół po usuniętym torze. Budynek dworcowy zamieniony został w całości na mieszkalny i jest zachowany w dobrym stanie. To jeden z nielicznych dworców modernistycznych na terenie Opolszczyzny (fot. Marek Konopka, 2009 r.)

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¹ The station in Otmęt was built in 1930, while the stop in Steblów in 1948. The other stations and stops functioned since the line was opened.



Fig. 2. Lubrza station. The building has been transformed into living quarters. Windows on the ground floor have been rebuilt and all the frames have been ineptly exchanged. The ground floor elevation has been painted (photo: M. Konopka, 2009)

Il. 2. Stacja Lubrza. Dworzec zamieniony na dom mieszkalny. Przebudowano okna w parterach i nieudolnie wymieniono całą stolarkę. Elewacje parteru pomalowano (fot. M. Konopka, 2009)

and roof ridge system. Some buildings were equipped with risalits with tops. They emphasise an axis and symmetric form of railway stations. These buildings have brick detail of cornices, jerkin heads of roofs and framings. Windows are surmounted by arches and the original joinery was wooden. They all can be defined as neo-Gothic. The building in Otmęt is different. It has wide rectangular windows, a deep arcade with an exit to the platform and a high steep hip roof with dormers. This building, which was built much later than the other railway stations, can be safely called modernistic.

This track functioned in such a form till the 1980s. Progressing regression of the railway in Poland did not omit it either. In the 1990s passenger and then goods traffic was withdrawn gradually[4]. The flood of July 1997 made it impossible to cross the Odra River through the bridge and the bridge did not function any longer. Since that time the transport of goods took place only between Prudnik and Krapkowice and it was soon limited to the distance Prudnik – Biała. At the end of the first decade of the 21st century the traffic on this railway line was stopped [1].



Fig. 4. The railway bridge over the Oder between Krapkowice and Otmęt. The western span fell down during the July 1997 flood. It was repaired but the traffic has not been restored (photo: M. Konopka, 2009)

Il. 4. Most kolejowy nad Odrą pomiędzy Krapkowicami a Otmętem. Przeszło zachodnie uległo zawaleniu podczas powodzi w lipcu 1997. Zostało ono naprawione, jednak ruchu kolejowego nie przywrócono (fot. M. Konopka, 2009)



Fig. 3. Krapkowice station. The building is inhabited on the first floor. The ground floor has been unused since 1990. The building is squalid. New and ill-selected window frames in the flat are explicit (photo: M. Konopka, 2009)

Il. 3. Stacja Krapkowice. Dworzec jest zamieszkały na 1. piętrze. Parter jest nieużytkowany od roku 1990. Budynek jest zaniedbany. Razi nowa i źle dobrana stolarka okienna w mieszkaniu (fot. M. Konopka, 2009)

Technical condition of the line as well as infrastructure and buildings can be described as bad. Railway tracks are covered with bushes and in some places the rails were stolen. The track between Gogolin and Krapkowice was totally disassembled. The place in front of the train station in Otmęt presents an unusual site – opposite the railway station building there is a platform and next to it a big hole in the ground which was left after the tracks were removed along with the stone foundation (Fig. 1). The railway station was adapted in whole to residential purposes and its front part was surrounded by a fence thus forming a private residential area. A similar situation can be observed in Lubrza. In front of the railway station, which is now a residential building, the residents separated a garden area (Fig. 2). In both of these two places the residents' care is limited to their own separated areas, while the other parts of the station are left alone. At the station in Krapkowice company apartments are still used, however, the ground floor of the building, which was



Fig. 5. The pedestrian footbridge on the railway bridge over the Oder between Krapkowice and Otmęt. The track was removed after the July 1997 flood. A pedestrian footbridge has been in operation here since the 1930s. At present the reconstruction of the bridge into a road one is under consideration (photo: M. Konopka, 2009)

Il. 5. Kładka dla pieszych na moście kolejowym nad Odrą pomiędzy Krapkowicami a Otmętem. Tor usunięto po powodzi z lipca 1997. r. Kładka dla pieszych funkcjonuje tu od lat 30. XX. w. Obecnie rozważa się przebudowanie mostu na drogowy (fot. M. Konopka, 2009)



Fig. 6. Zielina station. The station buildings have been torn down. Only fragments of the ramp have remained (photo: M. Konopka, 2009)

Il. 6. Stacja Zielina. Zabudowę dworcową rozebrano. Pozostały jedynie fragmenty rampy (fot. M. Konopka, 2009)

to serve as a passenger service department, is still closed (Fig. 3). The residents of this building – without permission but in good faith – occupied a fragment of the station railway tracks and are trying to keep it in order. This view is complemented by two big signal boxes flanking the station entrances in Krapkowice, which are left alone and ruined. People could cross the River Oder through a huge steel bridge from which the track was removed. It still exists because it has a footbridge which significantly facilitates transport between Otmęt and Krapkowice (Fig. 4, 5). The stations in Zielina, Łowkowie, Moszna and Krobusz were treated very drastically (Fig. 6), where all the buildings were pulled down. The rest of the structures, which are connected with this railway line are not used and ruined. We can mention here the railway stations in Biała (Fig. 7), Łącznik (Fig. 8), Strzeleczki (Fig. 9) as well as the nearby warehouse and utility buildings. At the station in Biała there is also a water-tower. The route between the stations is treated differently. On the way from Prudnik to Krapkowice all railway crossings are preserved and new crossings were built along the by-passes of Prudnik and Biała. Completely different actions were taken on the way from Krapkowice to Gogolin. After the railway track had been destroyed, the embankment was crossed with several roads, including a highway, and there were no pos-



Fig. 8. Łącznik station. Currently the station building is unused. Periodically small wholesale outlets function there (photo: M. Konopka, 2009)

Il. 8. Stacja Łącznik. Obecnie budynek dworca nie jest użytkowany. Okresowo funkcjonują w nim małe hurtownie (fot. M. Konopka, 2009)



Fig. 7. Biała Prudnicka station. The station is abandoned and squalid. In comparison with other stations on this line it boasts richer brick details (photo: M. Konopka, 2009)

Il. 7. Stacja Biała Prudnicka. Dworzec opuszczony i zaniedbany. W porównaniu z innymi stacjami na linii posiada bogatszy detal ceglany (fot. M. Konopka, 2009)

sibilities to restart the railway traffic without the need to build new flyovers.

Observing this situation we can ask a question concerning the quality of the landscape which was shaped in this way. The elements, which form the landscape, were created in an intended way and were subordinated to the transport idea. They were built as permanent elements. For a few dozen of years of functioning they acquired many cultural values – economical, aesthetic and historical. In the end, they have become a symbol of the time and place. At some time, however, this continuity and balance were broken. The present way of using the lines and accompanied buildings is not organized but simply chaotic. The cultural landscape constitutes a result of man's activity. Therefore, how to name the landscape in which man stopped his activity? We can claim that the lack of active actions also constitutes a manifestation of man's activity. But, where will this lead to and what kind of image of the surrounding world does it give?

The presented landscape of the railway line from Prudnik to Gogolin can be defined as degraded. It lost the values and significance which it had during the time of



Fig. 9. Strzeleczki station. The building is abandoned and unsecured, and the area around squalid (photo: M. Konopka, 2009)

Il. 9. Stacja Strzeleczki. Dworzec jest opuszczony i niezabezpieczony, a teren wokół zaniedbany (fot. M. Konopka, 2009).



Fig. 10. Łosiów station on the Opole – Wrocław line, rebuilt in 2005–2006 as a passenger stop. Platforms were rebuilt, monumental wheelchair ramps were built, the loading ramp and additional tracks were removed. The building was left unchanged (photo: M. Konopka, 2009)

Il. 10. Stacja Łosiów na linii Opole – Wrocław, przebudowana w latach 2005–2006 na przystanek osobowy. Przebudowano perony, zbudowano monumentalne pochylnie dla wózków inwalidzkich, zlikwidowano rampę i dodatkowe tory. Dworzec pozostawiono bez zmian (fot. M. Konopka, 2009)

efficient functioning of the railway. The function of technical condition as regards the passing time indicates technical and usage agony. The landscape looks as if it was dying. It is weakened and comes under pressure of external elements and disappears. The spontaneity of these transformations is also striking. The matter left without any purposeful activities becomes the subject of accidental and more and more numerous transformations which are provoked by neighbouring and stronger elements.

When we talk about a disappearing landscape and spontaneous landscape, it is worth asking a question whether – like a human face – we should allow it to get older and die and accept this as unavoidable and natural. However, a domain of culture is its continuity. For that reason alone, we ought to take care of the heritage quality.

Coming back to the Prudnik–Gogolin railway, we can start to specify the activities which are aimed at protecting its cultural values. Its present condition allows working out a method which shall make it possible to preserve most of its crucial features. Thorough examinations shall let us choose the range of revitalisation possibilities and revalorisation. A good example – or in other words learning based on mistakes – can be the modernisation of the railway line Opole – Wrocław. The fact is that both of the lines differ in their significance and possibilities; however, we can certainly compare them with regard to the landscape quality. Renovated stations in Łosiwo (Fig. 10) and Lewin Brzeski (Fig. 11) show the possibilities of actions. There may be some objections as regards the aesthetics of renovated structures. It shows that economi-



Fig. 11. Lewin Brzeski station on the Opole–Wrocław line, rebuilt in 2005–2006. Platforms were rebuilt, the network of tracks was reorganised, the signal box was reduced to the role of a level crossing attendant's post. The station building was renovated inside and the elevation was rebuilt. The freight yard was renovated. The warehouse and housing buildings were left unchanged (photo: M. Konopka, 2009)

Il. 11. Stacja Lewin Brzeski na linii Opole–Wrocław, przebudowana w latach 2005–2006. Przebudowano perony, przeorganizowano układ torów, zdegradowano nastawnię do roli posterunku dróżniczego. Budynek dworca przeszedł remont wnętrza i przebudowę elewacji. Odnowiono plac ładunkowy. Zabudowę magazynową i mieszkalną pozostawiono bez zmian (fot. M. Konopka, 2009)

cal aspects were most important during the modernisation. Nevertheless, these objects were adapted to the present needs of the railway transport. Functions of technical buildings were changed (signal boxes – gateman's lodges), buildings of local goods transport service were liquidated (loading platforms, railway sidings, weighing machines), buildings of passenger service department (platforms, shelters, waiting rooms) were renovated and rebuilt. At the same time, accompanying residential and warehouse functions were preserved.

So, there are tools and possibilities. There must be only people who want to use them to improve the present condition. Even in the situation when no train will ever go from Gogolin to Prudnik, all the existing railway buildings can be used in a proper way and brought back to life along with their values. The things that are now happening spontaneously and chaotically need to be directed by experts. However, what we need is the will of owners and determination of institutions which are responsible for the order and aesthetics of the space. It is really surprising that all the problems presented here concerning the small railway line are completely strange for the landscape of the neighbouring Czech Republic. This allows us to draw a conclusion that the condition of the Polish railway, which is reflected in the decrease of landscape values, is only a sign of disorganisation and 'a sin of neglecting' becomes the main value of the Polish cultural landscape.

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O jakości krajobrazu kolei prudnicko – gogolińskiej

Na przestrzeni dziejów kolej stała się nieodzowną częścią krajobrazu kulturowego. Na przełomie XIX i XX wieku powstała lokalna linia kolejowa z Prudnika do Gogolina. Powstało przy niej kilkanaście stacji i wiele obiektów kubaturowych o wyrazistym charakterze. Wznoszone w duchu neogotyku znakomicie oddawały ówczesną stylistykę. Regularny ruch na tej linii odbywał się do końca lat 80. XX. wieku. Od tamtej pory cała infrastruktura linii popada w ruinę. Duża część zabudowy została rozebrana, kilka obiektów wykorzystywanych jest na cele

mieszkalne i usługowe, a pozostałe niszczeją nieużytkowane. Pojawia się tu pytanie o istotę takiego krajobrazu. Na pewno jest on zdegradowany i coraz bardziej przypadkowy. Dla dbałości o dziedzictwo kulturowe, należałoby podjąć odpowiednie działania rewaloryzacyjne. Wzorować można się na modernizowanej linii kolejowej z Opolą do Wrocławia. Istnieją bowiem narzędzia i możliwości by zdegradowane elementy krajobrazów kolejowych przywrócić do życia i zahamować postępujący spadek wartości krajobrazowych.

Key words: railways, station, landscape, restoration

Słowa kluczowe: kolej, stacja, dworzec, krajobraz, rewaloryzacja

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Hellerau – a road to the future or a model of urban planning from the beginning of the 20th century?

Life Reform

At the beginning of the 20th century, an important project of reforms was born in Germany and Switzerland which originated from a profound intellectual and cultural movement that affected the conservative elites as well as the artistic avant-garde and groups of workers inspired by socialism. What united them all was the idea of creating a different and better society, even though to many the roads leading to a goal formulated in such a way seemed controversial. The modern design released the social potential of energy and the will to renew, modernize and improve social relations which were a legacy of the 19th century. An attempt was made to resolve the growing conflicts which were brought about by modern currents and to connect the emerging systems with the uncompromising nature of the experience of the traditional world. The idea, utopias, and designs as well as implemented projects whose origins date back to the early 20th century can provide a variety of answers to the questions arising also today which regard the social future of the community, the forms of concentrating in urban centers, the form of educating the youth for the future global village, the social responsibility for transforming the natural environment, the care for solidary human coexistence and maintaining physical health. These collective hopes which were voiced out loud at the turn of the 19th and 20th centuries create the topos of a “new man” and it seems that also today the desires and needs of social individuals are the same and that today the life reform movement can give the world a lot of impulses and solutions for a better future life in a world threatened by urbanization and alternative forms of organization of social life. In 1913, Georg Simmel declared that: *Our awareness should become*

a specific wholeness and uniformity, surpassing all fundamentality and not limited to single meanings and that would not be their mechanical composition. [3, p.75]

According to the poetics of numerical definitions, in his contribution to life reform in the volume of *Dzieje kultury niemieckiej*, Orłowski lists the following projects of new forms of life: youth movements (Jugendbewegung, Wandervogel), the concept of regional arts movement (Heimatkunstbewegung), garden city movements (Gartenstadtbewegung), Nordic movement, neo-Pagan and neo-Germanic groups, theosophy, anthroposophy, project of urbanization “for life” and ecological building as well as art colonies and art estates, rural communes and residential projects, animal protection, projects of reformed pedagogy, natural body cult and physical fitness, knowledge and acceptance of body, ecological nudism and naturism, sexual reform, visual literacy (Lichtwark), project of general social hygiene, marriage and education reform, tamed Nietzscheanism, project of religiousness reform, anti-civilization reactions, life guidance projects [5]. The projects listed above belong to social utopias of the beginning of the 20th century; they represent an objection of social individuals to the universal quality of life generated by the existing capitalist system. They originate from the imaginary world of an alternative society. The history of German culture indicates numerous attempts at creating models of utopian societies both in literature and in reality such as: the Idea Tower Society, Goethe’s Pedagogic Province, Hermann Hesse’s Castalia, Rilke’s and Heidegger’s idea of religion without God, the Folkwang idea, Waldorff’s villages, reverence communities – Herrenhuter Gemeinschaft, Gottes Acker as well as the freemasonry movement.

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The life reform movement was based on criticism of industrialization, materialism and urbanization. Rousseau's slogan – "return to nature" – was the motto of the members of the movement. Actually, the scientists even today cannot unambiguously identify the direction of that movement. In literature on the subject, they talk about modernist and anti-modernist as well as reactionary groups. The characteristic features of that period included the formation of hostility among bourgeois, intellectual, romantic and agrarian communities against huge cities, which resulted in the members of that social group escaping to the village, which was in line with the movement's guiding principle. Some of them felt satisfied with establishing allotment gardens which complied with the ideas of the Allotment Society (Schrebergärten-Verein) which operated already since the middle of the 19th century, whereas others moved to newly built and often architecturally sophisticated housing developments – garden cities, mansion districts, garden suburbs. Still others founded communes or shared ownership communities in the country which were economically self-sufficient and highly ideological. This way new communities were established with the same ideology, following the autarkic and autonomous lifestyle. The communities living in the first such estates shared a certain guiding principle; it could be the Folkwang idea (Hellerau garden city near Dresden; Hohenhagen, Mathildenhöhe in Darmstadt, art village Worpswede near Bremen), common form of life (vegetarian village Eden near Oranienburg), anarchism, socialism, anti-urbanism (Monte Verità near Ascona) or the idea of homeland (Heimland.) Ulrich Linse, a Marxist writer, drew the conclusion that the formation of shared ownership communities was an anti-urban revolution of progressive intelligentsia living in the city. This phenomenon can be described as the cult of village or agrarian utopia of urban writers. Linse sees a form of escapism in that movement. The idea of an art village – a garden city – is undoubtedly a result of such a position of progressive intellectualists in Germany and Switzerland. Although the idea, or rather the notion of a garden city, originated in England where it was estab-

lished by Sir Ebenezer Howard. However, the form in which it appeared in Germany was dominated by the idealistic, anarchic, reactionary and progressive ideas. The German idea of the garden city fits in between utopian life – connecting culture, education, artistic activity, and everyday life – and a reactive ideology of nationalists as well as a pragmatic attempt to implement social, ownership, and land reforms. In Germany, it was initiated by writers and artists gathered around Friedrichshagener Dichterkreis and Neue Gemeinschaft. The proclaimers of that movement included brothers Heinrich and Julius Hart as well as Bernhard and Paul Kampfmeier. The members of the German Garden City Association (Deutsche Gartenstadt-gesellschaft) included e.g. Wilhelm Bölsche (died in Szklarska Poręba) and Fidus (painter). Architects, sculptors, people connected with applied art, industrialists, social politicians, members of administration and cooperative management boards joined the Association only later. This group was not a building society but it was an organization aiming at disseminating the ideas of garden cities. Its members claimed that *We, the Germans, follow the principle: first the theory and then the practice. And that method shall bring us success!* [2, p.25].

Aimed at reason, but at the same time the bright, austere, and sensation-oriented world of the passing 19th century was to be replaced with a new world which would be simple, close to nature and paying attention to details. The new objective of a work of art was to express the human soul. Art, as a guardian of senses, was to occupy the center of life of each individual, wrote Emile Jaques-Dalcroze, director of the Institute of Rhythmic Gymnastics in Hellerau. Furthermore, the experience of home and safety, as noted by Ferdinand Avenarius, editor of *Kunstwart* who came from Prague, should be adamantly searched for. A gray city was confronted with a blooming city, the garden city [3, p. 22]. The motto of the flourishing reform movements was filled with zeal: culture instead of civilization. The reformers were going to resolve the hot burning social issues with the use of educational means and social esthetics.

Garden City and Art Colony

It was already in the 19th century that the first villa colonies (Villenkolonie) were designed in Germany in city suburbs. This architectural thought was adopted by the rich bourgeoisie. The typical model residential estates include Lichterfelde West and Grunewald in Berlin. They are exceptional on the European scale in respect of exquisitely rich and varied architecture and gardens. Their residents cultivated a kind of utopian form of existence, based on social and cultural practices, on staging their own lives, on imaginary, happy, and reasonable life in safety, health, and social harmony surrounded by culture and morality. These estates were occupied by representatives of the upper social class, wealthy bourgeoisie and recognized artists. The turn of

the centuries brought about a variety of movements and anti-urban projects which can be seen, as Orłowski put it, as a kind of "anti-civilization syndrome." [5, p. 398]. The Los-von-Berlin-Bewegung movement, which was growing at that time, was a reaction to metropolis, urbanized centers, poverty, dirt and diseases and the wish to find ecological niches can be explained by aversion to technical discoveries and to industrialization of the world. Regardless of the patterns suggested by Howard in his Garden Cities of To-morrow, it is Adolf Damaschke and Theodor Fritsch who should be considered the originators of the concept of alternative forms of social life in the German culture. Orłowski wrote: *The German version of the implementation of that concept of*

green estates with gardens surrounding mansions-villas became something special. In the designs which were never executed, such as for instance Fidus's, the «temples» and other architecturally separate spaces served as sacred places. On the other hand, some of the garden districts, which were often inhabited by artists, became famous for being spaciouly innovative and artistically charming architectural complexes.[5, p.398].

However, garden cities were designed not only in cities. Groups of city artists ventured some more drastic changes in the conditions of their life and work. This was the genesis of art colonies, most of which still exist today. The main objective of their founders was the desire to escape from the dystopia of the city to the utopia of the village, the formation of communities and the need to work creatively in the open air. In Germany, there exist estates closely combining the idea of an art village with the classic Howardian idea of the garden city. These estates provided a specific counterpoint to the strongly industrialized region and the realization of the idea of Gesamtkunstwerk and Folkwang, which indicates the legacy of idealism as well as classicism and romanticism.

The idea of creating an art colony in Hellerau, which today is a district of Dresden, is based on the utopian ideas of Folkwang – a combination of everyday life, social life, and work with art. In 1909, Karl Schmidt, a furniture factory owner, decided to build a garden city

with an applied art workshop as its integral part. He wanted to create an atmosphere of coexistence of residence, work, culture and education. He encouraged the cooperation of such architects as Professor Richard Riemerschmid or Hermann Muthesius. In 1911, Muthesius wrote that *Hellerau is the first and fundamental example of a model estate in Germany which was created by an artistic thought and in compliance with the land reform* [3, p.2]. Hellerau was a place of work and residence for such cultural life figures as Emil Nolde, George Bernard Shaw, Max Reinhardt, Franz Kafka, Oskar Kokoschka, Henry van den Velde, Paul Claudel, Stefan Zweig, Constantin Sergejevich Stanislavski, Upton Sinclair, Leopold Jassner. The colony also inspired the growth of the bourgeois reform movements of the 1920s. In compliance with the idea of their proclaimers, all arts should be reformed and transformed into one all-inclusive art. Fricke wrote in the context of Hellerau about a *significant social and cultural experiment* [4, p. 7]. Karl Schmidt, the founder of German Workshops (Deutsche Werkstätte), a sophisticated style furniture factory, enchanted the eminent architects of those times with his ideas, and they would happily visit Hellerau to create an estate for workers and artists based on a concept of a cooperative. A few years later they built a theater – Festspielhaus – whose grand opening took place in the fall 1913 with a play by Paul Claudel titled “L'annonce faite à Marie.”

Urbanized City

The garden city of Hellerau was a model reform triggered by crisis of the city during the first period of industrialization. Along with the design of Hellerau an attempt was made to build a city where the place of work and residence would be located close to each other and its residents would live in harmony with nature. According to one of its main precepts: social life should be organized around cultural events. Consequently, the theater building offered the estate residents a number of possibilities for artistic activities. Karl Schmidt provided the workers of his furniture factory with a possibility to actively participate in the process of development of residential districts: active participation in creating their own living space, implementing their own architectural designs of households and organizing spaces for social meetings.

The evident problems of the city arise also today; the question of the future of the city seems to remain unanswered, whereas the idea of the garden city addresses a number of issues faced by the residents of the city as well as industrial or post-industrial districts. The most important ones surely include the following: Can working and living take place in the same space?, How can life in the city be connected with the natural environment, its use and protection at the same time?, Is the threat of dividing public space in the city real? When the Athens Charter became effective in 1933 the idea of the garden city was squandered, the city was divided into

industrial and residential sections, and the two were to be connected by the city transportation system. Extreme examples of such cities appeared in Germany in the 1970s. This contributed to the expansion of individual means of transportation as well as formation of “bedroom suburbs” and “commuter towns.” Such trends of growth result in overpopulated cities, trying to cope with transportation problems and social inadequacies of whole districts. City spaces nowadays serve primarily transportation and consumption, whereas people meet in public places, on city squares, and streets only sporadically. The city is threatened with the loss of its integration as well as social and creative functions. Los Angeles is an extreme case of a city whose growth was generated by these trends. It is breaking into a number of “bedroom suburbs” interconnected by highways, with no specific center which would facilitate social contacts. Telecommunications and individual transport are the fundamental pillars of such urban clusters. The garden city of Hellerau provides today a possibility to admire a piece of work which demonstrates historic value, both artistic and ideological, on the one hand, and the phenomena, guaranteeing the creation of connections between the place of work, residence and social life, on the other hand, which can provide a significant impulse in the process of reurbanization and restructuring of existing cities. Architects would like to consider Hellerau a laboratory of architectural possibilities.

History of Hellerau and the Idea of the Garden City

The objective of the design of Hellerau was to formulate new theses in urban architecture. The basic intention of its originators was the coherence of the place of work, residence and life as well as a skilful use of the resources of the natural environment whose first stage of degradation became evident already at the beginning of the 20th century. The structure of the city of Hellerau was supposed to provide an answer to the question of integration of an industrialized society with ecological responsibility of architects, factory owners and city planners.

The history of Hellerau began in 1898, when the German Workshops Hellerau GmbH (Deutsche Werkstätte Hellerau GmbH) still existing today under the same name, were founded in Dresden-Laubegast. [4, p. 25] The company was set up by the 25-year-old apprentice, Karl Schmidt (born in 1873, died in 1948 in Hellerau), who gained his experience from two a little less successful enterprises and drew from the reform ideas of the 19th century which became more and more popular among progressive youth.

The idea of integrating the economic goals with ideology was the guideline for the activities of the originators of Hellerau: Karl Schmidt and Wolf Dohrn. They both realized that the plan which was based only on idealistic beliefs would not survive the clash with reality, as an enterprise which is oriented only to economic success is not worth commitment and support. Such virtues as entrepreneurship, social responsibility, artistic diligence or technical perfection were supposed to be fused in people willing to cooperate. Was it an evident indication of the birth of another social utopia originated by Iambulus in *Islands of the Sun* and continued by Thomas More in *Utopia* (1516), or the core of the idea of fourmieriism of the beginning of the 19th century? Undoubtedly, that position determined the reform initiated in Wilhelminian Germany which did not induce pragmatically in individual enterprises but addressed the total holistic life changes.

Jugendstil, the German style of art, which is considered to belong to modernism, that was named after the journal published in Munich "Die Jugend" which advocated separating art from historical imitation and repetition of styles from the *Gründerzeit* period. The periodical encouraged the cooperation of many outstanding graphic artists and painters such as Bruno Paul, Olaf Gulbransson, Ernst Barlach and Lyonel Feininger. Jugendstil regards architecture of interiors as well as applied art, graphic arts, and painting in their broad meanings. Its objective was a synthetic style equating "pure art" with applied art. The German version of Art Nouveau was surely a comprehensive attempt at providing an answer to the "cookie cutter" and reproducible "trash" in the area of objects of everyday life. Heinrich Vogeler, an artist creating also in Hellerau, the founder of Worpswede art colony, described that phenomenon as follows: *What was formed unintentionally was an art of imagination without content, purely formal, distant from reality. It was a kind of romantic escape from reality and maybe that is why for bourgeois man it was desired drawing attention away from the growing problems of the present* [6, p. 154]. It was

because of such periodicals as Friedrich Averius's "Kunstwart", Alexander Koch's "Deutsche Kunst und Dekoration" or "Dekorative Kunst" and Friedrich Naumann's "Hilfe" that the reformatory circles gained the cultural forum, the aesthetic forum as well as the economic and political forum. The English Arts-and-Crafts movement, established in 1888 by Walter Crane and C.R. Ashbee under the leadership of William Morris, became one of the most important sources of the European precursory and progressive aesthetic thought. The movement was inspired by the ideas of English writer John Ruskin. The most important postulate of Arts-and-Crafts was the slogan to create applied and functional art, however, not at the cost of its aesthetic values. That is why the artists who gathered around Morris objected to mechanical and industrial production and advocated the revival of manual art. Although during his apprenticeship trips Karl Schmidt visited England, he did not have direct contacts with the Arts-and-Crafts circles, which is often wrongly assumed, and instead he learned more about cheap mass production. After establishing his enterprise, Karl Schmidt invited to cooperation such painters and architects as Johann Vincenz Cissarz, Heinrich Vogeler or Ernst Hermann Walter. Schmidt, who did not have sufficient capital, intended to develop a financial plan which would not require huge expenditure and at the same time would facilitate the execution of his economic venture, and so he introduced innovative ideas and offered his colleagues a share in profits of the factory. The quality of manufactured products became their greatest benefit, which referred to Ruskin's and Morris' ideas. Schmidt resigned, however, from manual manufacture and managed to integrate craftsmanship with machine production. Thus, he preceded such contemporary socialists as Ruskin and Morris, but he remained faithful to his own socialist ideas. In 1916, he admitted that he "supported the state socialism" and in the 1930s he cared about the membership of his employees in trade unions [4, p. 26]. Schmidt used modern production solutions which are noticeable even today in the structure of some factory buildings. Soon after opening the factory, together with Richard Riemerschmid – a young Jugendstil painter from Munich – he found the first aesthetic answer to the growth of technology: machine furniture (die Maschienenmöbel): designed by the leading artists of those times, made of the best raw materials and manufactured with machine technology. The Schmidt's Workshop grew fast as was the demand for the furniture made in Hellerau. It was the period when the construction of new factory halls developed very intensively; numerous new factories were built in the first decade for instance the Turbine Hall in Berlin by the leading architect Peter Behrens or Alfelder Fagus-Werke designed by Walter Gropius, founder of the famous Bauhaus.

The first city whose architectural structure complied with all ideas of the garden city as designed by Ebenezer Howard was built around Schmidt's Furniture Workshops. The most important elements distinguishing them from other cities included the exclusion of the city area from the speculation with building plots, combining the place

of residence, work, culture and nature into one space, which was supposed to guarantee better social conditions, closer relations between people and convenient social development of the estate. Similarly to Deutsche Werkstätte, this newly designed city was a practical-social-reformatory reaction to industrialization and it addressed the issue of growing problems of housing economy. Already in 1901, in his proposal of displaying artistic crafts at the German Art Exhibition in Dresden, Schmidt mentioned a need to build a small city or a small colony of villas. Remaining faithful to the ideals of new artistic crafts, in accordance with which one should create a “uniform general impression” – a “uniform atmosphere” and not “just furnished apartments”, Schmidt asked Riemerschmid and Wilhelm Kreis, who cooperated with his Workshops, to prepare architectural master plans.

Le Corbusier, or actually Charles-Edouard Jeanneret, visiting his brother Albert Jeanneret, a co-founder of the School of Rhythmic Gymnastics in Hellerau, had an opportunity to meet the most bizarre group of prewar intellectualists in Germany such as artists, architects, musicians and people of the theater who gathered around the project of the first German garden city. The enthusiastic atmosphere among the group of young people passionate about discovering new areas greatly impressed Le Corbusier. In a letter to his parents he wrote that he “loved those who search.” [1, p. 35] In Hellerau, he familiarized himself with architectural works by Theodor Fischer, Muthesius and Baillie Scott from England as well as Riemerschmid. However, he was not enchanted by the neo-Biedermeier overtones and fondness for the Picturesque of the latter as he wrote in his log that “Riemerschmid did not delight me with his Hellerau.” In a sense Le Corbusier saw Hellerau in the context of the disputes in the German debate on modern style. On the one hand, Alfred Messel, Bruno Paul and Peter Behrens followed the road leading from the neo-Classical inclinations of Schinkel’s, through the Empire style, the classical architecture to the archaic motifs of the Corinthian order, whereas their opponents, opting for already declining Jugendstil style, such as Albin Müller and Riemerschmid, worked diligently on developing new forms and drew on pure joy of forms, on the other hand. However, already during his second visit in Hellerau, Le Corbusier revised his position. The reason for that was a personnel change which took place at that time in Hellerau. The city found a new, young architect, an indisputable protagonist of Heinrich Tessenow. In 1912, Le Corbusier wrote in *Etude sur Le Mouvement d’Art Décoratif en Allemagne* about an “outstanding city of Hellerau” that was “designed by the greatest German artists.”

Hellerau should not be confused with a regular residential district or a simple company housing estate known already in the 19th century as the garden city society, which was established especially for that purpose, was the owner of the building plots, which complied with the ideas presented by Howard in his work on the garden city. The objective was to provide the future residents with a guarantee of participation in the growing capital of the estate as a result of the growth of the Workshops and

expansion of the estate as well as to secure the place of residence in case of losing job in the Workshops. The future residents were also offered a possibility to realize their own architectural ideas or functional solutions. In Germany, unlike in Northern Europe or in the United States of North America, no houses were built of timber. Schmidt fought with the designs supported in Hellerau against the existing dislike and superstitions about this form of building. Today, it turns out and it is confirmed by the ecological summits in Rio and Berlin that it is necessary to enter into discussion on ecological architecture from renewable sources.

Already the first drafts made by Schmidt with architect Riemerschmid in the summer 1906 demonstrated a clear division of the city into 4 zones: industrial zone, residential zone for poorer people, a zone of social institutions and a zone of villas and single family houses. All the zones were strongly connected with one another with cultural and social institutions in the center, industrial section – the Furniture Workshops – were within walking distance. Such a design of the garden city demonstrates a necessity to prevent the spiritual unrest in a broad sense and social dissatisfaction which resulted from the quick growth of industry and industrialization of urban centers in Germany at the end of the 19th century. This atmosphere contributed to the development of a multilayer and diverse life reform movement. An attempt at reviving human existence through growth and practical implementation of a culturally changed system of values in life was the movement’s characteristic element. It was a task of every individual to submit to self-reform, rejecting artificial life in a big city and finding the original forces of nature, rejecting the authoritarian and hierarchical, social, and professional structures, resigning from poisoning the body with alcohol, tobacco, medicines and animal products. Two elements are combined in the garden city design: 1. life reform and 2. city reform. The attempt at developing a concept of the garden city as a place of cultural revival of Germany was accompanied from the very beginning by the processes of implementation of the Howardian ideas in this area. The garden city of Hellerau was supposed to become a new “German Olympia”, a national center of culture, theater, music, and sport. Its objective was not only to break the internal barriers between different forms of expression but also existing as an integral part of everyday life, folk festivities as well as lifelong national community education. A project of music education of the community of Hellerau was developed in connection with such a broadly drafted plan of reforms. Its final point was the transfer of Emil Jaques Dalcroze’s Rhythmic School from Geneva to Hellerau as well as building of the imposing Institute of Education designed by Tessenow in 1911.

The key note in the vision of creating Hellerau was played by the need to build a new, organic life, filling the place and its residents with harmony through rhythm that would affect the creation of moral and aesthetic architecture. The new, holistic style was supposed to pave the way of life where the feelings and soul of the residents could find their reflection.

Such a view, namely a biased and erroneous judgment of the specificity and partiality of every premise of the

reform as well as distorting its substance in a sense of global efficiency is typical of the reform attempts at the turn of the centuries. The land reform, re-agrarization of lands by cooperative estates and garden cities, resignation from the use of paper money or even vegetarian food were already contemplated and propagated as unprecedented and miraculous panacea for all social ills. Not much later than in Germany and Switzerland, that idea of hope for creation of “man of the future” became popular in Soviet Russia and fascist Italy. That instrumentation of social curing means was supposed to be extended in Hellerau to include new therapies based on rhythmic gymnastics.

And what did the city of the beginning of the 21st century look like? The classic means integrating urban communities began to disappear from the city. Trade is moved to the city outskirts to huge shopping centers, offering primarily mass products. Cultural institutions receive financial subsidies provided they are profitable. The number of workplaces on the market decrease drastically along with accumulation of production in industrial parks and as a result of rationalization of services. The space of social activities which are available to every resident is replaced with privately controlled galleries and shopping malls. The loss of the structural elements raises questions about the legitimacy of the existence of the European model of the city. The city center comprises only two to three percent of the whole city. The city outskirts grow quickly, preventing, however, the development of urban relations there. Furthermore, the city center lost its character, bonding the urban community and market squares no longer serve as space for public meetings, fairs or political disputes [4, p. 43]. The diversity of the media which we confront every day enables the residents of urban agglomerations to create their own virtual cities.

The Athens Charter (1931) provided a leading model for modern movement. Apart from the division of central functions of the city, it also defined the technical capabilities of the cities. Along with modernization the cities opened all doors to the destruction of their structure. A divided and flexible city encouraged attempts at combining functionalities, on the one hand, and transparency, on the other hand. Probably only few architects of those times realized that such activities would result in the growing control of the city and people as well as in an order which in Germany facilitated the growth of National Socialism. Furthermore, the architects of post-modern cities falsely assumed that the free choice of lifestyles, which is so broadly promoted today by the media and culture-forming individuals, affect the contemporary view of urbanized centers.

The changing policy of urbanization of cities often seems to refer largely to the forgotten ideas of the “city renewers” from the turn of the 19th and 20th centuries. It assumes changes in compliance with ecological, economic and social ideas. The newly built residential districts and new forms of use of post-industrial or post-military areas often submit to ecological guidelines which only a few years ago were not taken into account at all. New strategies for city building were presented at the International Building Exhibition Emscher Park (1989 until 1999). The

objective of the Exhibition was to show new ideas and designs in the area of social, cultural, and ecological changes for post-industrial regions with the example of the northern part of Ruhr region. The objectives of the organizers of the exhibition included 1. development of new infrastructure: connecting empty spaces, 2. maintaining the history of the region, including its previously unnoticed traces and industrial past, 3. supporting the decentralized structures of the region which, without the classic centralization features, could provide better conditions for growth of modern models of cities, 4. indicating endogenous possibilities, local economies and abundance of productive ideas of the region, 5. developing projects in compliance with pointillistic strategy, with no top-down imposition of plans, 6. supporting ecological, economic and social values, exerting less pressure on spatial plan.

The idea of garden cities, especially their German versions, is a holistic idea that from the very beginning combined the social, urban, and ecological necessities. It was an answer to existential ills caused by intense industrialization, speculation with earthly goods, housing problems, and poverty. It was not only an urban reform but it was the most important component part of the life reform movement.

The idea of the garden city as designed by Ebenezer Howard complied well with the significant principles of life reform: ideal residential conditions, improvement of the quality of life in general, popularization of the idea of community, joint decision-making of the residential community about the future of the estates, solidary model of cooperative operations, resignation from private property as well as the disappearance of differences between advantages of cities and villages which was provided in “Garden Cities of To-morrow.” It appears that the last chapters of the book by Howard are read less attentively. There, the author presents not so much a model of the garden city which turned out to be so important for the development of the first estates of that type. The garden city is also a model for the cities which await structural changes, primarily those polluted with industrialization. Howard presented his idea with an example of London destroyed by industry. The garden city is an indicator for structural remodeling of London. However, before such a great goal could be achieved, Howard recommends building smaller units which would provide experience and become a “working model.” Consequently, Howard goes beyond the images of garden cities known to us; he is preoccupied by the process of learning, collecting experiences that might contribute to restructuring of already existing cities. If then the biggest credit of Howard’s is that “working model”, it means the necessity of continual development of the notion of the garden city. Can the idea of the garden city become an answer to today’s questions? Can we expect the processes of decentralization, greater independence, self-government, autarky, getting closer to nature? Wouldn’t the unity of the place of work, residence, and life provide an ideal of life for many city residents? Wouldn’t the new forms of transportation result in a rejection of old means of communication between individuals? Shouldn’t we forget the idea of a

single family house with a garden, beautiful estates surrounded by green belts and develop an urban concept which provides answers to the hot burning issues of restructuring of post-industrial cities of the 21st century? Looking at Hellerau not as a museum but as a model of

a city of the future, as a “Laboratoire d’une humanité nouvelle” (Paul Claudel about Hellerau), one can recognize the center of a city of the future: a workshop where work is done on sustainable development of the city and its community.

References

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Hellerau – droga ku przyszłości czy model urbanistyczny początku XX wieku?

Zmieniająca się polityka urbanizacyjna miast zdaje się często odwoływać w dużej mierze do zapomnianych postulatów „odnowicieli miast” z przełomu XIX i XX wieku. Jej założenia zmierzają w kierunku zmian zgodnych z ideą ekologiczną, ekonomiczną i socjalną. Pomysł miasta-ogrodu, zwłaszcza w wydaniu niemieckim, jest ideą holistyczną, która od samego początku

łączyła potrzeby socjalne, urbanistyczne i ekologiczne. Była odpowiedzią na bolączki egzystencjalne, spowodowane intensywną industrializacją, spekulacją dobrami ziemskimi, problemami mieszkaniowymi i biedą. Nie stanowiła ona jedynie urbanistycznej reformy, ale była najważniejszą częścią składową ruchu reformy życia.

Key words: urbanization, garden city, life reform, Hellerau, green town, restructuring of post-industrial cities

Słowa kluczowe: urbanizacja, miasto ogród, reformy życia, Hellerau, zielone miasto, restrukturyzacja miast post-industrialnych



Lucjan Kamionka*

The problem of defining standards in the sustainable architecture design

Introduction

In the period of the threat to the environment and energetic crises the sustainable development has become the main strategy in the land management. Architecture and building industry constitute the biggest sections of economy in the economic aspect and in relation to the flow of raw materials. Most of the capital both financial and natural is invested in buildings. The role of architecture and construction in creating the sustainable development is very significant.

Sustainable development was defined in 1987 in the Report 'Our Common Future' worked out by The World Commission on Environment and Development also called the Brundtland Report. The Report contains the list of threats to the future proper development of

mankind. A central category of the Report became the notion of the sustainable development as well as the problem of satisfying people's needs at the expense of nature, the needs of the rich at the expense of the poor and the needs of today's generation at the expense of the future generations. It was stated that the principles of sustainable development should be executed by all countries because only then will it be possible to satisfy aspirations of the present and future generations [12].

Sustainable development in relation to architecture was presented for the first time in Gävle in 1998 and published in Agenda 21 in the document called 'Sustainable buildings' [4].

Components of sustainable architecture

Sustainable architecture is the architecture designed in accordance with the principles of sustainable development. In 2006 the European Council adopted a renewed strategy of the EU sustainable development [3]. The strategy lists three dimensions of sustainable development, i.e. environment protection, social integration and economical growth as well as seven key challenges in the sphere of economic, ecological and social policies:

- limitation of climate changes and promotion of pure energy,
- ensuring that transport systems meet the requirements of environment protection,
- promotion of sustainable models of production and consumption,
- better management and counteraction against excessive exploitation of natural resources,

- promotion of high quality public health,
- creating a society which is based on social integration and guaranteeing a high quality of citizens' life,
- active promotion of sustainable development and ensuring compliance of EU actions in this aspect.

The aspect of energy saving in architecture in the modern civilisation conditions plays a key role. Directives of the European Community for the year 2020 presented in the so called 'Green Book of Energetic Effectiveness' [2] assume as follows:

- execution of potential savings in buildings within the range of energy used for heating, air-conditioning, hot water and lighting on the level of 22%,
- doubling of participation of renewable sources of energy from 6% to 12% in the general use of electricity,
- increase of ecological electric energy from 14% to 22% in the general energetic use,

In order to facilitate the process of designing architecture structures which function in accordance with the rules of

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sustainable development, attempts to codify standards are made. Standards set the quality of solutions and they are subordinated to the components which create the model of building functioning in the environment. These components creating particular problem areas comprise the following,

- energy saving and the usage of renewable sources of energy,

- health comfort of users,
- integration of a given structure with the environment and pro-ecological exploitation of the terrain,
- rational usage of water, materials and other raw materials.

Programmes which certify designing and execution of architecture structures deal with standardisation of components.

Designing standards in certifying programmes

Standards of designing and execution of architecture structures are codified in specialist assessing programmes which give certificates to the particular buildings.

The following programmes enjoy a special interest and prestige:

- 'Passive house' programme created in Germany in the Institute of Passive Houses in Darmstadt,
- 'Green building' programme of the European Commission which, using the established standards, goes beyond the narrowly understood circle of energy saving problems,
- 'BREEAM' British programme estimating buildings which has been functioning for several years in the sustainable architecture environment, mainly in Great Britain,
- 'Leed' American programme which currently carries out certification processes in over 33 countries (certificates are granted by US Green Building Council) on different continents.

Analysing the attempts of codifying and determining the standards of designing as well as architecture, we must bear in mind that these programmes are not closed and are subject to constant development and improvement. In our article we focused on the problem of defining standards in the above mentioned programmes.

'Passive house' – the idea of the house was created in Germany in the 1990s. The creators of this idea Doctor Wolfgang Feist and Professor Bo Adamsom [8] made design assumptions according to which passive systems were supposed to cover a big part of the demand for heat. Passive energy sources are as follows:

- heat sources such as, e.g. people, household devices,
- heat recovered from air,
- passive profits from natural sources such as solar energy, earth energy.

In 1991 in Darmstadt the first passive house was built (Fig. 4). In 1996 the Institute of Passive Houses

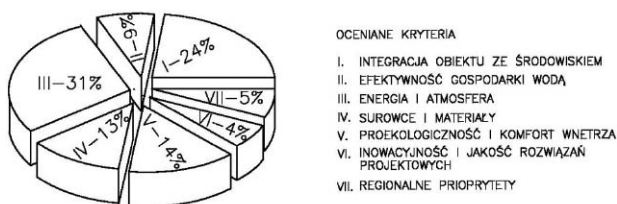


Fig. 1. Percentage value of the participation of individual categories in the importance of the certifying evaluation.

II. 1. Wartość procentową udziału poszczególnych kategorii w wadze oceny certyfikującej.

in Darmstadt was established. It is an independent research unit under Doctor Wolfgang Feist's guidance. The creators of the idea focused strictly on the saving energy problem and other factors of sustainable development were left beyond their current sphere of interests. Nevertheless, we should keep in mind the fact that this idea as well as standards undergo evolution. A passive house is considered to be the house which does not use more than 15 kWh of energy per 1 m² of usable area in order to provide residents or users with thermal comfort.

The passive house must meet specific standards:

- a total coefficient of thermal permeability for the passive building cannot be higher than 0.15 W/ m² K,
- a coefficient of 'U' heat permeability for walls, the roof and floor on the ground cannot be higher than 0.13 W/m² K,
- a coefficient of 'U' heat permeability for windows not higher than 0.8 W/m² K,
- a coefficient of solar energy 'g' permeability for window panes not higher than 50%,
- exchange of air not more than 0.6 of the house cubature per hour, e.g. for the house with 500 m³ (193 m² × 2.6 m) cubature the maximum ventilation efficiency is 300 m³/h.

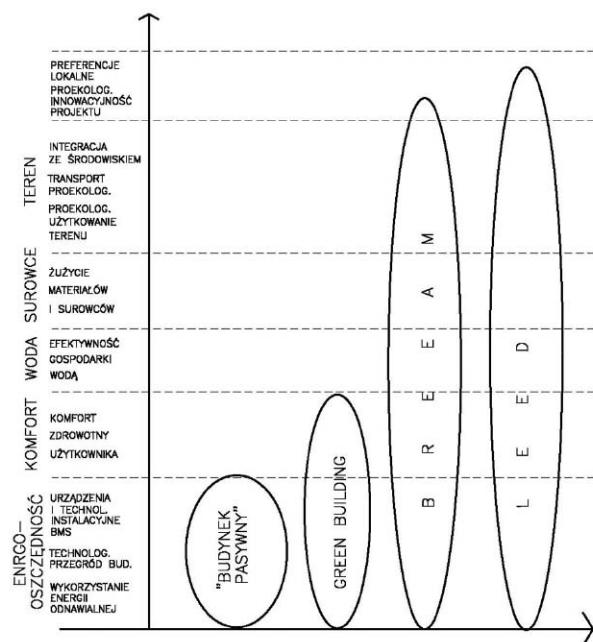


Fig. 2. Disadvantaged areas of the sustainable development in codified certifying programs

II. 2. Obszary problemowe zrównoważonego rozwoju w skodyfikowanych programach certyfikujących.

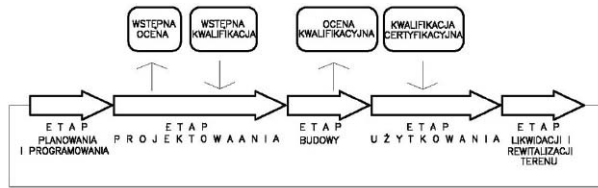


Fig. 3. The Cycle of the existence of architecture object in the environment (life cycle)

II. 3. Cykl funkcjonowania obiektu architektury w środowisku (life cycle)

Execution of the defined standards causes a decrease in the use of energy in relation to the effective laws and technical conditions [6].

The first design of the passive house in Poland was performed in Smolec near Wrocław in 2009. Architects use the idea of an energy-saving house in their designs and realizations more and more often. In cooperation with Daniel Libeskind in Dattein, a prototype of the ecological house was built which was to be mass produced (Fig. 5).

The European Commission undertakes many initiatives within the scope of sustainable development and the particular role of the architectural activity. In 2008 this Commission published ‘The Council conclusions concerning architecture: participation of culture in sustainable development’ [5]. The Commission undertook the initiative of the programme based on a voluntary participation, which aimed at increasing energetic effectiveness of buildings.

The ‘Green building’ [11] programme was activated in January 2005. This is a voluntary programme thanks to which the owners or users of buildings are helped with increasing energy saving and introducing renewable sources of energy into the construction substance.

The office block UNIQA in Vienna was built in accordance with the Green Building standards (Fig. 6). Each company, firm, organization or a natural person who is going to contribute to the tasks of the programme can participate in the Programme. The ‘Green Building’ – is:

- flexible and open – in order to be applied in different kinds of buildings along with their surroundings and to comprise modernization of the already existing buildings,
- precise enough to guarantee that companies which join the programme shall fulfill their obligations and shall achieve a significant part of potential energetic savings,
- possible to be adapted to different national as well as regional and local conditions,
- competent and effective in popularizing the Directive on Energetic Efficiency of Buildings and stimulating its implementation.

The procedures of the ‘Green Building’ programme specify technical modules assessed in the process of certification, i.e.:

- energetic industry management,
- three-generation (mechanics, heating, refrigeration engineering),
- exploitation of solar energy,
- electric devices,
- distributional transformers and UPS,
- furnishings: equipment and devices,

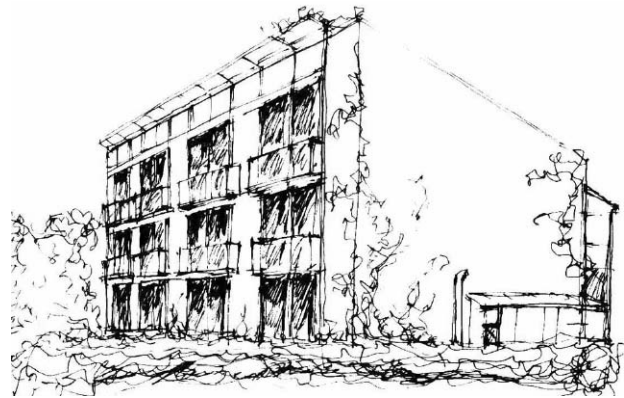


Fig.4. Passive house in Darmstadt (arch. Bott, Ridder, Westermeyer).

II. 4. Dom Pasywny w Darmstadt (arch. Bott, Ridder, Westermeyer).

- heating systems,
- ventilation,
- air-conditioning and passive cooling,
- kind of external material of the building,
- lighting comfort.

The procedures of technical modules define the standards which a building is supposed to meet.

In 2009 the office block Atrium City situated in the centre of Warsaw obtained the certificate ‘Green Building’ from the European Commission as the first in Poland.

The ‘BREEAM’ [13] programme was worked out in Great Britain in 1990. The programme is cyclically updated (the last amendment took place in 2008).

The standards comprise a two-stage procedure of assessment including the following stages:

- designing,
 - realisation
- and they make it possible to assess various buildings.

There are three levels of influence on the environment which are used in the assessment:

- global,
- local,

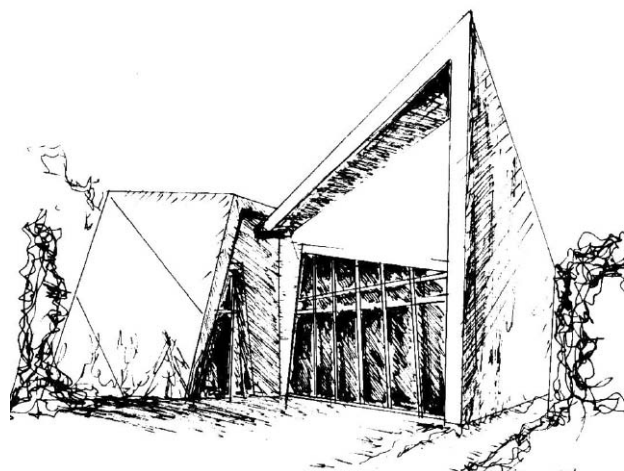


Fig. 5. Economical house energy in Dattein 2009 (arch. D. Libeskind, source: Rheinzink).

II. 5. Dom energooszczędny w Dattein 2009 (arch. D. Libeskind, źródło: Rheinzink).

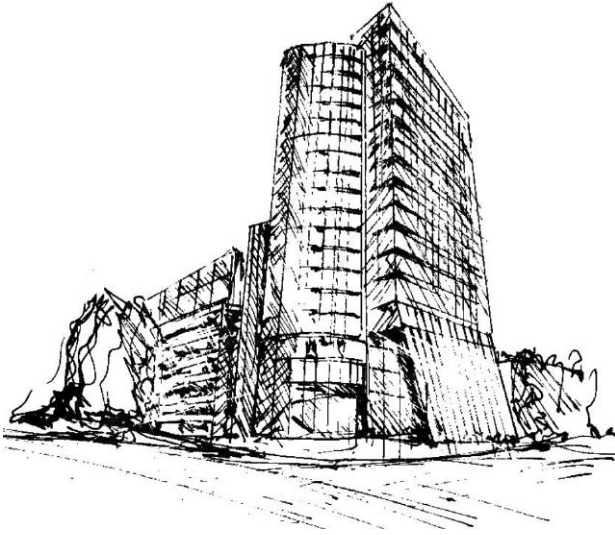


Fig. 6. UNIQA Towers in Vienna, Green Building.2008r (arch. Neuman & Partner).

Il. 6. UNIQA Towers w Wiedniu, certyfikat Green Building.2008r (arch. Neuman & Partner).

- internal.

A Conference Centre, which constitutes a model of programme assumptions, was built in accordance with the defined standards in Durham in England (Fig. 7). 'BREEAM' is also tested in the structures of architecture which is designed and realised in accordance with principles of sustainable development outside Great Britain, e.g. Hermitage Plaza in Courbevoie (Fig. 8).

The programme procedures determine the categories and standards of designing a building:

- energy,
- health comfort,
- water,
- usage of the terrain,
- design management,
- materials,
- contamination, wastes,
- transport.

Total of the points from the assessment in the design stage and in the execution stage give a definite result and as a consequence a category of the granted certificate:

- satisfactory – at least 60% of the maximum number of points,
- good – at least 70% of the maximum number of points,
- very good – at least 80% of the maximum number of points,
- excellent – at least 90% of the maximum number of points.

The certificate of the 'Leed' programme functions mainly on the territory of the United States; however, it is worth noticing that there is a growing interest in it in Europe, the Middle East and Africa.

The programme 'Leed' [10] as a programme which comprehensively deals with the issue of sustainable development has been enjoying a greater interest and prestige among investors, developers and designers. At present, in more than 33 countries a qualification proce-



Fig. 7. Rivergreen Centre of Durham. Breeam 2007 (arch. Jane Darbyshire & David Kendal Ltd.)

Il. 7. Centrum Konferencyjne Rivergreen w Durham, certyfikat BREEAM 2007. (arch. Jane Darbyshire & David Kendal Ltd.)

cedure for obtaining the certificate is in progress. The certificate is granted following a successful assessment of a building by the US Green Building Council in seven categories in which a definite number of points can be obtained as follows:

- Energy and Atmosphere – max number of points – 35,
- Pro-ecology and interior comfort – max number of points – 15,
- Effectiveness of water management – max number of points – 10,
- Integration of a building with the surrounding – max number of points – 26,
- Raw materials and Materials – max number of points – 14,
- Regional priorities – max number of points – 4,
- Innovativeness and the quality of designing solutions – max number of points – 6.

The system of categories sets the standards of functioning of an architectural structure.

The number of granted points depends on results

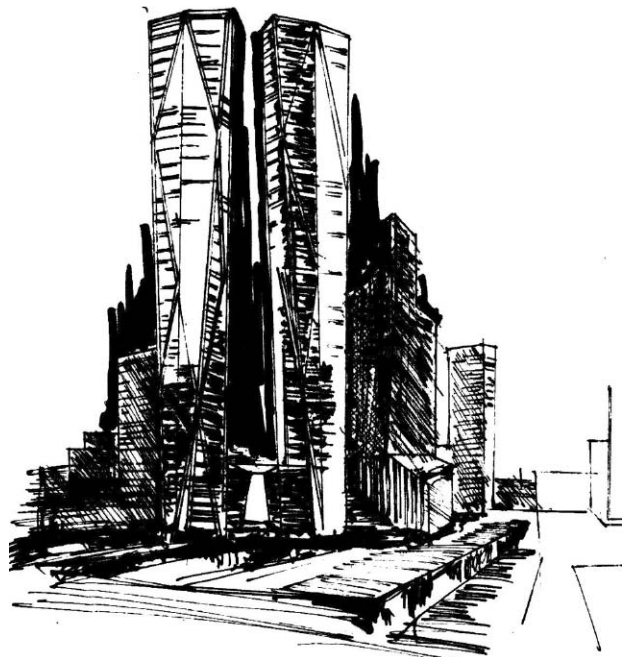


Fig. 8. Hermitage Plaza of Courbevoie, BREEAM – period of project design. Construction 2010–2015. (arch. Normana Fosterera).

Il. 8. Hermitage Plaza w Courbevoie, certyfikat BREEAM na etapie projektowym. Realizacja 2010–2015. (arch. Normana Fosterera).

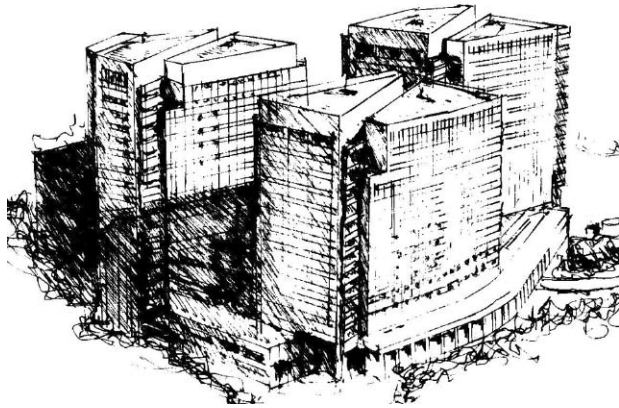


Fig. 9. Adobe Towers of San Jose USA, LEED – 1996 r.,1998r.,2003r.
(arch. Hellmuth Obata & Kassabaum Inc.)

II. 9. Adobe Towers w San Jose USA, certyfikat LEED etapy 1996 r.,1998r.,2003r. (arch. Hellmuth Obata & Kassabaum Inc.)

which a building achieves in the above mentioned categories, while the total number of points decides about the level of certification.

The categories which play a key role in the process of certification are as follows:

- ‘energy and atmosphere’ which constitutes circa 31% of the total point value,
- ‘integration of a building with the environment’ which constitutes circa 24% of the total point value.

A percentage value of particular categories which matters in the certifying assessment is shown in Figure 1.

The number of the scored points determines the level of the granted certificate:

- ‘Leed’ Certificate basic level 40–49 points;

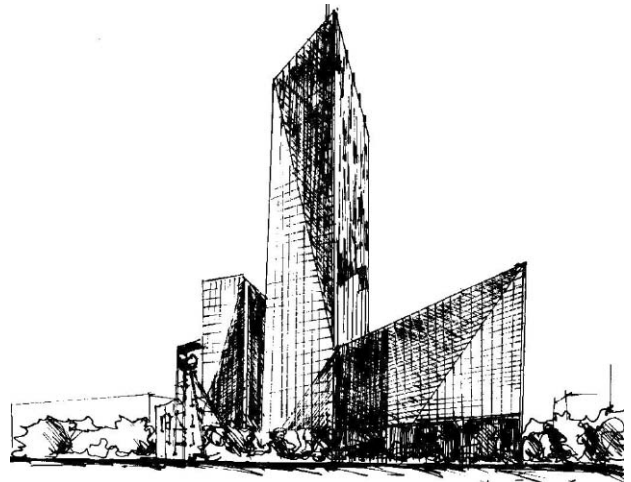


Fig. 10. Jindrich Plaza of Ostrawie (CMC architects David Richard • Chisholm, Vit Maslo).

II. 10. Jindrich Plaza w Ostrawie (CMC architects David Richard Chisholm, Vit Maslo).

- ‘Leed’ Certificate silver level 50–59 points;
- ‘Leed’ Certificate golden level 60–79 points;
- ‘Leed’ Certificate platinum level over 80 points;

The complex of edifices of the Adobe Towers in San Jose in the USA as one of the first received a platinum certificate (Fig. 11). The complex of Jindrich Plaza buildings in Ostrava also received the ‘Leed’ Certificate (Fig. 12). In 2010 the aforementioned office block Atrium City in Warsaw met the standards of the programme and received a silver certificate ‘Leed’ (Fig. 6–8).

On the basis of the review we carried out, we must

Preliminary assessment of standards specified in the analysed programmes

conclude that the scope of standards of the ‘Passive House’ programme is the most narrowed down and it does not include the entirety of the sustainable development issues, nevertheless it rigorously deals with the issues of energy saving of a building, which are significant for creating sustainable development. The programme ‘Green building’ goes beyond the problems of energy saving but its standards in this aspect as well as the scope of architectural structure assessment at the current stage of the programme procedures do not give a fully satisfying image. The programmes ‘BREEAM’ and ‘Leed’ deal with a much more extensive range of the sustainable development problems and they are enjoying more and more popularity and interest. It is worth emphasising that the sustainable architecture standards

are a significant factor of an economising city [7]. In Figure 2 we presented the comparison of the analysed certifying programmes in the aspect of the sustainable development issues.

In the process of designing architecture which complies with the principles of sustainable development, we must take into account the full cycle of functioning of the spatial complex which comprises a given fragment of the environment. This cycle is presented in Figure 3.

In Poland there are more and more design, developer and construction companies which are applying for the certificate. Several designs and implementations are in the process of assessment and certification, which is a most desired tendency.

Standards of sustainable architecture pose new tasks

The role of architecture in designing for sustainable development

and open new perspectives for an architect as a designer and coordinator of a designing process. Close cooperation with designers of installations and energy issues of

a building on each stage of designing is of key importance to achieve the assumed goals.

In the book entitled ‘Architecture & Quality of Life’

[12] by Architects' Council of Europe an urgent need was emphasised of comparing the main goals of action comprising, on the one hand, economic development and competitiveness and, on the other hand, a balance – all things analysed as regards the quality of life. A leading role is supposed to be performed by the architect in this process.

While designing buildings the principles of architectural shaping, which aim at the best combination of a building function with a harmonic integration with the environment as well as at increasing energetic efficiency and ecological comfort, ought to be employed.

The triad of sustainable development: Ecology – Society – Economy is associated with the Vitruvian triad: Durability – Beauty – Usability [8].

Modern ecological designing consists in conscious taking into consideration the rules of building physics, the principles of energy and material saving, the usage of natural energetic resources of the surroundings, rational

water economy as well as preference of pro-ecological relations with the urban surroundings.

A building design should constitute a resultant value of a multi-criteria analysis in which each of the solutions is confirmed by a simulation which allows estimating the effects of the accepted concept.

The architect's role is to give such values to the created buildings so that they could form a harmony in the content and form of the building (technical and functional issues). Aesthetics of sustainable architecture should determine the harmony between the form, technology and widely understood surroundings. An architect as a creator and coordinator in a complicated process of designing must harmonise different specialists in, e.g. constructions, installations, energetic balance, building management, ecology and economy.

The architect in an inter-disciplinary process of designing should always take sides with Man as a user of the created space.

The problem of specifying the standards in designing

Conclusions

sustainable architecture – was analysed on the examples of the chosen certificating programmes. The standards which were defined in them comprised numerous categories:

- energetic efficiency
- comfort of the user, micro-climate
- efficiency of water economy
- integration of a building with the surroundings, pro-ecological usage of the terrain
- management of materials and raw materials
- pro-ecological innovativeness of a design and regional preferences

The energy saving factor in sustainable architecture in modern civilisation conditions plays a key role. Sustainable architecture which is designed and executed in accordance with the codified standards of sustainable development brings about significant profits as follows:

- for the natural environment, it contributes to the limitation of natural resources consumption as well as the decrease of the environment degradation,
- for health and safety, it contributes to the improvement of comfort, health and safety of users,
- social ones, it contributes to the improvement of the quality of life and relieving local infrastructure,
- economic ones, it contributes to the increase of the worked out benefits and profits.

Architecture in the light of the codified standards should be considered in a full cycle of functioning (life cycle). The stage of designing is important as well as the stages of design implementation, exploitation of a building and finally its utilisation.

The investor, Developer, Designer can freely make choices as regards participation in a particular programme.

The architect as a coordinator of the multi-domain process of designing should be a guarantee of such values that they could result in a harmony of the content and form of the building with adherence to the sustainable development principles.

Programmes, which assess and certify structures of architecture, should be considered as unfinished processes in a dynamic concept. The problem of defining standards in designing sustained architecture is still open, which is proved by periodic changes in the programmes with an aim to create optimal models of buildings conducive to sustainable development. These changes take place particularly in the scope of:

- adaptation to local conditions,
- increase of the area of certificating connections of architecture with the environment.

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Problem określenia standardów w projektowaniu architektury zrównoważonej

Architektura funkcjonująca w zgodzie z zasadami zrównoważonego rozwoju powinna odpowiadać określonym standardom. Próbę ich zdefiniowania podejmują programy certyfikacyjne. W artykule przedstawiono wybrane programy: „Dom pasywny”, „Green building”, „Breeam”, „Leed”, które obejmują problematykę zrównoważonego rozwoju w różnym zakresie i w różnym stopniu. Certyfikat „dom pasywny” skupia się głównie na energooszczędności, „Green building” obejmuje problema-

tykę energii i komfortu użytkowego. Programy „Breeam” i „Leed” dają kompleksowy obraz zrównoważonej architektury. Kodyfikują takie kategorie oceny, jak: energooszczędność, komfort zdrowotny użytkownika, efektywność gospodarki wodą, proekologiczność użytkowania terenu, efektywność użycia materiałów i surowców, proekologiczna innowacyjność architektury. Programy certyfikacyjne nie są zamknięte, podlegają ciągłemu rozwojowi i doskonaleniu.

Key words: standards of architecture, environment friendly programs, sustainable architecture.

Słowa kluczowe: standardy architektury, programy proekologiczne, architektura zrównoważona.



Presentations

Sustainable development of residential environment

Architectural workshop of Scientific School Habitat'10. Faculty of Architecture of Wrocław University of Technology

Supervisors: Ewa Cisek

Roman Czajka

Wojciech Januszewski

Michał Pelczarski

On 21–23 October 2010 at the Faculty of Architecture of Wrocław University of Technology there was an Architectural Workshop devoted to Sustainable Habitats organized by the Scientific School Habitat which operates at the Institute of Residential Architecture Designing. The workshop was preceded by the scientific conference: Habitat – sustainable development of residential environment, which is part of the works of the International Discussion Forum: Man, Space, Culture.

The founder of the Scientific School Habitat and the initiator of Architectural Workshops which have been organized periodically since 1987 is Professor Zbigniew Bać. The whole event is under the scientific supervision of Ada Kwiatkowska PhD. Architectural Workshop is always an interdisciplinary event, therefore, the final elaborations are enriched with comprehensive knowledge of architects, constructors, sociologists and psychologists.

This year's workshop was an attempt to define the basic notions connected with the concept of spatial order and sustainable development of habitats, determination of influence of sustainable development on the improvement of quality of life in habitats, promotion of democratic procedures and participation of local communities in the formation of residential environment as well as definition of principles of residential architecture designing in the aspect of issues connected with the protection of natural environment resources and cultural heritage of a place. Special guests were Professor Jan Gehl, author of the book: *Life between buildings*

and Maria Folta PhD, author of the book: *Negotiating and mediation in life*.

The effect of three days' work of four design groups were workshop studies which presented SUSTAINABLE HABITATS in various ideological, functional and spatial aspects. On the provided situational maps of the chosen regions of Wrocław there are elaborations of variants of land development as well as individual interpretations of design solutions which ensure sustainable residential environment for the future residents of the habitats.

Topics of the architectural concepts are the following: "dotleniacz" (Additional Oxygen), "maszroom" (Mushroom), "zielokąt" (Green Corner) and "przedmieście w mieście" (Suburb in City).

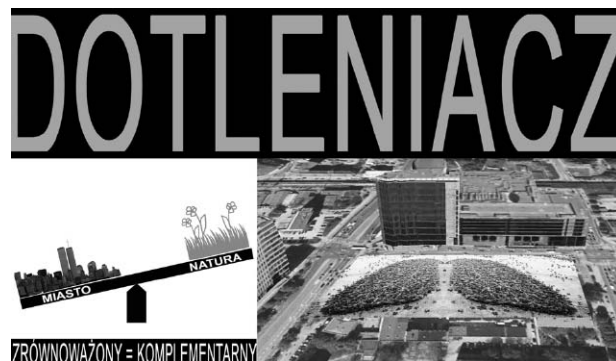


Fig. 1. Habitat DOTLENIACZ (ADDITIONAL OXYGEN HABITAT) – idea foundation,

II. 1. Habitat DOTLENIACZ – idea założenia,

Habitat Dotleniacz

Authors: Ewa Cisek PhD, Tomasz Głowacki PhD, Igor Kaźmierczak MA Eng, students Elżbieta Głogowska, Anna Krzysztóń, Monika Tokarska, Dorota Waszak, Bartłomiej Zasiński. (Fig. 1,2)

This sustainable habitat was proposed in the heart of Wrocław, in the close vicinity of the shopping centre “Arkady Wrocławskie” and the office block “Globis”, which is a part of the town with very scarce green areas. The form of the designed structure was complementary in that it compensated the lack of green areas and fresh air and served as ‘a lung’ for the city; it also compensated the shortage of recreation areas and *sacrum* space and it counterbalanced the commercialized neighbourhood. The natural border of the Habitat is made up of biologically active planes, taking the form of a 35-metre cuboid with regularly planned vertical pedestrian circulation units.



Fig. 2. Authors of monograph 'Habitat DOTLENIACZ (ADDITIONAL OXYGEN habitat)': Ewa Cisek PhD, Tomasz Głowacki PhD, Igor Kaźmierczak MA Eng, students Elżbieta Głogowska, Anna Krzysztóń, Monika Tokarska, Dorota Waszak, Bartłomiej Zasiński (photo: A. Krzysztóń)

II. 2. Autorzy opracowania Habitat DOTLENIACZ: dr inż. arch Ewa Cisek, dr inż. arch Tomasz Głowacki, mgr inż. arch Igor Kaźmierczak, stud. Elżbieta Głogowska, studenci Anna Krzysztóń, Monika Tokarska, Dorota Waszak, Bartłomiej Zasiński (fot. A. Krzysztóń)

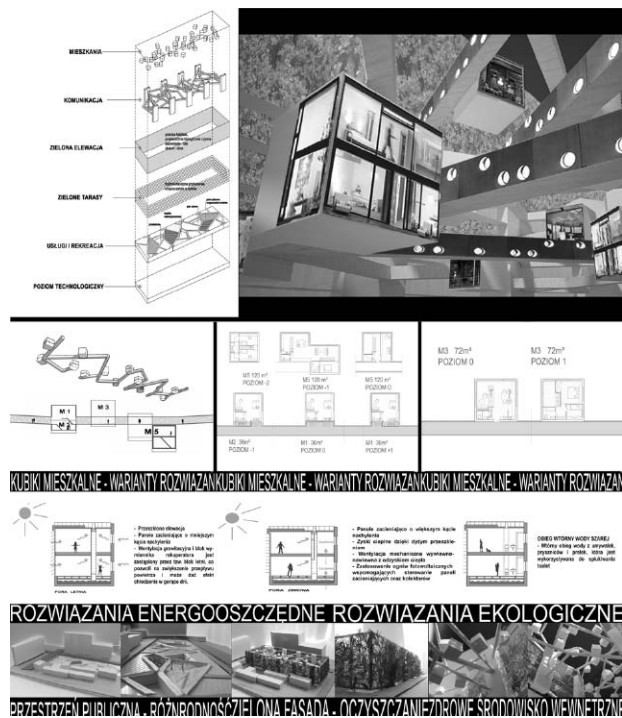


Fig. 3. Habitat DOTLENIACZ (ADDITIONAL OXYGEN habitat) – functional and spatial concept

II. 3. Habitat DOTLENIACZ – rozwiązania funkcjonalno – przestrzenne Habitatu

Inside, at various heights, dwelling units are suspended in the shape of modulated cubes. They are fitted into place by means of connectors attached to massive stairwell shafts accessible through passageways. The ground floor has been designed as containing a water pool, service facilities and reed fields, while the basement accommodates the technical infrastructure. The project utilizes ecological and energy-saving solutions (Fig. 3).

Habitat Maszroom

Authors: Paweł Horn PhD, Michał Pelczarski PhD, Jerzy Łątka MSc, students Marta Rusnak, Kamil Bocian, Jolanta Boska, Magdalena Gęgotek, Piotr Jarczyński. (Fig. 4, 5)

The designed Habitat occupies an area between the streets: Powstańców Śląskich, Swobodna and Komandorska. This is strictly the centre of the city with big-city housing. The concept of this entire arrangement incorporates the idea of shaping safe space not only by architecture but also by its users. Eight dwelling mushroom-shaped towers of various sizes have been proposed. Such an approach allows us maximum reduction of contact surface between the building and the ground, which leaves more space for biologically active areas of the site. The form of mushroom caps enables to use them as umbrellas protecting against changeable weather conditions, provides the necessary space for photovoltaic solar panels and allows collection of grey water (obtained from melted snow) for use in sanitary systems. The dwelling compounds, in the form of sphere-shaped fruits, are suspend-

ed from the caps by means of bands. The compounds are built in an organic-like fashion. The core element splits into separate sections accommodating the living quarters,

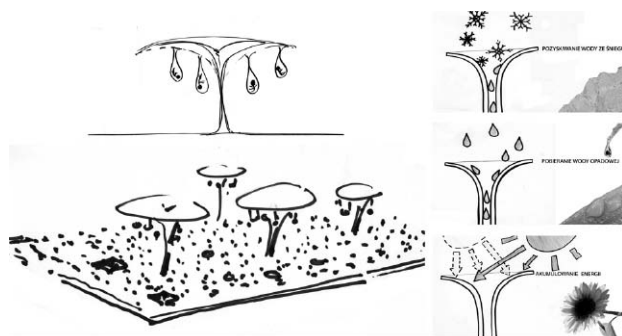


Fig. 4. Habitat MASZROOM (MUSHROOM habitat) – idea foundation,

II. 4. Habitat MASZROOM – idea założenia



Fig. 5. Authors of monograph 'Habitat MASZROOM (MUSHROOM habitat): Paweł Horn PhD, Michał Pelczarski PhD, Jerzy Łątka MSc Eng, students: Marta Rusnak, Kamil Bocian, Jolanta Boska, Magdalena Gęgotek, Piotr Jarczyński (photo: M. Rusnak)

II. 5. Autorzy opracowania Habitat MASZROOM: dr inż. arch Paweł Horn, dr inż. Michał Pelczarski, mgr inż. arch Jerzy Łątka, studenci: Marta Rusnak, Bocian Kamil, Jolanta Boska, Magdalena Gęgotek, Piotr Jarczyński (fot. M. Rusnak)

offices, technical and integration rooms. The idea of spot mushroom towers has allowed us to create a very strong visual and spatial concept retaining the big-city character combined with sustainable development features. Fig. 6)

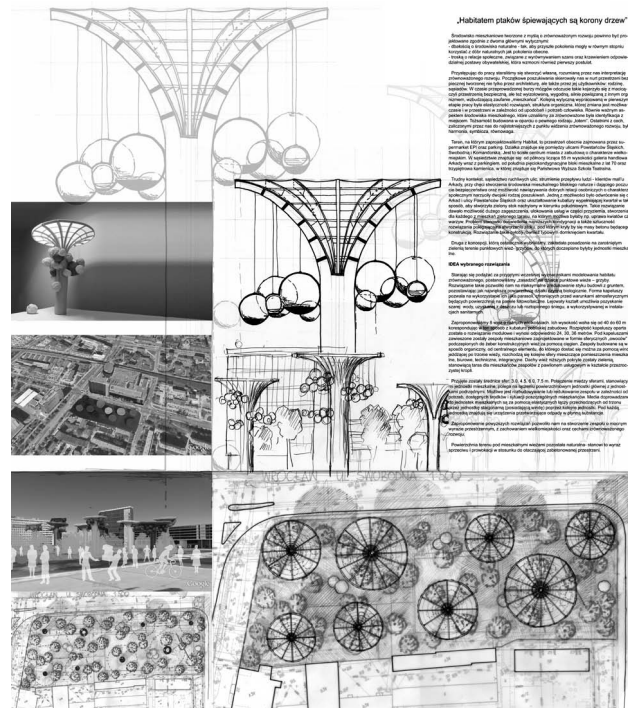


Fig. 6. Habitat MASZROOM (MUSHROOM habitat)- functional and spatial concept

II. 6. Habitat MASZROOM – rozwiązania funkcjonalno-przestrzenne Habitatu

Habitat Zielokąt

Authors: Jan Zamasz PhD, Wojciech Januszewski PhD., Justyna Kleszcz MSc Eng, students: Patryk Antczak, Elżbieta Karkoszka, Judyta Rybka, Martyna Stasiniewska. (Fig. 7, 8)

The workshop project presents a land development plan for the area located near Księcia Witolda Street, in the vicinity of two Odra River canals.

A building development plan has been proposed, whose main idea was to spatially join the two river banks leaving the maximum area of biologically-active zone, while fully utilising the plot and pro-ecological installa-

tion solutions. The final shape of the idea takes the form of a modified quarter plan with characteristic triangular geometry. Each wing of the building is elevated above the

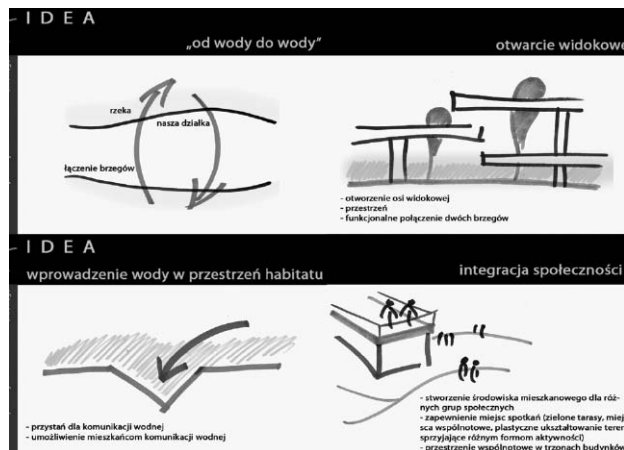


Fig. 7. Habitat ZIELOKĄT (GREEN CORNER habitat) – idea foundation

II. 7. Habitat ZIELOKĄT – idea założenia

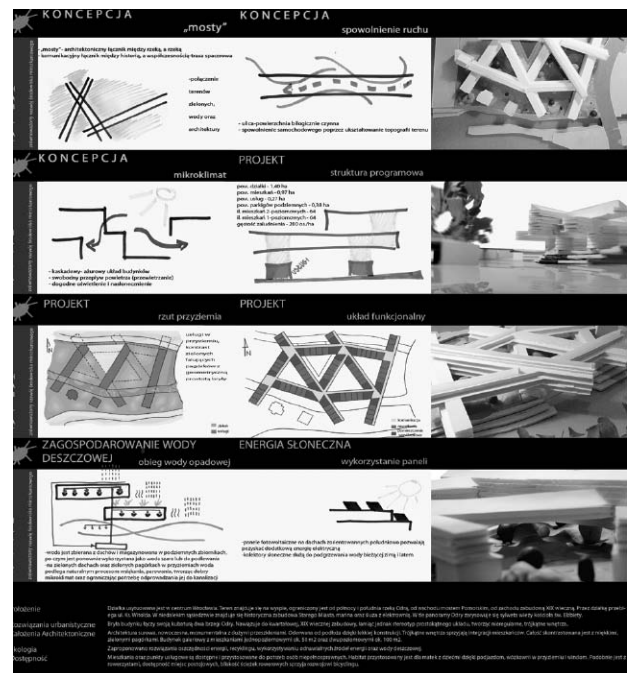


Fig. 9. Habitat ZIELOKĄT (GREEN CORNER habitat) – functional and spatial concept

II. 9. Habitat ZIELOKĄT – rozwiązania funkcjonalno-przestrzenne Habitatu



Fig. 8. Authors of monograph ‘Habitat ZIELOKĄT (GREEN CORNER habitat)’: Jan Zamasz PhD, Wojciech Januszewski PhD, Justyna Kleszcz MSc Eng, students: Patryk Antczak, Elżbieta Karkoszka, Judyta Rybka, Martyna Stasiniewska (photo: P. Antczak)

Il. 8. Autorzy opracowania Habitat ZIELOKĄT: dr inż. arch Jan Zamasz, dr inż. arch Wojciech Januszewski, mgr inż. arch. Justyna Kleszcz, studenci: Patryk Antczak, Elżbieta Karkoszka, Judyta Rybka, Martyna Stasiniewska (fot. P. Antczak)

ground level, which frees the space underneath and provides a deep perspective insight. Created urban interiors - filled with soft terrain forms and greenery – constitute public space for the inhabitants. The programme struc-

ture comprises living quarters of various sizes: both single and two- storey, studio type dwellings, work-rooms, rental spaces and ground-level basic service facilities (Il. 9).

Habitat Przedmieście w Mieście

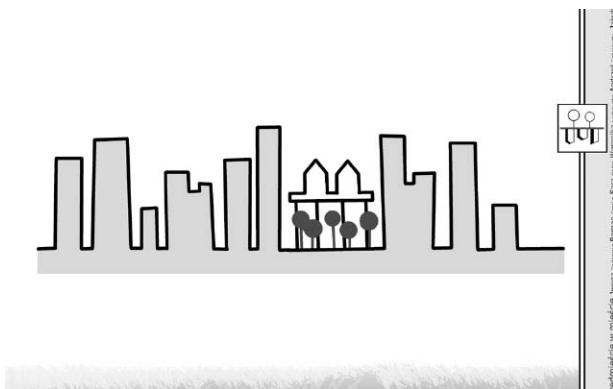


Fig. 10. Habitat PRZEDMIEŚCIE W MIEŚCIE (SUBURB IN THE CITY habitat)- idea foundation

Il.10. Habitat PRZEDMIEŚCIE W MIEŚCIE – idea założenia



Fig. 11. Authors of monograph ‘Habitat PRZEDMIEŚCIE W MIEŚCIE’: Roman Czajka PhD, Andrzej Sobolewski PhD, students: Iwona Bednarska, Sara Kędra, Weronika Lachowska, Jakub Szkiłdź, (photo: I.Bednarska)

Il. 11. Autorzy opracowania Habitat PRZEDMIEŚCIE W MIEŚCIE: dr inż. arch Roman Czajka, dr inż. arch Andrzej Sobolewski, studenci: Iwona Bednarska, Sara Kędra, Weronika Lachowska, Jakub Szkiłdź (fot. I.Bednarska)

Authors: Roman Czajka PhD, Andrzej Sobolewski PhD, students: Iwona Bednarska, Sara Kędra, Weronika Lechowska, Jakub Szkiłdź. (Fig.10, 11)

The team-selected plot is located in the centre of Wrocław between the streets: Swobodna, Komandorska and Powstańców Śląskich.

With regard to urban issues, the spatial concept of the habitat was based on the idea of reclaiming green terrains and,superimposing’ on them perforated platforms with densely arranged dwellings and service facilities (mostly in the terraced form). The desired effect has been achieved by elevating the dwelling units onto spatial grillages to the level of 4th/5th storey, available through multifunctional (communication, media, turbines, rainwater tanks) supports of the habitat. The difference in height and distance between the levels not only provides extra lighting for the greenery on the ground level and the service

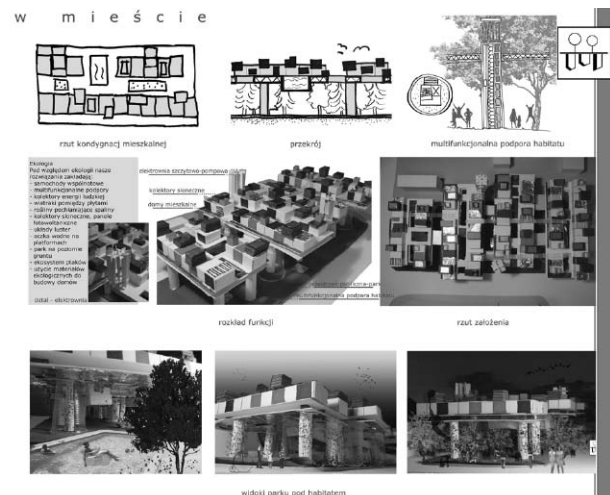


Fig. 12. Habitat PRZEDMIEŚCIE W MIEŚCIE – functional and spatial

Il. 12 Habitat PRZEDMIEŚCIE W MIEŚCIE – rozwiązania funkcjonalno-przestrzenne Habitatu

facilities suspended underneath the slabs but also improves air circulation. The achieved result resembles a negative copy of the city - introducing elements of suburban atmosphere into the city centre with ecological factor playing an important role. The habitat is fully self-contained. (Fig. 12)

Each of the demonstrated projects represents very interesting study material, giving incentive for further spatial exploration. Apart from varied conceptual ideas, more universal aspects of sustainable develop-

ment of residential environment proved very important. These values, together with the richness of the presented solutions, give a complete and harmonious picture of a habitat whose individual elements create a consistent and complementary entirety. The integrity of the system is achieved in different proportions by: utilized technology, selection of shapes, functional and spatial arrangement of objects, natural forms of landscape and lifestyle organization of the inhabitants.

„Rozwój zrównoważony środowiska mieszkaniowego” – Warsztaty architektoniczne szkoły naukowej habitat’10

W dniach 21–23 października 2010 r. na Wydziale Architektury Politechniki Wrocławskiej odbyły się Warsztaty Architektoniczne poświęcone Habitatom Zrównoważonym, zorganizowane przez Szkołę Naukową Habitat, działającą przy Zakładzie Projektowania Architektury Mieszkaniowej. Prace warsztatowe poprzedziła konferencja naukowa: *Habitat – zrównoważony rozwój środowiska mieszkaniowego*, wpisująca się w nurt Międzynarodowego Forum Dyskusyjnego: *Człowiek, Przestrzeń, Kultura*. Efektem trzydniowej pracy czterech grup projektowych stały się opracowania warsztatowe, ukazujące HABITATY

ZRÓWNOWAŻONE w różnych ujęciach ideowych i funkcjonalno – przestrzennych. Na dostarczonych mapach sytuacyjnych wybranych rejonów Wrocławia zostały opracowane warianty zagospodarowania terenu oraz indywidualne interpretacje rozwiązań projektowych, zapewniających zrównoważone środowisko mieszkaniowe dla przyszłych mieszkańców habitatów.

Tematy koncepcji architektonicznych to: Grupa I – „DOTLENIACZ”, Grupa II – „MASZROOM”, Grupa III – „ZIELOKĄT”, Grupa IV – „PRZEDMIEŚCIE W MIEŚCIE”.

Key words: Habitat, sustainable development, residential environment

Słowa kluczowe: Habitat, rozwój zrównoważony, architektura mieszkaniowa

Translated by B. Setkowicz



Our Masters

Professor Andrzej Tomaszewski – the end of the journey

Andrzej Tomaszewski was born in Warsaw on January 26, 1934. He was only child of Eugenia and Stanisław Antoni Tomaszewski. His father was a Polish Army officer. His happy childhood was short and when the war broke out the family was in Jarosław. His mother took him to some relatives, first to Puławy, then to Starachowice, and finally they returned near Warsaw. After the fall of Warsaw Uprising they went to the camp in Pruszków and then to the manor in Rybno. They spent the end of war and the first few years after the war in Chodzież where the young boy went to primary school. He was an active pupil and a scout. He had a great artistic talent and kept some of the school newsletters with his own drawings.

After his father returned to Poland from England in 1947, they all went back to their relatives near Warsaw, and then to their reclaimed family home in Rembertów. After attending a few schools during the war, Andrzej passed an exam to the famous Władysław IV Secondary School in Praga in Warsaw. He was a very good student and in May 1951 at the age of 17 he passed the school final exams. He was very proud of the school's tradition and of a number of his schoolmates who later became famous. He participated in the school's graduates' meetings and reunions until the end. Unfortunately, his father's war engagement (he was a major in the Polish Army) was a political obstacle and prevented his dream studies. For a year, he worked as a drawer in the Commission on Research of Old Warsaw where he improved his artistic skills.

He liked to joke that it was the painting skills that helped him begin studies at the Faculty of Architecture. Building the Palace of Culture in destroyed Warsaw was an amazing undertaking which drew attention of the public. The monumental "portrait" of the Palace made by the would-be student which was hung at the Faculty of Architecture attracted great interest. The press also published it – already with the student's signature. A yellowed copy of the "Przyjaźń" Weekly is still kept in one

of the files. After the secondary school graduation and during his studies, he used his artistic skills and made various works and painting projects. He painted numerous postcards, calendars, posters and illustrations.

He was interested in art and architecture and soon his dream of studying two subjects came true. He liked to

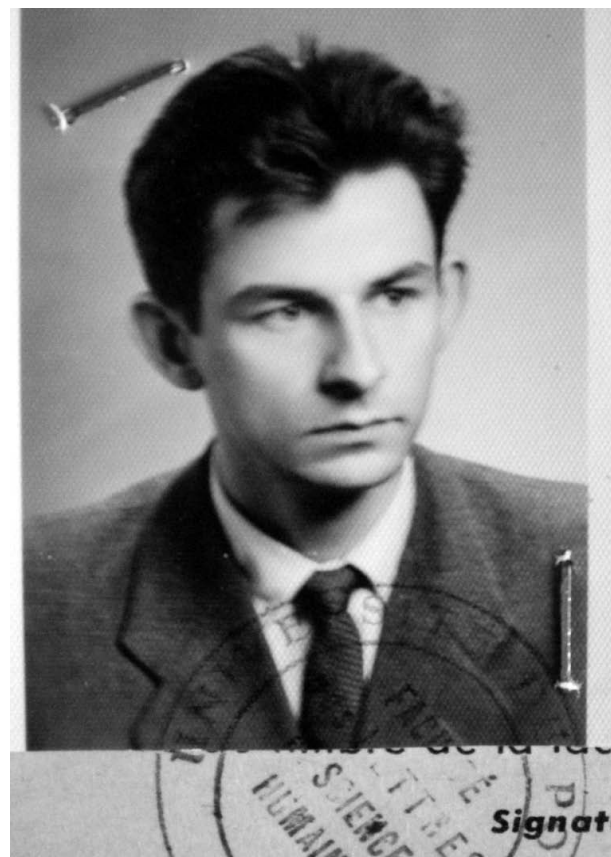


Fig. 1. Professor Andrzej Tomaszewski – circa 1958

Il. 1. Profesor Andrzej Tomaszewski – około 1958



Fig. 2. Professor Andrzej Tomaszewski – circa 1961

Il. 2. Professor Andrzej Tomaszewski – około 1961

remember his first contacts with wall painting conservation. Still in his secondary school, he would go with his father on vacation to the Pieniny Mountains. The memories of his first meeting with art conservators on the scaffolding of the church in Krościenko stuck deeply in his mind; there he could help Ewa and Jerzy Wolski who together with Ewa Pilitowska conducted preservation works on Gothic paintings. Over a few years when the works were carried out, he visited the conservators as well as also after he completed his studies. After a year-long break when he worked as a drawer, he finally started his studies at the Faculty of Architecture of Warsaw University of Technology. He studied there in 1952–1962. As he was interested in art he also began to study at the Faculty of History of the University of Warsaw in 1954–1959 where soon he was awarded the diploma. The student of the University of Technology was fascinated by art history so much that his diploma in architecture had to wait a little longer.

The 1960s were an intensive period of archeological and architectural explorations so that the new findings could add to the celebration of the millennium of the Polish State. Still before he was awarded the diploma in architecture, in 1959, he started to work as assistant to Professor Piotr Biegański at the Chair of History of Architecture and Art at Warsaw University of Technology.

The collegiate church in Wiślica was the place where Andrzej Tomaszewski did his first archeological and architectural field research. During the second year of the excavation digs in Wiślica, Aleksander Gieysztor initiated the millennium jubilee interdisciplinary research conducted jointly by the University of Warsaw and Warsaw University of Technology. An interdisciplinary Team for Research on Polish Middle Ages was set up with eminent scholars, including historians, archeologists, anthropolo-

gists and architects. Due to his interest in history (for a number of years he participated in Professor Aleksander Gieysztor's seminars) already with his graduate diploma of master in art history but still studying at the University of Technology, Andrzej Tomaszewski became in 1959 the Team's secretary, and he held the position until the end of its operation in 1965.

For young architects from Poland the experience gained during the work in Wiślica was the first opportunity to enter into direct scientific cooperation with Western Europe, which was forbidden at that time. The discovery of the oldest architectural monument in Wiślica that is the relics of St. Nicholas Church from the 10th century was of great significance for further professional carrier of the young researcher but the discovery in the very collegiate church proved most important; in 1959, the famous engraved plaster floor slab was discovered 3.5 m below the level of the existing floor, in the ruins of the earlier church. The finds opened a number of doors for the young university scholar, not only in the research centers in Poland; they also initiated publications and future trips abroad. As he knew French very well he could talk to the scholars visiting Wiślica and make both scientific and personal contacts with them. Professor Gieysztor, who maintained relations with prominent European historians, was happy to present the finds from Wiślica. It was at his invitation that the French historian Jacques Le Goff came to Wiślica to see the already famous engraved floor slab from up close.

Andrzej Tomaszewski went abroad for the first time still before he finished his studies in 1960–61. After he was awarded the scholarship from the French government he studied at the Centre d'Etudes Superieures de Civilisation Medievale at the University of Poitiers. He took the opportunity and visited for the first time such



Fig. 3. Professor Andrzej Tomaszewski – circa 1966

Il. 3. Professor Andrzej Tomaszewski – około 1966

cities as Rome, Florence, and Venice and saw the greatest works of Italian art and architecture.

After his return he continued his study of Romanesque churches. It was not intentional on the part of the authorities of the communist state to join the fight against religion with the discovery of the rich history of ecclesiastical buildings in Poland. A few years ago, Andrzej Tomaszewski vividly described the research works in Wiślica both as regards facts and anecdotes in a series of radio shows recorded for Polish Radio. In 1965, a year before the celebration of the millennium jubilee, the study on Polish Middle Ages was suddenly put on hold for political reasons when the authorities of the communist state finally realized that by supporting the works on early architecture they in fact finance the research on the history of the church in Poland. As a result of that policy a lot of great historical finds and discoveries were never described and the open war of the government against the church began.

The research in Wiślica resulted in the work titled *The Romanesque Church with Crypt in Wiślica (architectural study)* which Andrzej Tomaszewski defended in 1967 and was awarded the degree of Doctor in Technical Sciences at the Faculty of Architecture of the Warsaw University of Technology.

In 1968–1969, he served his scientific internship at the Chair of History of Architecture of the University of La Sapienza in Rome and took a course in conservation in the ICCROM international center.



Fig. 4. Watercolor by Andrzej Tomaszewski, construction of the Palace of Culture 1952, "Przyjaźń" Weekly no. 43 (250) 25 X 1953, p. 9

Il. 4. Akwarela Andrzeja Tomaszewskiego przedstawiająca budowę Pałacu Kultury 1952, tygodnik „Przyjaźń” nr 43 (250) 25 X 1953, s. 9



Fig. 5. In his study

Il. 5. W swojej pracowni

In 1971, he was awarded the postdoctoral degree of *Doctorus Habilitatus* in Technical Sciences and in 1973 the degree of Assistant Professor. In 1976, the title of Associate Professor was conferred on him by the State Council.

When the Director of the Chair of History of Architecture and Art – Professor Piotr Biegański turned 65 and in compliance with the directive of the University President he had to retire from that post, Andrzej Tomaszewski became the youngest Director of the Institute at the Warsaw University of Technology as the unit was transformed into an Institute of Basics of the Development of Architecture and in 1985 into the Institute of History of Architecture and Art. He held that position in 1973–1981, and then after his return from abroad – in 1987–1988. He was also the representative of the University President for Humanization of Technical Studies.

In 1973–1976, he was a member of presidium and research secretary at the Committee of Architecture and Urban Planning at the Polish Academy of Sciences.

The first real beginning of his large-scale international activities was the Congress of the International Council on Monuments and Sites (ICOMOS) in Rome in 1981 where he met a lot of prominent figures connected with the organization of protection and care for cultural heritage. In 1984–1993, he was President of the International Committee for Conservation Education and Training and member of the Advisory Committee of ICOMOS. At that time he organized numerous conferences on teaching conservation e.g. in Dresden, Warsaw, Edinburgh, Ferrara, Montreal and Jerusalem.

In October 1981, he went for two years to Berlin to Wissenschaftskolleg as Fellow Professor. There he con-



Fig. 6. With Professor O.P. Agrawal, founder of modern conservation in India, former Vice-Director in ICCROM, during his visit in Warsaw
 Il. 6. Z profesorem O.P. Agrawalem, twórcą nowoczesnej konserwacji w Indiach, byłym wicedyrektorem w ICCROM podczas jego wizyty w Warszawie



Fig. 7. With Professor Władysław Zalewski, old friend, director of conservation works in the presbytery of the Cathedral in Sandomierz, June 2010

Il. 7. Z profesorem Władysławem Zalewskim, wieloletnim przyjacielem, kierownikiem prac konserwatorskich w prezbiterium sandomierskiej katedry, czerwiec 2010

ducted research on activities of Polish artists and aristocrats in 19th-century Berlin. Later, also in Germany, during the academic year 1986–1987, he headed the Chair of Polish Culture (*Schwerpunkt Polen*) at the University of Mainz.

In cooperation with Dethard von Winterfeld, professor of art history at that university, they decided to begin the study of architecture and art of Silesia, Pomerania and former Prussia. The Working Group of Polish and German Art Historians which was set up then started its operation and its first result was the conference organized at the University in Mainz in 1988. The regular meetings of the scholars from both countries which were originally planned were disturbed by the stormy events and historical transformations. The next meeting was held at the International Cultural Centre in Krakow only in 1995; fortunately the following meetings took place every year alternately in Germany and Poland. The Group has been operating actively to date, involving the new generation

of art historians, architects and conservators who continue to pursue the founders' original ideas.

In 1988–1992, Andrzej Tomaszewski was Director General of the International Centre for the Study of the Protection and Restoration of Cultural Property (ICCROM) in Rome – inter-governmental organization with over a hundred member states. He was appointed that position in an open competition. It is worth noting that this is the highest position in the international structure of protection of cultural property. Apart from organizing the daily operations of the Centre, the responsibilities of its director include the constant maintenance of cooperation with UNESCO (delegate at the General Conference) as well as with the World Heritage Committee (delegate at the sessions of the bureau and plenary sessions). As Director of ICCROM he also maintained regular contacts with such international organizations as ICOMOS and ICOM. He participated in a number of ICCROM missions on four continents. Apart from the existing trainings in Rome, Andrzej Tomaszewski initiated new postgraduate conservation courses, e.g. conservation of paper in Vienna, conservation of Japanese copying paper in Tokyo, conservation of sun-dried brick (adobe) in Grenoble, together with CraTerre. After returning to Poland, he maintained his contacts with ICCROM as an *ex officio* Council Member and participated in General Assemblies as the delegate of Poland.

In 1995, he assumed the position of the General Preservation Officer of the Republic of Poland on the basis of the result of open competition for that post announced by the Minister of Culture and Art. While holding that position, he introduced a number of organizational changes such as introduction of three deputy positions: for architectural heritage, for works of art and movable monuments and for archeology; these positions were assumed by acclaimed specialists in their fields. He also organized regular contacts, conferences and meetings of the Provincial Preservation Officers who were then a strong, loyal, and opinion-forming group that enjoyed high scholarly recognition. Unfortunately, as a result of later administrative reforms of the state those



Fig. 8. On a tour at the congress of PTTK (Polish Tourist Country Lovers' Society), September 2010

Il. 8. Podczas objazdu na kongresie PTTK we wrześniu 2010



Fig. 9. Memories by the relics of old architecture in the underground of "Małachowianka" Secondary School in Płock, September 2010

II. 9. Wspomnienia przy reliktach dawnej architektury w podziemiach płockiej „Małachowianki” we wrześniu 2010

structures do not exist anymore today. Many attempts which were made later by Professor Tomaszewski in order to resume the former organization of the state care for historic monuments unfortunately failed.

Furthermore, while holding that position, he was actively involved in operations of the circles connected with the protection of cultural property in Poland and abroad. He developed closer relations with the Polish National Committee of ICOMOS, the Association of Monument Conservators, the Association of Art Historians, and the Society for Preservation of Historic Monuments; he also cooperated with the International Cultural Centre in Krakow, being there a Member of the Program Board. As the delegate of Poland at the UNESCO World Heritage Committee, he actively participated in the preparation of application and inscription of the following on the World Heritage List: Medieval Town of Torun, Castle of the Teutonic Order in Malbork (both sites inscribed in 1997), Old Town in Gdansk, Kalwaria Zebrzydowska (inscribed in 1999) and the Churches of Peace in Świdnica and Jawor (inscribed in 2001).

He was the delegate of Poland at the Council of Europe's Cultural Heritage Committee. He expressed his experience and concern for the condition of the heritage in many cultures in the application submitted in May 1996 by Poland to the Council of Europe at the 4th Conference of Ministers of Culture of the Council of Europe's Member States in Helsinki. He was a member of the Council of Europe's Group of Experts which was established to develop a strategy of protection of the cultural property in multi-cultural areas. In 1999–2000, he was also in the group developing the Council of Europe's campaign "Europe – Common Heritage".

He cooperated with NATO, co-organizing and chairing the international conference organized in Krakow in 1997 titled "The protection of cultural property in the case of threats in war and peace time" within the "NATO Partnership for Peace" program. He co-organized the international conservation workshops: "The protection of historic monuments against threats especially flood", in Warsaw and in Silesia in 1998. He also actively partici-



Fig. 10. In the face of Opatów mystery

II. 10. W obliczu opatowskiej tajemnicy

pated in the Conference of the NATO Civil Defense Command in Budapest in 1998.

It was important for Andrzej Tomaszewski to be involved in the operations of the German-Polish Foundation for the Preservation of Cultural Monuments. With the use of the funds that the organization raised it undertook a number of activities in the scope of rescue conservation as well as research of architecture structures in Silesia, Pomerania and Masuria. As a result of the efforts made by the Foundation Professor Tomasz Niewodniczański presented a collection of Polish priceless historical maps to be deposited in Poland. It is exhibited at the Royal Castle in Warsaw whose interiors were specially prepared for this exceptional exhibition.

Being an active member of ICOMOS, he set up a new International Committee of Theory and Philosophy of Conservation which he chaired until the end. After its first meeting, at the conference connected with the celebration of the 10th anniversary of the International Cultural Centre in Krakow in 2006, the Committee started its cooperation with the Romualdo Del Bianco Foundation in Florence, where a few meetings of the Committee were held. Its members also met in Prague and Vienna.

Andrzej Tomaszewski had a lot of publications. At the beginning they mainly included reports from archeological and architectural research which he conducted in Romanesque churches in Zagość, Opatów, Kije, Wiślica. He did research also abroad in Hungary, Belgium, France and Italy. The years spent in Germany were a source of international experience and that is why a number of articles published later regarded the Polish-German cul-

tural contacts and especially the protection of common heritage. The most important publications by Andrzej Tomaszewski were based on his international activities and the ease with which he worked in the organizations established to care for cultural heritage at national level as well as their teams and scientific associations or societies. He was the scientific editor of a lot of books, numerous publications from conferences on protection and preservation of historic monuments.

Andrzej Tomaszewski was deeply affected by the mutual dislike and animosity between different people and always tried to mediate between conflicting parties. If it was possible, he alleviated tensions with a joke; he would always stand by the people who were treated wrongly or hurt by unjust opinions. When defending others he frequently would attract undeserved unkindness of less thoughtful adversaries. Due to his active participation in many international bodies he was a universally recognized figure among the world specialists engaged in protection of cultural property. It is amazing that in the world of international and often contradictory interests he could apply simple mechanisms of solidarity, which helped to achieve (although not always) the set objectives. This quality can be best illustrated by the complicated efforts connected with the inscription on the World Heritage List of new properties often from the most remote corners of the world such as for example Hiroshima Peace Memorial in Japan. He achieved the high position in various councils, commissions, and bodies not only because of his great specialist knowledge but also because of his knowledge of human nature and the ability to find what is best in every person.

He did not weigh coldly the hierarchy of events. For him the lectures at a university abroad were as important as some special occasion celebrated in a small town, meetings of a prestigious body or his colleagues' requests

for a review, opinion or recommendation. He did not know how to decline such requests and until the end his schedule was full of events where his appearance was impatiently anticipated. Unfortunately, he did not get to the museum in Opole or to the lecture in Wrocław. He did not personally finish the unforgettable speeches at a few scientific conferences that were held under his patronage or supervision as President of the Polish National Committee of ICOM: Olsztyn, Pułtusk, Szreniawa.

We have lost an excellent and knowledgeable expert in the field of protection of historic monuments, a respected participant in international academic colloquia, a debater who could present the point in a few sentences and summarize a lengthy discussion, as well as a Friend.

A tired wanderer has left us. A very good person who was curious of the world and people. We will all miss him. It is not true that nobody is irreplaceable.

Fortunately, there are some continuators. This is one of them.

Regardless of what we believe and how we imagine afterlife, from time to time we all let our imagination run free and think about eternity of our own and others. Will we meet those who passed away before us? Will we be able to visit the places that once were most beautiful and later totally changed? Will it be possible to ask questions which were left unanswered during our lifetime? Will it be possible to rewind time like a film to see images and people who lived before us? If yes, I am sure Andrzej Tomaszewski, once on the other side, would begin with Opatów. Every trip to the south of Poland included a long stopover in front of Opatów's portal, stroking the stones, going round and round to finally come to the same conclusion "So many tried to find the answer and still we don't know anything..."

Ewa Świącka

Fotografie ze zbiorów autorki

Profesor Andrzej Tomaszewski – koniec podróży

Andrzej Tomaszewski urodził się w Warszawie (1934–2010). Jego aktywna działalność w wielu gronach międzynarodowych sprawiła, że był postacią powszechnie rozpoznawalną w kręgu światowych specjalistów zaangażowanych w ochronę dóbr kultury. Zadziwiające, że w wielkim świecie międzynarodowych, często przeciwstawnych interesów umiał zastosować proste mechanizmy solidarności, co pomagało osiągać (choć nie zawsze) wytyczone cele. Najlepszą ilustracją tej cechy były skomplikowane zabiegi w przypadku wpisywania na Listę Światowego Dziedzictwa kolejnych obiektów, niejednokrotnie z bardzo odległych rejonów świata jak na przykład japońska Hiroszima. Wysoką

pozycję w rozmaitych radach, komisjach i gremiach zdobywał nie tylko z powodu ogromnej wiedzy merytorycznej, ale także dzięki znajomości natury ludzkiej i umiejętności znalezienia w każdym tego, co dobre. Straciliśmy wybitnego eksperta, znawcę problematyki ochrony zabytków, cenionego uczestnika międzynarodowych kolokwium naukowych i dyskutanta, potrafiącego w kilku zdaniach sprecyzować sedno i podsumować przedłużającą się polemikę, ale także Przyjaciela. Odszedł od nas zmęczony wędrowiec. Ciekawy świata i ludzi dobry Człowiek, którego będzie nam wszystkim brakowało. To nieprawda, nie ma ludzi niezastąpionych.