Bogusław Szuba / Tomasz Drewniak (eds.)

Beauty in Architecture

Harmony of Place

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PETER LANG

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Introduction.
Harmony of beauty and harmony of place

Bogusław Szuba
University of Applied Sciences in Nysa

Conceptualisation

The idea of beauty, return to origins

Near the Minor Basilica, the St. Jakob's Treasury, between the town square and the entrance to the Wrocławska Street, there is one of the most beautiful masterpieces of baroque blacksmith art that is most commonly associated with Nysa – the Beautiful Well.[1] According to the author of this statement, the Beautiful Well (presented on the cover of the book, intricately related to the water falling on it) has a symbolic meaning – a return to drawing from the sources of beauty and harmony of the space shaped by man.

In the history of human thought, many theories of beauty and the harmony related to it, perceived in many areas of life, have been developed.

The Pythagoreans were the authors of the so-called Great Theory, according to which beauty lies in the proportion of parts. According to their views, beauty means a perfect structure, this idea in turn is based on proportions, which could be determined by numerical ratios.

Harmony (alignment and proportionality) closely followed this theory. Critics of the Great Theory have attempted to create other theories of beauty. In fact, these things have become its complement, not its contradiction. Here are a few of them (Tatarkiewicz, 1998):

- Beauty means unity in multiplicity. John Scotus Eriugena argued that the beauty of the world lies in harmony.
- Beauty means perfection. Thomas Aquinas used this concept specifically in connection with art: 'An image is called beautiful when it perfectly depicts a thing.'

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1 The well is one of the oldest town wells. It was most likely built during the Thirty Years' War (1618–1648). The intricate iron structure covering the well was made by Wilhelm Hellweg, and it was unveiled on 15th September 1686. The inhabitants stopped drawing water from it when the waterworks in Nysa were put into operation – 1880 (Sikorski, 1999; Daniel, Zielonka, 2007).

- Beauty means appropriateness, in adapting things to their nature and purpose. Everything that is *aptum*, *decorum*, what is appropriate and handsome is beautiful (in ancient times, this concept was represented in the Stoic philosophy, in the rhetoric of Cicero and Quintilian).
- Beauty is the revelation of ideas in things, the revelation of the 'archetype,' the eternal pattern, the highest perfection, the absolute (Neoplatonists, Plotinus, Pseudo-Dionysius, Albert the Great).
- Beauty is an expression of the psyche, the 'inner form' (Plotinus). According to this theory, the spirit alone is what appeals to us – it is the only thing that is truly beautiful, whereas material things are beautiful as long as they are saturated with it.
- Beauty means moderation (Albrecht Dürer). Excess and scarcity spoil a thing. Beauty 'lies in the middle, between the two extremes' (Charles Alphonse du Fresnoy).
- Beauty is figurative, it is based on a metaphor, on *parlar figurato*, there are as many varieties of fine arts as there are figurative varieties (Emanuel Tesauro).

It is impossible to list or describe all theories of beauty here. They are known and well-described by many theorists around the world. Among the features of beauty, harmony seems to occupy a special place. The French architect Blondel describes beauty as 'concert harmonique.' He believes that harmony is the 'source, beginning, and cause' of the satisfaction that art provides (Tatarkiewicz, p. 147).

Man in harmony with nature

Man is a part of the natural world, and at the same time he is influenced by the value systems cultivated in his family, in religious groups, or in the nation. The concept of beauty may vary among nations, social strata, and even individuals. To a large extent, it is a subjective feeling, extremely difficult to verify, sometimes very fleeting, depending on the individual experiences of the perceived environment.

However, there are premises indicating the existence of objective beauty, contained in the world of nature or in the world of man shaped by the Creator, guided by the creation of good and fully valuable things.

Man, which has harmonious, perfect proportions, may himself be a symbol of beauty. Beauty means also good that lies in the depths of human personality. It manifests itself in the noble deeds of man, his attitude, and conduct towards fellow man. Beauty also manifests itself in the human community, the functioning of which is based on partnership, mutual understanding, cooperation, dedication, or sacrifice.

Phenomena occurring in nature can be the key to perceiving and learning about beauty, positively inspiring people in shaping the environment. It can be presumed that this influence will result in the formation of links and relations between elements of the environment, causing the perception and experience of beauty among the users of the shaped space.

> A drop of water dripping down a steep rock, looking for the most convenient slopes, hollows it over the centuries, avoiding rock ledges and falling along a vertical wall, breaking itself and the rock, carving deeper and deeper. The streams that join on all sides create a mass that moves quickly and transports the crushed rock material down their path further and further, finally depositing it in the lower course of the river in the form of sandbanks and islands. Water movements constitute a creative element by taking away material and adding it later. The result of this creative movement of the material is a unique landscape filled with an atmosphere that is the only one of its kind.
>
> How similar the process of creating the oldest cities seems to be. The first drop is man who carves his path in the forest, slowly and stubbornly. Over time, other people start to use this path, widening it. This is the beginning of the path chosen due to convenience and the most advantageous fall in comparison to all other passages available. The first human shelters are built next to it, most often made of material created as a result of carving along the path. The green wall of the forest slowly turns into a wall of picturesque and freely formed buildings, a wall of a human stream canyon. Side lanes flow into the river like streams, feeding the main stream. Where two such rivers meet, a larger town is created. The streets of the old town reflect the mood of the river canyon well, the impression of the walls controlling human movements is very similar. The same creative displacement of material takes place there, but in the case of the town creation process, its final product, which is formed via addition, is the same as the end product in the case of a canyon, which is formed via subtraction (Kuraś, 1969).

This poetic vision of shaping the environment by man, presented more than half a century ago, contains an image of perceptible beauty. Since the dawn of time, people guided by their own safety have tried to intuitively integrate their place of residence into their surroundings. Two elements – nature and man in direct contact with it – constituted a balanced and mutually complementary system. The intuitively understood need for a harmonious coexistence with nature meant that man treated the surrounding world as an inexhaustible source of wisdom. Over the centuries, he has been learning to use it in a rational way, compliant with the laws of nature.

The intuition of people untouched by the mundane, such as modern civilisation, has led to the creation of magnificent architectural buildings, which, while

maintaining harmony with the existing surroundings, have survived intact to this day. Over time, people stopped using the sense of harmony and began to adhere to specific fashions. The resulting oddities were inconsistent with the purpose of the building – the spatial harmony.

The rapid development of civilisation led to the creation of large urban agglomerations, the design of which ceased to take into account the interests of an individual and created forms of survival-type construction. Seemingly harmonious architectural compositions were created, the main goal of which was to create comfort that would facilitate human life in the material sense, rather than in terms of mental and health comfort. However, these trends were enthusiastically received in their time as a solution to the settlement problem.

Harmony as an expression of beauty

The concept of harmony appears in many spheres of meaning. According to the *Słownik języka polskiego PWN*, it means:

- personification of order and agreement (in Greek mythology, the goddess of true love. Also in the era of Hellenism: order, agreement, and unity),
- conformity, complementarity or appropriate proportions,
- agreement,
- the way of combining and building chords in a piece of music,
- part of the music theory concerning the principles of chord structure and what follows.

There are indications that harmony is one of the most important features of beauty that man intuitively seeks, moreover, harmony is a condition for the emergence and maintenance of life on earth.

> The world and the universe are developing cyclically. The physical order of the emergence, disappearance, and rebirth of all things depends on fire, understood as the centre from which the harmony of the heavenly spheres originates and around which is shaped (Legowicz, 1976).
>
> Thousands of years ago, the universe was treated as an infinite ocean of vibrating energy, and the solar system with our Earth as part of it. People realised that the mutual positions of these particles interact with each other with powerful energies, and our planet lives with the rhythm of the mighty Cosmos.
>
> Today we have come to the conclusion that the Earth would be uninhabitable without the Moon. Even the spirally shaped form of our Milky Way system suddenly reveals itself to us as one of the basic preconditions for us to even appear. In this way, a picture is drawn that is radically different from the vision of the uncaring Earth, flowing

forward through empty space, in nightmarish confusion. The sublunar realm of passing things and mortal beings is in fact crossed a thousand times with the sphere of stars and the entire depth of the universe in which rules and forces rule also over us and our life on the Earth, and to such an extent that we would not be able to live here if our Earth were isolated from them (Ditfurth, 1978).

Ancient man had much more modest technical possibilities, his creative activity was dominated by beliefs and religious rites. He erected a number of buildings considered to this day as a model of harmony and beauty of the shaped space. The harmonious formation of space concerned both sacred structures and those related to social life. The architects of that time based their designs on sensitive intuition, creative imagination, as well as sensual and extrasensory experiences. They were guided by the supremacy of the pursuit of harmony – understood as compliance with the laws and energies of nature, beauty – associated with the form of the object, and utility of the shaped building. The relationship of ancient man with nature was so strong that these people developed in their beliefs the so-called astrobiological religion.[2]

> (…) the existence of the World that is ordered is possible primarily due to the fact that individual beings-structures survive through love (border, Harmony) and because of love (under its influence) (Biedrzyński, 2014).

For as long as there have been human beings – man has been trying to learn about himself. Learning the laws governing the universe is conditioned by understanding human beings. All buildings, pyramids, and temples were built on the basis of both astronomical data and the proportions of the human body. Were these undertakings merely an expression of the exuberant ambitions of rulers?

> In Luxor, the ceiling of the temple is decorated with golden stars, the so-called decanal constellations, which maintain over 36 parts of the sky, zodiacal deities, and star deities in boats travelling across the sky (Porębski, 1976).

A French orientalist of Polish origin named R. A. Schwaller de Lubicz, after spending a long time researching the temple in Luxor, published an unorthodox vision of ancient Egypt in a series of books. According to de Lubicz, all architectural undertakings were intended to be a kind of spiritual exercise, and at the

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2   The outstanding Polish anthropologist, professor Andrzej Wierciński believes that all the oldest civilisations of our planet followed one religion, which he described as astrobiological. This religion most likely arose in the vicinity of the Iberian Peninsula or North Africa, among the creators of great megalithic cultures (Wierciński, 2010).

same time an initiation for those who were properly prepared to receive knowledge about the secrets of existence.[3]

Nowadays, anthroposophy – the way of self-improvement, understanding the world, nature, and man – that originated in Europe is becoming increasingly more popular. One great value of this path of learning is its practicality in life, a holistic view of man and his place in nature. R. Steiner, in his famous expression, states: 'Anthroposophy is a path of knowledge, to guide the spiritual in the human being to the spiritual in the universe.'

'Man, know thyself' – such an inscription could appear at the entrance of the spiritual centre – Goetheanum, erected on a hill, in a vast park and orchard, in Dornach, near Basel, in Switzerland. The history of the Goetheanum dates back to 1920. First, a wooden building was erected, designed in such a way that its architecture, applied symbolism, appropriate material, and the colour used would embody the spiritual secrets of man and the universe. Its structure is based on the same wood combinations as in the case of a violin. However, this facility was set on fire, which resulted in its complete destruction. A huge, reinforced concrete building was erected in its place with its own characteristic architecture, expressing both the materiality of the world and the realness of its spirit. Currently, the facility is vibrant with the activities of many scientific sections, conducting extensive research and teaching in the following fields of science: medicine, biodynamic agriculture, astronomy, pedagogy. A number of original artistic ventures in the field of painting, sculpture, eurhythmia, etc. are undertaken here.

> All that is the object of our knowledge becomes a part of our life. The admonition "know yourself"[4] was carved on the temple portal at Delphi, as testimony to a basic truth to be adopted as a minimal norm by those who seek to set themselves apart from the rest of creation as "human beings", that is as those who "know themselves."

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3   There is a known figure that appears in medieval engravings, the so-called cosmic man, i.e. a human figure with the signs of the zodiac assigned to particular parts of the body. Schwaller de Lubicz showed that the temple in Luxor was built on the basis of similar premises. By superimposing a silhouette of a man on the projection of the temple, we find sculptures depicting the signs of the zodiac in parts of the building corresponding to individual parts of the body, analogous to those appearing in the drawings of a cosmic man from the Middle Ages (West, Toonder, 1970).

4   The inscription on the facade of the Temple of Apollo in Delphi is attributed to a Lacedaemonian philosopher named Chilon, popularised as a philosophical motto by Socrates.

(…) in different parts of the world, with their different cultures, there arise at the same time the fundamental questions which pervade human life: Who am I? Where have I come from and where am I going? Why is there evil? What is there after this life? These are the questions which we find in the sacred writings of Israel, as also in the Veda and the Avesta; we find them in the writings of Confucius and Lao-Tze, and in the preaching of Tirthankara and Buddha; they appear in the poetry of Homer and in the tragedies of Euripides and Sophocles, as they do in the philosophical writings of Plato and Aristotle. They are questions which have their common source in the quest for meaning which has always compelled the human heart. In fact, the answer given to these questions decides the direction which people seek to give to their lives.

The Church is no stranger to this journey of discovery, nor could she ever be (John Paul II, 1998).

Fields affected by the harmony of place

Harmony is a phenomenon of friendly relations between the elements that create it. In its most obvious sense, it is the relationship between architecture and its user. The contemporary image of architecture is an environment in which man finds his place. The traditional division into the building and its surroundings becomes blurred. Together, they create the conditions for meeting human needs.

It seems that the semantic layers of the impact of the harmony of place are inexhaustible. Beauty as a source of creative inspiration in shaping man's environment is still undergoing attempts at its discovery and searched for. Beauty in architecture can be perceived in a single architectural or urban facility/complex, as well as in its relations with the immediate surroundings as well as further surroundings.

One of the ways of finding the fields of harmony of place is to perform an analysis of the construction process. This begins with an idea initiating the creation of a work piece and ends at the stage of technical death of an architectural facility/complex, return to the previous state, or transformation, revitalisation, and re-initiation of the cycle.

Harmony of the idea of a creative place

The beauty of the creative idea of an architectural work piece being shaped consists of several layers of meaning, including:

- the accuracy of defining its usability programme in the space being shaped, allowing for the conviction that it will be fully accepted by its user,
- the ability to specify the concept of the space being shaped, to bring out the individual character in relation to the surroundings, to distinguish and emphasise its values,
- determination of the form allowing for full identification of the dominant functions performed in a facility and its surroundings.

The programme arrangements are the basis for undertaking project activities. An incorrectly programmed facility will not fulfill its function or it will fulfill it partially. What captivates the user of the shaped space is often related to the form of a perceived facility, its originality, and individuality. The form of an architectural facility often becomes a showcase of a specific creator, representing his own approach to shaping the form. It is obvious that we prefer the legibility of functions shaped in the space of our surroundings. The necessity to guess them is not desirable. A facility should be a showcase of the functions it serves inside.

It is quite common to see someone declaring *how a given facility fits beautifully in its surroundings in terms of its functionality* (it complements the already existing functions), *how it is distinguished by its individual form, and at the same time how it indicates the functions it serves inside…*

Man has learned to build in such a way as to distinguish a residential building from a public utility one, an industrial plant from an educational facility, etc. Identification of a function of a facility in space is necessary to maintain proper communication, as well as its proper orientation of space. Despite the repeated functions in the shaped space, each of the designed houses should have individual features allowing for its proper identification by users. The proper identification of architectural facilities is also influenced by the diverse needs of people fulfilled by them in a properly shaped space. Although architectural facilities may represent the same specific function, they differ beautifully – they fulfill the diverse, individual needs of future users. Typical projects do not actually exist, as they do not respond to the investor's specific needs.

Harmonising architecture in the space of a location

The harmony of a location with the planned investment intention is one of the most important conditions for the success of an investment, i.e. achieving friendly relations with the environment.

Spatial planning is the art of selecting a location for the planned functions. The provisions of local spatial development plans should become a real signpost

for the location of planned investment projects. In many cases, an investor does the opposite. First, he tries to buy a plot of land (he usually looks for the cheapest land), often not knowing yet what facilities he would like to build, and then, when making decisions about the implementation of a specific project, he often remains in conflict with the provisions of the local plan and imposes his own corrections to it.

Buying a plot of land is not enough. It needs to be equipped with technical infrastructure leading the necessary utilities to the planned facility, often including fencing, and security systems preventing entry of unwanted persons.

Upon completion of the task, it is first equipped with the necessary machines, devices, furniture, which allow a user to use the facility properly.

Proper location of a facility, i.e. one that allows a person to obtain the expected profits from the functioning of his investments, correct equipment of a building under construction, which improve the performance of activities, create the basis for the sense of safety and comfort of its users.

In view of the premises described here, people using a facility may feel that it is harmoniously integrated into the surroundings or that it is perfectly equipped. These features give splendour and popularity to the architecture shaped in this way. However, as with everything, moderation needs to be observed in this case too. Excessively expanded territory of the plot that is at one's disposal – this reduction of the depleting spatial resources, irrational retrofitting of a facility is the cause of the need to incur unjustified economic expenditures for the purchase and maintenance of furniture, devices, etc.

Harmony of connections between a location and its surroundings

An architectural facility does not function without connections with its immediate surroundings, in the form of pedestrian and road routes with the possibility of using parking spaces in the area of a location. Contact with the immediate surroundings also means that a facility should be open to public spaces in its immediate vicinity, it should offer people places to meet and rest, to organise cultural events. As for advertising, it should be unimposing and balanced. These spaces should also provide public information about important aspects of the life of residents. Communication with the immediate surroundings also includes public transport stops, taxi ranks, and bike rentals.

An architectural facility is located on a construction plot with a number. A street at which it is located has its name. A number given to a building indicates which side of the street it is on and what position it takes in relation to the order

of other facilities. While walking on the streets of a town or a city, you can often find its plan, which shows the locations of the most important facilities along with paths for pedestrian traffic and roads for vehicle traffic that enable collision-free access to them.

The immediate surroundings also include the natural environment, if it is limited (e.g. due to the investment being located in downtown space), it should at least include accents of decorative greenery, accompanying greenery or other elements like ponds, fountains, etc.

Traffic between an architectural facility and its immediate surroundings may have the hallmarks of the beauty of the correctly functioning connections, easy access (including for people with disabilities), publicly available information about what is happening or will take place inside the building in the future.

Harmony of the form of a facility with a prevailing tradition and custom

The beauty of a facility standing out 'in its location,' the beauty of the continuity of historical forms is a state of harmony resulting from the connection of a facility with its local human environment.

Students of architecture start learning about the history of architecture and urban planning from their first year of studies. Solutions that once proved to be successful and gave an elementary sense of security, stability, psychological comfort, or lack of threat, are worthy of attention and continuation.

Relating the form of a facility to tradition, creating relations with the environment based on the local customs of building, contributes to maintaining the cultural continuity of a place. Building without considering the past leads to shaping space without tradition. Each generation inhabiting a given space creates characteristic relationships between the culture it generates and the architecture it shapes, which turn into characteristic features of regional architecture related to the maintenance of specific forms of development, the use of specific building materials (usually of local origin).

Shaping the form based on the experiences of previous generations, related to the place and beliefs of a local community, creating a sense of familiarity, being at home, as well as being safe and fulfilling life tasks, is nowadays, unfortunately, the disappearing beauty of the continuity and homogeneity of historical forms, the beauty of the regional landscape.

Creativity in shaping the space of a place

The beauty of creating new functional and spatial solutions based on the transformation of existing forms is the harmony of human creative passion with a shaped environment.

Although the use of traditional forms functioning in given surroundings is a distinguishing feature of the homogeneous shaping of architecture, however, the passage of time requires changes to be made, which are not only to make the facility fit into the surroundings more favourably, but also to have a positive response among the users of the space being shaped. In an extreme case, the author of a newly designed facility may completely distance himself from the existing tradition, create a spearhead of the avant-garde, which, after a certain period of time, will be perceived as something brilliant, a milestone in shaping architecture and urban planning. This does not mean that this type of action is doomed to failure. The history of architecture is full of examples of facilities that were initially unacceptable, but later became a symbol of the place of their origin (e.g. the Eiffel Tower in Paris).

Beautiful architecture, despite using traditional forms, has a strong impact on the environment – it introduces new details created through creative transformation of historical ones and is a result of implementing new technologies based on previous work that, after a few modifications, have already been tested and recognised as safe. The beauty of it usually results from fascination, admiration, or wonder.

Harmony of innovation and precision of planned functional and spatial solutions

An architect must be ahead of his time, anticipate the conditions that will prevail during the period throughout which the space he shapes will be used. Acting with future outcomes in mind must lead to improvements in the sphere of the functioning of a facility, achieving a state in which the created conditions will be able to meet the requirements of its future user. The existing difficult local conditions may become the reason for completely new solutions, which would constitute transformed versions of the existing ones, which for some reasons cannot be continued.

New, innovative solutions are still ahead of us. Their complexity will increase, consisting in the integration of multiple technologies, computerisation of the process of manufacturing construction elements, constructing, and ultimately managing an investment project. Both interdependence and interdisciplinarity of many fields of technology harnessed in the investment process require precision,

meticulousness, and efficiency in joint activities of engineers and technicians who are specialists in various industries.

Shizuo Harada and his 'Sky City' – a 1 km high facility, intended to replace the entire district in Tokyo, in order to regain free space in the city intended for recreation and leisure, is an example of innovative thinking about shaping the modern city, which in the case of Tokyo, the limit of exhaustion of the disposal of areas free of buildings has been reached. Weak soil, extreme loads of structures, earthquakes, wind loads, threats resulting from the possibility of fire, gas explosion, or terrorist attacks are factors influencing the need to look for unusual, individual solutions that can meet such challenges – beautiful, because they have not been tested anywhere, subject only to computer simulation.

Harmony of interactions based on the partnership between a facility and the formed environment

Each architectural facility, together with buildings of similar purpose, creates a specific complex (residential buildings, sales and service facilities, etc.). Regardless of the type of facility, each of them serves the needs of both the owner himself and the people who, for various reasons, move inside it. Hence, there is a need to divide functions into zones that serve their purpose to the hosts of a facility and those who are on the premises as customers, guests, or just casually.

Apart from its function, a facility affects its surroundings with its appearance. Placing excessive emphasis on newly designed facilities may cause dissonance with the existing architecture. Relations are reciprocal, often its surroundings trigger a negative impact on a given facility. The balance of mutual interactions is the basis for achieving harmonious relations, broadly understood participation in an investment project.

A facility should engage in a dialogue with its surroundings. The context of the environment is important. A facility exists in the context of its surroundings. The beauty of interactions based on the partnership between the building and its surroundings consists in the socialisation of its functions (even a single-family house has a zone intended for guests), weighing the attractiveness of the function and the expressiveness of the form in relation to the surroundings.

Harmony of cooperation and participation in the implementation of an investment project

Investors unable to fully finance the project include companies in which they transfer ownership, and jointly organise an investment process.

Usually it is an architect who is faced with the task of planning and organising a project financed by a team of investors. This situation is difficult because it usually involves the necessity of designating several stand-alone functional facilities, but at the same time constituting one organism.

More often than not, the free market triggers the need to organise a construction site for several contractors. This leads to the need to synchronise their actions at one construction site, dividing the scope of duties and responsibilities for the tasks performed.

Joint organisation of their assets during implementation may shift to the phase of utilisation or management of an architectural facility.

A project that provides for the possibility of investment, operation, or management by many investors requires a careful division into roles, sometimes even a designation of separate land properties and associated architectural facilities, which constitute a compact complex of architectural facilities as a whole. An architect plays an extremely important role in this process. It may turn out that the negligence consisting in the inability to divide the real property into a certain number of possessions assigned to individual investors will not favour the smooth implementation of the task.

There would be no joint investment if not for the previously concluded contracts, agreements, etc. Connecting individual facilities into a complex, constituting a functional and spatial whole, is a kind of beautiful integration of various architectural, construction and material, technical, formal, and legal problems, etc.

Beauty of conveying symbolic and semantic values inscribed in a form

The purpose of many architectural structures is related to worship and meditation. Since ancient times, man has built temples, places of worship, rituals, etc. Whenever we enter these facilities, we find many images and symbols inside them that present religious content or philosophical values. Said content can also be encoded through the appropriate arrangement of the architectural elements. One example is the Egyptian pyramids. To this day, we uncover more and more new meanings and contents that prove ancient men were exceptionally knowledgable. Among the contemporary facilities, sacred buildings are mainly the ones that are filled to the brim with symbolism and meanings. Both the spatial arrangement and the architectural detail are treated in a unique way in the case of these facilities. The sacred space clearly differs from the profane space. The rich language of architectural forms allows for presenting various forms of

content related to faith, the message of the Creator himself, the history of man's relationship with God. Such facilities tend to have long-range impacts (St. Peter's Basilica in Rome).

Harmony of the hierarchy of importance of functions fulfilled by shaped places

Architectural facilities that we design, implement, and use are influenced by cultural, social, and political conditions, shaped by a given human environment. All this means that their purposes and functions are segregated, zoned, and given an appropriate rank. In many cases, facilities are grouped into specific organisations related to education, hotel industry, social and health care, etc. A phenomenon that is similar to the life of every human being occurs here – fulfillment of a specific social role. Hence, facilities that require universal access are included in isochrones of a specific time required to reach it by foot or to provide organised transport (primary schools). Shaping a given space while maintaining the hierarchy of the importance of facilities is very important for man. An example may be the buildings on a market square, where the dominant role is played by the town hall raised above the surrounding buildings. This creates a sense of proper identification and hierarchy of functions shaped in the human environment.

The beauty resulting from the implementation of the purpose of a facility/complex of architectural facilities depends on its proper location in the hierarchy of facilities constituting its surroundings, or located in the organisational network of the complex made up of facilities with similar functions. The above example also shows a simple conclusion that not every architectural facility will play the role of a town hall, which results not only from the location where it can be built, but also from the society's demand for such facilities.

The proper zoning of functions, the logic of the accessibility of functions (pedestrian accessibility, individual and mass vehicle communication isochrones), fulfilling the role of a facility expected by a user in a community (rural, urban, agglomeration, region, state) are the premises supporting the above-defined beauty.

Beauty of achieving the aims of site users

Shaping space is associated with determining the conditions of existence for many social groups, related to each other by relationships resulting from professional relations (administration, blue-collar workers, white-collar workers,

clients). Many times, many of these groups share a single architectural facility. Each of them requires meeting appropriate technical and functional conditions. Hence it is necessary to carefully program and design functions in such a way that satisfies all social groups using a facility.

Architecture achieves the purpose of its existence by meeting the expectations of its users.

Harmony of place transformation

It is not possible to use a facility/architectural complex for an unlimited time. Sooner or later, there is a period of technical aging of a facility and the related need for repairs and renovation. As long as a facility still meets the expectations of its users, the necessary repairs cause only its temporary shutdown.

Facilities also age morally, after a certain period of time they no longer conform to the needs of users due to the changing trends and lifestyles in our lives, as well as new, more advantageous opportunities to satisfy the same needs. It also happens that facilities fulfilled their role, their specific purpose, and their further use is impractical.

This phenomenon causes facilities to be abandoned by their users, results in the change of their owners, introduction of necessary modernisations in their interiors, and in justified cases, the complete change of their function, which allows them to be used again.

We often rediscover the former beauty of abandoned facilities multiple times, it can be expressed in their form, details, or other aspects mentioned above. A specific kind of beauty applies to industrial architecture. Its traces of old technologies, devices, and machines become a specific beautiful cultural heritage.

Harmony of place as an objective of shaping the human environment

In the light of the ongoing social unrest, the growing threat of global terrorism, increasing consumption, and what comes with it is the pollution of the natural environment – our civilisation is becoming one focused on resources, not objectives. It is rich in resources much more than any other epoch and has almost superhuman needs, but it is misusing these resources, squandering them, it has forgotten the value of life. In the reality outlined above, architects are born, brought up, and taught in order to shape the space that surrounds us. These are people also contaminated with the mundaneness of modern civilisation. The conditions in which today's and future generations grow depend on

their commitment, work, reliability, and integrity, as well as accountability for decisions made, and constant broadening of knowledge, gaining it.

The investment process consists of repeated stages of programming, design, implementation, use, and then modernisation, revitalisation, transformation, conversion, technical death, usually followed by the redevelopment of a programme, and the stages listed above are repeated anew. The process of shaping space resembles metabolic processes occurring in nature; it is similar to the stages of human development. A conceived life develops an organism, leads it to the period of maturity, and after exhausting its strength, it returns to a state that allows new creatures inhabiting our planet to be born and develop. It seems that nature controls the processes of matter and energy exchange in a way that allows the renewal of the life cycle following the passage of time in a way that is not limited. In this respect, man can learn from nature, which (as the world of science maintains) is determined by the physical laws that function in our reality.

Man who is a part of the natural world, despite the awareness of his individuality and the unique role he plays on Earth, remains under their influence, learning about the mechanisms of their operation – he tries to use them to achieve his own goals resulting from elementary human needs. All this is a testimony to the peculiar beauty contained in nature, man himself, and the things made by him. Architecture, the work of human hands, also has this beauty in itself as long as it serves man and is nature friendly. Beauty in architecture is a state of harmony between aesthetic and functional values of a shaped space in the relationship of a creative response to the broadly understood conditions of the local natural, socio-cultural and constructed environment.

'The criterion of beauty accompanies the process of creating architecture from the very beginning. It plays an important role in this process also due to the fact that architecture as a field of art is unifying and at the same time it has been making use of its other fields – painting or sculpture – for centuries. Along with the progress of civilisation and the development of new media, the list of the fields of art used is expanding' (Barnaś, 2007).

Harmony weaves the local conditions of the place into friendly relations between the natural, socio-cultural, and constructed environment. The harmony of the place is one of the basic conditions for shaping the human environment.

There is a view that there are two kinds of beauty:

- hidden beauty that is discovered inside things,
- objective beauty that is perceived by the public, always visible on the outside.

The presented fields of influence of the harmony of the place do not in themselves constitute the value of beauty in architecture. However, getting to know

them and shaping them consciously leads to the objective whereby beauty can be perceived or felt in various ways by users of architecture, regardless of whether it will be perceived in a subjective or objective way.

The harmony of the place is a state of the dynamic balance of mutual local interactions of the natural, socio-cultural, and constructed environment. Such shaped places should be a space for organising human work, interpersonal meetings, living zones, recreation and relaxation areas, stimulating the senses, and conducting spiritual experiences.

Beauty is an inexhaustible source of creative inspiration in shaping the human environment. This publication is a form of documentation of the search for beauty in architecture, its discovery as well as the process of learning it. The book consists of eight chapters, the first seven of which have been arranged according to the methodological procedure starting with the general ideas, i.e. the city as a place of the most complex nature and continuing through the characteristics of public spaces, the dominance of the place towards detail, i.e. the structure of the place as an interior and a friendly living space. The last chapter combines the analysis of the place in terms of the harmony of the microcosm, which is the human living environment with the macrocosm, and in particular, reflecting it with the sacred space and the aesthetic values associated with it, emphasising the axiological (connection between beauty and good), symbolic and spiritual aspects.

Tomasz Drewniak
University of Applied Sciences in Nysa

Analysis

Harmony of the city – from art to reality

Not only does art have its place in time and space, but it is also one of the basic forms of spatial conceptualisation. *Invisible Cities* (1972), a book written by Italo Calvino, in which Marco Polo presents Kublai Khan with a description of 55 cities, is an inspiration for contemporary artists and architects (Tatiana Goranskaya, *The fictional cities of Italo Calvino in contemporary visual arts*). Calvino places cities on the axis between memory and desire: cities dominated by memory implement a universal pattern, whereas cities defined by desire grow through the contamination of heterogeneous elements (Gwarecka, 2012, p. 272). The latter appear to be the opposite of the city (and also of the place), because the difference between the centre and the periphery disappears in their case (Sławek, 1997, p. 17). The author distinguishes two discursive figures: an architectural utopia aimed at shaping a real architectural and social space by presenting an ideal city, and an architectural fantasy that is devoid of reference to a specific place. At the same time, the architectural fantasy, without being limited by the requirements of compliance with reality, allows for a discourse on 'various issues of urbanism, ecology of cities, preservation of historical and cultural heritage, identity.' Figurative representations of individual cities transfer them to the sphere of visual perception by means of a symbolic presentation of the idea that makes them organised, in which real life goes beyond the rules of geometric rationality (Weiss, 1993, p. 156). This idea, in turn, arises through the overlapping individual images, which are integrated by the imagination, which always bases them on the basic image of the place (city) with which other places are compared and can be defined via a combination of similarities and differences. *Invisible cities* revalue the role of the imagination in creating 'the image of the city,' as well as in generating subsequent images, by freely manipulating known elements (Modena, 2011, pp. 180–181), which leads to the creation of narrative, discursive, and design possibilities.

In Calvino's book, the purpose of a fictional conversation with the Emperor of China is to discover a model that allows for efficient insight in the problems of real-life cities, as well as for shaping space and human life optimally. An analysis of the cosmological and religious foundations of the city model shaped in

Chinese culture is presented by Ping Zhou and Nina Kazhar (*Influence of the categories beautiful and nature on the formation of the space of a traditional Chinese city and house*). The basic reference in the case of Chinese aesthetics, philosophy, and architecture is based on the notion that nature is a perfectly ordered whole, Qi energy flowing through all beings. Beauty means, first of all, the harmonious unity of heaven and man, *yin* and *yang*, man and nature, and it cannot be separated from good, man living in accordance with the moral rules that come from heaven. According to Taoism, the relationship of man with the earth is the basic principle of shaping space, therefore 'the walls of the city, temple, quarter, houses had the shape of a square.' In turn, the relationship with heaven is expressed by the shape of a circle and the emperor is perceived as 'the son of Heaven.' These principles are reflected in the theory of an ideal city and urban planning practice from ancient times to the beginning of the 20th century: cities were located in accordance with the principles of geomancy (Feng Shui), built on a square plan, divided into nine parts and surrounded by walls, and the ruler's palace was situated in the geometric centre with a square. The courtyards were made in accordance to traditional residential development and symbolised the void with which the built environment should be in balance.

The shape of the city is influenced not only by ideas, but also by historical, economic and cultural conditions. It is estimated that in the second half of the 16th century and in the 17th century in Galicia, in the vicinity of Lviv, Tarnopol and Ivano-Frankivsk, over two hundred urban architectural concepts based on Renaissance patterns were created (Svitlana Topylko, Ulyana Ivanochko, *Losses in the architectural and planning structure of the Renaissance towns in Galicia in the period from 1939 to the 1990s*). The towns losing their commercial, administrative and cultural functions and being transformed into villages were a characteristic phenomenon for this region. On the other hand, until 1990, changes in the architectural and urban structure were governed by functional and ideological considerations: in the area of historic centres, public institutions were erected and new communication routes were formed, religious buildings were degraded, new centres and typical residential housing were developed. According to the authors, the use of a comprehensive model of city design allows for the integration of urban space on the basis of the Renaissance structure and its integration with contemporary architectural forms and the current needs of the community, based on the implementation of the similarity principle and the principle of maintaining scale through horizontal and vertical divisions.

Places of/in public space

Public space is a prerequisite for the formation and implementation of those aspects of the human condition that are inscribed in the cultural and axiological dimension of human existence, because, as Richard Sennett points out, it requires the assimilation and implementation of supra-individual principles of action oriented towards the common good. The values inscribed in the public space are rationality, dialogue, mutual respect, and a tendency to compromise. In this context, Jan Wrana presents the transformation of Litewski Square in Lublin and the central zones of nine cities, incl. Barcelona, Lyon, Freiburg (Jan Wrana, *Transformations of city centres according to Jan Gehl's theory. Meetings with the master in Lublin)*. He uses the guidelines of Jan Gehl, formulated for participants of the competition for the project of transforming the square in Lublin, as a heuristic and analytical tool. Gehl pointed out, among others, that the most important aspects of any 'people-friendly city' include: 'high quality of public space available to the citizen', 'distinct identity and hierarchy of individual places in space', limiting vehicular traffic and replacing it with walking and bicycle paths, an appropriate scale of space public, the presence of greenery and water. The public space thus becomes the place where the built environment serves to create 'lively, safe, sustainable and healthy cities.'

Based on Podgorica, Gordana Rovčanin Premović distinguishes types of public spaces, the nature of which is determined by the functions they perform in urban space (*Typology and transformation of public spaces – urban interiors on the example of Podgorica, Montenegro*). The author notes: 'Podgorica has a historical urban structure in the form of *Stara Varoš* (unplanned urban structure) and two parts of the city that were created according to the functionalist principles: *Nova Varoš* and *New Town* (two planned parts of Podgorica).' And so, the oldest square in the Old Town is a place where the memory of the city community and its connection with the past have been condensed in symbolic forms. The main city square is primarily a place of social interactions, including the entire city space. In the New Town, the role of public spaces is played by parks, sports and recreational areas, which are characterised by their intimacy. In the newest parts of the city, public spaces are situated as multifunctional dispersed nodes, which defrags the city into polycentric systems, as well as systematically diminishes the importance of historical and symbolic public spaces.

Place as an interior

The interior in architecture is usually perceived in the spatial aspect, as what cannot be seen from the outside, which at the same time becomes cognitively and usably accessible when a person is inside the building. Identification of a place in its two aspects is based on two dimensions of human existence – striving for withdrawal into oneself, isolation, ensuring safety for oneself, and on the other hand, striving for opening oneself up, growth, expansion (Peter Schmid-Prakas, Gabriella Pal-Schmid, *The In-Side beauty of architecture*). In this context, the harmony of the place consists in the balance between the inside and outside of the place, achieved by giving it a symbolic meaning, indicating its relationship with the earth (*omphalos*) and the path (labyrinth, initiation attempt, growth) and heaven (system of values, cultural and social aspect of human existence). This meaning is also in line with the spirit of the place (*genius loci*), which is the 'In-Side' of architecture, connecting a person with *axis mundi*. The interior and exterior have two meanings in architecture: horizontal, visible and spatial as well as vertical, invisible, and spiritual. Their harmony is reflected in that in translates into a harmonious relationship between humans and the natural and social environment. In the spatial interior, the human spiritual interior is being achieved, which in turn reflects the macrocosm.

The issues of interiors in the residential environment are presented by Marco Lucchini (*Who does make the domestic space?*). How do the walls, constituting the space of the house, setting the boundaries between its exterior and interior, as well as setting the layout of the interior space, enable the feeling of being at home on the bodily, psychological and social level? The walls isolate, set clear boundaries of perception and mutual interaction, separate not only from what is outside, but also from the interior of the house and its occupants. The author presents the above issue in the context of how architecture shapes the correlation of two values – security and freedom. The spatial structure of a modernist house is subordinated to function, standardisation of human needs and mass production of modules, as a result of which 'the relationships between spaces no longer reflect a family hierarchy,' and the house serves as place for 'the reproduction of and social control, thereby shaping rational subjects and their adaptation to the requirements of the industrial society. Mies van der Rohe goes beyond the paradigm of organising space by dividing it into three-dimensional components (cuboids), who sought to adapt objective spatial divisions to the needs of an 'authentic existence' whose dynamism and personal openness to others – van der Rohe was inspired by, and not only, R. Guardini's personalism – are expressed by the asymmetry of the layout, large-format windows, glazed doors and walls.

The idea of opening the house to the landscape is continued by Le Corbusier, and Gio Pionti among others, using the traditional layout of the apartment based on the corridor, connects all rooms with a system of folding walls and visual axes. Striving to open up a place, to enable coexistence with the household members, as well as with the surrounding social, cultural and architectural environment, is the basic idea of shaping a living space that is visually, acoustically and tactile transparent (Vittoriano Vigano), as well as a living space, the individual zones of which are not defined by the architect and are mobile. This deliberate vagueness of the design presents itself as a key condition for a sense of feeling like home, which is inseparable from the freedom of shaping the space by its users and for recognising themselves as their own.

The difference between the interior and exterior of the building, as well as the ways of their interaction with users, leads to different criteria for determining their aesthetic value (Mieczysław K. Leniartek, *The aesthetic integrity of the architecture of the contemporary interior in the old and new building*). The author, by studying different cases – old buildings with new interiors – 'Zalipianki Ewa Wachowicz' in Kraków, 'Żyjnia' in Wrocław, a villa in Shanghai – and new buildings – 'Bachleda Club Residence' in Zakopane, '7132 Thermal Baths' in Vals and 'Les Cols Restaurant Marquee' in Olot, Spain – distinguishes three aspects of interior design: literality, interpretation, and transparency, expressing three levels of relationship between interior and exterior. The first consists in subordinating the interior to what is external to it, using historical symbolism, in order to shape the continuity of the consciousness of the individual and the community. The space then remains dominated by a specific cultural narrative. The second one tries to maintain a balance between the interior and the exterior of the building by combining the universal civilisation and architectural code with the specificity of the place. The third aims to abolish the clear division into internal zones, as well as blur the boundary between the exterior and interior of the building, subordinating the architectural space to the idea of mobility and readability, unrestricted by the limitations of the place. The correlate of literality and transparency is subordinating a place to tradition or modernity – shaping a place without taking into account its specificity, while the interpretation takes into account the nature of the place, function and users.

Dominants of the place

Grażyna Lasek (*The problems of beauty and the particular elements in landscape – case studies in the surroundings of the town of Bieruń*), following Kevin Lynch, points to three components of the image of the environment (place) – identity,

structure and meaning, which are merged into dominants that are symbols of the place, concentrating its atmosphere, uniqueness and aesthetic values. The beauty of the place is, therefore, the result of an appropriate correlation of the particular elements in the landscape, constituting the basic points of reference in the historical, architectural symbolic identification of the place, as shown by the author on the basis of the particular elements in the landscape of Bieruń. At the same time, they belong to the group of material and spiritual values, inscribed in the cultural heritage of the local community, therefore they 'will always have to be subject to some control and protection in order to eliminate the possibility of taking actions that could harm them or even destroy them' (last page). In the case of the place in question, the special elements of the landscape include: the mound, which is the remnant of a former stronghold, the urban layout with the market square, the historic wooden church, the cemetery, the square with the column of St. Valentine, the patron of Bieruń, the Kraków Gate, the Opawska Gate, the remains of the Great Pond of Bieruń and the remains of a barn complex.

The Northern River Terminal (1937) is one of the facilities designed and built during the reconstruction of Moscow into a complex of majestic buildings of the 'beautiful city of the future' (Irina Cheredina, Ekaterina Rybakova, *The Northern River Terminal in Moscow. A historical monument and harmony of the place*). The terminal, designed by A. Rukhlydayev, through its form imitating a double-decker ship with a high mast, harmony and lightness as well as artistry of workmanship, was to create the illusion of the real presence of the goal of communist utopia – the ultimate triumph of happiness and prosperity for all. Using the language of architectural and aesthetic tradition on the basis of 'classless society,' he gave it an egalitarian meaning, filling the palace with socialist and national symbolism. In the nineteen nineties, the facility ceased to act as a terminal in tourist transport and was gradually deteriorating. In 2018, restoration works were started, the aim of which is to restore the original appearance, and at the same time to create a place for 'walks, reflection and contemplation,' using the landscape and aesthetic potential of the river and the quay. Monumental architecture – illustrating the power of man over the environment and other people – also prompts a reflection that goes beyond the aesthetic contemplation of form and the sense of power arising from the identification with a symbolic code and belonging to a community. Well, its hidden and invisible 'interior' and 'silent speech' is the suffering of nameless victims, whose slave labour and blood constitute the components of the 'mortar' of many of the memorable works of art.

The city centre is characterised by the accumulation of buildings belonging to the historical and cultural heritage, and at the same time of high aesthetic and symbolic value. They express not only the identity of the place, but also

the identity of the community associated with it; at the same time, they are characterised by the potential to take up new functions and adapt flexibly to the changing requirements of life. Revitalisation activities focusing solely on the recreation of aesthetic, artistic and historical values often do not lead to the revival of architectural structures on the social and economic level, hence 'there is a need to adapt such structures, distinguished by unusual functional solutions, deviating from contemporary requirements and above-average aesthetic values, for new purposes' (Irakli Kvaraia, Inga Iremashvili, Liana Giorgobiani, Adam Ujma, *Reconstruction of building structures of historical and architectural heritage in the Tbilisi city*). The authors analyse the transformation of the 'Zarya Vostoka' printing house into the 'Merani' shopping centre (while maintaining the original facade of the building, marking out wide passages and connecting with the new building), the building of the Ministry of Agriculture of Georgia into a hotel (leaving the facade parallel to the main street and integrating it with the new structure), extension of the Rococo Revival style hotel 'Muza' (leaving the facade and combining it with the new structure), reconstruction of the Ministry of Justice of Georgia (reinforcing the facade, building a new interior), construction of the 12-storey 'Ramanda Encore' hotel and a residential complex (the old building of the tuberculosis institute was demolished and the façade walls were reconstructed). The above-mentioned projects harmonise the interior and exterior, tradition with the present, historical symbolism and the current dimension of life, form and function by extending the life of building structures and combining different functional, stylistic and technical orders.

The perception of a place as a landscape, the attractiveness and character of which are determined by architectural buildings established in the social consciousness, develops along with romantic sentimentalism and orientalism (Alina Dittmann, *Harmony of space in the German concept of modern tourism reflected in the first Guidebooks*). They refer to the origins of European culture, the lost places whose *genius loci* remains alive and needs to be assimilated as it harbours harmony and beauty. This spiritual and real 'journey to the East' (Greece, Egypt, Palestine, India) becomes possible on a mass and commercial scale with the emergence of the middle class possessing material resources, free time and cultural aspirations, as well as with the development of means of transport (railway, steamboats), the appearance of first travel agencies and the publication of guides. The author indicates, on the basis of guides prepared for the needs of Thomas Cook and Carl Stangen travel agencies, that they standardised the perception of a place by shaping its model image, which at the same time became a cliche for recognising this place and moving around it effectively. The publications covered, the architectural facilities of artistic, historical and aesthetic value were

distinguished and their rank was prioritised. In order to obtain a panoramic view of a landscape, a tourist was placed in a position towards the place that allowed him to have the best view of the entirety of something (e.g. tower, hill, railway wagon), which on the other hand favoured not only familiarisation with a place, but also its mythologisation. In the above model of experiencing a place, a fundamental role is played by historical facilities with unique figurative values, influencing the emotions and imagination of a tourist-viewer.

Tectonics of the place

The authors focus their considerations on the visual and acoustic aspects in the border areas between the external zone and central rooms (Hanna Michalak, Jerzy Suchanek, *Dynamic harmony of modularised space*). The analysed buildings include cultural institutions (e.g. The Semper Opera House and Kulturpalast in Dresden, the Harbin Opera House, the Museum of Fine Arts in Leipzig, the Gdansk Shakespeare Theatre), with halls, corridors, *foyers*, leading to the place constituting the setting of artistic events. 'Their geometric configuration: segmentation, location in relation to the main entrance to the building, as well as the ornaments used can provide an illustration of their involvement in the process of creating an overall impression of beauty for the whole building. This also applies to its impact on the city space.' Their aesthetic value, resulting from their form, scale, symbolism, colours, artistry, materials used, lighting and acoustics is shaped in relation to the central room, and at the same time, by the intensity of its impact, is meant to prepare one for contact with a work of art. It also transforms a person involved in everyday activities into a conscious recipient of artistic, cognitive and aesthetic values. Border zones are marked by spatial distances implying formal social attitudes characterised by mutual respect, kindness, restraint and self-control. By directing a person towards the mystery of art, they also direct towards ethical values.

Anna Telatycka (*Harmony of sound and architecture as one of the important criteria for shaping human space*) explores the acoustic aspect of a harmoniously designed architectural interior (apartment) on the basis of her own experimental research. The interpretative model of acoustic phenomena is based on comparing a room to an instrument, but in terms of acoustics, 'it can be a very complicated structure, because closing and opening doors to rooms changes the pattern of sound propagation inside the apartment.' Each room layout can be reproduced with a more or less complex acoustic system. The conducted research shows that the room and the things located inside add additional acoustic components to the signal, which leads to the sound reflected from the wall being similar to the

sound of vinyl records. The author also tackles the issue of an adequate 'handling voidness' in design practice in such a way that it results in the harmony of architectural, social, and acoustic space, in the combination of aesthetic values with functional values.

Friendly living space

By specifying the criteria for sustainable development of urban space, including complexity, ecology, transport accessibility, multifunctionality and adaptation potential, Katarzyna Szmygin and Olga Górnik (*Contemporary housing estate – urban layout in the area of the former depot of Miejskie Przedsiębiorswo Komunikacji in Lublin*) relate them to the phenomenon of urban sprawl and its consequences: high intensity of development, lack of architectural cohesion, minimisation of public spaces and green areas, degradation of urban spaces. On the other hand, on the example of the transformation of the former bus depot in Lublin into an urban planning scheme (CZ Office Park in Helenów), combining office, residential and service spaces, it is possible to point to a combination of a 'modern *city* with attractive architecture,' guaranteeing functional, compositional and architectural consistency. In addition, the discussed project involved the application of energy-saving solutions, no barriers to the availability of space, combination of residential, service, and administrative functions as well as the possibility of introducing new solutions. 'The investment has increased the attractiveness of the neighbouring areas where new building structures are being built. The residents of Lublin indicate this area as one of the most attractive on the city map.'

The next text presents an analysis of the relationship between the objective aspects of a place and their consideration on the perceptual-emotional level, based on the example of the following housing estates: Schoonship and Funepark in Amsterdam and Eco-Viikki in Helsinki (Agata Pięt, *Selected aspects of the harmony of the housing environment*). The harmony of the place of residence, manifested at the level of 'positive feelings of users,' results from the combination of aesthetic, architectural and urban aspects, functional and spatial layouts of apartments, zoning accessibility, communication systems, the possibility of experiencing nature, diversity and social ties. For example, social bonds in the Schoonship estate were not formed on the basis of the spatial vicinity of existing buildings, but result from the involvement of future residents in the process of designing and implementing the investment. The degree of fulfillment of the above criteria, which shape the sense of harmony of the place, has diverse characteristics in the examples discussed, which also results from objective conditions

(e.g. topography, financial resources, architectural and urban structure) and the differences in expectations as well as needs that occur among the users of these areas and their preferred determinants of settlement.

Decoration of the place

The details of the place, which indicate the location of the facility in the historical and local environment are its important aspect, giving it a universal meaning. It enables an architectural space to transform into an existential one, a unique housing environment for specific people who participate in the universal cultural code through local codes. The main idea, which can be seen in the projects, conservation works and didactic activities of the Italian architect Camillo Boito (1836–1914) – reconstruction of the Palazzo delle Debite in Padua, adaptation of the premises adjacent to the Basilica of St. Anthony, and the restoration of the original character of the Basilica St. Anthony, as well as the arrangement of the Polish Chapel – was care for the stylistic and symbolic continuity, exquisite workmanship and clarity of meaning (Elżbieta Barbara Lenart, *Camillo Boito – an architect on the way of discovering beauty in decorative art*). The detail – treated by Boito as an element of the text of the architectural record – plays an explanatory, integrating and persuasive role in shaping a historical and cultural community seeking 'in beauty not only a sense of unity, discovering its own identity but also the pleasure of being in the environment recognised and perceived as beautiful.'

Konrad Urbanowicz (*Architectural glass art compositions as significant components defining the character of public interiors and urban spaces*) captures the architectural detail in the context of the impact of architectural events on public space through the use of artistic glass in the preparation of an exhibition on the beginnings of Polish statehood in Ostrów Tumski in Poznań and in the project 'Silver Meteorites' in Srebrna Góra. In the case of the educational trail of the project 'Everything started here,' the relics of Mieszko I's *palatium* were covered with illuminated glass and the quotations taken from historical chronicles, historians and archaeologists, explaining the origin of the object and its role were placed there. In Srebrna Góra, glass transfers the 'starry sky' to the swimming pool hall. 'During the day, the composition is a uniform image with a play of chiaroscuro, emphasising the spaciousness and material texture of the wall. Along with the decreasing intensity of natural light, the composition is illuminated using an optic fiber installation.' By using the described compositions, the character of places is defined, and at the same time changeability and indeterminacy are introduced, transforming its observant into an active participant in

the aesthetic and cognitive situation, activating, apart from the intellectual and perceptual sphere, the imagination and emotions.

Towards the trans-objective (transcendental) aesthetics of place

The last part presents aspects of the place that go beyond the canon of beauty, for which the model is an abstract geometric order (abstract space), secondary to the coherent world of everyday life that characterises pre-industrial societies living in close proximity to nature and God. Scientific and technical rationality transforms the world into an object, but at the same time separates man from nature, the *sacred* and others, leading to loss of rooting in myth and place (F. Nietzsche) and to 'homelessness' (M. Heidegger). The transformation of an objectified and reduced reality to a measurable form requires – as indicated by philosophical and artistic concepts – the discovery and integration of the pre-modern memory with the postmodern world (Miloš Milovanović, *Postmodern memory. A study on aesthetics of the Eastern Europe*). Kazimir Malevich's concept of objectivity is an expression of his striving to transcend the everyday representation of the world in favour of a pre-object experience, as yet unconstituted and unstructured in forms enclosing it in isolated objects. In the Russian culture of the Silver Age, the tendency characterised above to overcome the crisis of rational, 'Socratic culture,' was being achieved by returning to the sources of Orthodoxy and to religious art, and in particular to icons whose canon deviates from the rules of Western European art, shaped on the basis of Renaissance humanism and rationalist anthropocentrism. Based on the rule of inverted perspective, the icon expresses the primacy of the spiritual world, according to the principles of which the figurative representations are shaped. Meanwhile, perceptual-discursive structures, leading to the development of modern science and technology, allow to control matter, guarantee the utilitarian efficiency of functioning in everyday life, but at the same time close access to the interior of existence, the spiritual world, as their assumption is the separation into a rational subject and an objective item. In Malevich's suprematism, the elimination of the subject (observer) leads to the transformation of the object, its presentation 'beyond' the boundaries that enclose it and separate it from the whole. In the perspective of the fractal model used by the author to analyse the works of Malevich, the basic geometric forms shaping reality are the circle, the triangle, the square and the cross, they express 'an evolving cosmos which is dynamical and self-similar.' Malevich searches not only for a primary ontological experience, but also a religious one, finding it in the life of the first Christian communities. Christianity transcends object and spatial boundaries, transferring the

Kingdom of God into the sphere of the spirit, while the Old Testament was to set clear boundaries separating in the spatial (Promised Land), ethnic (Chosen People) and religious (Judaism) areas. The revaluation of the icon by the avant-garde serves, as well as the reference to the cosmology built on the basis of the general theory of relativity, to extend the limits of perception by indicating the primacy of time over space, energy over form, changeability over constancy, love over power. The place remains open – in Malevich, architects express a dynamic and self-generating form of an architectural form. The consequence of crossing individualism is the disappearance or blurring of the face in the most basic contours, because it is to be a window for the manifestation of divine light. Except that in this depersonalised perspective the man himself disappears, and therefore God-manhood, which is the basis of Orthodoxy, disappears – the correlation of Christ as a True Man with the beauty of man. Criticism of modern anthropocentrism, carried out from the perspective of the aesthetics of icons, ultimately leads to posthumanism, the dissolution of man (and God) in abstract forms, and thus to iconoclasm.

Henryk Benisz (*Will to power in architecture. Nietzschean inspirations*), referring to the aesthetics of Immanuel Kant and Friedrich Nietzsche, presents an analysis of architecture as an art that synthesises beauty with sublime, which goes beyond the dyad of *firmitas* and *utilitas*, and directs man, through aesthetic values (*venustas*) towards cognitive and religious values. The concept of the will to power, key to Nietzsche's late philosophy, integrates the Apollonian (definite element, form) and Dionysian (indefinite but defining element) – categories exploring the phenomenon of pathos against the background of Greek culture in *The Birth of Tragedy* – and at the same time transforms their antagonistic dualism. Although this concept indicates the primacy of dynamic Dionysian as the creative energy of life, it also connects it with a concrete objectification (work) in which it finds its realisation. The great art 'expresses the power of humanity, which, with the will to power, even exceeds the limits of time and reaches eternity,' not only in the sense of permanent presentation of the creative power of the artist and culture, but thanks to the transformation of man into the creator of himself – the overman. The beauty associated with gentle aesthetic experiences enables contemplation, learning about the inner essence of phenomena, and the sublime, in turn, transfers into the sphere of *quasi*-religious, ecstatic experiences, going beyond *principium induviuationis* and transferring to another, more basic, inexpressible at the conceptual level dimension of existence. Architecture, due to the harmonious unity of the opposing forces of heaviness and lightness, earth and heaven, contemplation and mystical experience, private and public dimensions, past and future, human and overhuman,

time and eternity, is also a 'great architecture of culture' (KSA 2, 228), making it possible to shape the whole of human life, whose *telos* is a religious experience of a Dionysian character, consisting in experiencing the sanctity of the whole of existence (life). The sublime differs in architecture from monumentality: it does not require massive architectural structures and it shows a hierarchy resulting from the levels of spiritual development, not from the relationship of power. The author discusses examples of architectural realisations of the presented concept: from the adaptation of temples to a cult deviating from the religion with which they were originally associated, through the adaptation of churches to new functions, to the application of the 'green Vitruvius' model, combining traditional rules of building with human responsibility for the natural environment. The building structures emphasise the mutual belonging of the aesthetic order and the ethical order, for which the sublime is the base, giving man a sense of connection with the whole of existence (Earth), and at the same time shaping responsibility for them. The formula of the overman as the 'Lord of the Earth' does not mean the selfish exaltation of man, but his commitment to sublimate his environment, which results in the harmony of the place.

Bogusław Szuba (*Harmony and mysticism of the Albertine Hermitages in Kalatówki in Zakopane*), referring to his own concept of harmony of the human environment, which is the result of the dynamic balance between nature, culture, and architecture, presents an analysis of the complex of hermitages in Kalatówki in Zakopane. The facility, located next to the trail leading to Giewont, was built in 1901 and has been associated with the activity of St. Brother Albert Chmielowski, an insurgent and painter who abandoned art to help the poorest. The hermitage complex, designed by Stanisław Witkiewicz in the Zakopane style, and thus referring to the local tradition and its relationship with the environment, remains embedded in the natural terrain (forest, stream) at the foot of the Giewont mountain, and at the same time oriented towards the cross standing on the top of the mountain in question. The symbolism of the way defines the charism of Albertine spirituality, which unites two aspects of human life, which in the event of separation imply an escape from the 'world' to God or a fall into the 'world' away from God. Meanwhile, the way leads 'there' and 'back,' from the noise of 'the world' to God, but also from God and with God back to the world. While in the desert, Christ resisted temptations, that is, disobedience to the 'will of the Father,' and then began teaching, which was crowned with the 'sacrifice of the cross.' The hermitage is therefore not a place of escape from the world and isolation – the Congregation of Albertine Brothers runs shelters for 'the poorest, homeless people, often with serious health problems.' Spiritual peace is the basis for the formation of heroic virtues – obedience, self-renunciation, poverty,

sacrifice. The relationship with the *sacred* requires one to achieve silence, to go beyond the noise of everyday life, to learn the simplicity of the heart, inner silence, to be 'here' and 'now' while remaining open to the past by affirming it and looking at the future with trust and hope. The simplicity of the architectural form, firmly embedded in the ground through stone wall bases, the proximity of the forest and water, and through the wooden structure, walls, architectural detail, and the narrative function of the symbolism clearly referencing heaven, connects the earth with heaven, man with God, by directing towards others, those who seem to be abandoned by men and forgotten by God. The silence and simplicity of the place show the way to heaven, leading through the 'crucified love' in the world, the love that recognises and realises hierophany, the 'image of God' and the bond of brotherhood among the 'lesser brothers,' that is, in relation to the environment and the poor.

The above considerations are continued in the analysis of theological, onto-logical and axiological aspects of architecture (Tomasz Drewniak, *Emptiness as the openness of the place. Contribution to the reflection on the phenomenon of kenosis in architectural space*). Human being is characterised by openness to the world as a comprehensive spatial and symbolic structure, the 'nodes' of which are places that relate to each other, to real or intentional human movement from one place to another, and at the same time to its relationship with *axis mundi*. The basic relationship of places where the entirety of human life is realised – which is agreed among thinkers of the eastern (N. Fedorov) and western tra-dition (M. Heidegger) – is a square of a house, a workshop, a temple and a cemetery (J. Tischner), in which man's attitude towards nature, God, culture and other people materialise. The crisis of modern culture identified above results from the dialectic of belonging to a place and crossing it, being on the way and being at home, excess and modesty, power and poverty, the dialectic that leads to transformation or even detachment from the above-mentioned references. The place to which a person belongs and the things he uses define the limit of being selfish – on the one hand, the desire to be everywhere and possess everything, on the other hand, to remove oneself from others and shut oneself in. Therefore, in order to fulfill this selfishness, man objectifies himself – he objectifies the world (God, nature), objectifies himself in what he has, and construes on the basis of who he is, comparing himself in jealousy or contempt, oscillating between desire, satiety and disappointment. Meanwhile, God – according to the formula of ke-notic theology – finds a place in the world through his own humility, simplicity and service. The openness of the place is thus directly related to the simplicity and nobility of the heart, to the human capacity to receive and give, instead of taking and retaining. The circle of mutual self-giving is constituted – as shown

in the examples of Christmas nativity scenes and the Chapel of Our Lady on the Heights (*Chapelle Notre-Dame du Haut*) – by the so-called things that remain open to an emptiness where they can give, receive, and pass on the place.

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Part I Harmony of the city – from art to reality

Tatiana Goranskaya
National Academy of Sciences of Belarus

The fictional cities of Italo Calvino in contemporary visual arts

Abstract: The article analyses the artistic interpretations of individual cities, created in painting and graphics by contemporary artists and architects based on the book *Invisible Cities* by Italo Calvino. It is shown that images of fictional architectural objects and spaces are independent works of visual art that preserve the originality of the cities invented by the writer. It was pointed out that the contemporary iconography of architectural fantasies inherits the traditions of J.-B. Piranesi, M.-C. Escher, combines perspective constructions with surrealistic composition techniques, uses historical architectural forms and archetypes (labyrinth, stairs, etc.).

Key words: architectural fantasies, utopias, fictional cities, fine arts, Italo Calvino

> *… what people imagine is just as real,*
> *as what is called reality*
>
> H. Borges
> Preface to the book by Marco Polo *On the diversity of the world*

Introduction

Contemporary processes of globalisation and urbanisation are changing the perception and experience of human beings in the space-time of the city. On the one hand, there is a universalisation of social space and time, the denial of national traditions and cultural characteristics, and on the other hand, 'the particular is not simply preserved, but (…) takes on new forms' (Ionin, accessed on 10th January 2021).

'Nowadays the virtual is decisively gaining the upper hand… We are no longer in the logic of the transition of the possible into the real, but in the hyper realistic logic of intimidating ourselves with the very possibility of the real' (Baudrillard, accessed on 10th January 2021). The boundaries of the physical reality of the city become conditional, and 'the fictional world becomes a determining life experience' (Кастельс, 2000, p. 601). Consequently, architectural fantasies and utopias take on new life. The theme of imaginary cities is reflected in architectural theory and history, philosophical treatises, works of fiction, fine art and cinema.

The purpose of the article is to analyse the artistic interpretations of cities, created in painting and graphics by contemporary artists and architects, based on the book *Invisible Cities* by Italian writer Italo Calvino (1923–1985).

Main part

In this article the concepts of 'architectural fantasy' and 'architectural utopia' are separated.

'Architectural fantasy' is a graphic or pictorial representation of architectural objects, spaces and cities that do not exist within the limits of physical reality (Collective and fantasy veduta, the works of G. Panini, J. B. Piranesi, P. Bruegel the elder, etc.).

'Architectural utopia' is a reflection on the multiplicity of possible urban realities, the order governing the emergence, development and decline of cities in projections of the past and the future, expressed in verbal and/or visual form. (Treatises on ideal cities of the Renaissance, projects of megalomaniacs, Italian futurists, etc.).

In his book *Invisible Cities*, I. Calvino 'not only proclaims some timeless idea of the city, but unfolds (sometimes hidden, sometimes explicitly) a discussion about a modern city,' various issues of urbanism, ecology of cities, preservation of historical and cultural heritage, identity (Визель, accessed on 10th January 2021). It is a postmodern verbal model of a city that allows to create every conceivable city. '(…) This city consists entirely of exceptions, prohibitions, absurdities, contradictions, all sorts of nonsense,' the basis of which is everyday reality (Calvino, accessed on 10th January 2021, p. 8). It is enough to 'remove, in any order, exceptions from (…) the model, in order to finally get to one of the cities that (…) exist' (Calvino, accessed on 10th January 2021, p. 8). Thus, architectural fantasies can combine the actual and 'possible' desired and/or unwanted past-future.

In respect of iconography, there are descriptions of 55 cities, initially divided by the author into 4 groups: *Cities and Memory, Cities and Desire, Cities and Signs, Cities and Forms*. The fourth group was subsequently divided into separate semantic parts that overlap. It is also important to construe the book as a hypertext, a series of short stories about cities or a city 'in general,' which the Venetian merchant and traveller Marco Polo conveys to the great Mongolian Khan Kublai, founder of the Yuan dynasty in China (13th century). This allows the reader to determine the beginning, order and end of the reading of the text, depriving it of its explicitness, and allows for multiple interpretations. It allows the iconography of the text to become a series of distinct, immediate visual images that do

not have a particular order and have independent artistic meaning, reflecting the inputs, outputs and ways of 'presenting' imaginary stories. The work takes on the spatial (architectural) construction, 'polyhedron, and the conclusions in it (…) are visible everywhere, written along all its edges' (Визель, accessed on 10th January 2021).

The city of I. Calvino is 'scattered in space and time' (Calvino, accessed on 10th January 2021, p. 5). The journey allows you to combine different 'patterns' of urban space-time inside the book-kaleidoscope in a variety of ornaments in order to 'immerse yourself in your past' and 'find yourself in your future… Foreign countries are inverted mirrors. In them the traveller learns a little of his/her own and discovers a lot that he/she did not have and never will have' (Calvino, accessed 10th January 2021, p. 3).

I. Calvino's texts do not give a clear idea of the city. They are only keys that open the city gates, behind which there is always a different space and/or time.

In the work of contemporary artists, two approaches to the interpretation of Invisible Cities can be distinguished.

Continuing the reality of a certain city-place as a multiplicity of its 'readings' based on the preservation of historical memory, culture, architectural features and the expression of the 'soul of the city' as a collection of 'various things: memories, desires, signs of language…' in the context of globalisation and urbanisation (Визель, accessed on 10th January 2021). So the appearance of Zaira (*Cities and memory* 3) is determined by 'relations connecting spatial dimensions and events of past times' (Calvino, accessed on 10th January 2021, p. 1). The description of the city of the present is impossible without a story about its past. 'But Zaira does not talk about the past, the past is part of it, (…) it is here captured in the corners of houses, gratings (…) and railings' (Calvino, accessed on 10th January 2021, p. 1). The city grows, collecting and storing memories. Memories are unique, they are the basis of the play of the imagination, the imagining of the future. But they can change, they can be lost… The same places in the city can be associated with different individual and collective memories… Zaira is a 'Palace of Memory' – a combination of real and/or imaginary spaces.

The presentation of Zaira *à vol d'oiseau* by designer F. Cherci is an act of recollection and appropriation and, at the same time, it is a look at the city from the outside (fig. 1). The author tells the mysterious story of urban landscapes, bringing these places to life, and also reflects his own feelings and sensations.

The plan is the most ancient way of designating a city, territory. This means of representation is more symbolic than figurative. On one of the planes of the painting, along with a clear plan of the city, the artist placed a transparent female

portrait, significantly exceeding it in scale. The image of the woman blends into the landscape, being an integral part of it – *genius loci*.

Rejecting reality, creating a non-place utopia, devoid of 'orientation in historical space and time' and proposing possible alternatives to the existing reality – happy and/or nightmarish, depending on human choice (Власов, 2008, p. 755). This is an idea of unfinished urban landscapes and possible scenarios for their existence…

In the city of Fedora (*Cities and Desires* 4), there are many models of the ideal city of 'another Fedora': 'they are all creations of the imagination. One contains what is recognised as necessary, although there is no need for it yet, the others contain what appears to be possible, and after a minute it is already impossible. (…) The city could take such forms, do not become (…) what we see today. (…) what was its possible future before turned out to be just a toy, enclosed in a glass sphere' (Calvino, accessed on 10th January 2021, p. 4). Using the simultaneous method in constructing a monochrome graphic composition and rejecting the spatial depth of the image, the architect K. Puente forms the simultaneity of the vision (existence) of Fedora and its ideal models, each frozen in its own time. The artist, on the one hand, creates a holistic image of the city, and, on the other, emphasises the multiplicity of its possible realities.

The illustrator connects two-dimensional projections of the city into a single structure of vertical and horizontal rows, reflecting the construction of the hypertext book and creating variability of its 'perusal' (fig. 2).

In *Invisible Cities*, every urban utopia turns out to be dualistic… The basis for the existence of each city in the book and the creation of its visual image is one of its characteristic features, unchanging over time, as the duality of reality and dream. Layering on top of each other, fragments of reality and dream form an opaque urban fabric that hides 'desire or its seamy side – fear' (Calvino, accessed on 10th January 2021, p. 5). Every city here and now plays its assigned role, between heaven and hell.

The following images of *Invisible Cities* attract attention: 'the image of a huge metropolis, a continuous, unified city that crushes the whole world' (fig. 2); a small city 'which keeps growing and expanding and eventually forms many expanding concentric cities'; 'a web-city (…) suspended over an abyss' (fig. 3), a city-text (fig. 4) (Визель, accessed on 10th January 2021).

In the interpretation of the artist M. Kolpanovich, Trude (*Continuous Cities 2*) is the city 'without beginning and end,' where the 'resistance' (D. Likhachev) of space and time disappears, contemplated *à vol d'oiseau* occupies the entire surface of the canvas, which makes it possible to feel the integrity of the city, created by human hands and imagination (fig. 3) (Calvino, accessed 10th January 2021, p. 15). The solid wall of building facades with architectural elements (columns, cornices, arched windows and doorways, etc.) passing in perspective in the lower part of the canvas, approaching the blurred horizon line, turns into their plans, and then into landscapes, whose details of which become subtle. The city is a rhizome, that does not fit into the pictorial space of the canvas. There is no centre here, no periphery. The image of the city is a combined projection that created the labyrinth. The urban labyrinth has an implicit order and logic of construction.

The colour in the image has a unifying structure. The timelessness of the city is emphasised by the absence of a man in it.

Fig. 1. F. Cherci, digital graphics, paper, printing, 29.7 x 21 cm, 2016
Source: (19)
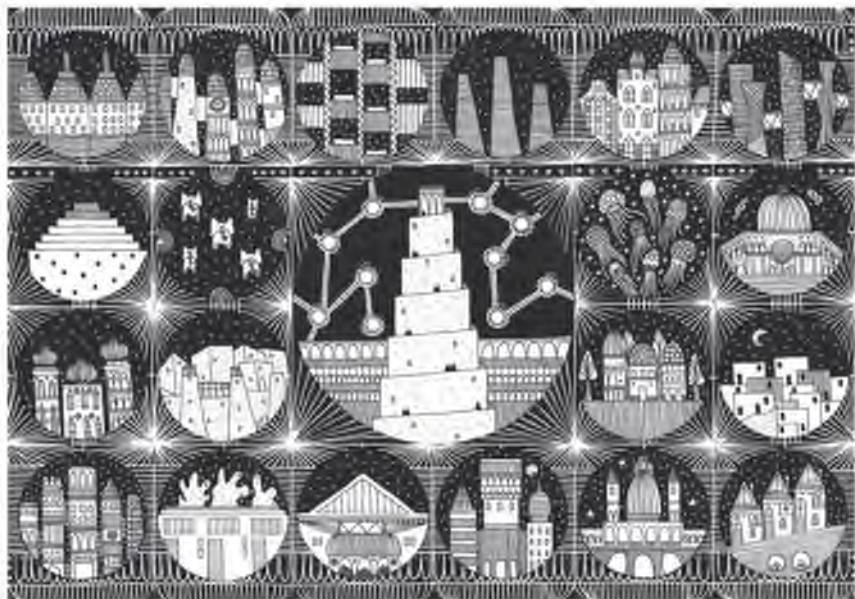
Fig. 2. K. Puente, cotton paper, mixed media, 50 x 35 cm
Source: (14)

Fig. 3. M. Kolpanovich, oil on canvas, 2007, 100 x 100 cm
Source: (12)

Ottavia is a 'web city' (*Refined Cities* 5). 'There is an abyss between two steep mountains (…). There is nothing hundreds of metres down, only clouds float (…). The basis of the city is a network – it serves as a support, they move along it. Everything (…) is suspended from it (…). Life above the abyss of the inhabitants of Ottavia is more definite than the life of those who inhabit other cities. These know how much their network can withstand' (Calvino, accessed on 10th January 2021, p. 8).

The image of a fragment of Ottavia from the inside of the urban space, made by the architect and graphic artist G. Trignac, is realistic and based on the principles of the Renaissance linear perspective (fig. 4). Drawing attention to the play of light and shadow, the artist uses a wide gradation of gray tones. The artist draws attention to the unambiguity and stability of the city's aerial network and the uncertainty of earthly space. By contrasting scale an aerial perspective, he juxtaposes immobile, massive urban objects with their natural surroundings. All the objects depicted, 'rope ladders (…), bag houses, (…) terraces, (…) gas horns, (…) baskets,' creating the 'interior' of the space, are emphatically material (Calvino, accessed on 10th January 2021, p. 8). The illustrator composes a general holistic view of the city from separate 'projections' of objects, presenting them from different angles. The attention to detail allows us to perceive the fictional world as a true everyday reality.
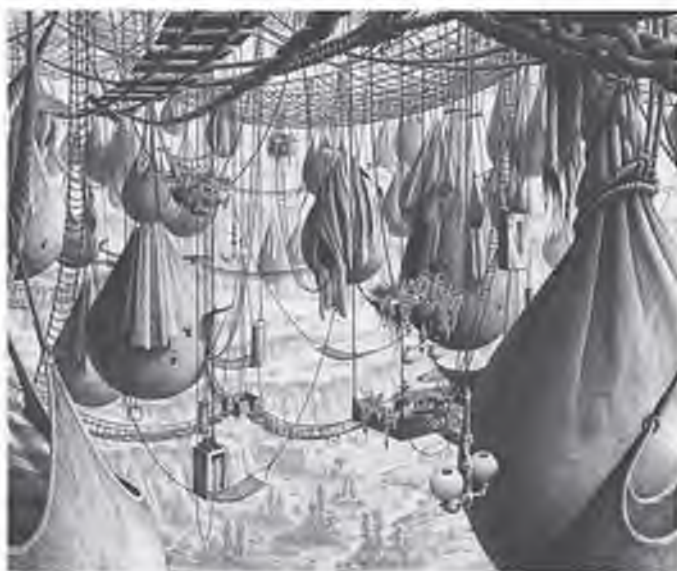
Fig. 4. G. Trignac, etching, 1993
Source: (21)

The system of signs of visual communication is the basis for structuring the information space of a modern city. Elements of visual communication distort urban reality, creating a mosaic perception of the built environment. Signs-messages transform the cultural landscape of the city and give everyday objects of urban reality (lampposts, rubbish cans, shop windows, etc.) new meanings. The scale and proportions of urban spaces change, introducing a game-like character into them, predetermining human behaviour.

In the city of Tamara (*Cities and Signs* 1), 'things are not presented to the eye, but their images, meaning something else.' 'The gaze slides along the streets as if on pages covered with writing.' Transparent watercolour technique allows P. Cano to hide 'what the city, called Tamara, really is; what it contains under this dense shell of signs'; to emphasise the semantic plurality of each element (fig. 5) (Calvino, accessed on 10th January 2021, p. 2).

Fig. 5. P. Cano, watercolor on paper
Source: (18)

In creating the visual rhythm of the city, the artist turns to archetypes, that can be interpreted in different ways in various combinations, without losing their main meaning, colours. The montage technique, used in the composition of the

work, makes it possible to see Tamara's signs at the same time, to identify their numerous combinations and to determine the possible meanings (finding the key to the city).

The city is the centre of culture and civilisation, embodied in its architecture, geometry of the plan, etc. In the city Smeraldina (*Cities and exchanges* 5), standing on the water, the network of roads and the network of canals overlap and intersect, allowing 'to choose between movement by land or in a boat, and, since the shortest path between any two points is not a straight line, and this or that broken line, before each traveller (…) several paths open up' (Calvino, accessed 10th January 2021, p. 10). This description of the city resembles a Venice labyrinth, where a certain order (rules of the game) operates. The labyrinth is a reflection of the city's being, its ambivalence.

The unique natural features of the place, where the city was founded, initially determined the originality of its planning structure and development, the stability of its borders. Over the centuries the appearance of Venice has remained virtually unchanged. Time in the city slowed down, taking on a spatial form. Venice is a city on the border of space and time, a crossroads of worlds. Perhaps that is why the Venetian Marco Polo brings a certain part of Venice to the description of any city. 'Perhaps I am afraid that I will lose all of Venice at once if I tell everything I know about it' (Calvino, accessed on 10th January 2021, p. 10).

The theme of the preservation of the architectural heritage and identity, of the relation between the past and the future is emphasised in the story of Zenobia (*Refined Cities* 2) – a city that 'despite years and changes' is 'the result of a combination of elements' of its 'original form' (Calvino, accessed on 10th January 2021, p. 4). Using the legacy of M.-K. Escher, artist C.C. Brannigan created the image of a closed labyrinth city Zenobia, in which ascending and descending stairs do not always connect the same points and have no beginning and end, emphasising the infinity of movement (fig. 6). Windows, arches, stairs reveal many paths, but do not indicate the direction of movement. The staircase is one of the most ancient symbols, that determines the man's place in the system of the universe between earth and heaven…

The labyrinth city, created by the author, has material and immaterial boundaries. The material boundary is formed by the walls of buildings, terraces and galleries, which 'are located at different heights and seem to step over each other on stilts, while being connected with each other by suspended sidewalks and ladders and crowned with belvederes with a pointed roof.' The immaterial boundary is the path (Calvino, accessed on 10th January 2021, p. 4).

Fig. 6. C. C. Brannigan, watercolor on paper, 32 x 70 cm
Source: (17)

The story of Eudoxia is reminiscent of the legend of the life-saving Ariadne's thread and the Minotaur's labyrinth, in which a person has no choice. In Eudoxia (*Cities and Heaven* 1), 'going up and down, with its winding streets, staircases, dead ends and shacks, a carpet is preserved that allows you to see the true shape of the city' (Calvino, accessed on 10th January 2021, p. 11). Each place in the carpet ornament corresponds to a place in the city. The labyrinth connects two spaces –the city and the carpet, internal and external. 'It's easy to get lost in this city, but looking at the patterns of the multicoloured threads of the carpet, you can find the "necessary road"' (Calvino, accessed on 10th January 2021, p. 11). 'Each citizen correlates his image of the city, his anxiety with the unchanging ornament of the carpet; everyone can find between the arabesques the answer to his question, a story about his life, the twists and turns of his own destiny' (Calvino, accessed on 10th January 2021, p. 11).

The legends of all European peoples tell of goddesses, who hold the threads of fate in their hands, creating order. The artist M. Bertolio depicted the magical

act of weaving a carpet city based on the Scandinavian myths about the norns, who hid the thread of life in the roots of the World Tree (fig. 7). Time is the basis of the universe.

In *Invisible Cities*, space becomes heterogenenous, time loses direction, retaining cyclicity (myth). It is the time of endless repetition that fills the events of the present and the future with meaning. The future is determined by the past. Thus, in the city of Euphemia (*Cities and exchanges* 1) 'every solstice and equinox an exchange of memories takes place' (Calvino, accessed on 10th January 2021, p. 4).

The integrity of the past and the future is reflected in Laudomias three-part setting (*Cities and the Dead* 5) – cities of the living, 'the dead' and 'not yet born' (Calvino, accessed on 10th January 2021, p. 16). The artist M. Kish uses the symbols of time in the designation of Laudomia: the silhouette of an hourglass, the serpent Ouroboros, the sun and the moon (fig. 8). The present is the centre of the hourglass of an infinite number of possible pasts and futures. The hourglass is the keeper of time. It is related to the frailty of being, the dialectical unity of Chaos and Space, Death and Life, Heaven and Earth… The living seek for an explanation to themselves in the city of the dead in order to 'feel confident,' while the city of the unborn 'does not inspire any confidence in the living now' (Calvino, accessed on 10th January 2021, p. 16). The Ouroboros, that surrounds the city, gives it an invariable order. In building the composition of the graphic work, the artist emphasizes the semantic unity of all parts. The city space is located in the centre of the intersection of linear and cyclical time traffic. In the city, time 'ceases to be a stream (…) and becomes motionless – akin to space' (Власов, 2000, p. 308).

The identity of the city is both a stable and changeable social construct that is shaped by historical and cultural characteristics. The basis of identity is everyday urban reality, 'proportionality' (G. Gornova) of a city and a person.

The appearance of Despina (*Cities and Desire* 3) 'is always determined by that desert,' 'which this city opposes' (Calvino, accessed on 10th January 2021, p. 2). The city is able to change its shape depending on the gaze of the observer… The artist S. Tyukanov depicted Despina ('a city on the border') in the form of a camel – a humpback bridge, connecting and separating two realities of single urban space (fig. 9) (Calvino, accessed on 10th January 2021, p. 2).

In the Middle Ages, city bridges were inhabited. As a means of communication, they were built up along their entire length with shopping centres, residential buildings, hotels, taverns, etc., transforming them into the original town. The inner built-up part of the bridge was perceived as a medieval city street, and the outer part was perceived as a continuation of the urban development.

The static silhouette of a camel with domes and towers of city buildings on its back, standing on a deserted road stretching beyond the horizon, is a sign of a crossing, a transition from one space to another, a choice of a path, a change in identity.

In graphic composition, the artist uses techniques of building theatrical scenography. The image is closed in its integrity, stopped in time and at the same time imitates the dynamic, changing continuous reality of the city.

The theme of preserving the architectural heritage, historical and cultural memory is reflected in the description of Maurilia (*Cities and memory* 5). The appearance of Maurilia of bygone eras can be seen only on old postcards, which the townspeople show to travellers… The new appearance of the city has lost its continuity with the past architecture and traditions. 'Sometimes on the same land and under the same name, cities, that are not similar to each other, replace each other. They are born and die without ever getting to know each other, without touching' (Calvino, accessed on 10th January 2021, p. 5).

The layout of the city of Zora (*Cities and Memory* 4) 'is similar to a skeleton or a lattice, in the cells of which everyone can place what he wants to remember: the names of the great, (…) constellations' (Calvino, accessed on 10th January 2021, p. 2). There is a definite connection between any concepts. Therefore, the city, 'forced to remain the same and motionless in order to better be imprinted in the memory, (…) collapsed, disappeared' (Calvino, accessed on 10th January 2021, p. 2). The artist V. Shvaiba creates a collage of architectural fragments from different historical eras and cultures, three-dimensional spatial concrete and metal frames, combining the abstractness of architecture and the naturalistic details (fig. 10). The use of frontal perspective allows to combine them into a single semantic composition of the Euclidean space.

Fig. 7. M. Bertolio, Creation of the Carpet City, canvas, oil
Source: (13)

In the book, I. Calvino touches upon the theme of the ecology of the city, its loss of connection with the natural landscape. The urban landscape is shaped by historical, cultural, social factors, depending on certain geographical features. The construction of many cities of antiquity was due to the higher cosmic order. In Isaur (*Refined Cities* 1) – the city of 'thousand wells,' which 'rises above the underground lake,' the 'visible' urban 'landscape is determined by the invisible' natural landscape (Calvino, accessed on 10th January 2021, p. 2).
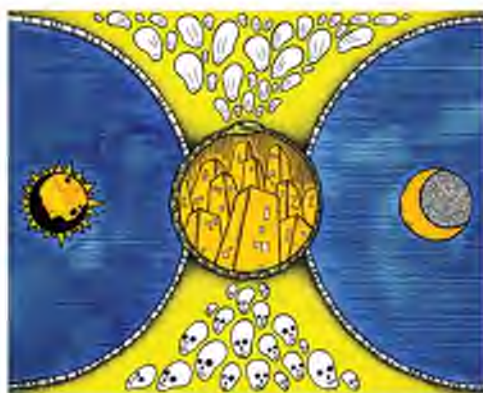
Fig. 8. M. Kish, watercolor, ink, marker on paper, 25.4 x 20.3 cm, 2015
Source: (16)

The growth of modern cities, the increase in urban population leads to a change in the relief of the earth's surface, hydrogeological features of the territory, climate, etc. 'We create cities, and these cities in some way create ourselves' (Иконников, 1985, p. 5). The construction of Thekla (*Cities and Heaven* 3) does not stop, 'so that it does not begin to collapse' (Calvino, accessed 10th January 2021, p. 15). Fear of the future generates and accompanies endless changes in the city… 'And not only the city' is in danger (Calvino, accessed on 10th January 2021, p. 15).

Fig. 9. S. Tyukanov, etching, 2007, 25 x 34.5 cm
Source: (9)

Fig. 10. V. Shvaiba, pencil, ink, pen on paper, 55 x 55 cm
Source: (20)

The illustrator, L. Aaltio, builds a multi-layered vertical composition of architectural elements and building structures, rushing towards stars (fig. 11). The lower heavy forms are complemented by the openwork structures of the upper part. Buildings of the past become the basis for the creation of cities of the future.

Khan Kublai's atlas includes maps of utopian cities and cursed cities that reflect the ambivalence of urban spaces, 'there are (…) maps of lands (…) visited in the imagination, but not yet discovered or not founded' (Calvino, accessed on 10th January 2021, p. 19).

The artist S. Azarov assembles the city from fragments of images of different cities that Marco Polo visited (fig. 12). The fragments, perhaps not in any way related to each other, overlap, intersect, representing not at all what they are in reality. It is a city that appears in a dream or memory. Here sailing wooden ships coexist with airplanes of the beginning of the last century, and the outlines of a wind rose, an astrolabe or a compass are only guessed at. The integrity of meaning escapes, dissolves in repetitions of individual details, unexpected juxtapositions

of things. Everything here is changeable, the space is temporary. The composition of the work resembles quick sketches and diary entries of the traveller – an outside observer, for whom the set of images changes with each step. And the journey (movement) itself is accompanied by a situation of constant choice. The artist simultaneously creates and reads the text of the city.

Fig. 11. L. Aaltio, 11 x 27 cm
Source: (15)
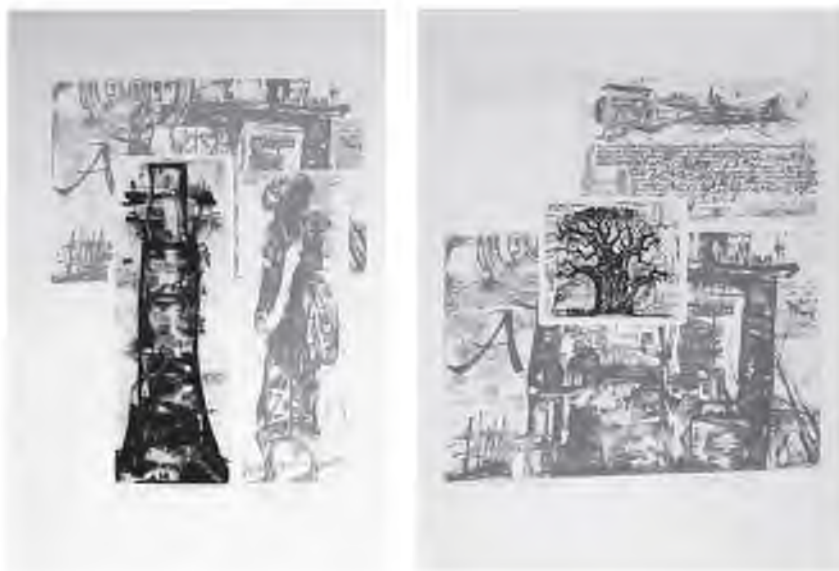
Fig. 12. S. Azarov, etching
Source: (10, 11)

In a conversation with the Great Khan about the future city, Marco Polo said: 'Sometimes, seeing an unexpected perspective of a landscape or a light dawning in the fog, I think: from this I will start to build a little (…) a city from such fragments, mixed with all sorts of things, from moments separated by intervals' (Calvino, accessed on 10th January 2021, p. 19).

The city is a space-time continuum on the border between the possible and the real, a mosaic of fragments of being in its discontinuity and continuity.

Conclusions

Interpretations of individual cities, created in painting and graphics by contemporary artists and architects on the basis of the book *Invisible Cities* by Italo Calvino, have an independent artistic meaning while preserving the uniqueness of the writer's imaginary urban worlds. Images of fictional architectural objects and spaces are based either on a plurality of 'readings' of the reality of a certain city-place in historical space and time, or on the creation of a non-place utopia, devoid of any connection to objective reality. Contemporary iconography of architectural fantasies inherits the traditions of J.-B. Piranesi, M.-C.

Escher, combines Renaissance perspective constructions with surrealist composition techniques, uses historical architectural forms and archetypes (labyrinth, stairs, etc.).

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Ping Zhou
City Planning Bureau of Zhengzhou Municipality, China

Nina Kazhar
Częstochowa University of Technology

Influence of the categories *beautiful* and *nature* on the formation of the space of a traditional Chinese city and house

Abstract: The development of Chinese culture was significantly influenced by the ideas of the main currents of Chinese philosophy, primarily Confucianism and Taoism. Therefore, it has a special picture of the world, a system of views on nature and man. In traditional aesthetics of China the central philosophical and artistic problem is not *beauty* but *nature*. It is understood as a perfectly organised whole, which makes it the main object of artistic expression.

Philosophical understanding of *nature* and the universe has led to the formation of specific Chinese spatial concepts. This influenced the system of types and genres of art, including architecture. There were architectural ensembles of great significance that were created and which embodied the idea of the inseparability of the aesthetic and the natural, and expressed the thesis of *harmonious unity of Heaven with man*.

Based on the theoretical and natural study of ancient monuments of China, the article analyses the features of the embodiment of aesthetic ideas about beauty in the spatial organisation of a traditional city and dwelling.

Key words: China, beautiful – 'mei', architecture, *siheyuan*

Introduction

Beautiful as an aesthetic value is one of the most fundamental concepts in every culture. And in each culture this concept is interpreted in its own way. As an aesthetic category, *beautiful* is denoted in Chinese by the word *mei*. This word means three concepts: 'elegant', 'beautiful' and 'beauty.'

Chinese culture is defined by a special system of views on nature and man, where the emphasis is placed on the need to achieve harmony between the *Heavenly Tao* and *Human Tao*, that is the harmony of man and nature. Therefore, the *harmonious unity of Heaven with man* is the aesthetic ideal of Chinese culture. This is how Chinese aesthetic thought differs from Western thought, which emphasises the role of man in the transformation of nature. The

idea of *harmonious unity of man and Heaven* is an important feature of Chinese thinking, which considers nature and man not as opposing each other like in Western thinking *subject and object*, but as *a single integrity*, more important than its constituent parts (王贵祥《匠人营国。中国古代建筑史话》。北京, 2015, p. 23).

The fastening element for the creation of this integrity is *Tao* – the basis of all living things, which came from nothingness, the source of beauty and, in fact, beauty itself. This is a fundamental concept in the philosophy of Taoism. Buddhists interpret *beauty* as 'striving for the Highest'. In Confucianism *beautiful* is synonymous with *good*, and the aesthetic ideal is seen as the unity of the beautiful, good, and useful. It also emphasises the unity of man and nature, but in the context of the aesthetics of everyday life. The strict hierarchy and system of rituals of Confucianism became the basis for the organisation of a traditional residential building.

The unity of the aesthetic and the natural in ancient Chinese thought was reflected in the fundamental concepts of traditional Chinese aesthetics. More importantly, it was not *beauty*, but *Qi* (in English: *energy*) the key concept of all Chinese sciences about nature and man. The Taoist doctrine of *Feng Shui* (風水, in English: *wind-water*) was engaged in the search for favourable flows of *Qi* energy for the benefit of man. The concept of *Qi* has also come to serve in China as a designation for the creative personality of an artist.

The peculiarity of the concept of *beautiful* in the aesthetic thought of China

As regards Chinese aesthetics, it should be noted that until 1950s the concept of beautiful was combined with philosophy, ethics and other disciplines: there was no clear line between them. Today, six of its main features can be distinguished:

1. Unity of *beauty, beautiful* (in Chinese: *mei*, 美) and *good, boon* (in Chinese: *shan*, 善). In Chinese aesthetics the key issue is the relationship between beauty and goodness. They are in a relationship of interdependence: beauty contains good, and good is found in beauty.
2. Unity of feelings and ethics. Special attention is paid to the combination of external manifestations of *feeling* (in Chinese: *qingan*, 情感) with *rational* (in Chinese: *lisin*, 理性). Chinese aesthetics recognises the educational role of aesthetics.
3. Unity of *conscious perception* (in Chinese: *renzhi*, 认知) and *intuitive* (in Chinese: *zhijiue*, 直觉). Scientific knowledge is based on conscious

perception, and art is also based on intuition. Intuition is especially important in the aesthetic ideas of Taoism and Ch'an Buddhism (禅).

4. *Unity of Heaven and man* (in Chinese: *tianren hei*, 天人合一). The connection between man and nature is not only one of the main issues of Chinese philosophy, but also an important point in Chinese aesthetics. Based on the idea of *the unity of Heaven and man*, Chinese aesthetics in search of the essence of beauty and beautiful turns to harmony. The thesis of *the unity of nature and man* was put forward by the Confucian scholar Dong Zhongshu (董仲舒; 179–104 BC) (fig. 1a). In his essay *Abundant dew of the chronicle* he combined the ideas of Confucianism with the more ancient teachings of the five primary elements and with the yin-yang dialectics. According to his theory, there are ten interconnected components in the world: Heaven, Earth, yin and yang, five elements 五行 (wood, fire, earth, metal, water) and man (Лучкова, 2011, p. 12). Heaven is the highest creative force. Objects that exist in the world are purposefully created by Heaven for humans. Moral and ethical principles also come from Heaven, which manifests itself through yin and yang. Their place is firmly defined and invariable (yang is the main, yin is secondary). Heaven and man interact with each other, influence each other. Man improves life through civilisation and culture, including art and architecture.

5. Chinese aesthetics carries the *spirit of humanistic values* (*zhendao zhui jingshen*, 人道主义 精神) of the ancient Chinese. This position is closely related to the idea of *the unity of Heaven and man*. It indicates that Chinese aesthetics preaches humanistic values. In the Taoist striving for freedom and equality, in the Mohist *universal love* (in Chinese: *jianai*, 兼爱) – an orientation towards the principles of humanism is everywhere.

6. *Highest level of the aesthetic sphere* (in Chinese: *shenmei jingjie*, 审美 境界) is equated to the highest sphere of human existence. This means that the level of *the unity of Heaven and man* is the level of the highest freedom, which is at the same time consistent with nature and surpasses it. Important for the architectural aesthetics of China was the position of Cai Yong (蔡邕; 132–192 BC) that *spirit*, not form, is of paramount importance (fig. 1b). To this day, in Chinese art history, *shen si* (*similarity of spirit*) is regarded as the highest aesthetic value of a work of art. It allows one to achieve a state of harmonious unity with nature. In architecture, the concept of *beautiful* also includes the *spirituality* of a man-made object. It is believed that its techniques were passed on to the ancient builders by divine beings. Among these great master architects, the most famous was Lu Ban, who lived during the spring and autumn period (the Chunqiu period of the beginning of the Eastern Zhou

Dynasty, from 722 to 481 BC) (fig. 1c). And today, architects and builders worship him. Lu Ban's teachings prescribe not so much to learn the skills of working with tools, but to learn moral values and noble behaviour, learn to be kind to others and strict to oneself. These requirements should help to 'achieve a state of pure mind and heart' in the Tao tradition.

a) Dong Zhongshu   *b) Cai Yong*   *c) Lu Ban*
Source: (9)   *Source: (12)*   *Source: (19)*

Fig. 1 a-c. Founders of Chinese aesthetics and architectural theory
Source: (this author's study)

Influence of aesthetic teachings on urban planning theory

The concept of *harmonious unity of the Heaven with man*, the perception of space in traditional Chinese culture could not but affect the formation of architecture. A traditional Chinese city accurately reflects the cosmogonic structure of the universe. Chinese architecture merges with nature.

It should be noted that in China there was no consistent development and change of artistic directions and styles, as in European architecture. The very concept of history has no signs of *duration* in China, and art has no signs of evolution. Artistic directions do not follow one after another, and *styles* and *schools* are associated not with differences in creative methods, but with techniques and materials. The unchanging worldview has determined the stylistic unity of Chinese architecture over the centuries.

In addition to following the traditions of Chinese culture, two more factors influenced the preservation of traditions in architecture:

- due to the use of short-lived building materials, each generation had to repair or rebuild the structures of the previous century,
- the destroyed object was *recreated* in the same place in the same form, ensuring the continuity and sustainability of architectural traditions. New buildings and even entire cities were built according to a certain canonical scheme.

The scheme was developed over several centuries and was recorded in a number of architectural and construction treatises. They contained practical recommendations for constructing buildings, ensembles, and cities based on the need to observe the basic aesthetic principles and to observe the laws of the *harmonious unity of Heaven with man.*

a) Taoist Monad, depicting Yin-Yang   *b) traditional forms of the wall (square) and the mintang temple (circle)*
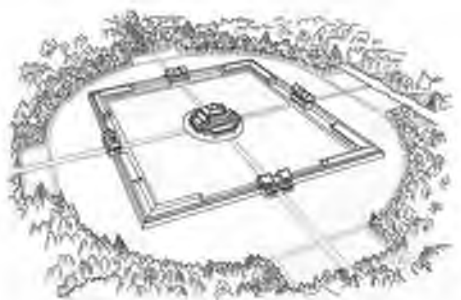
Fig. 2 a-b. The embodiment of aesthetic ideas in the scheme of the temple complex
Source: (this author's study)

In China, it was believed that the Earth is square and the sky is round. Therefore, the walls of the city, temple, quarter, houses had the shape of a square (*yin* i.e. 'Earth'), and the plans of palaces, temples, and the main city squares had the shape of a circle (*yang* i.e. 'Heaven') (fig. 2b). In addition, all buildings were strictly oriented in relation to the five cardinal points of the *wu-fan* (五方) i.e. centre, east, south, west and north, in order to achieve the harmony of nature (Чжоу, 2003, p. 80). This is noted in the *Treatise of Lu Ban Jin* i.e. one of the first publications devoted to the art of building. Lu Ban (507–440 BC) (fig. 1c) also invented the first drawing tools 'to draw a circle and a square.'

Figure 2b shows a diagram of a *mintang* ensemble, in which the yin-yang principle is expressed in a combination of square and round shapes. The orientation

to the four cardinal points is also clearly emphasised, and the main building is in the centre according to the laws of Tao (according to them, the main element of the ensemble must be placed in the centre). This figure reflects the implementation of ancient worldview foundations in architecture. A similar scheme was also the basis of the *Ideal Capital* plan. The scheme of the city also embodied the principle of axial symmetry. Universal primary elements of the urban environment have been developed, which have ensured the viability of the model of the Chinese ideal city for centuries.

The ideas of the ancient Chinese about an ideal city, an ideal capital are reflected in the treatise *Kao gong Ji* 考 工 记 (*Records of the Study of Crafts*) (Чжоу, 2019, p. 194). The treatise is generally considered to be a part of the Confucian canon *Chou li* 周禮, (*Chou rituals*). The authorship of the canon is attributed to Chou-gun (11th century BC). However, in synthology, research is still underway to establish the exact date when *Kao gong ji* was written. *Kao gong Ji* contains clear rules and sequence of construction work. It also presents a plan of an ideal city, the main types of buildings, and their designs.

Although due to economic reasons or geographic features of the area, sometimes the builders deviated from the norm, but the traditional building principles set out in *Kao gong Ji* were used in practice over the next centuries.

The principles of organising the space of the *ideal city* according to the laws of the canon of *Kao gong ji*

Kao gong ji contains not only idealised principles of urban planning, but also refers to practical matters. The city is considered as a single organism in which each element had its own specific place. According to the Feng Shui geomancy (in Chinese: 風水), the construction of a city began with a thorough search for a place, drawing up a plan, and marking the territory. The city was supposed to represent a square with sides 9 Li Iong (about 4 km), surrounded by walls with towers (fig. 3). Each wall had three gates.

The wall, as a symbol of dividing borders, was an important element in Chinese urban planning. Even the word *city* (*chengshi*) means literally *wall and market* and indicates the meaning of the wall as an indispensable urban attribute.

The city had nine main avenues, strictly oriented in the south-north direction and nine in the east-west direction. Every three avenues were connected into one highway: the central road was for carts, the other two were for pedestrians. The width of each highway was 9 Gui (16.65 m). A road 7 Gui wide (about 13 m) ran along the wall inside the city in which there were a number of buildings, also square or rectangular (Чжоу, 2019, p. 195). In the centre of the city there was an

imperial palace, divided into two parts. There were administrative buildings in front of the main gate of the palace. Markets (no more than two) were located north of the palace. A temple of the ruler's ancestors, sanctuaries and altars to the gods of the Earth and Bread were built in the location south of the palace.

a) Plan of the capital according to Kao gong Ji (Чжоу, Кожар, 2019, p. 195)

b) Kaifeng City, the period of the Tang Dynasty (Лучкова, 2011, p. 107)

c) Palace, as seen on the plan of the ideal city of Wancheng (刘敦桢 《中 国古代建筑史》 (第二 版), 北京, 2003, p. 97)
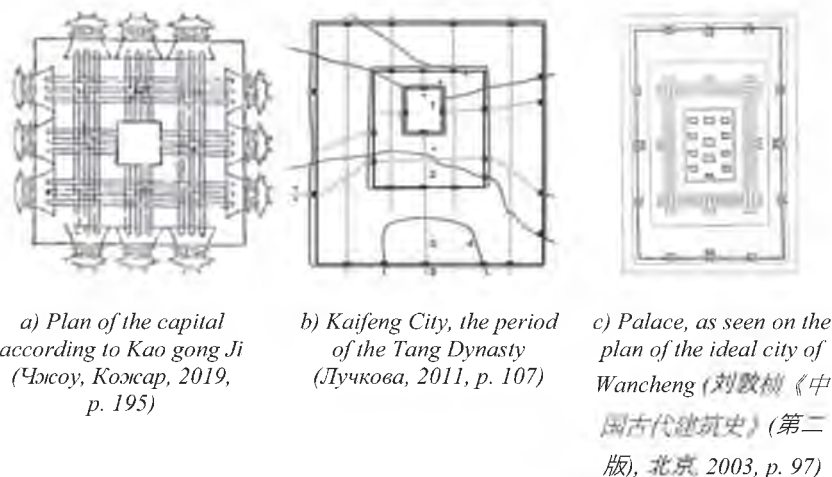
Fig. 3 a-c. Layout of the Chinese 'Ideal City' and palace plan
Source: (this author's study)

All these objects in the treatise *Kao gong ji* were to be placed in strict accordance with the location of the palace. Therefore, the need to build the palace precisely in the geometric centre of the strictly symmetrical plan of the capital was emphasised. The position of the palace in the centre of the city was indicated by the logogram 井 (*jin*) (in English: *well*). This expressed the idea that *the emperor is the son of Heaven*. Moreover, according to *Feng Shui*, it gave the emperor the maximum vital energy. The city itself, built in the form of a square (*jin*), divided into nine parts, also had an optimal shape for the distribution of energy.

The general internal composition of the palace complexes also had to correspond to the world outlook concepts, natural conditions, and Chinese concepts of beauty. The imperial complexes were divided into two functional zones and were built according to a strict axial scheme with the main palace in the centre. Sometimes it was a whole complex of pavilions-palaces located on high platforms, which highlighted its importance. These pavilions were located along the north-south axis (fig. 3c).

The structure of the city was created by enlarged blocks (*fans*) with streets and alleys. They were surrounded by high walls with a single entrance (fig. 4). The closed residential areas were intended for different segments of the population and consisted of a certain number of *siheyuan* dwellings. Such a spatial system of the quarters ensured the correct orientation of the main premises of the house to the cardinal points. The walls of the houses (*siheyuan*) were made adjacent to each other, forming a so-called 'carpet building.' Their connected outer walls formed a peculiar type of street called *hutongs*. *Siheyuan* (a quadrangle with a courtyard) was the main element of the Chinese city. The entirety of the city and quarter walls, streets, squares played an auxiliary role in enabling protection and communication. *Siheyuan* became a universal type of architecture, since its centre was not a building with a certain main function (residential, religious, industrial, etc.), but the space of a courtyard, i.e. emptiness. It made it possible to implement any architectural and typological options.

To achieve the beauty and harmony of the ideal city plan, it was necessary to fulfill the following conditions:

- the location of the main element in the centre,
- the location of the main element on the axis,
- axial symmetry as the main frame of the structure of the entire city and its components,
- the presence in the objects of the courtyard, i.e. *heavenly well*,
- division into five parts as the basic principle of space organisation.

The main city axes continued outside the city walls. According to *Feng Shui*, they should have been associated with cosmogonic structures and continued in important elements of the landscape (mountains, rivers, waterfalls, etc.).

The Chinese urban development axis as a whole is hypothetical, invisible. It runs through the centre of the composition of any ensemble. But in real space, the axis is constantly crossed by obstacles, including: closed doors at the entrance to the house or yard; *inbi* walls (stone or brick screens in front of entrances). The closed doors of monasteries or palaces were opened wide during religious ceremonies or holidays. But even then it was not always possible to fully see the entire perspective of the main axis of the ensemble. Axial symmetry was important. Its rules were followed during the construction of any town-planning ensembles and structures. The scheme of an ideal city assumed a symmetric-axial construction of ensembles. They also conformed to the main urban north-south axis (fig. 4). Gardens and parks also fit into a regular grid of neighbourhoods and conformed to general axial patterns.

Rectangular, oriented to the cardinal points, cities with straight wide streets (as prescribed in *Kao gong Ji*) began to be built everywhere. The most complete embodiment of the urban planning canon of *Kao gong Ji* is the capital of Eastern Zhou, the city of Luoyang (洛陽), founded in 770 BC. (fig. 4a). All the features of classical Chinese urban planning were embodied in the planning of the city of Chang'an (Xi'an) (fig. 4b).

The treatise *Kao gong Ji* also contains a short description of *mingtang* (mí ngtáng 明堂) i.e. the *Hall of Light*. The section titled *Builders lay the capital* (in Chinese: 匠人 營 國) contains measurements of the *Hall of Light* of the Zhou era. This highlights the importance of *mingtang* and the rituals performed inside in structuring an ideal capital. For example, Dong Zhongshu (fig. 1a) described the *Hall of Light* as the main architectural object, expressing the idea of *the unity of Heaven and man*. The rules for *mingtang* building were also described by Cai Yong (fig. 1b).

a) Luoyang city
(18)

b) Chang'an city (Xi'an)
(16)
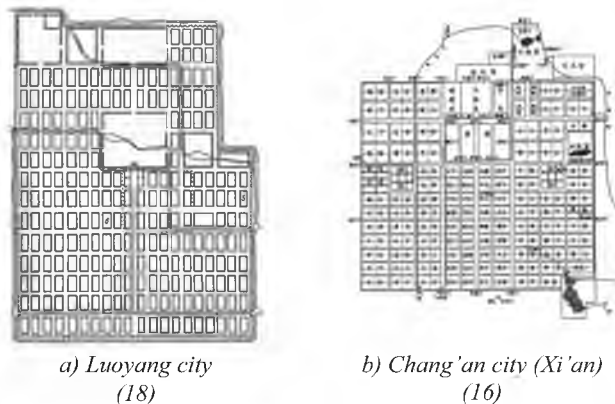
Fig. 4 a-b. Schemes of cities in China, made according to the laws of the canon Kao gong Ji

Source: (this author's study)

In the ritual system of Ancient China, *mingtang* served as both a temple and a palace. In it, imperial decrees were announced, the ceremony of transferring the mandate of Heaven to power took place, sacrifices were made. With the help of special rituals, the emperor asserted his role of a representative of Heaven, whose duties included regulating human life in accordance with the order of the universe.

The architectural solution of *mingtang* was idealised and closely related to not only the cosmological ideas, but also to the natural and philosophical ones. As can be seen in fig. 5a, the influence of the yin and yang archetypes (square and circle, respectively) is clearly visible in the volume of *mintang*.

The square shape of the plan of *mintang* was a universal symbol – Earth (fig. 5b). Its parts and their orientation to the cardinal points reflected the ideas of the *magic square* – Lo Shu (洛 書), the first image of which on a tortoise shell dates back to 2200 BC (fig. 5c).

a) Mingtang   *b) Mingtang, Plan*   *c) Luo Shu Magic Square*

Fig. 5 a-c. Mingtang
Source: (14)

Five main halls corresponded to: five seasons (there was still a fifth mid-summer season in China); five countries of the world (together with the centre); five constellations; five colours; five legendary emperors; five virtues; five sounds, etc.

The use of the traditional *siheyuan* quadrangle as a compositional unit of the ensemble determined such a specific feature of Chinese architecture as the absence of a sharp distinction between secular and cult complexes. The layout of churches and monasteries, belonging to different religions and cults, though different in details, mainly followed the same principles as the structure of residential and palace ensembles. The requirements of a religious cult mainly determined only the nature of the decor.

In Buddhist or Lamaist temples, in front of the gate, leading to the main courtyard complex, two small towers were built – *Zhonglou* ('Bell Tower') and *Gulou* ('Drum Tower'). An important element was the triumphal arches of the pailow. They were built in front of the main gates or in the courtyards in front of the pavilions. Paired obelisks, columns or pavilions with steles, bronze figures of fantastic animals, altars, etc. were also put there.

Urban Taoist monastic complexes met the requirement of 'solemn representativeness.' According to the teachings of Tao; the main task of the builder was to ensure that architecture and space (empty and full, in traditional terminology) maintained mutual balance. Simple or complex structures were created, based on the use of the *siheyuan* type:

Simple structures include residential estates, customs, administrations of small settlements, post offices, small monasteries and temples, and other small or medium-sized urban objects.

Complex structures include villages, imperial palace complexes and cities. These structures are constructed in a multi-tiered manner, but the essence of the structure remains unchanged.

Constructing and decorating spatial elements in accordance with traditional residential architecture in China

Aesthetic ideas determined not only the traditional layout of the ideal city, but also the dwelling. The main compositional element of the city was a closed spatial cell of a residential estate a complex of buildings surrounding an open interior space. The basic unit used in volumetric and spatial planning of the house was the *jian* (the space between four pillars holding the roof of the pavilion room), rectangular in plan view. The number of *jians* determined the size and functions of compositional structures, i.e. of residential, palace and sacral type.

The main type of traditional residential development was *siheyuan* (in English: *square courtyard*). Four *jians* surround the courtyard (a *heavenly well,* a symbolic place). The courtyard ('emptiness') symbolised space as a *pure diffused structure* i.e. the heavenly world. *Siheyuan* tectonics reflected ideas about the interaction of the heavenly and earthly planes of being through a single void structure of the universe (fig. 6) (Zhou, Kazhar, 2020).
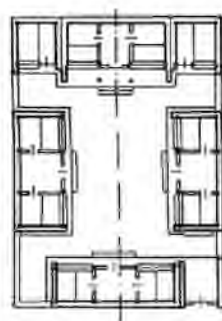
Source: (14)   *Source: (10)*

Fig. 6. Traditional Siheyuan with one yard
Source: (this author's study)

The constructive scheme, in which the image of the support is a symbol of the tectonic structure of the universe, is also metaphorical. This is a post-and-beam frame, where the load from the roof is transmitted through a system of horizontal beams and cornice brackets *dougun* to the column shaft and then to the foundations (fig. 7) (Zhou, Kazhar, 2020).

The basic structures of traditional Chinese buildings were described in the *Yingzao Fashi* published in 1103. The treatise not only provides *general explanations* (in Chinese: *zongshi* 總 釋), concerning architectural terms, formulas, and proportions of buildings. The *construction order* (in Chinese: *jidu* 制度), features of the external decor are also presented there. It describes the workflow for the production of bricks, roof tiles, and glazed tiles. In the fifth part of the treatise, there are printed illustrations, which show the types of buildings, as well as the connections of various architectural elements.

Structure of a timber frame building
(Лучкова, 2011, p. 254)
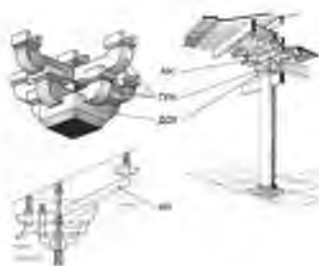
Dougun system
Source: (20)

Fig. 7. Construction of a traditional Chinese house
Source: (this author's study)

The original appearance of the buildings was given by various forms of roofs. The colour of the roof tiles that covered them indicated the social status of the owner of the house. The palace of the *sun-faced* emperor had a golden-yellow roof. *Heavenly purity* of temples was marked with blue roofs. Small pagodas and houses of noble townspeople had green roofs (*tree foliage*). In Chinese architecture, structures are additionally decorated. As a rule they are covered with paintings and carvings (photo 1).

The interior of any building was also distinguished by the use of many colours. The wooden pillars were decorated with images of animals and plants. Painted lacquered screens were often used to make each room distinct from one another. Red, gold, green, white, blue colours were the most common.

The decor of buildings is divided into *material* and *non-material*. The material decor includes recognisable elements, for example, a dragon – the eldest Chinese symbol of endless transformations (photo 2a). To understand and perceive the image of non-material decor, it is necessary to know the history of China, the main provisions of Taoism, Confucianism, Buddhism and its mythology (photo 2b) (Fowler, 2005, p. 123).

Photo 1. Decor of structures
Source: (15)

a) Dragon on the roof of the building

*b) Natural ornament, expressing
the cult of the Heaven*

Photo 2 a-b. Types of architectural décor
Source: (11)

The unified architectural system for the construction of cities and buildings described above remained relevant until the twentieth century. As the tasks of urban planning expanded, new materials were introduced, and building techniques were enriched, it was supplemented at every stage of China's development. However, the traditions of the embodiment of the basic principles of *harmony* of human nature and architecture were constantly preserved.

Conclusions

An important feature of Chinese aesthetics, like Chinese philosophy in general, is the *unity of Heaven and man*. This unity leads to the creation of a harmonious world, order in nature and human life. It creates a world dominated by three elements beauty, truth, and goodness.

The understanding of the aesthetic value of nature led to the formation of specific spatial thinking in China. Architecture has become a form of expression of ideas about the world, subject to general laws. Its main thesis proclaimed *harmonious unity of Heaven with man*, formulated in ancient philosophical, aesthetic and architectural treatises. The city reflected the idea of the correct structure of the universe, the building was considered as an integral part of the natural ensemble. Architecture helped *to comprehend the soul of nature*, revealed and clarified its laws of beauty.

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Svitlana Topylko, Ulyana Ivanochko
Lviv Polytechnic National University

Losses in the architectural and planning structure of the Renaissance towns in Galicia in the period from 1939 to the 1990s

Abstract: Upon the entry of Galicia into the USSR in 1939, the network of cities and towns was revised based on the new criteria. As a result, almost 40 % of ancient towns lost their urban status. The Soviet period is characterised by active interference in the historical planning network; namely at that time the architectural and planning structure of settlements suffered the greatest losses. Master plans of settlements that ignored the historically formed network were developed, and spatial outlines and regional character of buildings were significantly distorted in most towns, and even lost in some.

Key words: architectural and planning structure, town, master plan, element of the planning structure

Introduction

The former towns – settlements that over time have lost their administrative, commercial, and cultural functions mostly having turned into villages – hold a special place in the urban heritage of Ukraine. Meanwhile, they played a significant role in the development of urban planning, and their historical and urbanistic research is becoming significant today (Zamoyski, 2020, p. 138) for the purpose of filling the gaps in the history of architecture and urban planning of Ukraine. The period between the second half of the 16th century and the 17th century in Galicia was characterised by foundation of a large number of towns based on the then Renaissance worldviews and urban practice. In total, more than 200 urban settlements were established within the territory of modern Ivano-Frankivsk, Lviv and Ternopil regions. Some of them served as fortified urban residences. However, the majority of them served a function of small towns in the historical settlement system.

One would think that after the establishment of the Ukrainian statehood, changes in the state urban development policy should have taken place: the scientific research of historical towns should be expanded, the work on development of historical and architectural outline plans should be launched, and the issue of

preservation of urban historical monuments should be considered more thoroughly. Unfortunately, historical urban development continues to be given little attention in Ukraine in contrast to the rest of the world. The architectural and planning structure of all historically formed towns in Europe is fully studied in contraposition to towns of Ukraine, where the attention is focused mainly on the large cities.

Results and discussion

The architectural and planning structure of towns of Galicia, founded in the second half of the 16th–17th centuries, had undergone a complicated evolutionary path over the centuries, constantly changing and renewing.

The most devastating period for the towns was the period after the World War II. Central parts of most towns in Galicia were destroyed in battles. The essence of the tragedy of their disappearance is that they not only ceased to exist administratively as towns, but also were systematically destroyed by the then urban development measures such as specific historically formed architectural and urban formations in the landscape and planning network of Galicia. Obviously, such losses lead not only to the disappearance of a number of architectural structures, but also create gaps in the historical urban system and landscapes of the whole area (Bevz, 1996, p. 16). Out of 50 researched objects, only 7 settlements retained their urban status: Mykolayiv, Peremyshliany, Skole, Turka – district centres; Kalush – a city of regional subordination; Dobromyl, Rudky – cities. In addition, Adamivka and Mistechko were integrated into the city of Berezhany, and Gnyn became a part of the city of Horodok. In addition, 7 settlements received the status of urban-type settlements – Hrymailiv, Maheriv, Nemyriv, Pidkamin, Rozdil, Yaniv (Ivano-Frankove) and Yarychiv (Novyi). All other 33 settlements currently have the status of a village.

According to R. Mohytych, sweeping changes that took place in historical towns in the post-war period were caused, first of all, by the following factors:

a) change of forms of the land ownership in towns – a large number of small owners, whose houses formed a humane scale by the very nature of the private property, while the quality of architecture under conditions of the equal desire for the prestige reflected the level of their prosperity, was replaced by an anonymous omnipotent owner who was not limited by parcelling and whose prestigious efforts were mostly achieved by building the most cumbersome structures,

b) reorientation of the construction industry from the individual construction to the large-scale standard construction; the depersonalisation in the process of repairs of existing buildings became a side effect of this factor,

c) excessive growth of traffic flows through urban centres, the need to broaden streets by way of the demolition of historic buildings,

d) hostile attitude towards the main buildings in the urban environment, especially temples, imposed by the Soviet authorities,

e) enforcement of town master plans that largely ignored the aspects of planning and construction of historical towns and imposed 'socialist' principles of their formation (Mohytych, 1999, p. 143).

Such policy was implemented through the state design institutes, such as Dipromisto, Kolhospproekt, Zhytloremproekt, etc.

After analysing the post-war territorial and spatial development of Western Ukrainian cities, B. Posatskyi identifies three periods:

- the first period: 1945–1955,
- the second period: 1956–1980,
- the third period: 1981–1990 (Posatskyi, 1999, p. 107),

that serve as a basis for the analysis of changes in the architectural and planning structure of the former towns after 1945.

No master plans for the periods of the 1940s and 1950s have been found for the towns in the study, so it is difficult to judge the process of their development and implementation. We can only note that the first period was characterised by popularisation and implementation of 'socialist transformations' in Western Ukraine.

According to B. Posatskyi, the second period of the territorial and spatial development of cities of Western Ukraine took place under the slogan of the radical change of artistic landmarks in the architecture of the USSR (fig. 1). Promotion of the superiority of 'the new' over 'the old' had negative consequences, especially for the development of small historical towns.

The master plans of these towns, developed in the 1960–70s, implemented new red lines of streets based mainly on the traffic conditions, while the territorial zoning and location of new buildings were designed on the basis of purely functional considerations of land use. Centres of small towns were 'modernised' through the construction of new typical public buildings that were often located randomly, and their architecture was not associated with the surrounding environment. As a result, the historical planning structure of small historical towns was distorted and their spatial environment was deformed. At the same time, the individual housing of mainly manor type was actively developing in small towns. The widespread use of typical buildings resulted in uniformity, monotony and even oppression of the space of new urban formations (Posatskyi, 1999, p. 110).
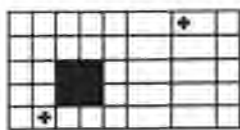
*Toporiv, Bus'k district. Scheme of the master plan.
Ukrndiprosil'hosp, 1966*
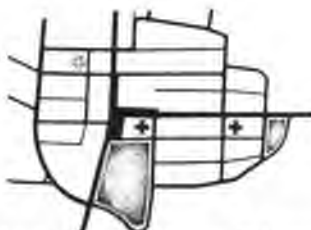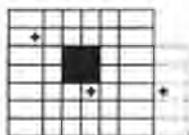
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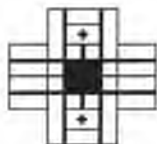
*Stanislavchyk, Brody district. Scheme of the
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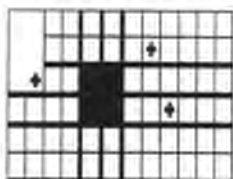
*Leshniv, Brody district. Scheme of the master plan.
Ukrndiprosil'hosp, 1965*

Fig. 1. Concepts of the modern development of towns (comparison of master plans
of settlements with hypothetical reconstructions of the architectural and planning structure)
Source: (own study)

The architectural competition gradually moved to new areas. This phenomenon is expectable, because new centres were almost always built as practically independent urban complexes, while the old centres of such towns to a great extent lost their former social significance. In the process of construction of new districts of small towns, a new type of the urban, architectural and public centre was created.

In the early 1980s (the third period), the next generation of urban master plans was elaborated, which once again envisaged the further growth of the urban population and development of industrial and residential areas. The poor development (and sometimes even stagnation) of many small towns contrasted with the dynamic growth of regional centres. The population of some of them, for example Rava-Ruska, Turka, Skole, did not reach the numbers of 1910 as of 1989. In the early 1980s, the public began to realise the need in the change of architectural forms and their humanisation (Posatskyi, 1999, pp. 110–111). The best way out was seen in restoration of the proper role of the historical and architectural heritage in the urban space and return to the traditional ways of formation of the urban space.

The process of development of master plans adversely impacted settlements and former towns with a developed architectural and planning structure, such as villages of Novyi Vytkiv, Bilyi Kamin, Leshniv, Sasiv, Stanislavchyk, Stoianiv, and Toporiv.

The development of master plans resulted in lesser changes in the planning network of settlements with an elementary or complete architectural and planning structure, such as urban-type settlement of Pidkamin, villages of Krukenychi, Pisochna, Tadani. These former towns have preserved their historical planning structure, districts and partially the parcelling.

Understanding of the concept of the residential block changed in comparison with the period of foundation of towns – now the residential block becomes larger, individual housing is formed along its perimeter, the passage is organised by turn-around areas or blind passes, landscape gardening is organised in the centre of the residential block. Another option: buildings are located along the streets, plots are grouped into two long strands with a common back side. Although now the construction site has a larger size and a different way of management, the Renaissance principle of formation of the planning structure of settlements is still preserved – a plot as a planning module of the architectural and planning structure.

The market area that so far had been the most stable structural element of the plan underwent significant changes in many master plans for the 1960s and 1970s (fig. 2). The following methods of redevelopment of market areas were identified:

- the market was preserved as a square, but market buildings were completely replaced by newly erected separately located administrative and public buildings (a monument to V. I. Lenin was designed on the square in Pidkamin and a landscaping project was developed);
- the market square was built up (a school for 900 places with school workshops and sports grounds was designed in the village of Sasiv based on the standard project (the project was implemented)), public and administrative, industrial and residential buildings were located along the perimeter of the square;
- relocation of a new centre outside the historical part of the settlement (the linear-type public centre of the village was designed in the village of Stanislavchyk to the east of the historical centre);
- redevelopment of the central part (according to the project of redevelopment of the village of Leshniv, a street was laid along the market square from the west to the east, a school was designed on one side of the street and public buildings – on the other side, a new centre was formed above the former market square on the junction in a form of a triangular square);
- formation of a linear centre, mainly on the main communication route that converges with the historical one in these settlements, for example in the village of Novyi Vytkiv.
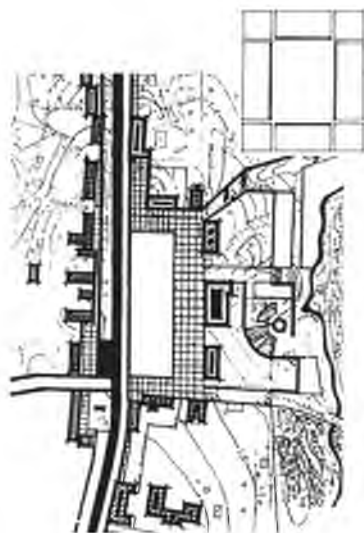
*Preservation of the market square
Pidkamin, Brody district.
Fragment of the master plan,
Dipromist, 1974*
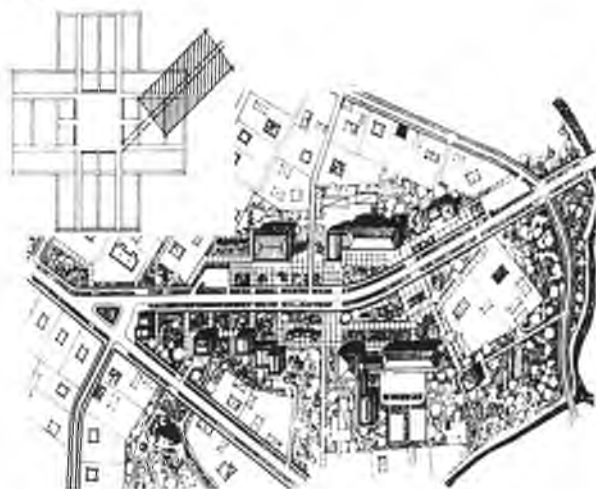
*Relocation of a new centre outside the historical part of the town
of Stanislavchyk, Brody district.
Architectural sketch of the public centre, Sovkominfo, 1991*

Fig. 2. Main methods of intervention into the historical planning structure in the process of design of the central part of settlements. Fragment of the master plan, architectural sketch of the public centre

Source: (own study)

*Construction of buildings
at the market square
Sokolivka Zhydachiv district.
Architectural sketch of the public centre,
Ukrndiprotsyvil'sil'bud, 1987*
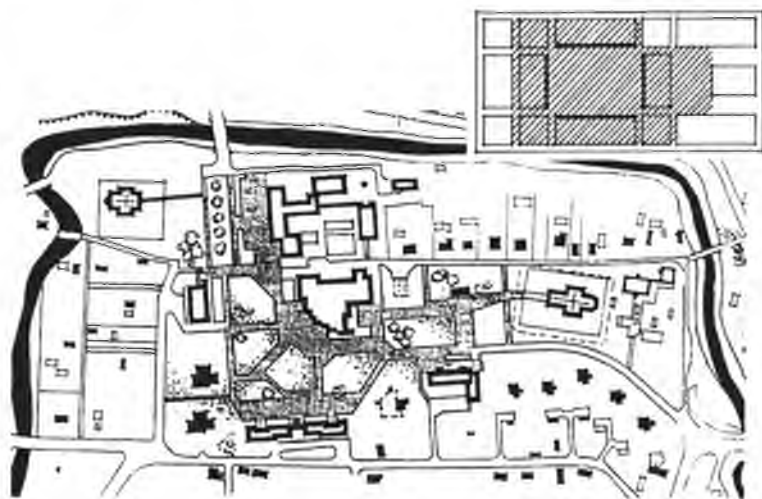
*Redevelopment of the central part of the town
of Bilyi Kamin, Zolochiv district.
Fragment of the master plan, Ukrkolhospproekt, 1972*

Fig. 2. (continued)
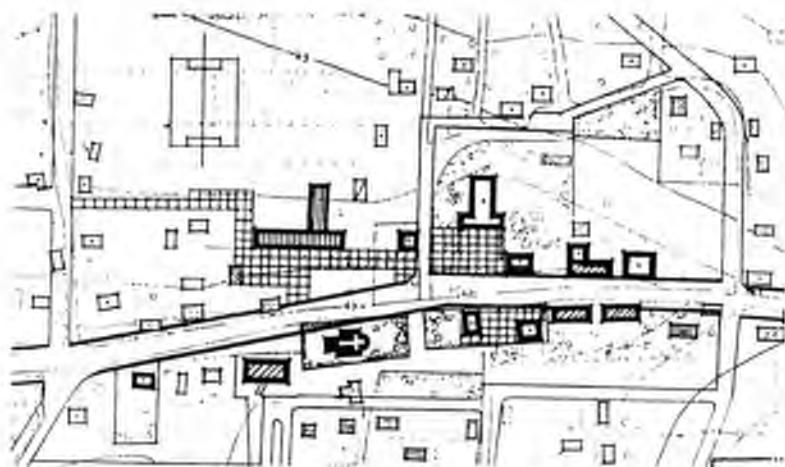
Formation of the linear centre
Novyi Vytkiv, Radekhiv district.
Fragment of the master plan, Dipromist, 1978

Fig. 2. (continued)

The advantage of a compact planning structure that initially determined the planning of towns is a compact form of the plan, convenient access to the centre, and a small degree of violation of the ecological balance of the environment. Broadening the territory of settlements, and thus resulting distancing of peripheral areas from the centre, increase of the functional load, leads to the inability of a centre to play the role of the main centre at some stage. The same happened with market squares. Their area did not allow to form a fully functional centre with a typical set of functional buildings as in the pre-industrial period. The uniform location of multifunctional buildings within the planning structure of settlements was identified in the villages of Bilyi Kamin, Leshniv, Sasiv. The scattered composition of public centres was found in the villages of Pisochna and Tadani.

At this time, master plans with the 'under protection' position, in particular the clear allocation of protected areas, are typical only of those sacred buildings that are included in the register of architectural monuments. Thus, in the urban-type settlement of Pidkamin the protection zones and building regulation zones were arranged for the monastery (the architectural monument from the period

between the 15th and the 18th centuries) and for the chapel (the architectural monument from the 17th century). Their arrangement at least theoretically should provide for a harmonious combination of old and new buildings. Within this zone, all types of the construction, as well as landscaping, gardening and installation of any engineering equipment, are subject to regulations (restrictions). The construction of production and transport facilities that may adversely impact the preservation of the historical and cultural heritage is prohibited.

However, it was previously planned to transform the monastery in Pidkamin into the camp site, what would not contribute to the preservation of the monument. Protected areas of architectural monuments were arranged in the village of Navariya around the Church of the Ascension (the architectural monument of the 17th century) and in the village of Bilyi Kamin around the Church of the Assumption (1613). However, on the master plan of the village of Bilyi Kamin, the church is mistakenly marked as an architectural monument instead of the Roman Catholic church, what is the evidence of formal approach to the development of master plans. In the village of Sokolivka (Zhydachiv district), a protection zone and a building regulation zone were also established around the Roman Catholic church (an architectural monument of the 17th century), and it is proposed to restore the church itself and the wall with towers around it. In the church of Toporiv, a museum was designed in the Roman Catholic church and a house of solemn events – in the former synagogue, in the village of Bilyi Kamin the church was planned to be rebuilt into a museum, and the Roman Catholic church – into the Palace of the Pioneers, the church in Novyi Vytkiv was planned to be turned into a museum, while warehouses were arranged in the churches of Krukenychi and Shchurovychi. And while the function of a museum could contribute to the preservation of the sacred building, the organisation of warehouses was a deliberate destruction of churches. In the process of development of master plans of the villages of Sokolivka (Busky district) and Stanislavchyk, the church and the Roman Catholic church were ignored completely and therefore destroyed (photo 1–3).

Based on the carried out research and analysis of the state of preservation of monuments, the following recommendations for regeneration of towns are offered:

- it is necessary to expand thorough scientific researches of historical settlements, and their results should be available to specialists in various fields of the architectural and urban planning,

- during any works, it is obligatory to consider the architectural and planning structure as a single complex that has the historical, architectural and urban development value,
- hypothetical reconstructions of town plans should be used as a basis for any restoration works, as well as in the preparation of master plans and historical and architectural outline plans of these settlements,
- where possible, it is recommended to carry out the reconstruction of the market square that should become a compositional and planning, and administrative and public centre of the settlement; the presence of the historical and cultural heritage is an important criterion for the formation of centres of historical settlements, where traditional urban and architectural forms have been preserved,
- territorial development of the architectural and planning structure should be carried out with the principle of similarity in mind,
- it is recommended to regulate the construction within the territory of the settlement by maintaining the town scale and taking into account the dominants in the architectural and planning structure of towns,
- recreation of the traditional character of the building system around the perimeter of the market square and blocks of the former 'town,' what will allow in some way to recover the traditional image of the settlement; functional adaptation that guarantees the preservation of planning and architectural and stylistic parameters of the building system. Architectural forms of new buildings should not literally repeat the historical architectural forms; however they should fit into the spatial scale typical of the surrounding environment, as well as observe horizontal and vertical divisions of dimensions and main compositional techniques of the building system formation. By the partial preservation of the architectural and urban development complex (mostly the planning structure with relatively few architectural monuments), it is possible to achieve a relative balance between the historical and modern architectural forms within the space of the historic centre by adhering to the traditional scale and proportions of architectural forms.

Photo 1. Roman Catholic Church (1613) in the village of Bilyi Kamin, Zolochiv district
Source: (photo by S. Topylko, 2003)

Photo 2. Church in the village of Novyi Vytkiv, Radekhiv district, built upon the design of Vasyl Nahirny in 1900
Source: (photo by S. Topylko, 2003)

Photo 3. Church (1731) in the village of Sasiv, Zolochiv district
Source: (photo by S. Topylko, 2003)

Fortunately, during the last decades of the twentieth century, we observed certain inertness in implementation of the developed projects, and most of the master plans were not implemented in full. By analysing the modern outline plans, it is possible to find only some implemented fragments of the proposed design solutions; however the housing system of towns was also distorted by unauthorised reconstructions. Planning and development projects that were carried out without regard to the historical basis provided for the complete further destruction of the historical planning structure of towns, including partially preserved historical parcelling. A significant number of deformations of the architectural and planning structure, accumulated from the moment of foundation until now, sometimes deprive us of the opportunity to reproduce the building system and historical planning of settlements (fig. 3).
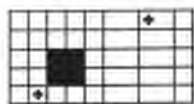
*Toporiv, Bus'k district. The current state of
the architectural and planning structure*
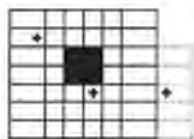
*Sasiv, Zolochiv district. The current state of
the architectural and planning structure*
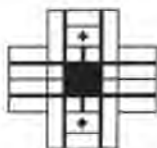
*Stanislavchyk, Brody district. The current
state of the architectural and planning
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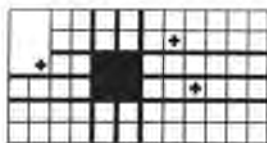
*Leshniv, Brody district. The current state of
the architectural and planning structure*

Fig. 3. Preservation and identification of persistent features of the historical planning
structure of towns

Source: (own study)

Conclusions

The current architectural and planning structure of former towns undergoes many changes: the territorial growth of the settlement; design of a 'new' centre in the 1960–70s with a typical composition of administrative and public buildings; loss of sacral buildings; construction of new sacral buildings both in the historical part of the settlement and outside it; laying of new streets in the historical part of the settlement that contradict the historical planning structure; implementation of designs of town blocks with uncharacteristic multi-storey blocked or separately located buildings in larger settlements; change of the natural microlandscape and the surrounding agricultural landscape. At the same time, it is necessary to emphasise the fragmentary preservation of symmetry, proportionality, geometric shape, compositional idea, scale and character of the building system. During this period, from 1939 to the 1990s, the persistent features of the architectural and planning structure were represented by the dominants, such as sacral buildings and the character of the building system, as well as secondary elements – traffic (transport) routes, longitudinal strands of the rectangular grid-type layout.

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Part II Places of/in public space

Jan Wrana
Lublin University of Technology

Transformations of city centres according to Jan Gehl's theory. Meetings with the master in Lublin[1]

Abstract: The 440th anniversary of the Polish-Lithuanian Union falling in 2009 required the expected extensive public discussion during the adopted format of the International Architectural Workshops devoted to the planned revitalisation of the square. To ensure a high level of expectations, I invited Professor Jana Gehl's world-famous master from the Royal University of Copenhagen, to be our mentor.

The author of the article received his original publication *New City Space*. After six years, I packed a full trunk of new books of professor Gehl *Cities for People*, which were translated into Polish, and I went to the meet him. The books *New City Spaces* and *Miasto dla ludzi* (in English: *City for people*) were signed by the master and continue to inspire me greatly to carry out the research, by introducing the concept of *Synergy in architecture* since 2015.

Key words: revitalisation, integration, synergy in architecture

> *Jan Gehl is our greatest observer of urban quality and an*
> *indispensable philosopher of cities. He can find solutions for*
> *the environmental and health crises that we face. As over half*
> *of the world's population lives nowadays in urban areas, the*
> *entire planet needs to follow the lessons the author gives in*
> *Cities for People.*
>
> Janette Sadik-Khan, Commissioner of New York City
> Department of Transportation

Introduction

At the turn of the 20th and the 21st centuries (during the post-industrial period), research was conducted and public discussions on the necessary changes and the commencement of the integration process to restore the image of 'friendly cities' held in our country. After 4th June 1989, the period of transformation began. It

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[1] The article is a continuation and extension of the research and analysis included in the publication: (Wrana, 2008, pp. 275–286; Wrana, 2009, pp. 291–297; Wrana, 2014).

was a process favouring social dialogue, supporting education that resulted from systemic changes and the necessary verification and renewal of city structures related to the development of the civilisational 'society of knowledge.' During this period, there were a lot of discussions in Lublin about the future shape and integrating function of the Litewski Square (the place in Lublin that commemorates the sessions of the Sejm (in English: Parliament) in 1569 and the signing of the Polish-Lithuanian Union), which is the main public space of the city of Lublin (Litewski Square in Lublin, 2000; Study of Conditions and Directions of Spatial Development of the City of Lublin, 1997–1999; Teodorowicz-Czerpińska, Choroszyńska Studziński, 1993; Wrana, Fitta-Spelina, 2014; Wrana, Fitta-Spelina, 2016). At that time, the City Hall prepared studies on the square, wrote its history, as well as conservator's instructions, which provided good material to form conclusions for solutions restoring the importance of this public space, the function of the city centre, a meeting place for residents, an urban 'ceremonial and cultural' space. The place that promoted activity in the city and the brand of 'a city of initiatives that integrate space – merging the structure of city space' – a centre that is an example of an active role in the revitalisation of urban interiors.

International Architectural Workshops, Lublin, 25th–27th November 2008. The first meeting with the master

In 2008, the Deputy Mayor of the City of Lublin, Stanisław Fic, Assoc. Prof., asked the author of this paper (an employee of the Lublin University of Technology) to invite the teams from Poland and abroad for a workshop connected with transformation of the Litewski Square that would have been organised in autumn that year. The 440th anniversary of the Polish-Lithuanian Union falling in 2009 required the expected extensive public discussion during the adopted format of the International Architectural Workshops devoted to the planned revitalisation of the square. In order to ensure a high level of expertise of the workshops, I invited Jan Gehl, BArch, MSc, PhD, Prof. (Gehl, 1971; Gehl, 1996; Gehl, 2000; Gehl, 2006; Gehl, 2010), a world-famous master from the Royal University of Copenhagen to be our mentor. Five teams led by architects from Denmark (professor Gehl, Copenhagen), Germany (arch. Andreas Reidemeister, Berlin), Italy (arch. Alberto Mazzucheli, Milan), Lithuania (arch. Gintaras Čaikaukas, Vilnius), and Poland (arch. Romuald Loegler, Kraków) participated in the workshops, which were held for three days, from 25th to 27th November at the Crown Tribunal at the Old Town Market Square in Lublin. The participants presented their ideas on the bases they received from the organisers, using the information included in the supporting materials.

During the presentation of the works, there was a lively discussion on the proposed new quality of public space in Lublin, with the participation of invited experts, city officials, residents of the city, and students interested in the format of the meeting – the Lublin Agora, a space for social, political, and cultural dialogue.

In the concluding final lecture, Professor Jan Gehl formulated the guidelines to be followed by the organisers of the planned competition for the transformation of the square. He drew attention to the following:

- the most important aspect of the city is the high quality of public space available to the citizen;
- the professor, by referring to Jane Jacobs (promoting *new urbanism*), recalled that the city's development strategy should be focused first and foremost on its distinct identity and hierarchy of individual places in space;
- the urban strategy to be prepared should cover such basic elements as:
- transport, b) infrastructure, c) car parks (in good proportions);
- a good city is a city with limited traffic, substituted by a large number of walking and cycling paths. It is also important to prepare the plan of public spaces in the city, though the greatest challenge is their scale. The Litewski Square is so large that people standing at its extremes do not see each other;
- a good project should take into account the divisions that would include water and greenery;
- the current paradigm focuses first of all on human life, next on organising the space around it, and only then does it finally match buildings (*life-space-building*), proving that this is one of the basic assumptions – *new urbanism*.

Photo 1. The workshops in the Crown Tribunal. From the left: the Deputy Mayor of the City of Lublin, Stanisław Fic, Assoc. Prof., the author of the article, the City Architect Jacek Gurbiel, professor Jan Gehl, and behind the professor, arch. Alberto Mazzucheli from Milan

Source: (author)

Photo 2. The mentor of the workshops, professor Jan Gehl (the Royal Academy in Copenhagen)
Source: (author)

Preliminary guidelines (consulted with professor J. Gehl) to start preparations for the competition, submitted by the organisational team to the President of Lublin are as follows:

1. the aim of the competition should be to formulate a new quality of public space of Litewski Square – future-oriented, taking into account the historical and symbolic values of this place,
2. the subject of the competition should be the elaboration of the urban context in relation to the surrounding area of the building site (space directly surrounding the site):
   a) the formulation of a detailed functional programme for the space of the square, including the identification of usable zones targeted at different generations of users,
   b) the creation of an aesthetically pleasing and innovative area inside the square, taking into account the variety of urban and architectural components (e.g. light), thus fulfilling the need for multi seasonal use of the square,
   c) the development of a vision of the accessibility of the square space – pedestrian and circular – after a traffic analysis of the city centre, it is proposed to switch off the road traffic and make an extension. The pedestrian route from the Old Town to the end of the Litewski Square – it is proposed to maintain the tripartite character of the square for the function – 'past-today-future.'

In 2010, the City Hall, together with the Association of Polish Architects, Lublin Branch, organised an urban-architectural competition for the revitalisation of the Litewski Square, in which the winning project was that of SAO Investments from Kraków, the second prize went to the project of the 'Franta & Franta' Architectural Studies and Projects Office from Katowice, and the third prize to the 'Idea' Architectural Office of Jacek and Urszula Ciepliński from Lublin. There was also an honorary mention for a studio from Valencia. Yet, the winning project was not accepted for implementation due to its inconsistency with the decision concerning identifying the location of a public purpose investment. In the end, the project which was awarded the third place – the concept of the 'Idea' Office – was selected for implementation.

Photo 3 a-d. The lecture of professor Jan Gehl. Public presentation of the works in front of the building of the City Hall in Lublin

Source: (author)

Fig. 1 a-b. Proposal to exclude the traffic from the area of the Litewski Square

Source: (author)

Photo 4 a-d. The Litewski Square, the main public space of the city, is the place of public cultural events integrating the inhabitants, promoting Lublin – 'the City of Inspiration' (in Polish: 'Miasto Inspiracji'). a) view from the monument of the Polish-Lithuanian Union in the direction of the city arcade to the Old Town, b, c, d) the display of animated, illuminated fountains (in the distance – the frontage of the extended arcade from the Old Town by Krakowskie Przedmieście to the end of Litewski Square), in the middle – the monument of Marshal Józef Piłsudski

Source: (the author's own photographs and b, d, https://pl.wikipedia.org/wiki/Plac_Litewski_w_ Lublinie)

At the request of the city, the selected team presented two new concepts, which were discussed in public. The new vision also raises some controversies but due to numerous debates and the involvement of the residents, it is slowly gaining public acceptance.

The final concept of the 'Idea' architectural office is quite conservative, but it organises the area of the square and introduces new and interesting elements into it. The modernised square was opened on 14th June 2017. At the opening

ceremony, which was marked by a multimedia show with a new fountain as the main attraction, crowds of Lublin inhabitants gathered. In September 2017, the revitalisation of the square was selected the TOP Investment of Eastern Poland in a vote of Internet users.[2] Currently, it is one of the most important junctions of Lublin due to not only its location and history, but also interesting functions together with a strong integrating role. It is a landmark of the city and also a place of integration for its residents (16). The time spent with the professor during each day of the workshops was a great experience which allowed us to learn about transforming city centres into pedestrian tracts and public spaces, while reducing car traffic in these areas and limiting the number of parking spaces. Professor Gehl was keen to talk about preferences regarding integrating traffic users by reducing their speed while reorganising and integrating traffic, but under the condition that priority is given to pedestrian traffic.

The author of the article received his original publications – *LIFE BETWEEN BUILDINGS: Using Public Space* and *New City Space*. Movies showing experiences in researching the urban space of cities in Europe, America, Asia, and Australia are valuable didactic gifts. Examples of the transformation of central city zones realised 'in the spirit' of professor Jan Gehl's theory presented in the publication Jan Gehl, Lars Gemzøe *New City Spaces* (received during meetings with the Professor) – original edition of The Danish Architectural Press Jan Gehl and Lars Gemzøe, Third edition, 2nd print, Copenhagen 2006:

I – 9 cities (Barcelona, Lyon,
      Strasbourg, Freiburg,
      Copenhagen, Portland, Curitiba,
      Cordoba, Melbourne) – implemented
      individual projects of modernisation
      of strategic public spaces;

II – examples of 39 public spaces:
      36 squares and 3 streets in cities
      in Northern Europe, Central
      Europe, Southern Europe,
      Canada, USA, Saudi Arabia,
      Japan, Australia.

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2   After: Service of the Regional Operational Programme of the Lubelskie Voivodeship, www.wup.rpo.lubleskie.pl (Wrana, Fitta-Spelina, 2014; Wrana, 2014), (accessed on 13th February 2018).
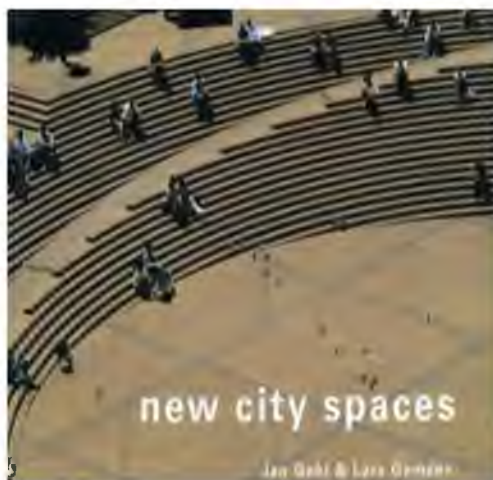
Photo 5. Book New City Spaces (received during meetings with the Professor)
Source: (author)

Transformation of city centres of 9 cities:

Barcelona – Spain

Photo 6. a) An aerial photograph of Barcelona, a view from the east. In the foreground, there is the port and the old town, in the background there are regular buildings designed by Idelfonso Cerda; b) A map showing historical city centre with the harbour and surrounding districts. New public spaces, created between 1980 and 2000, and the Rambla, are marked in blue
Source: (author)

Lyon – France

Photo 7. a) The city centre between Rhone and Saone rivers; b) A city map; streets without car traffic and passages/pedestrian areas and squares adopted in 1990 marked in blue. Underground car parks built underneath the squares marked with circles; c) Plaza des Terreaux with regular system of local water points illuminated at night

Source: (author)

Strasbourg – France

Photo 8. a) Strasbourg's aerial view; b) A city map, new tram lines marked in blue:(since 1994, a permanent line), B (since 2000, temporary service) and three squares after the renovation: Place Kleber, Place de Homme de Fer and Place de la Gare; c) A tram in a dense area. 4. A café on the Cathedral Square. 5. Kleber Square, a new tramway passes through a pedestrian street

Source: (author)

Freiburg – Germany

Photo 9. a) Freiburg – aerial view from the south; in the middle the medieval Old Town with the Cathedral and the wide main street; b) A map of the city centre, back le – the system of small streams marked in blue which form a popular architectural theme in the public space of Freiburg; c) A pedestrian street with a visible stream

Source: (author)

Copenhagen – Denmark

Photo 10. a) Aerial photograph of Copenhagen from the north. In the middle of the picture, between the harbour and the new quarters, the medieval city centre is found; b) A map shows the medieval city centre, the harbour and the neighbouring districts. The blue lines mark an extensive network of car-free streets and squares, gradually created between 1962 and 2000; c) A pedestrian and bicycle square: Amalienborg, Royal Palace Square

Source: (author)

Portland – Oregon, USA

Photo 11. a) Portland city centre seen from the south; b) A map of the city centre. The dashed lines indicate the routes of the new tram lines. Three squares – Pioneer Courthouse Square (by the tram) and city parks: Auditorium Forecourt Fountain and Lovejoy Plaza and Fountain (designed by Lawrence Hallprin); c) Greenery in the centre of a big city

Source: (author)

Curitiba – Brazil

Photo 12. a) Curitiba – aerial view. The characteristic, 'five-finger' plan of the city is reflected in the city panorama. In the city centre and along the public transport routes the buildings are high and densely located, but in the areas between the 'fingers' they are much lower; b) A map of the city centre, with the marked most important pedestrian streets and squares. The dashed lines indicate the streets with pedestrian priority and the circles indicate the three bus terminals located in the centre; c) A pedestrian street of Curitiba

Source: (author)

Cordoba – Argentina

Photo 13. a) Cordoba – aerial view, dense buildings of the centre are visible; b) A map of the city centre. The blue lines indicate the current network of pedestrian roads and squares, which has been extended several times since 1980; c) The seats of the parliament marked in the street floor literally depicting the idea of the 'street parliament'
Source: (author)

Melbourne – Victoria, Australia

Photo 14. a) Melbourne viewed from the south. The city centre lies between the Yarra River and the surrounding suburbs; b) A map showing the city centre on the Yarra River. The city grid consists of 200 x 200 m blocks, originally it did not cover any squares. Two pedestrian-tram streets are marked in blue: Bourke Street and Swanston Street and new squares: Federation Square and private Southbank area; c) Green recreation areas at Swanston Street
Source: (author)

Selected examples of the implemented projects of 36 squares and 3 streets

Piazza Matteotti Catanzaro – Italy

Photo 15. a) A plan of the square; b) Aerial view of the square: in the foreground there is a serpentine bench running along the lanes, in the background there is a green square and the court building

Source: (architect – Franco Zagari)

Pioneer Courthouse SQUARE – Portland, Oregon – USA

Photo 16. a) Close-up of the stairs and ramp. This is a popular place to meet, hang out, and observe everything that is happening on the square. The long ramp and the shell-shaped staircase connect the two levels of the square and at the same time, it creates one of the most popular sitting areas; b) The square is surrounded on both sides by rows of columns supporting glass roofs which protect passengers waiting for a tram from wind and rain c) A plan of the square

Source: (architects – Willard K. Martin, Martin/Soderstrom/Matteson)

Cloud Gardens, Toronto – Canada

Photo 17. a) Cloud Gardens Conservatory is reflected in a few characteristic elements. The constantly changing, partially destroyed urban landscape is juxtaposed with an idealistic natural landscape; b) The northeast corner: the winter garden sheds a gentle, intriguing light at night; c) A plan of the square

Source: (architects: Baird/Sampson, landscaping, small architecture: Milus, Bolenberghe, Topps, Watchorn, artist: Margaret Priest)

Tsukuba Centre SQUARE, Tsukuba – Japan

Photo 18. a) Tsukuba Centre Square – aerial view. A decorative, geometric floor enclosed in an oval pattern is visible; b) Connection between two levels of the square: stairs, stone decoration and flowing water. These organic forms clearly contrast with the precise geometry of the remaining square space; c) A plan of the square

Source: (architects – Arata Izosaki Associates)

Lublin 2014 – announced the year of Jan Gehl, the master professor

Photo 19. New book of prof. Jan Gehl
Source: (author)

Meeting after many years – 22.10.2014 promotion of the Polish edition of the book *Cities for People*

> *Above all, do not lose your desire to walk. Every day, I walk myself into a state of well-being & walk away from every illness. I have walked myself into my best thoughts, and I know of no thought so burdensome that one cannot walk away from it.*
>
> Søren Kierkegaard, 1813–1855

After six years, I packed a full trunk of new books of professor Gehl – *Cities for People* (Gehl, 2010) translated into Polish and went to the meeting with the professor. The event was held in two rooms at the University of Life Sciences in Lublin, connected by vision and sound. Professor Gehl was warmly welcomed by the Mayor of the City of Lublin, Krzysztof Żuk, PhD, the initiator of the new Strategy and its main assumptions for the years 2013–2020.

In the preface of the book, Richard Rogers writes: 'The city – just like books can be read and Jan Gehl understands their language (…). The humane city – with carefully designed streets, squares, and parks – creates pleasure and visitors and passers-by, as well as for those who live, work and play there every day.'

In the book introduction, master Jan Gehl thanks the team he has worked with over the years, confirming that motivated by the need for research, they have inspired the creation of innovative solutions and their implementation. He confirmed that 'after many years a great deal of knowledge has been amassed on the connection between physical form and human behaviour (…). It is now generally accepted that city life and regard for people in city space must have a key role in a planning of cities and built-up areas. Caring for people in the city is an important key to achieving more lively, safe, sustainable and healthy cities – all goals of crucial importance in the 21st century.'

During the presentation of the book on the meeting with the residents, he directed our attention in particular to subchapter *4.9. Best Bike Cities*, stressing that there is a lot to be done for the city of Lublin to join the group of bicycle friendly cities, recommending creating cycling lanes with quiet streets and squares for recreation and pedestrian traffic.

Conclusions

The book *Cities for People* signed by the master is a great inspiration for me to carry out the research on the processes of integration and consolidation of spatial structure, by introducing from 2015 the notion of 'Synergy in architecture' (Wrana, 2011; Wrana, 2018) both in student workshops and at scientific conferences. Through the conducted student workshops, building teams by actively engaging in a dialogue with the residents in order to get to know their vital needs and to discuss the ways of transformation, the common space in the city we are searching for 'integration nodes' – a diagnosis to obtain 'a city for people – a people-friendly city.'

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Gordana Rovčanin Premović
University of Montenegro

Typology and transformation of public spaces – urban interiors on the example of Podgorica, Montenegro

Abstract: The subject of the study is the typology of development of open spaces of urban interiors of the city of Podgorica, the capital of Montenegro. The study includes factors that influence the creation of harmonious spatial relations in urban interiors and the potential for urban transformation. It explores how specific open spaces evoke a sense of harmony and beauty, and what cultural and individual parameters determine the existence of harmony in an urban place. The development of the city of Podgorica is characterised by three major historical and spatial segments: the old town – *Stara Varoš*, *Nova Varoš*, and *New Town*. Each of these parts of Podgorica had a specific development and a characteristic urban matrix. Within this framework, different types of public open spaces were formed. These urban interiors have influenced the definition of the recognisable identity of the city of Podgorica, but also the perception of the city's public open spaces which are in constant transformations.

Key words: Podgorica, public space, transformation, typology, urban interiors

Introduction

Urban public spaces are open spaces which are available for use by all citizens and visitors, and in which urban activities take place and city life circulates. In addition to the spatial aspect, public spaces in cities are a reflection of not only cultural and historical views of the community, but also on social and economic ones. Consideration of natural, built and cultural aspects of the urban environment is important for achieving sustainability objectives. Natural factors, such as morphology and vegetation, are part of the basis for the natural features of an urban place. The diversity and vividness of urban environments are created by combining the natural features with the built environment and different local traditions of space use. Human activities and the physical environment in which social activities take place are the basis for mapping public space (Vujadinović, 2016, p. 57). The city is a structural and compositional ensemble of different parts and segments of infrastructure, public buildings and spaces, that is places where people interact with built elements and architectural building structures.

The elements of the composition of the city include: squares, parks, open spaces, various urban interiors, pedestrian zones, streets, paths. The public space of the city is intertwined with a network of streets and defined by buildings and other spatial structures. It consists of elements of the city composition which provide the urban scene for social events. Public spaces are places for city activities, which generate the framework for city life. Said spaces include not only the physical structures: squares, parks, streets and open spaces in the city, but also different variants of spatial and associative segments that are the initiators of social and urban activities. One of the most important segments and quality of public open spaces represents the presence and activities of people. Events and different social situations make the shared public space meaningful and attractive for the city's residents and visitors.

Theoretical review of public open spaces

The theoretical basis of the research relies on the analysis of the study of spatial relationships in the city and traditional open spaces, as well as on the role of space users and the generation of different perceptual impressions that urban spaces leave on its residents and observers. Many theorists have presented their views on this research problem. Christian Norberg-Schultz distinguishes space into five characteristic concepts: *the pragmatic space* of physical action, *the perceptual space* of immediate orientation, *the existential space* of stable representation of the human environment, *the cognitve space* of the physical world and *the abstract space* of purely logical relations (Norberg-Schulz, 1971). The public urban space, in addition to its existential significance for inhabitants, signifies great importance for the formation of a perceptual impression on the observer. Harmonious spatial relations in the city leave a strong impression on him, stimulate his tendency to return to such spaces and strengthen the identity of the city. Norberg-Schulz, also identifies two main elements of place: *space* and *character*, where *space* means a three-dimensional organisation of the elements that make up a place, and *character* refers to an atmosphere that fully defines the meaning of a place. These two elements build the *Genius loci* – the spirit of the place of any city.

In cognitive and mental settings of the image of the city, Kevin Lynch shows a tendency to identify aspects of the city that create a strong image in the eye and keep it in the mind of the observer. The city image is a set of different individual images of the observer. Lynch presents five key physical elements: *paths, edges, districts, nodes* and *landmarks* (Lynch, 1990). The observer's perceptions and reactions vary (differences are due to each citizen's different personal beliefs and social structures), making his experience of the environment personal. In

this way, a sense of connection with the place is created through the individual experience. The set of individual experiences with the city creates a similarity of socialisation patterns and certain images become shared by a larger group of people. Shared images create a space that is recognisable, which creates a sense of security and identity. Kevin Lynch outlines how residents perceive and interact with the city by creating a mental image. This approach is applied to map urban public open spaces and urban interiors as places of city life and activity.

Beyond the perceptual impression and experience of space, the city provides a framework for social events and activities. The city is seen by Jan Gehl as a meeting place. The direct link between stimuli and the way of using an urban space is reflected in the pedestrian areas and the city life. Walking initiates social and recreational activities (Gehl, 2010, pp. 12–19). Gehl analyses the boundaries and barriers of the city that limit the field of view and define particular spaces. The borders of the city make a vital contribution to the spatial experience and awareness of the individual space as a place. Urban life grows out of the boundaries and moves towards the centre (Gehl, 2010, p. 75). As factors of a spatial or perceptual barrier, the dimensions of public urban spaces represent an exchange between the inner and outer public space.

This theoretical study includes analysis of the factors that influence the creation of harmonious spatial relationships in urban public spaces. Based on the well-known theories of public spaces the study presents the ways in which specific open spaces and urban interiors evoke feelings of harmony and beauty in an urban place.

Historical and urban context – the case study of Podgorica

Public urban spaces in Podgorica were shaped in parallel with the development of the city. In some parts of the city, public and pedestrian zones were created. The urban structure of Podgorica consists of different urban parts that are the result of city development (fig. 1). These urban segments are characteristic units that have unique types of organisation of the physical structure. According to the period of origin, development, and function, the defined types of the urban structure of Podgorica inculde three different spatial and historical units (fig. 2) (Rovčanin Premović, 2020, p. 353):

1/ the old town – *Stara Varoš* (from 15th century – period Ottoman rule), unplanned dense medieval matrix;

2/ the planned town – *Nova Varoš* or *Mirkova Varoš* (from late 19th and early 20th century) – a classicist town, with an orthogonal urban matrix made of rectangular blocks with dimensions of 80/120 m;

3/ the new planned town – *New Town* (from the second half of the 20ᵗʰ century) – a functionalist city, with an orthogonal urban matrix made of rectangular blocks with dimensions of 200/240 m.

Fig. 1. Narrow city zone of city Podgorica
Source: (digital cadastral plan of Podgorica, excerpt)

Fig. 2. Types of urban structure of Podgorica
Source: (Rovčanin Premović, 2020, p. 353)

The first urban structure in Podgorica – *Stara Varoš* – was developed spontaneously, without urban planning, until the end of the 19th century. The concept was to build an urban and architectural structure of the oriental-Balkan type. The settlement was built outside the fortress and surrounded by town walls.[1] Its shape was irregular and it had narrow meandering streets. The matrix of structures and streets in *Stara Varoš* was unplanned and dispersed with small squares of irregular shape. In the late 19th and the early 20th centuries, the city expanded beyond its historic frames. After the construction of *Stara Varoš*, the first urban plan of Podgorica was the urban plan of the new part of Podgorica – *Nova Varoš* (*Mirkova Varoš*) in 1879, which included the free space on the right bank of the Ribnica river at the foot of the Gorica hill. The plan had a functional character with a geometric orthogonal raster. The development of the city was interrupted during the Second World War. The city was bombarded 72 times, and *Nova Varoš* was almost completely destroyed. The first decision to rebuild the city was taken in 1946. In the second half of the 20th century, Podgorica was a city of rapid expansion and development that extended the planned territorial boundaries. In that period several urban plans of Podgorica were created, which had an orthogonal matrix.[2] Parts of the city are connected by characteristic straight streets. *Stara Varoš* and *Nova Varoš* were merged by two main streets. One of the main streets in the urban matrix of Podgorica is the Adriatic road passing through *Stara Varoš* and through the centre of the *Nova Varoš*. This street passed through the main square in *Nova Varoš* and the *old square* in *Stara Varoš*, in front of the *Clock Tower*.[3]

Further development of the city continued to expand on the right bank of the Morača river. As a result of the expansion of the planned urban units, three characteristic types of the urban structure of Podgorica were created: *Nova Varoš* and *New Town*. All parts of the city are interconnected by a straight traffic network (Rovčanin Premović, 2020, pp. 348–353). The development of the city in the late

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1   This settlement had no defensive walls, but it had stone houses – towers, enclosed by high walls of stone, which served to defend the town and fortress (Rovčanin Premović, 2020, pp. 229–230).

2   The plans of Podgorica from the second half of the 20th century were: unsuccessful General Plan 1950, General Plan 1957, General Urban Plan 1964, General Urban Plan 1974 and General Urban Plan 1990.

3   The *Clock Tower* was built in 1667 in the centre of *Stara Varoš*, at *Bećir beg Osmanagić square*. The *Clock Tower* has been renovated several times, and today it is protected by law as a very important cultural and historical monument (Rovčanin Premović, 2020, p. 355).

20th and early 21st century led to the creation of new segments of Podgorica. New parts of the city were developed in the free areas in the east, south, and especially on the west side of existing urban structures. Within such spatial frameworks and urban matrices, different forms and types of public open spaces in Podgorica have been formed.

Typology of public spaces – urban interiors in Podgorica

Urban public open spaces consist of streets, squares, spaces within blocks, public open areas and green areas. Urban public space is defined by dimensions (length, width, height and depth of space), volumes of built structures, paths, and buildings. The spatial relationship between the structure of buildings and open areas observed through the general historical development of cities has been developed according to two characteristic principles: *traditional city* (historic town, inherited urban structure) and *functionalist planned city* (city with its clearly defined functions and zones). Podgorica has a historical urban structure in the form of *Stara Varoš* (unplanned urban structure) and two parts of the city that were created according to the functionalist principles: *Nova Varoš* and *New Town* (two planned parts of Podgorica). The two functionalist zones of the city are characterised by a planned geometric street network that generated block-like spatial arrangements, resulting in public spaces in these parts of the city having regular geometric proportions.

The dense urban structure of *Stara Varoš* with its narrow meandering streets has not allowed for the formation of large public open spaces. The only public area of this part of the city is the central pedestrian square – *Bećir Beg Osmanagić square*. On the same traffic stretch of the boulevard that passes next to the square in *Stara Varoš*, on the northern side in *Nova Varoš*, there is the main urban square of Podgorica – *Independence Square*. The planned layout of *Nova Varoš*, except the main city square, includes several important public park areas: public city park on the site of an undeveloped block – *Karađorđev park* (from 1927), public park areas along the Morača river – *Njegošev park* (from 1925), park areas along the Ribnica river – *Ivana Milutinovića park* (from 1953) and *Small park* (from 1927) (Vujadinović, 2016, p. 80). The orthogonal urban matrix of *Nova Varoš* was generated with seven internal and four peripheral traffic routes, which formed a total of 20 urban blocks (five in one direction and four in the other), of which the central block contains the main urban square of Podgorica – *Independence Square* (Perović, Bajić Šestović, 2019, p. 7). In the spatio-functional matrix of the newest part of the city on the right bank of the Morača river in the *New Town*, no special open space is

provided for a public square. Public areas in this part of Podgorica are open spaces within blocks between residential buildings that are planned as park spaces and sports and recreational spaces. This part of the city is dominated by open areas covered by green and park spaces (Vujadinović, 2016, pp. 79–81). The orthogonal organisation of the space and the orientation of the buildings towards the streets and towards the interior of the blocks have generated geometrically correct shapes of the public spaces of the *New Town*. The public open spaces are located between residential buildings, in accordance with the dominant traffic directions.

With the expansion of the city at the end of the 20th and the beginning of the 21st century, Podgorica's expansion began to shift primarily towards the dominant western part behind the *New Town*. New parts of the city have been built, mainly residential blocks in open areas, but also in abandoned and repurposed industrial zones. In these new parts of the city small public open spaces were built for specific blocks and zones. In that way, new public spaces were formed – several small squares and parks, according to the principle of polycentric development, which served to the inhabitants of specific parts of the city.

Based on the analysis of public open spaces of three historically, spatially and functionally characteristic parts of the city, as well as the contemporary city parts that are under continuous development, the dominant types of public open spaces in Podgorica, are as follows:

- *the square as a memory* in the historical urban structure of the city in *Stara Varoš*;
- *the square as a meeting place* – main square in the functionalist part of the city in *Nova Varoš*;
- *intimate public spaces* – parks in the neighbourhood units of residential blocks in *New Town*;
- *dispersed public spaces* of polycentric systems of the newest parts of the city of the 21st century.

The square in the historical part of *Stara Varoš* is irregularly shaped, created by a spatial gap within a densely built urban structure (photo 1). The square features a building that dominates the surroundings – the *Clock Tower*, one of the most important spatial landmarks and symbols of the city. This square was created according to the needs and activities in the past, with the focus placed on the pedestrian flow in the narrow and meandering streets. Specific dimensions, proportions, and spatial relations, made this square a harmonious urban interior bounded by compact historical structures. The value and significance of this square are deepened by the presence of a collective culture memory that

has been formed in the past. Because of its historical value, this square can be referred to as the *Memory square*.

The main city square – *Independence Square* – is the largest square in Podgorica, measuring 80 x 120 m. It was created in the place of the one block of the geometric urban matrix of *Nova Varoš* (photo 2). It is surrounded by socialist buildings of up to five and six storeys built in the second half of the 20th century. Due to the considerable proportional difference between the size of the square and the height of the surrounding buildings, it can be defined as an open square. This square is the most dominant one. At the same time it serves as the main meeting place in Podgorica.

With the development of the city on the right bank of the Morača, mostly residential blocks with internal free areas were built in *New Town* (photo 3). On these inner areas parks were formed to provide place for rest and recreation of residents of each neighbourhood. Despite of a public character, such open spaces in residential areas are visually enclosed and protected by surrounding buildings. Therefore, they can be characterised as intimate public spaces or neighbourhood urban interiors.

Photo 1. Bećir Beg Osmanagić square in Stara Varoš

Source: (photography by Vedran Ilić, graphic marks by Rovčanin Premović on the excerpt of the Digital cadastral plan of Podgorica)

Photo 2. Independence Square in Nova Varoš
Source: (the capital city Podgorica, http://www.podgorica.me//, graphic marks by Rovčanin
Premović on the excerpt of the Digital cadastral plan of Podgorica)

Photo 3. Intimate public space – park in the residential block in New Town
Source: (https://mapio.net//, graphic marks by Rovčanin Premović on the excerpt of the Digital
cadastral plan of Podgorica)

In recent decades, the city of Podgorica has experienced great development
due to the construction of new blocks and parts of the city. In each of these parts,
smaller centres have been created as a meeting places for people that reside there.
In such surroundings, public spaces are formed as semi-open dispersed points
(fig. 3). Podgorica is gaining the trend of developing polycentric systems in the
newest parts of the city in the 21st century.

Fig. 3. Dispersed public spaces in the newest parts of Podgorica
Source: (graphic marks by Rovčanin Premović on the orthophotomap)

Conclusions

Public urban spaces: squares, parks and pedestrian zones, in Podgorica were formed along with the development of the city. Characteristic historical and spatial urban parts of Podgorica have unique types of organisation of the physical structure, which are the result of city development. The study presents the dominant types of public open spaces in Podgorica, based on the historically, spatially and functionally characteristic city parts as well as the contemporary city parts that are under continuous development. The following types of urban public spaces were identified and defined in the study: *the square as a memory*, *the square as a meeting place*, *intimate public spaces* and *dispersed public spaces*. The first type – *the square as a memory* represents the value and significance of a historical square with a collective culture memory that has been shaped through the past. The largest and most important square in Podgorica is *the square as a meeting place*. In the semi-closed residential blocks, intimate public spaces or neighbourhood urban interiors were created. In the newest parts of the Podgorica, polycentric systems with numerous *dispersed point public spaces* were generated.

New public spaces and urban interiors are constantly affecting the reduction of social significance and the dominance of the main city square and the historic square in Podgorica. This is a process that is inevitable considering the contemporary society and the challenge that needs to be overcome through adequate urban planning, architectural design, and social and cultural engagement of the city's residents. The aim of urban trans-formation may consist in creating specific open spaces which evoke a sense of harmony and beauty. Based on the study, it can be concluded that the factors which have influenced the creation of harmonious public spaces are: the potential for initiating cultural memory, the potential for urban meeting places, potential for creating intimate zones and potential for shaping various multifunctional contemporary public spaces. All these potentials can perform the function of urban transformation and revitalisation of the modern city.

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Part III Place as an interior

Peter Schmid-Prakas
Eindhoven University of Technology

Gabriella Pal-Schmid
Research Education Design in Science Art Technology for
Peaceful Sustainable Development

The *In-Side* beauty of architecture

Abstract: The *In-Side* beauty of architecture is elaborated in this article in its visible as well as in its invisible existence or structure. *Side* in this context means more than just one certain side, like a side face, but rather an all-around covering phenomenon.

Interior or *interior space* is supposed to be understood in its broadest meaning in the given context.

Architecture involves well-known interiors: chambers, rooms, different forms of indoor spaces also in public buildings, in some way also courtyards, squares, and closed spaces in the landscape, garden architecture, and possibly the ones within land art. These all are the visible aspects of interiors in different varieties.

Harmony of place can have a relation with land art and landmarks – these are discussed using practical examples.

Both, the indoor-space and the harmony of place are explored in the context of this work. Moreover, the architectural inside can also be understood as the theoretical, spiritual background of architectural elements and objects and of architecture in general. Thus, this *invisible* inside – *In-Side* can be recognised as another dimension of architecture beyond the physical appearance. This issue is an integral part of the work. The order and the geometrical pattern giving measures and proportions to a building belong to that *In-Side*.

Keywords: architecture, interior, visible and invisible aspects, *In-Side* of architecture, land-art, harmony

Introduction

According to Sri Aurobindo, 'All problems of existence are essentially problems of harmony.' (To avoid any misunderstandings, the editorial note from the authors is added: 'All problems of existence are essentially problems of the lack of harmony').

Involvement and experience resulting from a long design practice and several executed architectural projects and research work connected with philosophy, lead us to this way.

Moreover, our dialogue with colleagues, PhD researchers, and students led to our specific elaborations in this paper. Theory and practice should go hand in hand. Therefore, some of our thoughts on interesting topics are included here, and we present our projects and finished examples within the fields under consideration.

To the observer the architecture seems to involve: facades, building blocks and building complexes, the *relief* of a whole group of buildings, like a village, a town, a (mega) city, even physical planning, and land art. However, there is also the inside. Inside in architecture usually means the visible interior. Its examples include chambers, rooms, different forms of (indoor) spaces also in public buildings, and in a certain way also courtyards, squares, street rooms, as well as limited, closed spaces in the landscape, garden architecture, and possibly the ones within land art. These are the visible aspects of interiors, but they are already regarded in their wide meaning.

In our understanding and elaboration, we interpret the very inside, so called *In-Side*, also as the invisible phenomenon, even better expressed as an approach or attitude and the philosophy with which a design and also the execution is done.

Harmony of place, in its literal sense, belongs in its important part most probably to the invisible factors. Geomancy and radiesthesia are the related fields. In this paper we present two examples, an *omphalos* and the Peace Garden Labyrinth.

The experience of interior beauty in terms of broadly understood proportions, colours, the wide range of measures and scales might be strictly influenced by the simultaneous experience of temperature, humidity, acoustics, smell… in simple words – comfort. Moreover, the experience can be influenced by the presence or absence of other people, i.e. crowd or lack thereof. It should also be added that there are also the impressions that a complex phenomenon generates and the experiences that one obtains under its influence. However, according to Ancient-Greek philosophical tradition, beauty can be defined as the brightness, lust, brilliancy, and splendour of *truth*. This suggests that there must be a core of perfect quality.

Considerations on inside and outside associate with the memorable paradoxical verses of Johann Wolfgang von Goethe: 'Nichts ist innen – nichts ist außen, denn was drinnen ist, ist draußen'or 'Nichts ist drinnen – nichts ist draußen, denn was innen ist, ist außen' (in English: 'Nothing is inside and nothing is outside – for what is within is without' or 'Nothing's inside, nothing's outside – For the inside is the outside'). In this paper, the focus is placed on distinctive aspects of interior, showing related examples of different scales, including furniture and land art, as elements of harmony of place.

The designs, as well as executed objects and complex interiors are shown.

In-Side – in more details

It is common for different people to be in favour of various types of places, buildings, and interiors. However, in this paper the values, which might be accepted as optimal, are the focus.

As mentioned in the 'Introduction', the *In-Side* of architecture has also a more or less invisible feature. In other words, there is a certain immaterial attitude, which even might be seen as the guiding force. The approach towards designing and making things is an important issue as well as a fundamental base of all architecture and even of all man-made objects and human actions. A spiritual intention, a philosophy, a theory, or at least an attitude, an opinion, conviction, or mind, perhaps a sentiment may be involved in the context of *making* anything. This phenomenon or power is invisible, but it still has a great influence. It can be located under, behind, above, or beyond the visible actions and their physical results.

Ronald Marius van Vierzen quoted in his work *over de Guldensnede en het Oneindige,* elaborated in his lecture on 2nd June 2020 in Den Bosch, NL, *The Relation between Geometry and the Spiritual World* on the words of Pythagoras, 'Your sensory organs allow you to recognise only the outer appearance of anything, but not the harmoniously structured laws, the source of their appearances.' And further he indicated: 'The Harmonious Laws you have to recognise and experience firstly in yourself before you can find them in the outer world.' 'Only after, you will be able to understand and experience the deeper meaning of the world in its eternal condition.'[1]

Li Xiaodong dedicated a chapter entitled 'Beyond Beauty and Talent, the Exploration of Self' to this topic in his book *Dancing Dragon: Chinese Aesthetics since 1979.* Therefore we should (once again) focus our attention on the *In-Side*, which is often forgotten or even overlooked. This is something that necessarily needs more attention. In other words: the Self and its development contribute to all creation and action. It assumes the role of an important invisible designer and supervisor. Indirectly, we can find partially visible *In-Side* aspects in the special geometrical order and in modular coordination. In this invisible aspect, if you like non-material dimension, there is the base for Harmony and Beauty

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1 The words of Pythagoras may not be conveyed fully after the necessary translations first from Greek to Dutch and then from Dutch to English.

incorporated as well. It is worth mentioning here the essential function of *In-Side* for human beings. The original reason why the architecture was created was to occupy the space *inside*. The desire and trend are such immaterial concepts, and yet they involve a strong power capable of guiding a project in a harmonious and beautiful way.

Defining mathematically what harmony and beauty are is difficult if not impossible. However, there are some traditions for dealing with the influence of beauty and harmony on designed architecture. Although there are times when intersubjective evaluation prevails on the matter of what is beautiful and/or harmonious and what is not, we can observe different opinions on the subject. Even our first conference on Beauty in Architecture surprised us with the amount of information on different views of this issue.

If it were not for the necessary need to find shelter for survival, people would not have started building, and that would have meant that architecture would never have been created.

Another dimension of the *In-Side* of Architecture can be seen in the enormous number of dialogues and multilogues, descriptions, critics, and polemics *created* by the features of architecture. These dimensions play an important role within the scene of architecture and architectural history, in architectural research, education, and design. They are not of an architectural nor material kind, except in the spoken or written language, and in most printed texts. They are rather a combination, sometimes a composition, of ideas, thoughts, and interpretations on a mental level.

Most of the architectural journals contain a lot of descriptions and polemics on the non-material aspects of architecture. In architectural history we also find descriptions of quantitative features of designs and implemented buildings, the focus on their qualifications, including beauty and harmony, what can be categorised to the immaterial *In-Side* of the plans and objects.

In his research and especially in his teaching, Peter Schmid regularly stipulated on the *In-Side* dimension of architecture and building technology, and he tried to illustrate these dimensions with the means of models (see the contribution to the 1st conference Beauty in Architecture which is more often mentioned).

To conclude our consideration of the immaterial *In-Side*, we would like to remind, that Ludwig van Beethoven, despite having lost his hearing, was able to hear (his) brilliant music (immaterial, with his *internal ear*) without the material vibrations of the air, which normally and conditionally gives us the opportunity to experience and enjoy music.

Interior space

The original reason for architecture, as already stated above, was the possibility of being inside, in a kind of interior space. If it were not for a need to survive, people would not have started to build their own facilities – finally, they would not have created architecture.

Being *In-Side* starts already with the development of our physical life in mother's womb or uterus. In some cases, like a premature birth, there is the need for an incubator, the smallest interior ever. This goes further: there is a cradle, a tester bed or a four poster, and various, differently sized rooms. In some cultures, this ends with a casket or a coffin, a sarcophagus or even a sepulchre or a tomb.

The art of design, composition, or arrangement of rooms, as an art of space, is elementary for architecture, beside the beauty of structure and construction, but also the functional management of ergonomic and harmonious use. If one looks at the animal kingdom, one can learn something from them, such as how they create their interior spaces. Usually, animals do not have continuous need of an interior, however, there are some fascinating and interesting exceptions. For example, mammals, whose life also begins in the womb, or birds and snakes, which begin their lives in the egg (shell), while birds also stay in their nests for a while. Moles, on the other hand, dig holes and corridors under the earth's surface, beavers even build quite large hills around and above themselves, and a baby kangaroo stays for a while in the fold of its mother's belly. And insects can build interiors, which are rather sophisticated.

When discussing human shelters, it needs to be noted that *In-Side* and *Out-Side* – interior and exterior – can *pervade*, can *flow* into each other. Japanese architecture, by using gliding (outer) walls, easily brings the outer space into the inner space. Frank Lloyd Wright is the designer of the house, called *Falling Waters*, which shows this mutual pervasion quite expressive. The 1928 Barcelona World Exhibition Pavilion designed by Mies van der Rohe and Lilly Reich is another, similar example. The Farnsworth House in USA, designed and also executed, again by Mies van der Rohe (1945–1951) is another super-transparent example.

Transparency can also be responsible for such a mutual confluence.

We remind here the paradoxical verses of Goethe concerning inside and outside, as quoted in the Introduction.

John Olie, a former PhD student that we had a pleasure to meet, concentrated in his design and research work particularly on the phenomenon of 'transition rooms,' which are functionally, physically, and aesthetically important when

designing room arrangements, or sequences of rooms, like in case of a draught screen room, a conservatory, or a waiting room (*antechamber*).

While living in the world of technology and comfort, it is worth looking at and researching what qualifications and criteria apply to the 'interior.' With respect to interior spaces, these are as follows:

- firstly, the atmosphere (of the room, the interior space),
- secondly, the single elements,
- thirdly, the combination of the first and the second.

The following are relevant for all of them: the experienceable forms, measures, colours, materials, textures, and the physical as well as imaginable sensation obtained by practical or even imaginable touch.

The experience of interior beauty in terms of broadly understood proportions, colours, the wide range of measures and scales, as explained above, might be strictly influenced by a simultaneous experience of light, temperature, humidity, acoustics, or sound qualities, smell… in simple words – comfort. Moreover, the experience can even be influenced by the presence or absence of other people, a crowded place, or a solitude. Finally, it should be added that there are also the impressions that a complex phenomenon generates and the experiences that one obtains under its influence, both consciously and unconsciously. When it comes to individual pieces of furniture, in German *Möbel*, which comes from the Latin *mobil* – 'movable,' ease of portability is of paramount importance. At the same time, furniture should be practicable in use, ergonomic and light, beside the above-mentioned criteria. All of this – if the right standard is maintained – should result in the Harmony. For the design of interiors and indoor spaces we have specialists, interior architects. Nevertheless, many (building) architects like also to design interior and furniture. And some of them gained much appreciation with their creations.

In the broad field of interiors, one can identify the times in which they were designed based on the style, the technology used to make them, and the place assigned to them when they became fashionable.

Jose Arguelles: 'The dimension of Art is the dimension of universal self-creation' (South, Arguelles, 2020, p. 151).
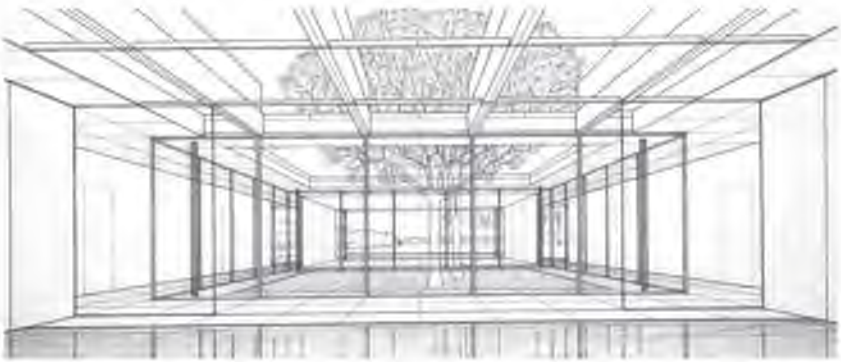
Fig. 1. Rich transparency in the design for the detached residence, Düsseldorf, 1964
Source: (drawing by P. Schmid)

Photo 1. Interior of a detached residence, Vienna, around 1956, transparency gives it a greater dimension
Source: (RED Archive)

Photo 2. Interior of a detached residence, Vienna, around 1956, plants are an integrative interior-element

Source: (RED Archive)

Photo 3. Interior designs for a detached residence with some transparency, Düsseldorf, around 1964

Source: (RED Archive)

Photo 4. Interior of the vestibule of a dwelling combined with a medical doctor's practice, Vienna, 1968/69

Source: (photo L. Danzer)

Photo 5. Panorama window, farmer's house in Kappel am Krappfeld, Carinthia, Austria, around 1971

Source: (photo L. Danzer)

Photo 6. Living room, farmer's house in Kappel am Krappfeld, Carinthia, Austria, around 1971

Source: (photo L. Danzer)

Photo 7. Interior of a farmer's house in Grohdorf, Hollenthon, Lower Austria, around 1973

Source: (photo L. Danzer)

At the first International Science & Technology Conference on Beauty in Architecture, in addition to our response to the conference organisers' request to present a 'Model of Beauty in Architecture,' our MBA proposal, we used primarily outdoor examples.

Our recent work presents a number of designed and partially executed interiors and furniture, all from out the own workshop during a long time of practice.

Photo 8. Detail of the interior of a harmonious, healthy and deeply-sustainable pilot project, South-West-Hungary, 2015

Source: (photo P. Schmid)

Photo 9. Design of a standing place within a building fair for the presentation of newly developed curved elements made of woodfibres, 1998

Source: (drawing by P. Schmid, RED Archive)

Harmony of place

In Europe, geomancy and radiesthesia have traditionally been related fields of knowledge primarily about health, but are also concerned with beauty and quality of place. In the past *genius loci*, the 'spirit of a place' played an important role for placing a building.

In the teachings of the Indian *Sthapatya Veda*, or *Vastu Vidya* and Chinese *Feng Shui*, in some varieties far spread in Asiatic countries, we can find many suggestions for searching, locating, and creating a good, prosperous, and harmonious place and a building with its interiors.

Photo 10. In 2013 the Erdősmecske 'Omphalos', challenging Planet Earth to create a 'navel for spending and radiating harmonious Peace energy', executed by workers of the municipality
Source: (photo P. Schmid)

Photo 11. The Erdősmecske Peace Garden Labyrinth, growing land art, 1st November 2020, a photomontage
Source: (photo P. Schmid)

Photo 12. Sketch of the Erdősmecske Peace Garden Labyrinth, Land-Art, showing the future state after some years of growing of the elm plants
Source: (driving by P. Schmid, RED Archive)

A relevant criterium – as is the case in all teachings – is the orientation. It is understood here as the position in relation to the sun, to the prevailing wind direction, including the movements of *Prana* or *Qi* (subtle forces in nature), to potential neighbours who may have a favourable or unfavourable influence (absence of negatively influencing electric/magnetic fields and bad geological conditions), the quality of the location in terms of the landscape of the area or the city is also relevant. All those aspects are more relevant today than ever before.

Sanctuaries, temples, churches mostly are located on auspicious places. Master builders of the past chose these special places because of their traditions. They were able to recognise them based on their mostly innate or learned subtle sensitivity that they displayed.

In this part, we present the two examples that have already been mentioned – the *omphalos* and the Peace Garden Labyrinth. In both cases an attempt was made to achieve harmony and the energy of peace. The Mecsek Stone Monument, as it was originally called – the *omphalos* – is a landmark. The stones of the monument came from the mountain-chain called Mecsek in South-West-Hungary.

The phenomenon of *omphalos* has a long tradition. These are specific points on the earth's surface where the earth's energy was expected to be found and where it was clearly felt. As a result, they have been marked with certain monument-like objects. For example, a small pyramid-shaped stone was found in Egypt. It

marked the *omphalos* there. Another example is the Greek *omphalos* that existed and can still be found in Delphi. It is a richly carved piece of art. A duplicate can be seen in a museum in London.

Speaking with some experts, we have learned that *omphalos*-like monuments can be found all around the world in the oldest cultures. According to the specific local traditions, there are sculptures of the so-called 'holy animals' and other figures: like tortoises, Nandi bulls, Shiva lingams in India, statues of saints and Austrian *Marterln* in European countries, and totem poles in the Americas. It can be assumed that all these monuments are at least varieties of *omphalos*. Below we dedicate our attention to the *omphalos* monument in Erdösmecske, which is dedicated to Mother Earth and is a request for harmony for the whole world.

The labyrinth, here in Erdösmecske known as the Peace Garden Labyrinth, forms a special walking path in a public garden. This example, although quite modest in size, is related slightly to physical planning. It also belongs, like the above-described *omphalos* – considered to be a 'navel,' giving positive and peaceful energy – to the phenomenon of *genius loci.*

It is still under development, but a peaceful ceremony was planned for 4th April 2020, to be led by an indigenous South American. In the end, the event could not have happened because of the pandemic. The design of the labyrinth is original in the sense, that none of such patterns was found elsewhere yet. This Erdösmecske Peace Garden Labyrinth is a physical art donation for the support of all peace-orientated movements. It actually represents a *Meeting of Worlds*, what is an important aspect of this particular peaceful labyrinth. The labyrinth, like *omphalos*, has a long and widespread tradition in many cultures: many labyrinths are found on Nordic seashores, the labyrinth on the floor of Chartres Cathedral, garden labyrinths in Baroque times, and the labyrinth at Knossos is one of the most popular.

A labyrinth gives the opportunity to the visitor or pilgrim to reach its goal. It is something that is opposite to a maze, where one can become lost.

The labyrinth is seen as a symbol of the human journey through life, where people go in different directions at different stages. Walking through the labyrinth one can, preferably by meditating, look around for one's destiny, one's purpose in life, or at least make an accurate self-assessment or form a certain attitude. The labyrinth is beautiful in its own way and therefore worth one's attention.

Nowadays there is a kind of renaissance or revival of architecture, in many places also with the use of labyrinths. There was a digital exhibition, DIGI-EXPO 1, organised by the Gallery of the House of Culture in Erdosmecske, which presented the development and current state of the Peace Garden Labyrinth in Erdösmecske and how it should look in the future when it is ready.

HARMONY OF PLACE – GENIUS LOCI

How to find a healthy and harmonious location for the dwelling ? Three radiesthetic field researches – made independently from each other – led together with the orientation to the sun to the final optimized choice of the site for the farmer's house, in Hollenthon Lower Austria 1972

Find the most harmonious undisturbed places for the dwellings in the apartment houses of the urban project for Gross Jedlersdorf Wien 1968
One local and one distance research helped together to decide an optimal the choice for placing the various building blocks

Fig. 2. Examples on 'Harmony of Place', drawings

Source: (photos RED Archive and L. Danzer)

The paper also includes illustrated practical examples of two building projects: One shows a completed farmer's house in Lower Austria and the other an urban housing project in Vienna. In both cases, we tried to find and to choose the optimally best place for the building(s) and its layout with the help of radiesthesia researchers, who independently made their field or distance research. After searching for them, with rather amazing results, we made an integrative decision on where to choose the final location of the building(s) and its premises. Nevertheless, there is an interesting saying: 'If you get ill, live in the countryside, and if that fails, move to a wooden house.'

The harmony of place also depends on many factors that many may already be familiar with. But nowadays there is a lack of systematic approach to designing and choosing a *harmonious* place. We do hope this conference will give a substantial contribution to the missing knowledge, because it is important to ask ourselves – what could be more important than a harmonious place in our (built) environment?

Jose Arguelles: 'Harmony is the Law of Life, discord its shadow, whence springs suffering, the teacher, the awakener of consciousness' (South, Arguelles, 2020, p. 144).

Conclusions

All in all, 'Beauty is not an additional decoration but an essential expression of truth and goodness.'[2]

In this article, we have presented examples of architectural interiors, especially the interpretation of the subject matter, and the methods for studying and supporting the harmony of the place for the benefit of health and for the provision of energy.

However, *beauty* can be defined – parallel to the ancient Greek philosophical tradition – as the brightness, lust, brilliancy, and splendour of *truth*. This suggests that there must be a core of – in a way – a perfect quality. We understand *beauty* only if it goes hand in hand with *goodness* and *truth*.

This shows that health and, of course, the wider environmental aspects must be included in the definition of *beauty* (especially in the context of architecture). In turn, this need is as much about the place as it is about the interior: the *In-Side*. And this *In-Side* also has an invisible, quite rich dimension, to which we devoted our attention.

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2   An earlier quotation by the author.

To summarise, first, one should direct one's conscious attention to the Self and the invisible, but also to that which regulates, rules, and manages the invisible *In-Side*, its dimensions and forces. The second element requiring attention is the 'Interior' – it is possible, specific qualities of transparency and the interpenetration of the visible *In-Side* and *Out-Side*. The third such element is the landmarks and land art, auspicious places of *Harmony*, with full respect for our environment (in German the word *Um-Welt* is used, which means 'the world around us,' but actually *Mit-Welt* should be used, 'the world in our midst,' or 'the unity between us and the world').

This all also fits in our mission statement: *Research, Education, Design in Science, Art, and Technology for Peaceful Sustainable Development.*

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Marco Lucchini
Polytechnic University of Milan

Who does make the domestic space?

Abstract: Last year a pandemic began to spread, which has forced people to rethink their relationship with their homes due to both the lockdowns and general feeling of uncertainty. The walls of our houses are the ultimate border against a possibly unsafe environment, but in the meantime, we need to come out in order to go to work, to school, and to remain present in our society. The domestic space has always been a core topic of housing design, but we have to reexamine it and highlight the importance of understanding which players 'make' it. The concept of domestic space blends architectural design with the field of interior design. Apart from the ordinary meaning related to the family or household, the word 'domestic' has its roots in the Latin word *domus* and means something that belongs to the home. The point is that the concept of the domestic space is liminal, there are typological and psychological features that define the house, it also matters what makes the former shift into the latter. There are several issues when defining what makes the place where we live our home, and most of them relate to what makes the domestic space. It is a matter of limits. Space changes a lot, whether the walls bound it or not. In the modern and contemporary history of domestic architecture, efforts are constantly being made to overcome the limits of the walls, to question the concept of the room. It is likely that the idea of the domestic space consists in finding balance between the search for freedom and the need for shelter. Even the view of the landscape, which relates to the former, can support our spirit, especially when such phenomena as the pandemic make us stay at home for a long time. Apart from providing us with protection against weather, the latter sets our range of movement and the scale between the corporeality and the world. Following the typological method, the paper presents the analysis of some examples of handling the relationship between limits and free space that can be considered representative. Among numerous examples, the ones that present Barcelona and Milan Modernism have been chosen. The author has been working on this topic since 2014 and this paper is part of wider research concerning the relationships that focus on domestic space.

In conclusion, architecture 'makes' space by setting the limits, giving them a shape and establishing how they can be crossed. It becomes 'domestic' when an interaction is triggered between the designer and the users.

Space is never established only by the means of the project but also by a relationship between body, mind, and design. The project does not end with the construction of the house, but continues over time through the process of appropriation of the space, which is similar to the evolution of a language that remains alive and can undergo change when it is spoken, practised, and when it travels.

Key words: domestic space, home, interior, flexibility, Modernism

Introduction

The concept of domestic space blends architectural design with the field of interior design and shows clearly the continuity among them, focusing on the relationship between the form of the interior architecture and the human activities. Apart from the ordinary meaning related to the family or household, the word 'domestic' has its roots in the Latin *domus* and means something that belongs to the home. The point is that the concept of the domestic space is liminal, there are typological and psychological features that define the house, it also matters what makes the former shift into the latter. There are several issues when defining what makes the place where we live our home, and most of them relate to what makes the domestic space.

First of all it is a matter of limits: the space changes a lot whether walls bound it or not. In the modern and contemporary history of domestic architecture, efforts are constantly being made to overcome the limits of the walls, to question the concept of the room. It is likely that the idea of the domestic space consists in finding balance between the search for freedom and the need for shelter. Even the view of the landscape, which relates to the former, can support our spirit, especially when such phenomena as the pandemic make us stay at home for a long time. Apart from providing us with protection against weather, the latter sets our range of movement and the scale between the corporeality and the world.

Following the typological method, the paper presents the analysis of some examples of handling the relationship between limits and free space that can be considered representative. Among numerous examples, the ones that present Barcelona and Milan Modernism have been chosen.[1]

The human point of view

Generally speaking, we call a house our home when we can recognise a sense of place that in some ways is a projection of our spirit and our habits on the physical structure of the space.

Day after day, we shape the environment following 'both an interpretative perspective on the environment and an emotional reaction to the environment' (Cross, 2001). As a result of a slow process of adaptation and mutual understanding, the house interacts with its inhabitants' identity and their past. The

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1   The author has been working with professor Gaspar Jaen Y Urban of Universidad de Alicante on this topic since 2014 and this paper is part of a wider research about the relationships that focus on domestic space.

house becomes its users' home not by simply being cosy, but when they can recognise it as a place where they want to be. This happens when the architecture mixes space with life through an interplay with our mind. On the one hand, 'we look to our buildings to hold us, like a kind of psychological mould, to a helpful vision of ourselves' (Botton, 2007, p. 107). On the other, the house 'is the place of our conscious emotions and our unconscious, on which (…) one's life and dreams are set' (Raboni, 2005, p. 53). As George Simmel stated, space is a product of the thought that binds sensitive experiences together (Simmel, 1998, p. 524). This also applies to the house the interiors of which combine dwelling with everyday life. The relationships between space and form depends on specific architectural design matters, such as: tectonics, composition, and technology. Considering the cognitive and interpretative processes, the relationships between the objects and human beings have a meaning based on the significance attributed to reality. So, the domestic space, which we occupy, is both the extension of our body and the reflection of our psyche (Filighera, Micalizzi, 2018, p. 35). According to Schmarsow's aestethic of interior, which he deduced through the theory of empathy, 'when perceiving things, the mind projects on them its knowledge of bodily sensations' (Forty, 2004, p. 260). It is easy to realise how deeply the boundaries of the domestic space, which in most cases constitute the walls of the apartments and rooms, are involved in the mutual relationship between space and body. The same happens in the case of furniture, as the domestic space is crossed by tensions, called by Arnheim 'perceptual forces' (Arnheim, 1977, p. 40), which are the counterpart of human body motions contributing to giving a meaning to the space and affecting lifestyles.

If the walls, the partitioning system, and the façade are limits that define the spatiality of an apartments architect, can tune the habitability of the space by operating on them.

Introducing changes in the apartment arranged with the rooms

The most widespread dwelling model in the European city is the bourgeois apartment. Here, the domesticity relies on a structure that mirrors both family hierarchies and daily routines, resulting in a rigid, highly specialised system with a clear difference between the individual and collective spaces. The relationships among the spaces are, so to speak, 'fixed.' Domestic spatiality is directed at regulating behaviours to achieve such goals as: the display of status or performance of practical functions (food preparation, hygiene, rest, leisure, work). From 19th century, when the bourgeoisie came into power, collective and multifunctional spaces like the ancien regime *enfilades*, which were meant to represent or to display celebration

of power, were replaced by a robust functional specialisation: for this reason, the house arrangement has changed through rooms, connected by corridors, lobbies, and halls. There are two factors behind the changes of this kind of house to consider: the increasing complexity of its arrangement and the room breakdown.

The first one originated in the English history of houses after the Georgian period (1714–1830). The spatial structure is neither serial (with corridors) nor central (with a single centre), but polycentric. The high number of rooms, each with a specific function, are clustered in relatively autonomous and well-interconnected parts; buffer spaces like halls, stairs, and ante-rooms serve as the passages between them (Cornoldi, 1977, pp. 16–21, 38–39). Furthermore, in the English house, the furniture is part of the architecture: wood-panelled walls, cupboards built in the panelling, sideboards and bookcases integrated with the walls, and the incorporated wardrobes were the elements that made the 'interior as a whole, the essence of which lies, in fact in its totality, in its quality as a space' (Muthesius, 1905, p. 164). The influence of the English house spread in Europe following a tortuous path: its main disseminators were Hermann Muthesius and Frank Lloyd Wright. The latter applied some English house principles, such as maintaining spatial continuity between rooms, separating spaces without divisions, and creating multiple centres in the prairie houses (1908–1909). These principles returned to Europe, where they encountered an excellent popularisation through the exhibition of Wright's works held in Berlin in 1910 and the publication of his works by Wasmuth.

Fig. 1. English house: M. H. Baillie Scott. Mary's Convent, Wantage. Ground floor
Source: (Muthesius, 1905)

Both the English house and the Wright houses were designed for the wealthier part of society and were certainly not a standard for everyone. The industrial revolution and the rising of fast urbanism increased the working-class

housing demand, but the dwellings provided by private developers were small, overcrowded, unhealthy, and with no facilities.[2]

As it is known, providing decent, affordable housing is the core objective of any progressive architect design research and the central issue in the political agenda of many countries. Modernism with the seminal apport of German rationalists introduced the most important innovations. Modernism made the domestic space a part of a process that spans, as Ernesto Nathan Rogers stated in 1952 in the Athens Charter, from the spoon to the city. The space design of the dwellings is directed towards modularity, repetition, mass production, the search of consistency between the furniture and the entire house. Among the numerous and famous examples of districts in the style of Modernism, Alexander Klein's Bad Dürremberg (1930) in Leipzig is worth mentioning as the architect applies what he had discovered in his studies on minimal housing (Rossari, 1975).
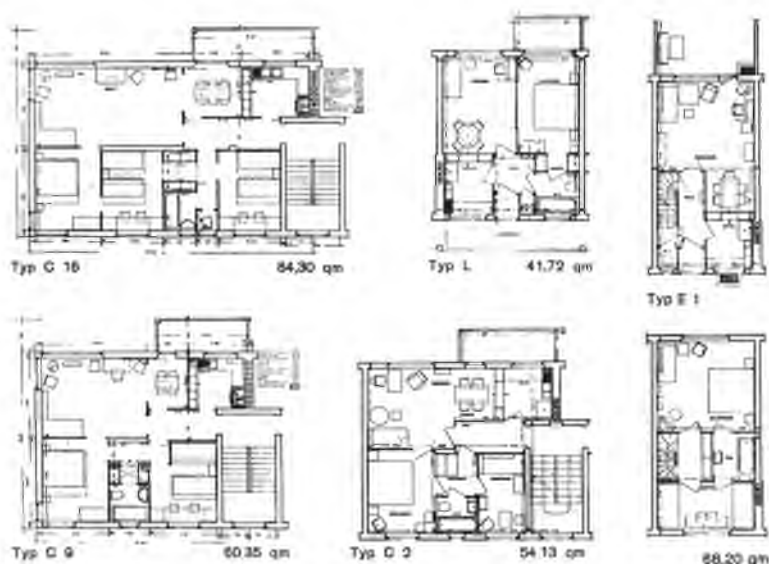

Fig. 2. Alexander Klein, typical apartment plans from 68 to 84 sm
Source: (Rossari, 1975)

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2   In several countries, the improvement of the living conditions of the working class started only due to the subsidised housing, which appeared in the first decades of the 20th century.

The space design follows the rules based on the relationship of such parameters as the amount of light, air, optimisation of free surfaces, rationality of internal connections. Klein's cultural effort highlights the basic principle of modernist house design: the size of the space depends on the analytic decomposition of functions and their recombination in the form of space units. The former are supposed to be shaped taking into consideration the pieces of furniture and their room. The domestic space of the modernist house is modular, standardised, suitable for mass production of construction elements and furniture. The rules that control the organisation of space are objective, while the relationships between spaces no longer reflect a family hierarchy, but universal principles aimed at giving everyone the same living conditions.

The limits of the rationalist house fit the measurements of the cell; indeed, they correspond to the physical walls and are part of an invisible and pervasive order determined by the technique. In fact, the domestic space is subordinated by the mass production system and contributes to regulating daily routine according to the schedule and timing dictated by industrial production. Another reason is quite obvious: the house serves its role in the reproduction of the workforce.

Nevertheless, the modernist dwelling is strongly referred to as the middle-class house: Otto Haesler, in his typical apartment layout at Georgs Garten Siedlung (Celle, 1927), abandoned the traditional *Wohnkücke* and substituted it with a sitting room, which is a reference to the drawing room,[3] and a small kitchen. In such a way, the household focus is shifted 'towards an austerity version of the bourgeois "salon"' (Frampton, 1992, p. 137).

The room breakdown: first act

The criticism regarding subduing the domestic space with object-type design method comes from a paradigm shift caused by the same modernist architects. Modernist architects discarded the rigid apartment layout based on division into rooms and introduced more flexible and more ambiguous arrangements enabling them to blur different spaces.

In the case of the Schroeder house (Utrecht, 1924), Gerrit Rietveld pursued an 'anti-cubic' architecture and questioned the use of static partitions due to the strong connection with De Stjil and Van Doesburg. Rietveld opted for sliding

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3   The drawing room is the prototype of the modern sitting room in the English House.

walls so that all the partitions could disappear in a short time making the space transformable and dynamic as well as carrying out a 'new plastic expression in open space' (Frampton, 1992, p. 145). In some ways, the Schroeder house is the outcome of an exquisitely artistic and avant-garde vision that via an analytical way allows for controlling space using abstract and elementary geometric principles.

Mies van der Rohe took a more expansive conceptual leap. He triggered a new vision of space by following a cultural path and a substantial building competence. From 1926 onward, he got new cultural inputs including via contact with Rudolf Schwarz, Siegfried Ebeling, August Endell, and the philosopher and theologian Romano Guardini. His goal was to combine the objectivity embodied by technology with the 'human spirit,' rediscovering the meaning of life and the need for an authentic existence. Hence Mies denied the 'a priori' meaning of space considering it as a chance that may be handled by means of enclosuring or openings to 'allow to set the inner needs of human life free' (Neumeyer, 1996, p. 195). At the beginning of his career, Mies coped with a transition from a relatively traditional concept of space, in which the domestic space is arranged by using boxes, to a new one, in which dynamism and open plan prevails.

In the series of brick houses (Wolfe house in Guben – 1926, Herman Lange house in Krefeld – 1928, Esters house in Krefeld – 1930), even though the spatiality is defined by an opaque wall envelope and rigid internal partitions, the asymmetry of the layout and the introduction of large picture windows are affected by avant-garde spatial concept. For example, space is made more fluid due to the visual connections between the living areas achieved with double glazed doors. In the Barcelona pavilion (1929), space is devoted to the dialectic between the solid tectonic conception displayed by the freestanding walls. The monolithic and filigree surfaces are visible on the eight cruciform columns that establish an intangible relationship with the flat plane of the ceiling and the floor. The absence of connecting elements (capitals or beams) alludes to free space, in which the boundaries are suggested without being imposed by the 'freestanding planes that bypass these supports' (Frampton, 1995, p. 175). Villa Tugendhat was the domestic version of the pavilion in which case, however, Mies presented a more cautious attitude in the design of the sleeping area by using masonry walls. These architectural structures tend to have no boundaries: such limits of the envelopes as the large glazed wall that may disappear by sliding into the base are 'in becoming,' a return to Siegfried Ebeling's conception of space as a 'membrane.'

The aesthetic value shift from volume to space: the latter constitutes a metaphor for the former. Mies turned the domestic space into something endless by transforming the room arrangement into a force-field generated by the dualism between solid, filigree, tectonic, abstraction limits, and their dematerialisation in such a way that the architecture becomes a continuum with the landscape.

Photo 1. Mies van der Rohe, Barcelona Pavillon 1929
Source: (author)

On the one hand, modernist domestic architecture widened the limits of space, making it more fluid and continuous, but on the other hand, it applied coercive models to the living. The first attitude concerns the architectural design and becomes real by modifying the relationship between the support and the cladding system using innovative materials. The second is more concerned with an intellectual and social dimension and, as Colin Rowe argued, the architect presumes to 'renew the world according to his conception of reality' (Rowe, 1994, p. 31). The machine-driven architecture of Modernism, despite the good intentions, puts people who should have been assisted under a hidden control that is reminiscent of the manipulation and control of the 'disciplinary technologies,' about which Michel Foucault wrote in *Discipline and Punish.*

Aside from the role of the technological system, the machine-inspired houses, especially the ones designed by Le Corbusier, compacted different scales

in a single piece of architecture. The airplane or steamship strongly fascinated the *maître à penser,* as they enabled one to observe a huge portion of the landscape in a glance. The Petit Maison built on Lake Geneva by Le Corbusier's for his parents (1926) combines the view of the lake with the space through some mechanisms, one of them being the ribbon window. This last element becomes the protagonist of the space: to make it flow, the rooms are turned into polarised core around the pieces of furniture that become the protagonists of the spatiality. The house is a technical box that allows the inhabitants to contemplate the landscape as it will happen for many subsequent projects from the Beistegui apartment to the Unité.

In his naïve trust in technological progress, Le Corbusier was able to notice a tendency of thoughts that sought an ideal spirit of order and harmony in the Mediterranean culture. As Benedetto Gravagnuolo (Gravagnuolo, 1994, p. 38) argued, Le Corbusier's admiration for the *lyrisme* of the white volume put together under the light arose from his awareness of the historical role of the classic and Mediterranean architecture that grew while he was traveling through Italy in his Voyage d'Orient.

The room breakdown: the second act

The Second World War and the reconstruction of Italy and Spain[4] left no much room for the machine philosophy; the objective conditions of poverty and backwardness in those countries made only traditional construction technologies sustainable. The neorealism widely spread in Italy in cinema, literature, and architecture as well, and was closely linked to the enhancement of local culture and, what Ernesto Nathan Rogers called, the environmental pre-existing.

The reevaluation of Modernism began: this is symbolised by the monument built to commemorate the fallen in the German Lagers built by the BBPR in Milan in 1946 and the Velasca Tower built by BBPR in Milan in 1959. Both represented the ongoing research on the fluidity of space without the subjection to pervasive machine logic. In this context, the reconstruction made housing design for everyone (subsidised and social) mandatory, setting aside the fascination for mass production and standardisation for deeper attention to the history of the place and environmental features.

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4   In Spain a violent civil war was fought from 1936 to 1939, which resulted in the victory of the fascists under the command of Francisco Franco, whose dictatorship lasted until 1975.
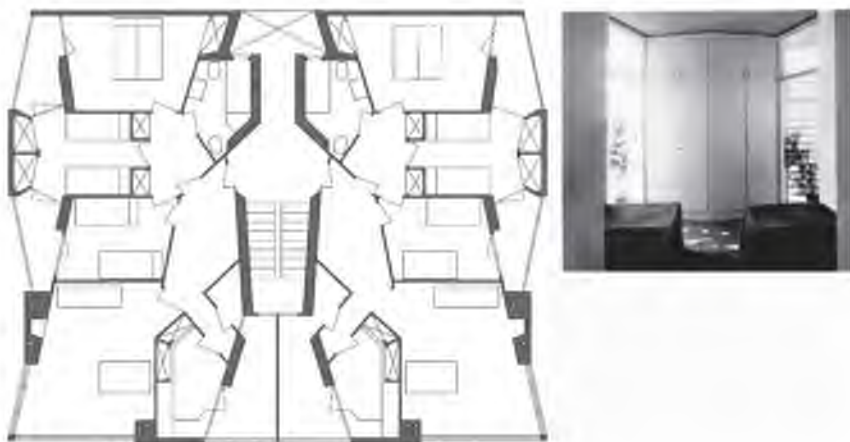
Fig. 3. J. A. Coderchs ISM Barceloneta (1953), plan and view of the double bedroom
Source: (redrawn by the author)

Among the main 'players' are Ernesto Nathan Rogers, the intellectual leader of BBPR architects, Ignazio Gardella and Gio Ponti in Milan, José Antonio Coderch, Federico Correz Ruiz, and many others in Barcelona. They played key role due to both the quality of their professional achievements in housing and their influence, including international ones, as directors of *Casabella* and *Domus* magazines (Lucchini, Urban, 2018, pp. 9–24). In 1946 Rogers, who recently was appointed the director of *Domus*,[5] writes that mans house project is a matter of limits and defining them is 'a cultural issue' (Rogers, 1946, p. 2).

J. A. Coderch was able to obtain a meaningful interior space in his houses, rethinking the boundaries among the different rooms. He focused on the geometry of the layout, attempting to change the spatiality, twisting or deforming the partitioning system. Coderch designed an outstanding house for working seamen in Barcelona (1952) – known as La Barceloneta (a district of Barcelona) or ISM house (ISM stands for Istituto Social por la Marina), in which he slightly rotated the internal walls, compressing the bedrooms into small modules placed halfway between the core of the stairs and the façade, so that the connections became broader and less dull. In this way, the spatiality of the apartments

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5   He left *Domus* in 1953 to undertake the direction of *Casabella*, which he continued
    until 1965. Meanwhile, Gio Ponti took his place at *Domus*.

becomes more dynamic as the space is vitalised by an interplay of compressions and dilations. Furthermore, the space between the façade and the flats has been divided into two layers, which form a lenticular niche that belongs simultaneously to the interior and exterior.
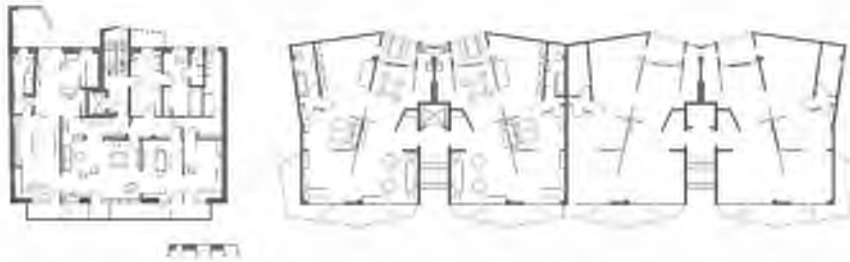
Fig. 4. Gio Ponti's Architect's house, 1957, Milan, space for four people
Source: (redrawn by the author)

In the meantime, in the magazine *Domus,* the topic of flexible adaptable space was gaining popularity; the topic of modularity linked to the mass production is being resumed as in Italy the industrial system is slowly becoming empowered. This time the modularity is addressed via a flexible arrangement in the apartment layout in order to enhance the feeling of domesticity and make the apartment more 'sensitive' towards the inhabitants (Chimenti, p. 127).

Gio Ponti boasted years of experience as housing designer capable of setting a long-lasting style (Irace, 1997, p. 1997). He made a remarkable effort to make Coderch's architecture widely known through *Domus.* But his legacy should be sought in flexibility. Since the 1930s, Ponti's focus was had been on a large living space that would be flexible and adaptable. He partially tested it in the case of the 'typical houses': Julia, Carola and Fausta, (1931–33) in Milan and in Marmont house (1936) as well, by means of equipped diaphragms. His more effective attempt was the single-space house for four people (1956) designed for the magazine Domus: the house is arranged through a set of modernfold movable panels and a series of obliquely angled sections of walls' so that the space is fluid and divisible (Galfetti, 1997).

Photo 2. Vittoriano Vigano, Bloc's house, 1958, Portese del Garda
Source: (Domus, 1959)

He pursued a prominent outcome in the house that he designed for himself in via Dezza in Milan (1957). The apartment covers the area of the entire floor of a nine-storey building. The layout follows a fairly common system in Milan at the time, based on a central corridor. The service spaces are clustered on the side facing the courtyard, with bathrooms, laundry room, kitchen, ironing room, and a small room for a maid. Gio Ponti, however, shifted his focus on spatial relations towards the façade, connecting all the rooms through a system of folding walls; this type of longitudinal connection, very similar to the enfilades, is superimposed on a transverse one, which combine visually the architect's study room with the master bedroom and the living room. The relationships between the environments are turned into 'open' and 'dynamic' because they tend to make the inhabitants occupy a single space.

From the 1960s, other design experiences questioned the hierarchical order rooted in the room as a space unit: among them, the villa 'La Scala' designed by Vittoriano Viganò for André Bloc, built in Italy at Portese sul Garda (Brescia) in 1958, can be considered a milestone. There are only horizontal boundaries marked by the daring reinforced concrete slabs which overhang on Garda Lake. There are no walls, but a thin glazed skin which is just a climatic frontier and

virtually sets no difference between indoor and outdoor space. The open plan arrangement makes the interior space fluid and fleeting, and this concept is highlighted as such by the long and amazing stairs that follow a slope leading forty metres down to the lakeshore (*Domus*, 1959, p. 351). Apart from the service area clustered in a container, the differences between the functional areas are suggested by ephemeral partitions, such as the Venetian blinds hanging from the ceiling (Ottolini, 2011, p. 54).

The inhabitant's body gains spatial value because he is one of the protagonists in the system of perceptual and topological relationships created by the relationship between architecture, furniture, and landscape. Removing fixed partitions changes the way space is touched and seen; moreover, the relationships of distance and proximity between the human body and the architectural space make them extremely flexible. The space in turn becomes an 'amniotic fluid' in which said body experiences dilations, compressions, cavities, convexities, edges, as well as vertical and horizontal planes (Vitta, 2008, p. 99).
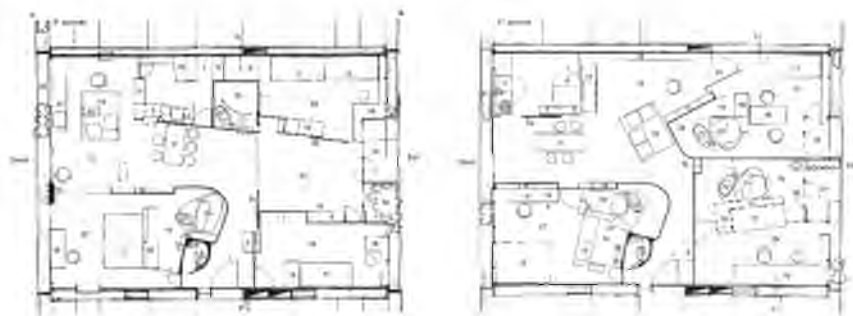
Fig. 5. Daniel Chenut, Ipotesi per un habitat contemporaneo (Hypothesis for a contemporary habitat), 1959, the same apartment changes according to different family life periods

Source: (Chenut, 1968)

The room breakdown: the third act

In the above-mentioned examples, the architect is always the person that decides on the structure of the space, yet he progressively leaves a pretty large degree of freedom to its inhabitants. In later research, the space arrangement has been achieved through adaptability and flexibility.

In the 1960s, many architects designed apartments with increasingly flexible domestic spaces to quickly fulfill their users' changing needs. The form of the living space no longer depends on a composition or arrangement; technology is the main issue that can affect the space. At least, this is what one can infer by looking at Daniel Chenut's project *Ipotesi per un habitat contemporaneo* (1959–60): dwellings are designed with a high degree of flexibility as everything can be moved, regardless of whether it is a partition, a piece of furniture, or a sanitary block. The horizontal load-bearing structure is a steel girder frame, supported by concrete pillars, through which the building installations run. In this way, the sanitary items can be moved, which allows one to overcome the main obstacle regarding flexibility (Chenut, 1968).

Fig. 6. Cini Boeri's House in the Wood, Usmate, 1969
Source: (redrawn by the author)

The space arrangement follows a modular pattern clearly inspired by Le Corbusier, however, what matters is the dynamic space concept according to which man acts with movement and glances (Ottolini, 1993, p. 199). Ábalos & Herreros, in the unbuilt project for the contest 'Housing and City' for the Barcelona Diagonal, designed a high-rise slab building with gallery access open space apartments in which there were sanitary blocks that could be moved freely,

which was an analogy to Chenut's project. In both cases, the house consists of the contained space set by the envelopes, and what makes the domestic space are the properties of the object (Lucarelli, 2015).

Cini Boeri developed a different, more realistic way of overcoming the limits of fixed partitions in the villa in Osmate, northern Italy (Zevi, 1972, pp. 297–301). The house is not arranged via the rooms, but through 'spatial areas' created as if they were niches 'dug' in the wall perimeter. The latter becomes an inhabited wall in which the rooms are defined by impalpable limits consisting of nooks and small offsets in the height of the floor. The sleeping area for parents and for children can be opened and closed with sliding walls allowing these spaces to be connected to other rooms. There is a tendency to make the transition from private to collective areas a free choice; for this reason, all the rooms overlook the common areas.

There were many other attempts, most of which not built, to design domestic spaces that would remove the physical partitions. Some of them definitely abandon the field of architecture and transition into the field of industrial design, like the modular furniture system by Giannantonio Mari (1972) or the mobile wall modular system by Alessandro Bini (1983) (Ottolini, 1993, p. 271).

Tatjana Schneider and Jeremy Hill continued research work at the University of Schieffield providing a full scope of the project designed on the basis of flexibility. The authors have discovered recurrent types of flexibility categorised according to the possibility for users to modify in a more or less relevant way the internal partitions. Sometimes the house is just raw space, in which case it is necessary to cope with constructing on one's own; in other cases, excess space is offered in order to provide an opportunity for applying future expansions. An example is the multi-storey apartment house designed in Germany by Brandluber and Kniess (1999) (Schneider, 2007, p. 117).

Conclusions

The house is a 'system of places' and their permanence results both from the relationships between the spaces and their individual properties. The overall figurative value is characterised by the relationship between the autonomy of various singularities (rooms, spatial areas, or distribution apparatus) and the whole unit (an apartment or a building).

Moreover, whether space turns into one's place depends on the inhabitants recognising themselves in those spaces. This happens for many reasons, but we can argue that they mould themselves into the interiors, thus making the change of the abstract space into a 'place to be' (Schulz, 1985).

So, architecture 'makes' space by setting the limits (walls, floor, ceiling), giving them a shape, and establishing how they can be crossed; it becomes 'domestic' when an interaction is triggered between the designer and the anonymous or known user. The intention, expressed by the designer, interplays with the practices of space use, implemented by the inhabitants. The boundaries of this intersection are determined by the freedom that the designer leaves to the inhabitants; it can be very limited, as happens in the case of the houses in which the partitions are rigid and the spatiality is strongly hierarchical, intermediate – as is the case in mobile partitions – or almost absolute, as it happens in the case of the raw space in which the inhabitants physically build the interiors, thus getting a custom-made home.

Space is never established only by the means of the project but also by a relationship between body, mind, and design. The project does not end with the construction of the house but continues over time through the process of appropriation of the space, which is similar to the evolution of a language that remains alive and can undergo change when it is spoken, practised, and when it travels (Teyssot, 1986, p. 26). 'In short, space is a practised place' (De Certeau, 1984, p. 117).

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Mieczysław K. Leniartek
The Angelus Silesius University of Applied Sciences in Wałbrzych

The aesthetic integrity of the architecture of the contemporary interior in the old and new building

Abstract: The subject of this thesis is the problem of maintaining the integrity of the architecture of buildings in the face of the changing ideas, trends, and fashions in the sphere of design. Its objective is to verify the relationship between the building and its interior, which may be based on literal use of cultural patterns, their interpretation, or complete separation from them. These various approaches are considered for old and new facilities. The thesis was based on a comparative analysis of the literature on the transmission of the cultural code in architecture, as well as the perception of the interior as 'good', extended by research through observation of new interior designs. It was found that harmony in the relationship 'building – interior' is conditioned by the consistency in the application of architectural patterns common to both scales.

Key words: aesthetics of architecture, aesthetic integrity, architecture of building, interior design

Introduction

It is evident that contemporary architectural criticism treats solutions in the scale of buildings and their interiors differently. The former are usually assessed as a whole, in the context of their location, functional and spatial solutions, and finally aesthetics. The latter are most often considered as original artistic propositions, being a separate piece of work in relation to the architecture of the building itself, at best with more or less understandable relationships. As a result, interior design schemes become the subject of an aesthetic assessment that is taken out of the context of the entire architectural solution.

The nature of architectural solutions in the scale of the interior of a building is determined by a number of factors, such as, in the case of existing buildings, the intangible and material tradition of the place, and for newly erected buildings, the current ideas, trends, and fashions. The individuality of the creators of architecture also plays a significant role here – these old buildings and new ones, which is reflected in spatial solutions, which make them iconic features. Due to the fact that the assessment of an interior design proposal takes into account a

number of factors, both from the functional and formal sphere, but also from the semantic sphere, the task becomes extremely difficult.

The question arises as to how, in the case of original interior design proposals, there is an intergenerational dialogue between architects operating on different scales and within the same generation, and whether the transmission of historical and contemporary aesthetic concepts translates into harmonious architectural solutions.

Building – interior relation

According to the holistic approach to architecture, the interior is the basic element constituting space. The individual, higher, and lower needs of its user are fulfilled inside, and the specificity of the function is reflected in its form and how it fits.

The solution of each interior is based on a set of architectural patterns developed through the historical experience of space. They constitute the basis of the entire sequence of spatial decisions: selecting the interior from the functional areas of the building, connecting the interior with the outside world, defining its shape and size, determining the surface finish and type of interior detail, choosing decorations, light, and colour, as well as elements determining how the place is familiar. The degree of concentration on these cultural patterns determines not only the cost-effectiveness of the solution, but also the poetic nature of the architectural expression (Alexander, Ishikawa, Silverstein, Jacobson, Fiksdahl-King, Angel, 2008, pp. LV–LVII).

However, as can be seen in architectural education, practice, and criticism, this ideal pattern language is applied selectively, depending on whether the object of interest is the entire building or just its interior. And so, in the case of presenting the history of building architecture, patterns that shape the function and form are more exposed (Rogers, Gumuchdjian, Jones, 2015), while in the case of interior architecture, more emphasis is placed on issues of a visual nature (Pile, 2013).

A similar approach is visible in the design manuals: the dominant elements of architectural design are function, structure, and technology, which is why the interiors of the entire building are subordinate (Neufert, 2020); the interior design emphasises colour, lighting, decorations, and the surroundings – it is treated as an element that enhances the attractiveness of the interior (Gibbs, 2010). The difference of accents is also visible in the verdicts of the architectural competition: in architectural schemes of buidings, attention is paid to the correct integration of the building into the surroundings, the attractiveness of the shape of the body and the appropriateness of the materials used (18), in interior design,

the most important criteria are: originality of design, visual values, and innovative solutions, whereas its functionality is marginalised (26).

Perception of 'good interior'

Recognising, that a given interior has the features of a 'good interior' is based on the perception of its utility and aesthetic values, derived from the logic and aesthetics of spatial proposals. The reliability of the solutions is based on the knowledge of the design techniques, whereas their originality results from the architect's creativity and distinguishing individual features. The final result, which is a complete interior, is also the effect of significant contribution made by its user, with his lifestyle and views on art. The communication between these two entities during the design process plays an important role here and the final effect is the result of their mutual understanding and cooperation.

The variety of individual and collective needs and tastes causes the emergence of fashions that are characteristic in a given time period in interior design, which sometimes become preserved in the form of a longer-lasting artistic style. And so nowadays we observe such interior design trends as: eclecticism, i.e. playing with form, texture, pattern, and colour, eco-design and the search for inspiration in modernism, French elegance, and Japanese philosophy of wabi-sabi, in place of the recently dominant Scandinavian aesthetics (23). To some extent, these trends are an expression of globalisation with a mixture of cultural patterns, as well as the idea of sustainable development with a shift towards ecology.

Due to the multiplicity of interests and the rapidly changing fashions associated with them, it is possible to observe various types of beauty, ugliness, or kitsch in architectural designs. They are often intentional in nature, and due to their originality and otherness, they evoke an aesthetic experience related to the sense of pleasure as well as emotional and intellectual stimulation. As a result, they gain widespread popularity, which means that over time they will become new aesthetic categories, defining the directions of creative searches, as is the case with the 'camp', which exhibits bad taste, 'glamour', which displays splendour, and 'vintage', which refers to previous eras (Kazimierska-Jerzyk, 2018).

On the margins of this common tendency of following the current trends, there are interior solutions that constitute a factor shaping collective identity. In such cases, historical facilities of material culture are most often used, which when introduced into the interior not only enhance its artistic expression, but above all give it a symbolic meaning. This procedure, referring to the common cultural tradition resulting from a common place, history, and participation in the life of a community, is meant to evoke a sense of identification with a given

place and a sense of being rooted in it, both in the individual and collective dimension (Sikora, 2015, p. 81). From the perspective of the architecture of the entire building as a collection of interiors, such an approach may be considered shallow, as it refers to one sign – 'the element that determines the identity of the place'. This omits many other patterns relating to the entire structure of the facility, derived from the interaction of users with their environment, and which are deeply rooted in the architectural tradition. It also applies to newly designed buildings (Unwin, 2014).

Some similarities, but in the local dimension, manifest themselves attempts to shape the architecture, including interiors, based on the principles of critical regionalism. As Kenneth Frampton explains: 'The fundamental strategy of Critical Regionalism is to mediate the impact of universal civilization through elements derived indirectly from the peculiarities of a given place (…). It may find its leading source of inspiration in such things as the range and quality of the local light, or in a tectonic derived from a peculiar structural mode, or in the topography of a given site' (Frampton, 2017, p. 14). This form of regionalism distances itself from attempts to recall traditional 'simple-minded' regional forms, as well as their reinterpretation, accusing them of cheap sentimentalism in the face of irretrievably lost vernacularity.

At the opposite extreme, there seems to be a new direction in architecture, which is characterised by transparency, and thus complete blending into the physical and social landscape. Functionally perfect buildings, formally devoid of any references to the tradition of the place, often have significant aesthetic values. The user's imagination of a neutral space plays a significant role here – the foreground merges with that what is further away and the most distant. This lack of the third dimension architecture – due to its transparency, which also carries no meanings and does not evoke moods, is criticised for being a departure from cultural values and subordinate to economic values. As Michel Houellebecq notices: '(…) contemporary architecture is a transparent architecture. Having to enable the rapid circulation of individuals and commodities, it tends to reduce space to its purely geometrical dimension. To be traversed by an uninterrupted succession of textual, visual and iconic messages, it must ensure maximum readability (only a perfectly transparent place is capable of providing a total conductivity of information)' (Houellebecq, 2016, p. 21).

New functional and spatial concepts emerge from the flood of ever-changing needs, the assessment of which is extremely difficult due to the lack of unambiguous criteria. Although the assessment of architecture is based on the traditional, logical Vitruvian triad: *utilitas – firmitas – venustas*, only the first two parts are unambiguous because they refer to unambiguous concepts in the field of economy and technology. The third element of the triad – 'beauty' has

lost its original meaning, which has been replaced by impressions, intellectually strengthened – by being in an aesthetic situation (Gołaszewska, 1986), or psychologically – by communing with the architecture of happiness (Botton, 2010). Hence, there are such opinions as: '(…) the aesthetic richness of architecture in the last dozen or so years puts aesthetics and the theory of architecture in a theoretical crisis that must be overcome in order for new facilities to be conceptualised and classified' (Tarnowski, 2002, p. 106).

Case studies: old building – new interior

Various new interior design solutions relating to rooms in existing buildings were analysed. In order to emphasise the observed phenomena, the selection of the facilities was limited to the ones that are characteristic in terms of their historical, aesthetic, and regional values. Their interiors are subject to adaptation or aesthetisation, representing a variety of approaches: from literal quotation of old cultural patterns, through their interpretation, to avoidance of direct references to tradition, characteristic of modern architecture. Attention was paid to whether the newly designed interiors correspond stylistically to the values represented by the building in which they are located and whether they fit in with the latest trends in architecture.

Literality

The building, called Kamienica Kantorowska, is located at Szewska 24 Street in Kraków, in the immediate vicinity of Planty. It was built in 1428 as a brewery and from the first half of the 18th century it was inhabited by the liturgical service of the Church of St. Anna. In its vicinity, there was a small parish school, which survived in this place until 1689. The building is associated with the figure of St. Jan Kanty, professor of the Kraków Academy, who lived there between 1429 and 1473. After Poland regained independence in 1918, the tenement house was taken over by secular owners. The stone-built two-storey building with a steep roof has a classicist decor and is an important element of the park surroundings of the nearby temple. Since 1968 it has been in the register of architectural monuments – photo 1.

After 1945, there was a co-operative vegetable shop on the ground floor, and between 1976 and 2013, the 'U Zalipianek' cafe, with an interior decorated in the regional style by folk artists from the village of Zalipie near Dąbrowa Tarnowska (Encyklopedia Krakowa, pp. 363–364, 368, 372–373, 378, 722, 949) – photo 2.

The regional tradition has been continued since the end of 2017 by the 'Zalipianki Ewa Wachowicz' resto bar. The resto located on the ground floor of the building has three rooms with one hundred seats for clients. There is a garden adjacent to it located on the terrace with a view of the greenery of Planty.

Photo 1. Kantorowska Townhouse, Szewska 24 St., Kraków
Source: (39)

Photo 2. Interior of the café 'U Zalipianek' in Kraków in 2013
Source: (photo Anna Stankiewicz Ordyczyńska (28))

Photo 3. Interior of the Café 'Zalipianki' Ewa Wachowicz Resto Bar in Kraków in 2018
Source: (38)

The interiors of the restaurant, designed by the architect Robert Piątek, display a reference to the regional art of Powiśle Dąbrowskie associated with this place, the tradition of which dates back to the end of the 19th century. The vaulted rooms with plank floors are fitted with simple furniture in muted colours in order to display the paintings with floral motifs covering the walls. These are the works of Zalipie folk artists, discovered during the adaptation of the rooms, as well as paintings on the walls and vaults made by decorators Sebastian Gomułka and Andrzej Górnisiewicz, inspired by the art of Młoda Polska (in English: Young Poland) artistic movement, especially plant motifs in the works of St. Wyspiański – photo 3.

The painting artists, who are the authors of the film sets and interior decorations, achieved the desired effect by creating an interior that would be a 'stage in the theatre of life' and, at the same time, a set for television culinary programmes that were to be recorded in this place (25). This realisation is a clear manifestation of the ubiquitous carnivalisation of cultural life.

Interpretation

The building is located at Świdnicka 2–4 Street in Wrocław, which is one of the oldest streets in the city. It is an element of the urban block development complex, which was built here between 1955 and 1962 in the place of tenement houses destroyed during World War II. Alongside the historic route, which was enlarged here to the form of an elongated square, a long, four-storey apartment block with commercial premises on the ground floor was erected according to the concept of architects Włodzimierz Czerechowski, Ryszard Jędrak, Ryszard Natusiewicz as well as Anna and Jerzy Tarnawski from Wrocław. In terms of style, the architecture of the building combines socialist realism with modernism. Socialist realism manifests itself in a simplified body with gable roofs, its proportions, and horizontal articulation of the elevation, whereas the inspiration of modernism is visible in the layout of the ground floor with openings connecting the interior of the street with greenery in the back of the building. Thanks to these restrained solutions and a well-chosen scale, the building harmoniously fits into the landscape of the Old Town with its rich architectural forms (20) – photo 4.

Photo 4. Residential and service building at 2–4 Świdnicka Street in Wrocław
Source: (40)

In 2019, in the BWA Wrocław Gallery of Contemporary Art on the ground floor, a permanent installation called 'Żyjnia' (in English: 'Lifery') was created, which was intended to be a *materialised dream of a municipal sanatorium* (27). Inspired by the atmosphere of Lower Silesian spa towns and villages with spa houses and sanatoriums, the interior was designed by architects Dominika and Paweł Buck from BUCK.STUDIO in Wrocław. The room with an area of 76 m² is used for mental and physical renewal of 'city patients' in parasanatory conditions, and at the same time is a meeting place, a 'contemporary city lounge' in which various artistic, cultural, and social events take place – photo 5.

Inside the 'Żyjnia' there is a rectangular structure with rounded sides that is made of glass blocks, in which aromatic mist is produced for inhalation and herbal infusions are made. The silent and relaxing atmosphere of the interior is formed by the surrounding delicate, semi-transparent green curtains and comfortable, specially designed seats and couches. The entire place is reminiscent of resort architecture, but there are also visible echoes of modernism – photo 6.

Photo 5. Axonometry of the interior 'Żyjnia' in BWA Wrocław Gallery of Contemporary Art
Source: (31)

Photo 6. Interior 'Żyjnia' in BWA Wrocław Gallery of Contemporary Art in 2019
Source: (33)

Transparency

The building is located at No. 33, Lane 506, Jianguo Road in Shanghai, China. This place is located in the centre of a given French Concession, i.e. a separate area covering 66 hectares, functioning autonomously between 1849 and 1943. This specific residential area was influenced by the European culture and therefore in its vicinity there are buildings with stylistic features from the 1940s, which were borrowed from the United Kingdom and Spain. The three-storey building has the features of a modernist villa, with a portico accentuating the front entrance and a balcony overlooking a 30 m² courtyard in the back – photo 7.

Photo 7. Residential and service building at Jianguo Road No. 33, Lane 506, Shanghai, China

Source: (photo Ripei Qiu (42))

Despite the change of the function of a single-family house into a multi-family house, forced by political and social conditions, the villa has not lost its architectural qualities and, as an important witness of the 150-year history of the city, is under conservation protection. Its role as a monument is significant because many old houses in this district were demolished in order to obtain economic benefits resulting from more intensive, high-rise buildings.

The interior of the 90 m² ground floor villa was transformed in 2018 by Xiaochao Song and Keming Wang from the Shanghai MONOARCHI architectural team into their studio. The adaptation of the building was treated as an obligation to *defend its past and enrich its narrative* (17). It consisted in arranging a working space for 8 people, with an exhibition space in the middle. The programme also included a conference room, a library, a modelling workshop, a kitchen as well as technical and sanitary rooms, all with a small ground floor area – fig. 1.

Fig. 1. Axonometry of the interior of the architectural studio MONOARCHI
Source: (41)

This forced the hybridisation of functional solutions, as well as the intro-
duction of specific pieces of furniture into the interior, such as racks made of
steel bars, a desk without a leg, or a floating table top made of brushed stainless
steel. Various spaces have been defined by concrete walls and vaults that give the
corridors a ritual atmosphere, as well as the form of steel bar arches emphasising
the importance of work rooms, without interfering with their building structure.
It is an echo of characteristic colonial architectural details – photo 8.

Case studies: new building – interior

Various new interior design solutions related to rooms in newly constructed
buildings were analysed. To emphasise the observed phenomena, characteristic
objects were selected due to their reference to the latest trends in architecture.
Buildings and their interiors represent creative attitudes: from reinterpreting
regional cultural patterns, through looking for inspiration in the natural land-
scape, to negating the context expressed in total transparency that creates
illusions. Here attention has been paid to whether there is a stylistic correspon-
dence in the 'building-interior' relation, decisive for the consistency of artistic
expression.

Photo 8. Interior of MONOARCHI architectural studio in 2018
Source: (43)

Literality

The building of the five-star aparthotel 'Bachleda Club Residence' is located in Zakopane at Kazimierza Przerwy-Tetmajera 16 Street, near the city centre. It was built in 2019 and it is a part of a larger complex which includes the 'Wersal' hotel erected in 2004. Designed by the Karpiel Steindel Architektura studio in Zakopane, the building houses 129 apartments and a complex of recreational and leisure rooms with a swimming pool, saunas, a lounge bar, and meeting rooms. The rectangular shape of a four-storey building with facades made of wood, stone and glass, enclosed with a grate supporting the significantly protruding eaves of the green flat roof, decorated with stone pots with endemic vegetation, according to the authors of the project, it is: 'an example of the concept of the so-called Keneth Fromptons critical regionalism, which proclaims the contemporary use of traditional elements of regional architecture in an approach to shaping a fully modern facility and its development in a large-scale and cubature project' (16) – photo 9.

Photo 9. Aparthotel 'Bachleda Club Residence' at Kazimierz Przerwa-Tetmajer 16 in Zakopane

Source: (photo Paweł Ulatowski (37))

The interior of the building, inspired by regional architecture and art, was designed by ORB Studio in Warsaw. This is an attempt to refer to the Zakopane style created by Stanisław Witkiewicz in the late nineteenth century, manifested in the characteristic architecture, furniture and applied arts, and at the same time meet the requirements of modern functionality (19). Decorative elements of the interiors with plant ornaments were made using traditional techniques by local craftsmen – carpenters, painters, and black-smiths, with the use of larch wood, stone slabs of sandstone, and leather. The rooms are dominated by light earthy tones and have rich décor with regional accents, which include sculptural walls with motifs inspired by highlander folklore and other building elements, patterned floors, comfortable furniture, and elegant accessories. The character of the interior is diversified – some emphasise the regional element more strongly through the domination of wood, others focus on comfort through the wider use of fabrics – photo 10.

Photo 10. Interior of the restaurant and pastry shop 'Góralska Tradycja' in aparthotel 'Bachleda Club Residence'

Source: (32)

Interpretation

The building '7132 Thermal Baths' is located in Vals, a small village with a spa tradition dating back to the 17th century in south-eastern Switzerland. It was built between 1993 and 1996 according to the design of Swiss architect Peter Zumthor, creating a complex with a hotel from the 1960s. The two-storey building has two swimming pools – internal and external, as well as numerous rooms for healing, relaxation and rest. Erected over the spring of St. Peter, the massive, rectangular object fits into the Alpine landscape by being partially cut into the mountain slope and covered with a flat roof with grass. It consists of fifteen healing rooms, five metres high rectangular blocks made of concrete and stone, with protruding cantilevers covering the entire building, with gaps between them, which introduce cobalt light into it. The significantly glazed facades are lined with local quartzite plates. In 1997, the building was placed under conservation protection as an example of architecture in line with the spirit of time and place (22) – photo 11.

The interior of the '7132 Thermal Baths' resembles a form of a cave. This is due to the characteristic layout of the rooms, their décor and architectural details. The entire structure, which is referred to as the 'negative space between the blocks', resembles a labyrinth carved in the rock that binds all rooms into an intriguing arrangement. This space is characterised by the presence of stone and water, a combination of darkness and light, as well as silence and sounds composed especially for this place of music. This makes the place a ritual experience, both physical and spiritual, stimulated by visual, auditory, and tactile stimuli – fig. 2.

This convention of a place of physical renewal and spiritual meditation is subordinated to the aesthetics of minimalist furnishings, such as wooden chaise lounges in rest rooms and cherry veneer cabinets in cloakrooms. The interior is a materialisation of Peter Zumthor's declaration: *I believe that the language of architecture is not a question of a specific style. Every building is built for a specific use in a specific place and a specific society* (Szymczak, 2020) – photo 12.

Photo 11. '7132 Thermal Baths' in Vals, Switzerland
Source: (29)

Fig. 2. Plan of '7132 Thermal Baths'
Source: (44)
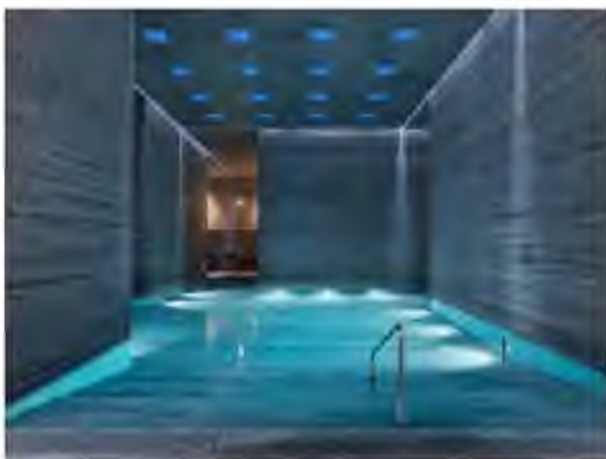
Photo 12. Interior of '7132 Thermal Baths'
Source: (photo Fabrice Fouillet (36))

Transparency

The pavilion 'Les Cols Restaurant Marquee' was erected in 2011 in the city of Olot in the province of Girona, Spain. Its authors are the architects Rafael Aranda, Carme Pigem, and Ramón Vilalta, from the local RCR Arquitectes studio. This large, 2630 m², semi-open banquet and party space was arranged next to a 13th century country building with a restaurant added in 2002 and a hotel in 2005 (Curtis, 2013). Made of natural stone and transparent plastic, the facility with a banquet hall, sanitary facilities and a kitchen blended into the volcanic landscape, placing it in a recess – photo 13.

Photo 13. Pavilion 'Les Cols Restaurant Marquee' in Olot, Spain
Source: (35)

The transparent tent of the banquet hall, which is the cover of the wedding hall, cocktail bar, disco, and restaurant, has the form of a cuboid cut into strips, between which internal gardens have been created to separate individual functions. This allows for intimacy while maintaining a sense of wholeness. On one side of the tent, there are a cloakroom, changing rooms and toilets that are located underground. On the other side, there are kitchens separated by a series of glass yards cut out in their plan – fig. 3.
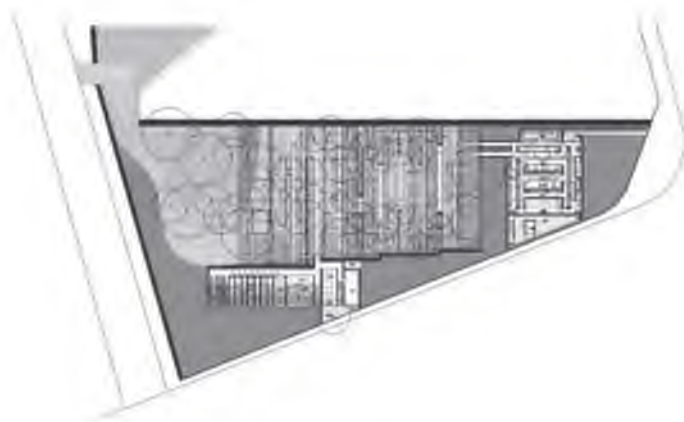
Fig. 3. Plan of the 'Les Cols Restaurant Marquee'
Source: (34)

The interior of the pavilion constitutes a materialisation of the architectural concept of a hybrid space in which the boundary between the interior and exterior of the building is blurred. This was achieved through the use of the same building materials: volcanic stone, steel pipes, and transparent plastic, as well as a specific layout allowing for visual interpenetration of various internal spaces, the 'gardens' between them, and the surrounding landscape. The walls of the pavilion are made of several layers of transparent plastic strips, the floor is made of concrete with volcanic aggregate, and the roof is made of two layers of translucent plastic stretched over steel pipes. To ensure the homogeneity of the interior, the drainage is led under the floor, and the lighting is integrated into the ceiling structure. The ephemeral nature of the interior design is emphasised by the selection of almost invisible pieces of acrylic furniture. The whole thing is like the remembrance of the authors of the project: 'Meeting in the open air, near the fountain, in the shade of the grove, family picnic' (Varady, 2018) – photo 14.

Photo 14. Interior of the 'Les Cols Restaurant Marquee'
Source: (photo Pep Sau (30))

Conclusions

The relationship 'building – interior' is conditioned by three factors: who is the author of architectural solutions, what these solutions concern, and finally how these functional and aesthetic proposals are materialised in a specific architectural work. The final expression of the facility, being a reflection of temporary trends and fashions, and finally the style emerging from them, depends on the nature of these factors.

The authors of the buildings and interiors are architects of various specialising in different fields, with different professional background. When the subject of interest is the interior of an existing building, especially when it is a historical one, the author of the project is usually an interior designer. The choice of design solutions depends in principle only on him – with the approval of the project ordering party. On the other hand, the interiors in new facilities are usually designed by their creators, which is why they constitute a form of author's speech on various formal and aesthetic issues. Sometimes such projects are carried out by interior architects with the participation of the architect of the building, who imposes a general formal expression on the solutions regarding the body, which is perceived as a set of interiors that make it up. The overall expression of the facility depends on the degree of communication between them, as well as with the investor.

In the case of existing interior designs, the focus is placed on adapting them to the new needs of users. As a rule, due to the logic of the real estate market,

the function introduced inside is a continuation or development of the existing one. It does not involve a fundamental change in the structure of the building, the interior design proposal is therefore unlimited. In the case of interiors in new buildings, their function and form are determined by the general functional and spatial concept of the building, whereas the artistic expression of the whole is the result of the architect's vision and what an interior architect creates after becoming inspired by it.

Interior design projects follow three trends: continuation of formal features, creation of new forms based on the tradition of the place, and finally creation in isolation from the tradition. Interiors representing the first trend, and designed by interior architects, are inspired not so much by the character of the old or new facility which contains these interiors, but rather by the broadly understood cultural context. These solutions are theatrical and usually highly artistic. The second trend includes interior designs by building architects. Here, one can observe more attention to the structure and form of the building in all of its dimensions – from the body to the detail, which results in greater consistency in the implementation of the architectural statement, and as a result a more complete work. The third trend includes various, often controversial, solutions which, due to the original formal solutions and homogeneity, are distinguished as being 'beautiful' in the contemporary understanding of this concept. In these proposals, the interior blends with other elements, including landscape interiors, into one whole.

In conclusion, the architectural education of building architects and interior architects has a fundamental influence on the shape of the 'building-interior' relationship. It should take into account the various dimensions of space and the role of different designers specialising in various fields in shaping it. At the same time, it should provide knowledge on how to communicate effectively, so that the joint work of the designers representing these two areas of architecture becomes an expression of the same creative idea that shines through them.

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Part IV Dominants of the place

Grażyna Lasek
University of Applied Sciences in Nysa

The problems of beauty and the particular elements in landscape – case studies in the surroundings of the town of Bieruń

Abstract: The article presents the problems related to the beauty of particular elements in landscape. I have paid the attention to the issue of factors which also determine whether and in what case a given landscape element, especially the one that is a man-made product, may become a particular element in the environment. The next question was how and to what extent the changes that took place there would influence the element and in what way such changes would co-decide on it. An analysis of particular elements of the town of Bieruń landscape was carried out, they are as follows: the Mound, the urban layout with the most important town square - the market square, St. Valentine church next to which there is a cemetery and an adjacent square, the so-called St. Valentine square, the Krakowska Gate, the Opawska Gate, the Levee, as well as the remains of the former barn complex built just behind the dense buildings of the old part of the town.

Key words: beauty, landscape, particular elements in landscape, Bieruń

Introduction

When we consider the problems of beauty and particular elements in landscape, some questions and problems may arise. They concern, among others, the following issues:

- What are the particular elements in landscape?
- What other factors determine when a given landscape element – especially the one which is a man-made product – may become a particular element? What is the basis and the way to specify the factors?
- If so, what is the relationship between particular elements in landscape and the beauty?
- What features should a particular element in landscape have in order to be regarded as beautiful? In what way the process of changes affecting the particular element will influence the element and co-decide on it?
- How can particular elements in landscape be/in what way they are the seeds of the creation of harmony of the place?

It was assumed that an element which by definition is the simplest component of a whole (group), a component or a factor that gives something a separate feature, will in the discussed case have two distinguishing features: beauty and peculiarity (Szymczak, 2002, key words: element, landscape, particular; Czopek, 1995, key word: landscape).

In order to find answers to the above-mentioned issues, the following research method was adopted:

- Analysis of the concept of beauty and its areas.
- An indication of the value of a harmonious environment which is an important feature of the beautiful town.
- Pointing to the elements of the environmental image and the town's physiognomy.
- Attempting to answer the question: what are the particular elements in landscape and what should they be like?
- An attempt to identify particular elements occurring in the urban stock on the example of the Upper Silesian town of Bieruń (case studies).
- Analysis of selected literature, documents and maps of Bieruń.
- Research on the existing condition, features and the process of changes taking place for selected particular elements of the town of Bieruń landscape.
- Summary and conclusions.

An attempt to indicate the range of features that particular elements in landscape should have

Beauty is an aesthetic value that in the past some Stoics called the direct knowledge (sense) of beauty. It arises in a specific situation, without which it cannot exist, it is related to sensuality, it is an objective concept. The types of beauty depend on the shape of the aesthetic situation, for which the basic elements are: the creator, the work, the recipient, and the superior element is the aesthetic value (Gołaszewska, 1984, pp. 76, 84–85; Stępień, 1995, pp. 106–109). The areas of beauty include:

- Existing beauty, which is the beauty of nature.
- The beauty of the arts accompanied by human creations.
- Beauty which is a 'by-product' of various human activities undertaken in connection with the creation of its surroundings, such as, for example, shaping the urban environment, interiors.
- The beauty of the sphere of events (Gołaszewska, 1984, p. 84).

Therefore, we can search for and indicate particular elements in landscape, which are distinguished by beauty, both in the natural and cultural environment. Limiting the research area to the two above-mentioned areas of beauty: art and 'by-products', it should be noted that beauty is the goal of creating works of art, which in turn, in addition to knowledge (science), religion and morality, is one of the four branches of man-made culture. Dłubacz states: '(…) the concept of art includes the human ability to create beautiful things and these beautiful things themselves. Art (Greek – *techne*, Latin – *ars*) would therefore be a set of human activities and products whose goal is beauty. Neither the art comes from nature, nor without the nature. It is the result of a deliberate, conscious creative process based on knowledge of the accepted rules. Creation does not mean creation of something but only the transformation of the existing material according to the criteria accepted by the creator. (…) Thus, creativity consists in processing the contents of known "From this world" and making from them new arrangements. (…) The essence of the creative process is introducing thoughts (ideas, plan) into matter and submitting them to the laws of the human spirit. Its goal is bringing into existence such an object that is supposed to be beautiful' (Dłubacz, 1994, p. 42).

During the analysis of the adopted distinguishing features of particular elements in landscape: beauty and peculiarity, it can be concluded that beauty, which is the purpose of creating works of art, should be classified as one of the most important features reflected by the man-made products, which are particular elements in landscape. Beauty can even be the distinguishing feature that gives individual elements the particular, i.e. unique and extraordinary character. As a consequence, it will be a necessary condition for the classification of a given element, as well as for answering the question: is it that particular element in landscape and whether this particular element in landscape can become / is the seed of the creation of the harmony of the place?

Kevin Lynch writes about the beauty of the urban environment, its peculiarity and the potential value of a harmonious environment in the work entitled *The Image of the City*. The author focuses in it especially on one visual value, which he describes as the obvious clarity of the urban landscape. He indicates it as a key value for the town's organisation. The clarity of the landscape is related to the ease of recognising the fragments of space surrounding us and organising them into a coherent pattern (Lynch, 2011, p. 3).

As he states that 'While clarity is certainly not the only important quality of a beautiful city, they are of particular importance when considering the spatial and temporal features as well as complexity of urban environments. (…) The vigorous and integrated scenery, capable of producing a sharp image, also plays

a social role. It can provide raw material for symbolism and collective memory that serve to communicate in a group. (…) A good environmental image is a source of an important feeling of emotional security. A person who has it can build a harmonious relationship between himself and the outside world' (Lynch, 2011, pp. 3–5).

Kevin Lynch indicates three components into which the environmental image can be divided: identity, structure, meaning. They are also a kind of guarantee of its usefulness. Identity is associated with the identification of an object, which distinguishes it from other things, enables it to be recognised as an individual and a separate unit. He defines the structure of the image in the sense of the spatial relation between the object and the observer and its surroundings (other objects). The importance of the object for the observer, which is a certain relation, is associated with the practical or emotional sphere (Lynch, 2011, pp. 9–10). It can be noticed here that if reading the environmental image and the degree of its clarity is possible by its identification, structure and meaning, reading beauty is related to the identification of its basic elements – the creator, work, recipient and the superior element – aesthetic value, then for both analysed planes the problem area within them overlaps. Therefore, indicating whether a given element is a particular element in landscape, i.e. having certain aesthetic values, will require both the analysis of its identity, structure, meaning, as well as the relations between the creator, work and recipient.

Kevin Lynch in his further part of his work, lists five basic elements of the physiognomy of the city: *districts*, *edges*, *paths*, *knots*, *landmarks*. They all also determine its image and each of them is inextricably linked with the landscape features that contribute to it. Due to the fact that landscape features are linked with their impact through the sign and/or symbol of the place, it can be assumed that particular elements in the surroundings should be sought and identified primarily in the group of knots of the city and in the group of knots and landmarks. Indeed, the landscape distinctions for knots are functional and symbolic features. In the case of knots and landmarks, it is said, among others, on the symbols of the city (Chmielewski, 2001, p. 46). The content they contain – enabling direct knowledge, appreciation and evaluation of something in terms of beauty (value) (Stępień, 1995, p. 101) – they will define not only the meaning, reception and role played by individual knots and landmarks, but also whether in a given specific case we can presume that their set of features is unique and identification of the object's identity, and whether, as a consequence, it is possible – and perhaps even necessary – to analyse them in terms of particular elements in the place where they are spatially located.

Particular elements of the town of Bieruń landscape (case studies)

Currently, in the urban stock of over 600-year-old Bieruń, especially in the Old Town area, there are several peculiarities belonging to its historical legacy. Their creation and functioning was related not only to history, but also to the specificity of the natural and artificial environment. The elements that clearly emphasise their presence in the place where they are located are as follows: the Mound, which is now located within the town's administrative borders, a very regular, almost model urban layout with the most important town square – the market square, the historic wooden St. Valentine's church next to which there is a cemetery and the adjacent square, the so-called St. Valentine square with a column – the statue of St. Valentine's Patron of the Town of Bieruń, then the Krakowska Gate, the Opawska Gate, the Levee and the remains of the former barn complex built just behind the dense concentration of buildings in the old part of the town. All of the above-mentioned particular elements in landscape, as in the past, also play a very important role in it, both from the planning and urban perspective, as well as from the material point of view.

It seems that the rightful thing to do would be to make the following thesis:

Fig. 1. A copy of the map showing the town of Bieruń plan from 1881
Source: (copy from the private collection of R. Nyga)

The Mound, the urban layout with the most important town square – the market square, the historic wooden St. Valentine's church of next to which there is a cemetery and the adjacent square, the so-called St. Valentine square with a column – the statue of St. Valentine's Patron of the Town of Bieruń, then the Krakowska Gate, the Opawska Gate, as well as the Levee and the remains of the barn complex constitute a group of the most important landscape features of Bieruń and can be treated in terms of its particular elements. They are also the seed of the harmony creation of the place in the spatial environment of their location.

Fig. 2. Indicative diagram of the location of particular elements and the most important features of the Bieruń landscape

Source: (own work based on a copy of the map from Google resources)

The history of Bieruń is connected with the Mound, which is the oldest monument in the town. The development of the town is preceded by the history of the earth structure in the form of an artificial mound – the Mound, surrounded by ditches and being the knot of the keep – an early medieval settlement, the seat of a duke's official[1] and his team. They were built on the main, ancient

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1   The prince's official was called a komes.

communication and trade route from Kraków to Wrocław. In the vicinity of Bieruń, surrounded by swampland, it ran next to the Mound across a ford on the Biała River (now the Mleczna River). Its high banks of the river ensured very good conditions for the settlement of people. The hill with the keep was one of the order and security control points on a designated section of the route in the Racibórz region, a prince's custom office and a market place. Currently, the Mound is 5–5.5 m high, the base is approx. 24 x 32 m, almost oval summit approx. 12 x 18 m. The summit is crowned with a small brick baroque chapel of St. John of Nepomuk. Unfortunately, access to the monument is difficult due to the fact that it is located on a private property at the intersection of Kopcowa and Kadłubowa streets.

Photo 1. View of the Mound in Bieruń
Source: (photo author)

Photo 2. View of the market square in Bieruń

Source: (photo author)

Photo 3. View of the St. Valentine's church, next to which there is a cemetery and the adjacent, contemporary square, the so-called St. Valentine square with a column – the statue of St. Valentine's Patron of the Town of Bieruń

Source: (photo author)

The Mound with the keep gave rise to the settlement beyond the town walls, which in turn became the beginning of the town of Bieruń, founded in 1387 'in a new field' on the basis of German law. The town was laid out in a very regular urban layout, typical and characteristic of the medieval period. An almost square market is clearly drawn in its structure. From each corner of the square, there are two streets situated at right angles to it. In the south-eastern corner of this main centre of the town's social and economic life, the oriented Roman Catholic parish church of St. Bartholomew the Apostle was built.[2]

Going from the market square to the south-east, only a few hundred metres from it, there is the historic, wooden St. Valentine church,[3] with a ring structure with a cemetery and the adjacent, contemporary St. Valentine square with a column – the statue of St. Valentine's Patron of the Town of Bieruń. Market square and St. Valentine's church are connected by a compositional axis – by Krakowska street, which is the main communication and trade route leading from Oświęcim to Mikołów. It crosses the market square diagonally. Its course from the north-west to the south-east coincides with the directions of the strongest development of the urban stock.[4]

It should also be emphasised that the Mound, the market square and the St. Valentine's church can be classified into the group of knots of the town. Two of them are clearly legible and at the same time outlining: the market square with the parish Bartholomew the Apostle church and the sacred complex consisting of the St. Valentine's church accompanied by the cemetery and the adjacent square - St. Valentine square. The Mound, which had lost its significance, served as a knot in the period before the town was founded (Lasek, 2018, pp. 005–014).

A peculiarity of the town, which is worth paying attention to, is the fact that although Bieruń has never had town walls, and therefore has always been an open town, there are two gates located in it: the Krakowska Gate and the Opawska Gate. For centuries this has been the name given to the exit points from the oldest part of the town above the designated main transport and trade route – Krakowska Street. The Krakowska Gate is located on the Pond Stream in the vicinity of the St. Valentine's church and the so-called St. Valentine square

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2   The first mention of the wooden st. Bartholomew the Apostle church in Bieruń comes from 1441. The present, brick building dates from the second half of the 18th century.

3   Date of the foundation of the St. Valentine's church in Bieruń is not known. The first historical mention comes from 1628.

4   The shape of the settlement of the town of Bieruń was influenced by the features of the terrain, vast wetlands that almost surrounded the town, a network of rivers and streams, numerous water reservoirs, including the Great Bieruń Pond.

with a column – Monument to St. Valentine's Patron of the Town of Bieruń. The Opawska Gate is located on the opposite side of the Old Town.

Photo 4. View of the Krakowska Gate in Bieruń
Source: (photo author)

Photo 5. View of the Opawska Gate in Bieruń
Source: (photo author)

Photo 6. View of a part of the barn complex in Bieruń
Source: (photo author)

Other, identifiable particular elements in the landscape of Bieruń are the remains of a historical levee and a barn. Their creation was related to the professional specificity of the local population, the economic situation, as well as the features of the landscape. Wetlands, which in the past almost surrounded the town, the network of rivers and streams formed the basis for the construction of the Great Bieruń Pond in the years 1530–1549.[5] The levee was built to protect the town from waters. After the collapse of the fish trade markets that occurred at the turn of the 18th and 19th centuries, the reservoir was drained at the beginning of the 19th century. Borders of fields and meadows were set out there. Agriculture began to develop (Lasek, 2016, pp. 223–232). It constituted the main source of income for the population. Agriculture required the construction of farm buildings. They were built just behind the dense concentration of buildings in the town centre, at the back of the residential houses. Initially, they were wooden in a log frame structure, covered with straw, and then, they were usually made of brick. The barns were most often based on a rectangular, sometimes on an octagonal plan.

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5   The Great Bieruń Pond, also known as the 'Bieruńskie Lake', in the period of its greatest splendour had an area of about 600–623 hectares.

Fig. 3. A copy of the map showing the ponds around Bieruń, including the Great
Bieruń Pond

Source: (copy from the private collection of R. Nyga)

Documents

In Resolution No. IV/1/2013 of the Town Council in Bieruń of 25th April 2013
*on adopting the update of the study of conditions and directions of spatial devel-
opment of the town of Bieruń,*[6] in Part A – *Development conditions*, it was indi-
cated that the area of the urban layout of the Old Town entered in the register
of monuments coincides with zone 'A' which is full of conservation protection,
Bieruń Stary – the Old Town. Location of the so-called 'the Krakowska Gate'
and 'the Opawska Gate' are situated on opposite borders of this zone. The study
also designated the 'W' zone of archaeological protection, which includes, first
of all, the archaeological site of the so-called garden 'on the mound' at Kopcowa
Street, and secondly – the area of the centre of Bieruń Stary. It should also be
emphasised that the area of the 'W' zone coincides with both the boundaries of

6   The summary of the study is part 'C' – *Justification of the adopted solutions* – synthesis
of the plan arrangements – Appendix 3 to the resolution.

the 'A1' zone and the area of the urban layout of the town entered in the register of monuments. The remains of the former barn complex are located in the 'B' zone of indirect conservation protection.

Apart from the levee, all the other particular elements of the town of Bieruń, which are indicated, are: the Mound, a very regular urban layout with the main town square – the market square, the historic wooden St. Valentine's next to which there is a cemetery and the adjacent, contemporary square, the so-called St. Valentine square with a column – the statue of St. Valentine's Patron of the Town of Bieruń, the Krakowska Gate, the Opawska Gate, and barns are located within the Cultural Park for the Old Town Area. It was created by Resolution No. III/6/2016 of the Town Council in Bieruń of 31st of March 2016 *on the creation of a Complex of Cultural Parks under the names of Cultural Park for the Old Town Area and Cultural Park for the Levee Area* and announced in the Official Journal of the Silesian Voivodeship, Katowice, on 18th April 2016, item 2285. The protection plan was approved by Resolution No. III/7/2016 of the Town Council in Bieruń of 31st March 2016 *on the approval of the Protection Plan for the Complex of Cultural Parks under the names Cultural Park for the Old Town Area and Cultural Park for the Levee Area* and announced in the Official Journal of the Silesian Voivodeship, Katowice, on 18th April 2016, item 2286.

In the Resolution *on the creation of a Complex of Cultural Parks under the names Cultural Park for the Old Town Area and Cultural Park for the Levee Area* and in the process of its analysis in the context of the particular elements in the surroundings and the changes taking place in them, several entries deserve special attention.

In Chapter 1 – *General provisions* in § 3, which indicates the objectives of the protection of material and landscape cultural heritage in the area of the Complex, the emphasis has been put on the necessity of:

1. 'maintaining historic urban layouts and historic buildings,
2. recreating and restoring historic urban layouts, street frontages, (…)
3. ensuring the exhibition of immovable and historical monuments, building complexes, natural, historically developed landmarks and the three-dimensional town silhouette, (…)
4. protection of axes, strings and vantage points, enabling close and distant views of the characteristic elements of the area development, (…)
5. protection of the cultural landscape by counteracting the excessive expansion of commercial and service activities, interfering with the architectural form of historic buildings or disrupting their exposure, as well as interfering or

disrupting the possibility of exposing public space or contradicting the cultural tradition of the Complex.'[7]

In Chapter 3 – *Natural values* in § 9 – the arrangements for the protection and shaping of green areas were indicated, among other things, to the fact that:

1. In the area of the Mound (entered in the register of monuments under No. C/819/67; of 21st December 1967), any investment in the area should be excluded and the object should be properly exposed (…).
2. Any self-seedings growing on the Mound should be cut and the Mound's body should be maintained without a tree stand.
3. One should take care of the greenery on the market square. Non-historic conifers should be replaced with low-growing varieties of deciduous trees.
4. It is suggested to recreate and maintain a ring of greenery around the market square.
5. It is recommended to introduce green belts into the streets (…).
6. The areas around the town's buildings should be left open – they should be of agricultural or recreational nature, without trees.
7. It is allowed to locate a city park between the buildings and the building area, with not many trees (…).[8]

Amendments

Currently, the town authorities are carrying out the procedure of preparing a local spatial development plan for the area located in the Old Town and Levee in Bieruń, i.e. within the areas covered by the borders of two cultural parks: the Cultural Park for the Old Town Area and the Cultural Park for the Levee Area. The analysis of the developed documents draws attention to the issue of the areas located in the vicinity of the Mound, which is the oldest monument in the town. It is possible to cover the Pond Stream flowing into the Mleczna River and make the place a car park. This small watercourse is a very important element of the landscape, because it is, apart from the historic Levee, a tangible trace of the existence of the Great Bieruń Pond. In the past, it was an integral part of the water reservoir. It performed the function of regulating the water level. It should also be noted that, in accordance with the currently valid study of the conditions and directions of spatial development of the town of Bieruń, it is also planned to dedicate plots of land located between Kadłubowa and Kopcowa Streets

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7   Resolution No. III/6/2016 of the Town Council in Bieruń, p. 3.
8   Ibidem, p. 6.

and the Mleczna River and Pond Stream beds and in the immediate vicinity of the Mound, for service development. The indicated area is currently used as meadows. The lack of cubic measure on it and the natural character of the Pond Stream and the Mleczna River create favourable conditions to present one of the most important monuments of the town – the Mound, which may be endangered in the case of investment projects such as car parks or commercial and service facilities. Green areas will be destroyed forever – meadows, which currently, apart from Levee, the Mleczna River and Pond Stream, constitute the borders of the oldest part of the town. In the urban location, they clearly separate the old town part of Bieruń.

In the analysis of changes taking place within the discussed part of Bieruń, attention should also be paid to the actions taken in relation to the historic complex of barns built just behind the dense concentration buildings in the centre. In the past, similarly to the green areas around the old town, they were an integral and distinctive feature of the landscape. Unfortunately, for many years barns did not go appropriate construction and renovation works. Some of them are destroyed and demolished. New facilities are being built there. As a result, the things that once formed such an important part of the town landscape and the ones which were its particular elements are constantly disappearing.

Conclusions

The particular elements in the landscape, the beauty they contain, will always have to be subject to some control and protection in order to eliminate the possibility of taking actions that could harm them or even destroy them. The scope of undertaken changes should include both the process of creating the work itself and the transformation process taking place at every stage of its life within its functional and spatial structure, as well as within the context of its location.

The attempt to indicate the particular elements of Bieruń was made in the context of the centuries-long process of their crystallisation and ongoing changes. The Mound, fitting into the landscape of the town, with a very regular urban layout with the most important town square – the market square, the wooden St. Valentine's church next to which there is a cemetery and the adjacent square, the so-called St. Valentine square with a column – the statue of St. Valentine's Patron of the Town of Bieruń, the Krakowska Gate, the Opawska Gate, the Levee and the barns built in the former suburbs of the town, due to the importance they play in the landscape, they can be regarded as its particular elements. They are also the beginning of the creation of harmony of place in the environment of their spatial development. The objective of the actions carried out towards them

should be to adopt the most beneficial development strategies with respect for the landscape and history. Their effect should be to optimally adapt them to the current needs.

The conducted research may constitute an input in the discussion on the use and adoption of the direction of further development of particular elements in the surroundings of the town of Bieruń.

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Irina Cheredina, Ekaterina Rybakova
Moscow Architectural Institute – State Academy

The Northern River Terminal in Moscow. A historical monument and harmony of the place

Abstract: The article is devoted to the history of the rise, fall and revival of a unique object of Soviet architecture of the 1930s, the Northern River Terminal in Moscow, built by the architect A. M. Rukhlyadev. The terminal, opened to the public in 1937, was the last accent of the grandiose construction – the Moscow-Volga canal. The utilitarian purpose of the canal did not prevent the implementation of one solution for all its technical structures and the Terminal building – an architectural ensemble. This approach to the development of Moscow according with the Master Plan of 1935 was a characteristic of the time. The article discusses the techniques by which A. Rukhlyadev designed the Terminal, making it open, light and user-friendly, subtly integrated into the landscape and enriching its surroundings. It was these features that allowed the River Terminal to join the flow of time and, after restoration, to continue its existence 84 years after its opening.

The construction process of the current Terminal has placed it in a series of historical sites, as a memorial to the victims of repression, builders-prisoners who died during the construction of this architectural masterpiece.

The charm of the architectural image, together with the park and the river, form the basis of the harmony and uniqueness of the created environment, which is characterised by a vital energy that is appreciated by the numerous visitors of the Northern River Terminal complex.

Key words: the Northern River Terminal, Soviet architecture, influence of the environment on a person, 'the soul of place'

Introduction: the history of the Northern River Terminal

More than ever, residents of today's megacities need places where it is possible to relax and unwind. One way to solve this problem is trough architecture, which will be able to harmonise the surrounding space, focus on the person and create the 'soul of the place' (Day, 1990, pp. 12–13). Of course, there are not many such places. However, they do exist in Moscow. One of them is the Northern River Terminal and the adjacent park area.

In the 1930s, in the dreams of people about the ideal city of the future, Moscow was presented by its creators as an exceptional capital city. The most spacious squares, the straightest and widest streets, residential blocks of flats blended into the greenery, magnificent ensembles consisting of unique structures, such a city was being created in the minds of citizens and in the intentions of the architects who developed the Master Plan for the reconstruction of the capital. However, with such a rapid pace of the city's reconstruction, the dream of the ideal could not be realised in a short time. It took more than a decade to completely reconstruct Moscow, which was to be transformed into a majestic ensemble consisting of architectural complexes subordinate to the centre. But the desire to demonstrate to the whole world the achievements of socialism was so great that the urgent implementation of certain parts of the future was simply necessary. Every public building erected in the capital had to carry a powerful figurative message, intended to ensure the uniqueness of not only the ensemble created, but also to become a worthy part of the beautiful city of the future, indicating its future greatness.

Photo 1. The Northern River Terminal in 1950
Source: (Moscow archive photo, 1950s)

Such structures built in the 1930s include the Northern River Terminal (1937, architect A. Rukhlyadev) (photo 1). The final touch of this great hydro-technical construction was the Moscow-Volga canal, the construction of which turned into a mass grave of mostly nameless heroes, all those who fell into the millstones of the great construction projects of socialism. The construction of the Northern River Terminal, by a bitter irony of fate, mostly built by the hands of prisoners, was to become one of the symbols of prosperity and new life that was officially

proclaimed in those years. A life of ease, joy and even kind of warmer life (as if the sunshine of life could change the cold climate of the capital). The architectural design of the structure was, of course, created by A. Rukhlyadev, convinced he was creating a future that should delight people with its beauty and harmony for many years. This is where the lightness of the arcades, the transparency of the bypass galleries, the delicate drawing of the spire, the careful execution of the details and the whole structure come from.

Beauty of the place

The river Terminal was to serve not only a utilitarian function, but was also intended for the cultural recreation of inhabitants (demonstrating the 'the joy of living under socialism' was also a distinctive feature of the time). The approach to the creation of this structure was clearly dominated by a lyrical literary image: a double-decked ship with a high mast standing at the pier. Therefore, the means chosen to achieve the pictorial solution, construction details and techniques used by the architect A. Rukhlyadev, were also in the spirit of the times and the changed architectural orientation of the 1930s. The parts of the complex – the galleries, an open veranda on a flat roof, water in the fountains, sculpture, decorative details and paintings-all aimed at creating special symbols and meanings, dictated by the ideology of the 1930s, whose main task was to reflect the "triumphant march of socialism".

The architecture of the River Terminal is extraordinary and continues to amaze the viewers. The image created by the architect remains long in the memory of those who saw this building. The master managed to create a monumental and at the same time light structure, to find techniques for fine-tuning details and to meet not only the needs of his era, but also to become one of its symbols (Rukhlyadev, 1937, p. 16).

The Terminal is symmetrical, long rectangular building (its length is 150 m), with rounded ends, where open colonnades run around the courtyards. The central part is accentuated by portals with three massive arches, on the surface of which 12 one-and-a-half-meter tondi made of polychrome ceramics are installed (on the park side and on the river side). One of the authors and the head of the team of sculptors who performed this work was Natalia Danko. She recalled that 'the themes of our reliefs on large panels were specific, according to the approved list… We carved multidimensio-nal, fractal reliefs, with a lot of detail – "The Dam of the Dnieper river", "Blast furnaces", "Steam Locomotive", "Red Square". They can only be viewed at close range.' As a real artist, N. Danko was very demanding about her work, which was indeed done perfectly. Close up,

each panel is a complete, deep and multidimensional composition that the masters have elegantly inscribed into a circle. From a distance, the images are seen through the coloured decorative inserts that soften the power of the wall and decorate the arches, while up close they are real paintings, individual works of art that require careful inspection. This is one successful attempt to bring coloured majolica into the exterior design of a public building. It is worth mentioning that among the architectural objects represented on the panels, in addition to the Kremlin and Red Square with the mausoleum, the sculptors were commissioned to make images of the most significant buildings of the 1930s. The list of these buildings speaks for itself. Dneproges (an outstanding hydro-technical structure), the Palace of Soviets – a ghost building that was never built, but for many years marked the development of all Soviet architecture. The Red Army Theater is a palace, a symbol of the power and invincibility of the Soviet army, where not only the building plan itself was a five-pointed star, but even the columns surrounding it on the perimeter in the shape of a star. And finally, one of the metro stations, a unique achievement and pride of its time: Kievskaya, an underground palace that portrays the wealth and power of the socialist system. There is no doubt that the River Terminal was also designed as another link in this brilliant chain. The image of a beautiful palace simply floated in the air, dictating the architectural solution of the complex.

The centre of the symmetrical composition is marked by a four-storey tower with a spire. Each of it storeys is decorated with the order of the architectural details and sculpture. The plasticity of the forms is created by the orderly details: cornices, rods, brackets. At the corners of the first storey there are figures cast in concrete: a southern girl with a basket of grapes, a Red Army soldier, a red Navy man and a young man from the north.

The next storey on all four sides is decorated with forged metal compositions of anchors and ribbons, above them there is a clock with chimes, which were designed to enrich the figurative solution of the building not only in appearance, but also in sound. The clock struck every 15, 30 and 60 minutes. According to one urban legend, in 1930s 7 bells were installed for the chimes, which have been removed from the destroyed Cathedral of Christ the Saviour. Whether the idea of moving the bells was carried out is not documented, but it is obvious that many believed that the voice of the defeated symbol of the former life (the temple) still sounded from the new 'bell tower.'

The last storey ends with a high spire, crowned with a star, made similarly to the stars on the Kremlin towers (height above the ground level 75 metres). According to the author's plan, the spire was movable and at the end of navigation, it was retracted inside the tower with the help of a special winch.

The Terminal building features many interesting techniques employed by A. Rukhlyadev. The building on a piled reinforced concrete foundation was placed on loose soil, which allowed the Terminal to be elevated above the surrounding area, making it the dominant element of the complex. Based on the topography, the author of the Leningrad highway design created a 2-storey building, and from the river – 3-storey building, where the lower part houses maintenance rooms. The first floor of the station is surrounded by a colonnade, the second floor – by an arcade. Above the arcade there is a flat roof, which in summer was used as an open terrace with a balustrade. There were unusual shapes installed on special pedestals resembling luminous platens of salute lamps, lanterns that had been made according to the author's sketches. There were also benches placed around them, which surrounded the leading out exhaust duct.

The attraction of the terrace, apart from the architecture of the Terminal itself, was undoubtedly the view of the river and the ships moored at the pier. The open galleries surrounding the station were used for walking, and on the side of the façade by the river, behind the colonnade, the tables of the restaurant, the kitchen of which was located on the 2nd floor, were displayed. Vacationers could not only eat delicious food (the restaurant used to be famous for its fish cuisine), but also enjoy the view of the water and feel its coolness.

The techniques used in the spatial planning of the building were clearly aimed at creating a warm summer atmosphere for the complex, evoking associations with famous southern resorts.

The surface of the roof was covered with asphalt with inlays of pink marble, creating a beautiful geometric pattern.

Open promenades are placed above the semi-circular end columns, as well as a terrace framed by a balustrade with asphalt pavement and inlays. Inside the bypass colonnades there are open courtyards, in the centre of which there are small fountains with sculptures. In the southern courtyard there are a bronze dolphins (sculptor I. Yefimov). In the northern one – marble polar bears, over which bronze cast loons and geese flew (the work of the sculptor L. Kardashev).

According to the author of the design, the Terminal was designed taking into account the maximum load during navigation (Rukhlyadev, 1937, p. 19). It was designed to accommodate 430 people at a time. The building plan is very clear and reasonably designed. In the central part, there is a lobby and ticket offices. The Central hall-vestibule has a coat of arms of the Soviet republics made of coloured glass (like stained glass) placed on the upper perimeter of the walls, called the stamps. On the sides of the coat of arms hall, there are four huge pylons, on which the Terminal tower rests. Between the pylons there is a coffered ceiling with a painting. To the left of the central hall there was a small waiting room for

persons with special needs, next to it there was a room for NKVD officers. Closer to the lobby there was post office and telegraph station, to the right of the centre there were rooms of the station chief and duty officer, a propaganda centre, a restaurant and a buffet. The main waiting room was on the upper floor. The interior space of the building seems to flow in both directions from the spacious hall of the coat of arms through narrow passages, to spill out again at the ends of the building to the full height of its volume.

The interiors of the River Terminal were characterised by a subtle and careful detailing. The decorative details were executed to a very high standard with carefully selected wall cladding marble and parquet patterns giving the building a special elegance and solemnity. Large geometrical patterns were used on the stone floors of all storeys of the building, including the lower technical ones, whose layout emphasises the spatial arrangement of the halls, optically expanding them.

All the main rooms have coffered ceilings (lobby, restaurant hall, etc.) with polychromes. Even the most utilitarian details, such as ventilation grilles and radiator housings were done in an artistic manner. The restaurant room was characterised by particular attention to interior decoration and detailing. This two-light room was covered with a thin-walled vault, a reinforced concrete shell, with a coffered ceiling in the centre. On the ceiling coffers, the artists depicted sea and river birds in flight, and in round medallions on the arches, surrounded by finely executed stucco-images of ships, from sailboats to steamers.

On the cornices and ceilings in the corridors and in other rooms of the station there are polychrome paintings, stuccos. And in the room of the mother and child, located on the top floor, paintings have been done not only on the ceiling, but also on the walls, with themes of children's fairy tales.

The copper lamps, specially made according to the sketches of A. Rukhlyadev, with patterned milky glass are different in all rooms, their shape and pattern varying according to the features of the decor of each room.

The designer incorporated works of three-dimensional sculpture, stucco decorations, paintings, ceramics, and stained glass in the architecture of the building. The River Terminal is a typical example of the architecture of the 1930s, an example of the synthesis of different types of art, and at the same time a proof that properly selected and beautifully executed details can complement and enrich the main architectural idea. There is no excess of details, they are used subtly and harmoniously. It is a completely special object, a unique monument of history, culture and architecture, the preservation of which is important not only for Moscow, but also for the whole of Russia.

Waters of forgetfulness

For most of the time the Northern River Terminal was used for its original purpose as a transport infrastructure facility. Passenger traffic was its main function and after the war a tourist destination emerged and began to develop. In the early 1970s, there was a gradual decline in passenger traffic with the complex becoming less and less popular. For the 1980 Olympic Games, cosmetic repairs were carried out 'in a hurry' without taking into account the historical value of the building. The result was the careless painting over the cracks and original facade finishes.

The rapid decline in river traffic occurred in the 1990s: no more new ships were being built, and the old ones were transferred to private ownership. During this difficult period of decline, there were shopping stalls and booths in the terminal building, and some of the once main halls were used as furniture warehouses and storage facilities. By 2010, the Northern River Terminal, one of Moscow's most recognisable symbols, was falling into disrepair and closed to visitors: the building was tilted, the walls were cracked, the facades were collapsing, sculptures were disappearing from the fountains, and the walking alleys were overgrown with grass and bushes (photo 2). It was not until 2015 that the object returned to the city's ownership, after which there was hope for its restoration.

By 2017, the closed and abandoned River Terminal was still falling apart. However, this year marked a turning point in the history of the legendary work of art: it was agreed to restore it. The main objective of the reconstruction was to restore the complex to its original appearance. This was facilitated by the preservation of a large volume of historical construction documentation, drawings and diagrams of decorative fragments with explanatory characteristics and methods for their production (Morozova, 2020, p. 22).

Reconstruction and new life of the Northern River Terminal

The large-scale research and restoration work began in 2018. More than four hundred specialists participated, including historians, conservators, architects, engineers, designers, artists, technologists, geologists, approval specialists and many others. The primary task was to eliminate the sliding of the building towards the river and the collapse of the facades. For this purpose, a set of emergency response works was carried out: the ground was stabilised, the foundation and supporting structures were reinforced, and communications was provided. Steps were taken to restore the historic appearance of the River Terminal both

outside and from the inside. Using the archival photographs, the lost slatted decoration and facade cladding was restored (in the Soviet period light blue paint was used instead of the original gray terrazite plaster). The balustrades and coverings of the pedestrian galleries and the usable roof-terrace were restored, the window and door openings made according to old drawings were replaced. The 24 unique ceramic tondo plates by N. Danko that decorate the facades of the station, were also restored and reconstructed. They were cleared, repainted, and re-fired, and once again presented to the audience in all their glory.

Photo 2. The Northern River Terminal in 2007
Source: (photo by I. Cheredina)

Photo 3. Famous 'North' and 'South' fountains in 2007
Source: (photo by I. Cheredina)

Photo 4. 'North' and 'South' fountains after reconstruction in 2020
Source: (photo by E. Rybakova)

The planning structure of the building was also restored. The interiors of the River Terminal given were acquired their own historical appearance. The coats of arms of the former Soviet republics were recreated on the walls and windows in the central hall on the basis of archive drawings. By a fortunate coincidence, the restorers found a warehouse with preserved spare lampshades, thanks to which the chandelier of the central hall fully corresponds to its historical appearance. In other rooms, the artists restored the original ornaments of the walls, recreating the lost stucco elements. All preserved and restored lighting fixtures have been adapted to modern electrical installation. The former waiting room for special guests has been transformed into a luxurious room, furnished with antique furniture modelled on furniture from the 1930s. Creating a new urban legend, this room was dubbed 'Stalin's office' despite the fact that Stalin had never been in that place. The architects therefore focused on the concept of 'the spirit of the place,' referring to its cultural and historical context. In this case there is a dual perception of the monument. On the one hand, it is a tribute to the architectural flourishing of the capital, on the other, to the terrible times of Soviet totalitarianism and mass repression (Morozova, 2018, p. 9). Even in such a harmonious place, people should not forget the tragic experience and events of the 20th century.

By the time of the reconstruction, the two famous fountains, 'North' and 'South' were in a deplorable condition. Of the 9 dolphins of the southern fountain, only 3 were preserved, in disassembled form, lying on a remarkably well-preserved bowl (Gajnutdinova, accessed in 2021). The loons of the northern fountain disappeared, and the marble polar bears were covered with cracks and

chips (photo 3). Fortunately, the missing dolphins were found in the station's storage facilities and sent to the workshop for further restoration. The loons were reconstructed from drawings and archival photographs. In addition to the two main fountains, two small fountains were reconstructed, located on the ground level on the river side in small semi-circular niches. As a result of the restoration work, the reconstructed functioning fountains appeared to visitors in their original form (photo 4).

A major event was the restoration of the retractable 27-metre spire. The famous guiding star located on it was dismantled and cleaned of sediment. Only 17 out of 741 Ural precious stones (rock crystal, amethyst, quarts) on the hammer and sickle were replaced (they were lost and damaged during operation). As a result of the reconstruction, visitors will once again be able to observe a unique image of the moving spire. At this point, it is worth mentioning that this phenomenon occurred only a few times during the Soviet period: at the opening in 1937, during the war in 1941, at its end and in honour of the celebrations of the 850th anniversary of the capital.

During the restoration, the old tower chimes, which had lost their appearance over many years of use, were also restored: the dials were cleaned and restored to their original appearance. Unfortunately, the original clock mechanism was lost, so it was replaced in the 1990s with an electronic one that does not require constant winding. Currently, this clock has been modernised again, and the original sun-shaped overlays have been returned to the dial. The famous anchors that were located under the clock have also been restored and returned to their former place.

The sculptures located in the four corners of the tower (Red Army soldier, a sailor, southern girl, northern boy) were in poor condition at the beginning of the restoration: the coating was peeling off, exposing the gray concrete. The figures were cracked, lost some parts, and the metal frame was rusted. Fearing for their continued safety, the conservators made moulds from the sculptures and cast new concrete figures from them. The originals will later be displayed at the Canal Museum, which is planned to be opened in the near future.

Considerable attention was devoted to the restoration and improvement of the park area and the embankment adjacent to the station. According to the design of engineer T. Shafransky, in 1937–38, an extensive park was laid out with an axial composition and a system of alleys crossing at a right angle. Over the years, the park has preserved its historical planning structure, yet many elements of this structure and small architectural forms have been destroyed or lost. On the basis of historical photographs and preserved drawings, the fountains, fences and statues that had been almost completely destroyed were reconstructed. The

pedestal of the concrete figure 'Waterway,' created by the sculptor Y. Kun in 1937, had lost its carrying capacity and was replaced. The sculpture was restored, the ship in the girl's hands was painted blue colour. In order to enrich the landscape, flower beds were laid out, trees and shrubs were planted in the park.

A separate project was the complex improvement of the embankment, the length of which is about 1.5 km. For its design and paving, the 'colours of the river' were used: white, gray, beige. Small architectural forms (pebble benches, wooden terraces near reservoirs and flower beds) give the complex a special walking atmosphere (Revzin, 2019, p. 27). In the southern part of the park it is planned to build a recreation area with three pools. It is supposed to create a summer cinema and an amphitheatre for 100 seats in the northern part. As entertainment for visitors, a miniature of the Moscow Canal with carefully executed details was placed on the embankment. The newly renovated station with its surrounding landscaped park is supposed to be used not only during navigation, but also throughout the season. By 2023, for the convenience of citizens, it is planned to connect the metro stations Rechnoy Vokzal and Skhodnenskaya on the other side of the Khimki reservoir with a cable car.

Photo 5. The Northern River Terminal in 2020
Source: (photo by E. Rybakova)

Conclusions

The Northern River Terminal has been reborn after restoration works, not only as a unique object of transport architecture, but also as a place of recreation for residents, guests, and tourists (photo 5). The river station, like many public buildings, is a vivid example of the ideology of the Stalinist period, expressed by

means of architecture. The duality of the complex clearly emerges on the example of the history of the station: on the one hand, its luxury is a demonstration of the wealth and power of the totalitarian system. On the other hand station is a magnificent work of architecture, the finest monument of its time, whose aesthetics immerses the viewer into a unique world, forcing him to forget about urban life: to spend time alone in a beautiful park, enjoying of the natural beauty; to walk through the open galleries; to stroll on the roof of the Palace, offering beautiful views of the quay and ships mooring. Having passed an era of complete oblivion, the complex of the Northern River Terminal is once again experiencing a period of prosperity, becoming one of the favourite places of attraction for locals. This opens up a wide range of possibilities for environmental influence on a people (Day, 1990, p. 10). The embankment and the park, as place for walks, reflection and contemplation, can distance the residents of the noisy metropolis from their problems. The water reflecting the sky is like a stage whose action can be observed from the luxurious stands that the River Terminal building becomes. The landscape and water combined with architecture form the basis of harmony and uniqueness of this setting.

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Irakli Kvaraia, Inga Iremashvili, Liana Giorgobiani
Georgian Technical University

Adam Ujma
Czestochowa University of Technology

Reconstruction of building structures of historical and architectural heritage in the Tbilisi city

Abstract: The article concerns the reconstruction of some building structures of historical and architectural heritage in the city of Tbilisi, maintaining their facade form and architectural details, carried out in recent years. This approach to extending the 'technical life' of old buildings in Tbilisi dates back to the 1970s. In particular, efforts are made to preserve the façade, which is a kind of 'face' of buildings. In the old part of the city, work was systematically carried out to restore the traditional, characteristic low-rise residential buildings with open balconies. Reclamation and reconstruction of the old districts of the city have been successfully continued to this day. This largely ensured the architectural appearance, beauty and character for which the Georgian capital has long been known beyond its borders. After that, many famous buildings were also completely renovated (Opera and Ballet Theater, Rustaveli Theater, Tbilisi State University, etc.). However, it is often necessary to change the functional purpose of historical and cultural heritage building structures along with the change of their entire internal space, which will be described later.

Key words: architectural heritage, reconstruction, facade, renovation, conservation, reinforcement

Introduction

One of the basic principles of urban planning of world cultural capitals is the obligatory conservation of historical and architectural heritage building structures through their renovation, reconstruction or restoration. Such a policy not only extends the life of individual buildings and structures, but also preserves the traditional character of the entire city. These works often make it possible to emphasise the beauty and form of decorative and architectural elements. More often than not, details that have been damaged or lost can be recreated. These activities are both patriotic and attract tourists and new

investors, which is important for the economic, social and cultural recovery of each country. The protection of historical and cultural heritage sites has long been considered a task of national importance. However, examples of successful adaptation of old buildings to a modern style are still rare. It should also be noted that, as a rule, most historical and cultural heritage sites are located in the central parts of cities. The accumulated experience related to the reconstruction of the centres of various cities in the world shows that the reuse of monuments often does not give the desired socio-economic effect. More and more often it becomes necessary to adapt such building structures, distinguished by unusual functional solutions that differ from modern requirements and above-average aesthetic values, to new purposes (shopping centres, hotels, restaurants, tourist facilities, etc.). Such actions should be based on the principle of maximum preservation of their form, external appearance, aesthetics and beauty of the building structure, which has been preserved over the years of its operation.

Examples of the reconstruction of selected historical buildings in Tbilisi

In modern society, historical buildings in the city centres are preserved, including through reconstruction, with adaptation to the needs and requirements. Often, the reconstruction project provides for the complete demolition of an emergency building-monument with the preservation of only its front facade. In this case, even such a fragmentary restoration of the monument makes it possible to emphasise its aesthetic or historical value. In general, there can be no single approach to the reconstruction of monuments. In many ways, it depends on the development of the infrastructure of the city centre, which is the most important place for attracting and motivating both visitors to the city and its permanent residents. Therefore, the reconstruction of each historical architectural building structure requires an individual, very careful and meticulous approach. At the same time, the main task is always to preserve their original architectural form, elements showing the beauty of details and entire facades since functional change depends on the changing interests of their owners or city authorities. For example, the reconstruction of several building structures of historical and cultural heritage in the centre of Tbilisi, which are a complete embodiment and an integral part of the history of their time is given (Chainikova, 2017; Korotaeva, Malyarov, 2018; Kvaraia, 2019; Imnadze, Chubinidze, 2016; Salukvadze, Bidzinashvili, 2017).

The reconstruction-extension of the printing house of the newspaper 'Zarya Vostoka' on the central avenue of Sh. Rustaveli of the city was the first venture of a radical change in the functional purpose of the historical building structure. A multi-storey industrial building, built in 1938 in the constructivist style (architect D. Chisliev). It completely lost its functional purpose at the beginning of the 21st century and over time the question arose to remake the beauty of it, rather than converting the well-preserved building into a large shopping centre 'Merani'. At the same time, a prerequisite for the reconstruction was the complete preservation of the original facade of the building, since it is one of the rarest architectural solutions of this style in Tbilisi. The new design, in addition to the restoration and reconstruction of the building of the printing house itself, provided for the arrangement of wide passages in the blank brick walls of the existing building with its subsequent reunification with the newly erected reinforced concrete frame building. The construction of this building was decided due to the lack of space for the construction of a modern shopping centre, which the city really needs. An extension is a completely new building several times larger than the area of the printing house, which was built in the courtyard of the printing house, which is schematically shown in fig. 1.
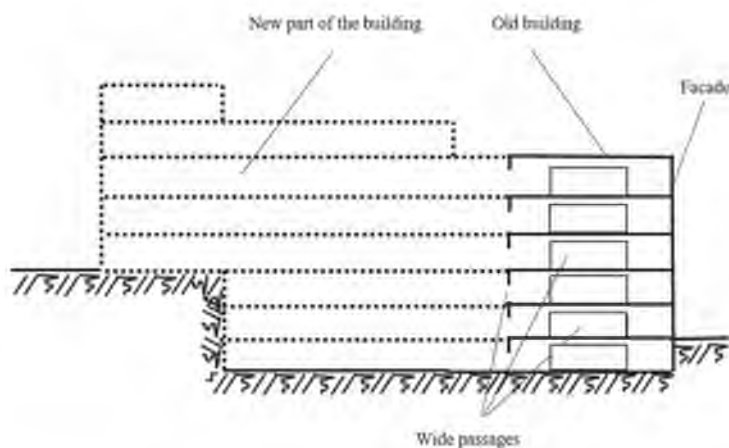

Fig. 1. Printing house reconstruction-extension scheme
Source: (author)

It should be noted that in order to fully unite the old and new buildings, the old brick wall with a thickness of more than 100 cm was replaced with a reinforced concrete wall 30 cm thick. Corresponding transitions from the old part of the

building to the new one were arranged in this wall, which fully ensured a single-purpose perception of the combined building. In the process of reconstruction in the old building, work was carried out to strengthen all the supporting structures and all obsolete parts and elements of the facade (railings, windows, doors, etc.) were replaced. In addition, due to its historical and aesthetic values, the original terrasite plaster of the façade was completely restored. Previously, it had been primitively repaired and painted many times. Referring to the original design of the external facade of the building, the same type of plaster was used on the facade of the added part to give it a similar appearance (Davitaia, Valishvili, 2015; Kvaraia, 2016; Kvaraia, Khanchashvili, 2013; Zolotozubov, Bezgodov, 2014). The Merani shopping centre was opened in 2014 (photo 1).

Photo 1. Shopping centre 'Merani' after reconstruction-extension
Source: (author)

The reconstruction-extension of the former building of the Ministry of Agriculture of Georgia was carried out almost in the same way, but with a very important peculiarity. To preserve the original facade of the monumental building, built in the 1950s of the last century, characteristic of the period of developed socialism, a rather wide part of it, parallel to the main street, had to be left intact (photo 2). After the rest of the building was demolished, a reinforced concrete skeleton was built in the abandoned area and in the courtyard of the building. After its structural integration with the facade of the former building, facade works began. In order to ensure the proper visual effect, they were made flush with the existing façade made of Bolnian tuff slabs (photo 3).

Photo 2. Front part of the former Ministry of Agriculture
Source: (author)

Photo 3. The process of combining the front and the new part
Source: (author)

The full completion of the reconstruction and getting the appropriate aesthetic effect, improving the possibility of using the space in the urban development, is planned for 2022 and there will be a 5-star, 200-bedroom Hilton hotel.

It took quite a long time to solve the problem of reconstruction with the extension and extension of a small, but very attractive building of the 'Muza' hotel, with an interesting form and facade finish, next to the large Tbilisi concert hall. The beautiful three-storey house, built at the beginning of the 20th century, became a real showcase of the city, and the necessary task was to preserve its original facade in the Rococo style. In contrast to the above reconstructions, in

this case, during the construction work, only one facade wall remained intact. Its stability was ensured by temporary reinforcement systems and the remains of the side walls (photos 4–5). The rest of the building was completely demolished. Despite the difficulties associated with the construction of a new building in the presence of many reinforcing metal structures, each floor of the new frame was attached directly to the facade wall, became its continuation, and after the completion of the work, the desired result was achieved. Currently, finishing work is underway. Terrasite plaster is being restored on the historical facade. A 32-bedroom, new high-class hotel 'Muza' is planned to open.

Photo 4. Strengthening the front wall of the hotel 'Muza'
Source: (author)

Photo 5. Combining an extension with a superstructure to the facade
Source: (author)

The preservation of beautiful architectural buildings usually requires the use of special construction solutions. The use of equipment of a very non-standard reinforcing system became necessary during the reconstruction of the former building of the Ministry of Justice of Georgia. One of the characteristic, the most beautiful buildings in the capital of Georgia was built in 1898 (architect K. Tatishchev), as a tenement house, where many state institutions were located in different years. Before the start of the reconstruction, the structural integrity of the entire building was checked (fig. 2). The results of the study showed that the facade walls were in good condition and could be preserved, but the weight of the internal frame of the building needed retrofitting (Amirejibi, 2011).

Throughout the visible facade of the building i.e. from the side of the avenue
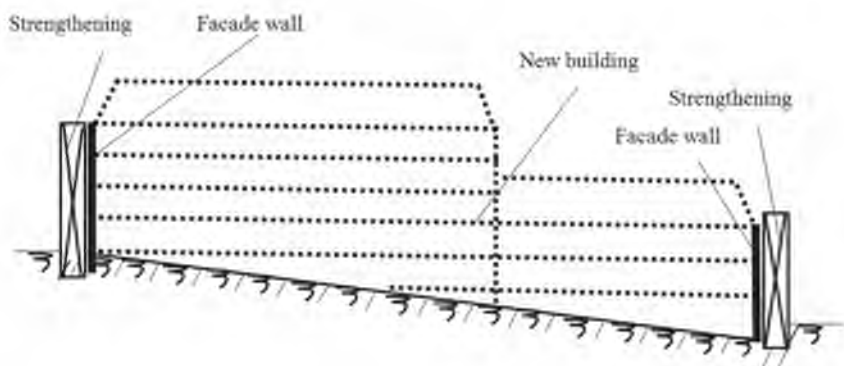
Fig. 2. Scheme of reconstruction of the former building of the Ministry of Justice
Source: (author)

and two streets, powerful metal reinforcement systems were installed to support the walls of the old building from the outside. Inside the perimeter, the frame of the existing building was completely dismantled. The construction of a multi-storey reinforced concrete frame began with the construction of a new foundation (photo 6).

With the construction of each floor, the process of connecting it to a temporarily reinforced facade wall will be carried out. After the reconstruction, the terrasite plaster will be restored on the facade and the building will regain its original architectural appearance and there will be a 170-bedroom, 5-star hotel of the world famous brand Hyatt Regency, which finances this construction (photo 7).

Photo 6. Reinforcing the facade walls and commencement of work
Source: (Fund.ge photo)

Photo 7. The future building of the Hyatt Regency Hotel
Source: (Fund.ge photo)

The architectural synthesis of the 20th and the 21st centuries after the completion of the construction of a 12-storey hotel 'Ramada Encore' and a residential complex on Melikishvili Street last year turned out to be quite interesting. The old building was built in 1930 for the first tuberculosis institute. The author of the project was the architect K. Leontiev, who was able to combine the Georgian historical architectural style with the constructivism popular at that time in one building. He, as one of the followers of asymmetric architecture, used an asymmetric design of the main facade on this building structure (photo 8). The initial design for the reconstruction of this building provided for the reinforcement of the facade of the building, inside of which a monolithic reinforced concrete

frame was to be built, of a much higher height than the old building (Kvaraia, Javakhishvili, 2008). However, at the beginning of the construction work, it was discovered that, due to serious damage to the walls of the facade, their temporary reinforcement was impossible. In this situation, the Ministry of Culture of Georgia made a rare exception. The façade walls were dismantled on condition that during construction they were completely restored taking into account the smallest architectural details (opening of balconies, arches, openings of windows and doors, etc.). Despite the fact that all the works were made of reinforced concrete, the construction company fulfilled this commitment at a high level. As a result, the old façade fits well with the very modern architecture of the multistorey complex (photo 9).

Photo 8. The building of the first tuberculosis institute
Source: (Indigo.com.ge photo)

Photo 9. New building with a facade at the bottom of the old building
Source: (author)

Analysis of the construction works securing beautiful, historic facades

By analysing the five reconstruction works performed on the buildings and their facades, an interesting range of possible different activities has been obtained. All works assumed the preservation of the historic facades of buildings, very characteristic of the centre of Tbilisi. However, each reconstruction differed radically from one another, as can be clearly seen in the drawings of the reconstruction plans (fig. 3).
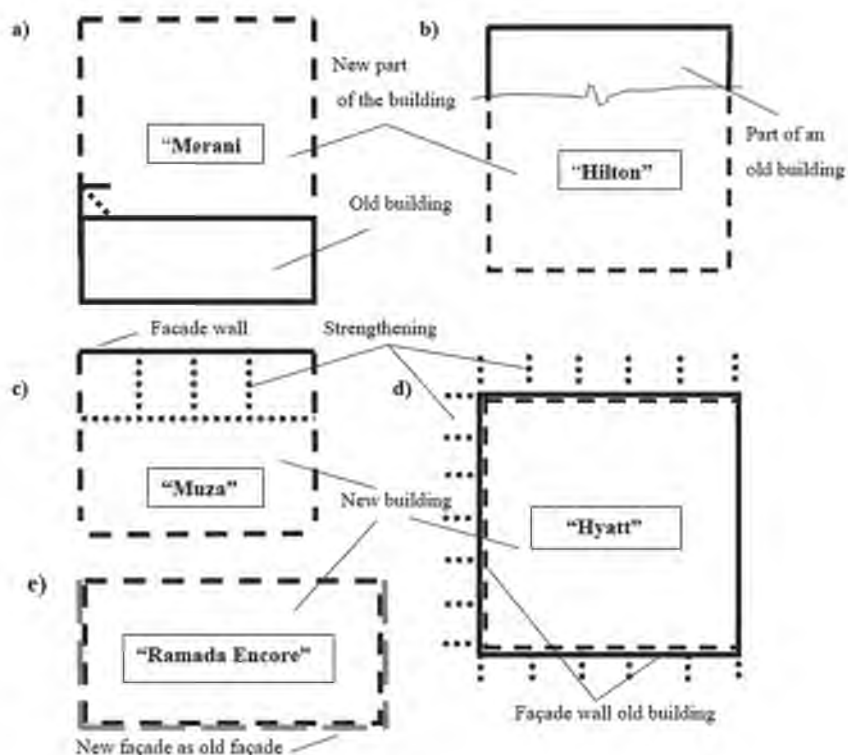

Fig. 3. Reconstruction plans schemes
Source: (author)

They can be described as follows:

1. The old building of the printing house of the Zarya Vostoka newspaper has been preserved in its entirety with the reinforcement of all load-bearing elements and ensuring an interesting integration of the historical part with the new building segment (fig. 3a).
2. In order to preserve the facade of the former building of the Ministry of Agriculture of Georgia, only the front part was left intact, and the rest was pulled down. Then it was attached to the new structure of the building structure (fig. 3b).
3. The reconstruction of the 'Muza' hotel consisted in the preservation of only one front wall with the use of reinforcing elements from the inside (fig. 3c).
4. Contrary to the previous reconstruction, at the beginning of the construction of the Hayat hotel, all three walls of the facade were completely intact and reinforced with a special system of external reinforcement (fig. 3d).
5. The exceptionally oldest building of the former first tuberculosis institute was completely demolished, and the original façade was reconstructed in reinforced concrete, with attention to the smallest details (fig. 3e).

Conclusions

The reconstruction work carried out in the centre of Tbilisi on several historical and cultural heritage sites has shown that changing the functional purpose of each building is possible in different ways. At the same time, it is necessary to preserve their original character and appearance of the facade. Otherwise, irreparable damage could occur to the traditional, historical architectural appearance of the city.

The facades of buildings are a kind of 'face' of a given building structure. They are an inseparable element of the whole architectural layout of streets, avenues, squares, etc. The facades are 'witnesses' of significant historical events as well as everyday urban life. They indicate the character of the city and a given district. Therefore, architects make special efforts when working on the facades, in order to obtain an interesting, unique, attracting people's attention, the effect of exposing the values of the building.

In the process of reconstructing a building while preserving the facade walls, it is often necessary to independently reinforce these walls with special structures, the choice of which depends solely on the complexity of the work to be performed. This stage is one of the decisive moments of renovation works and

the final effect of the entire reconstruction and the preservation of all beautiful, characteristic elements of the facade depends to a large extent on it.

One example showed that despite the existing strict limitation of the total dismantling of the reconstructed building, an exception can be made in the event of loss of load-bearing capacity of the facade walls, and the only condition should be that during the construction of a new building, the original facade shall be completely restored in the old building, with taking into account its smallest architectural details.

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Alina Dittmann

University of Applied Sciences in Nysa

Harmony of space in the German concept of modern tourism reflected in the first Guidebooks

Abstract: The concept of the *Harmony of Space* varies between the periods of Enlightenment and the European modernism. From the subjective and sentimental impression of the travel literature of the 18th and the first part of the 19th century, the instructions on where and how to travel became more standardised and unified since ca. 1840, and a new mass travel concept was established.

The first guidebooks on modern tourism, such as those published by German publishers Baedeker or Meyer, offered instructions on what is worthy to be seen. This article focuses on publications and activities of one of the first German travel agency – situated in Berlin – the Carl Stangen's Reisebureau and its selection of sights attracting Europeans of the last quarter of the 19th century, with a special consideration given to the popular oriental destinations.

Key words: Guidebooks, Orientalism, modern tourism, Constantinople, first travel agencies, Baedeker, Carl Stangen

Introduction: The space revolution and the beginnings of the modern tourism

The phenomenon of cultural space and the harmony of space was presented in the first commercial guidebooks of the three last decades of the 19th century.

Publishers such as John Murray (Murray, 1838) and Karl Baedeker (Baedeker, 1932) revolutionised not only the style of travel, but also the approach to landscapes and architectural objects.

In Leipzig, the Meyer publishers' family edited in the Bibliographic Institute[1] the *Meyer's Universum* (since 1833), a historical-geographical magazine with

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1 The Meyer's publishing house has been founded by C. Joseph Meyer. His series *Meyer's Universum* was one of the first highly popular work, featured engravings of notable landscapes, vedute, and architectural monuments from around the world. See: (Belgum, 2016, pp. 235–258).

illustrations and descriptions of extraordinary natural and cultural attractions from around world.

As the Thomas Cook and Son Company became a well-set enterprise in Great Britain and abroad after 1865, interest in the cultural achievement of other nations and a private leisure travels became a mass phenomenon. It was not long before Cook's competitors on the continent also began to be significantly active in travel offers for group tours. The first travel agency in Germany was opened by Johannes Rominger in Stuttgart (1842), in Austria it was Gustav Schrökl (1836) (Schotter, 2019), but the really popular and recognisable tourism pioneer remained Carl Stangen's Reise-Bureau in Berlin for four decades (1863–1904). The travel agencies Thomas Cook and Carl Stangen became icons of the modern tourism, as well as did the publishers of guidebooks and travel literature: Murray, Meyer and Baedeker.

The industrial revolution resulted in creation of railways and steam ships and caused social changes such as more free time for the new middle class – the bourgeoisie.

In Germany, the first regions of tourists' interest were the Middle Rhine, the Harz Mountains, and the Baltic Spas seaside resorts. Other favourite destinations were Spas with mineral springs as well as ancient ruins in Italy and Greece (Fritzon, 2004). The Rhine area in particular was already overrun by national and international tourists in the middle of 19th century, and steam ships became a popular means of transport. Already in 1850 they carried one million passengers on the river of Rhine and in 1906 another over two millions (Spode, 2020, p. 7). The second means of transportation, the railway, appeared first in 1830 between Liverpool and Manchester and in 1835 the first railway route in Germany (Knipping/Schricker, 2014) was opened. Tourists equipped with the first professional guidebooks contributed to the space revolution, which is still going on today: Distances and the unimaginably wide globe have shrank to a tiny sphere in space. The first group journey around the world organised by Thomas Cook & Son dates back to 1872.

Photo 1. The Headquarter of the Carl Stangen's Reise-Bureau in Berlin ca. 1900 (the so-called Arabic House)

Source: (an original postcard in private archive of the author)

Group tours offered by German tourism pioneer Carl Stangen[2] led his clients to the Pyramids and Cataracts of Nile, to the Holy Grave and to Hagia Sophia (Pietsch, 1871, p. 2). In 1878, the same travel agency performed the first German journey around the world. But what became really popular was another invention of this entrepreneur: Package holidays in the Mediterranean – with a focus on Constantinople, Egypt and Palestine. These were the very prototype of the first all-inclusive vacation (Stangen, 1900, p. 21).

The first Guidebooks

The fascination with new cultural areas was stimulated by the mass production of guidebooks and the growing interest of the middle class in education, and especially their interest in the world; not only in the natural wonders and specific traditions of ethnic groups but also in the civilisational achievements of societies and its effects such as works of architecture and technology (religious temples, factories, bridges, towers, skyscrapers, luxury hotels. monuments and battlefields).

The first modern German tourist guidebooks, such as those by Baedeker and Stangen, were model for conciseness and clarity, contrasted with the 'literary'

2   Carl Stangen (also Karl Stangen) 1833–1911, was a German travel agent, publisher and author, who applied modern forms of traveling among the German society.

and 'aesthetic' qualities of the older models of guidebooks. New typical features were factuality, timeliness of information and a strict structure that gave the impression of a totally catalogued world. The modern guidebooks included star symbols, a register of monuments, as well as symbols for the particular types of sites. Furthermore, the standardised perception of the user was aided by instructions and ready-made routes. This well controlled factuality was criticised by Roland Barthes as a 'disease of the essence.'[3]

Photo 2. Cover of a programme brochure (Stangen, 1898)
Source: (in posession of Historisches Archiv zum Tourismus in Berlin)

The first guidebooks standardised a catalogue of what is worth to be seen and in which way. The phenomenon of 'tourist sights' came onto existence. A good example of pre-made sights depicting in miniature the wonders of the world are the world exhibitions of the 19th century. The most famous were the world exhibitions in Paris, Chicago, and London. In 1893, Carl Stangen's Agency organised a special group tour to visit the World's Fairs in Chicago.

The indirect aim of publications such as travel guides was, among others, the construction of cliché, which served as an accelerator of travel experiences. The recognition effect was important in this context (Pretzel, 1995, pp. 84, 103). In

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3   R. Barthes 1957 cited after Spode Hasso (2020): 'Wahre Kultur, authentische Attraktionen. Eine Philosophie des Echten' [in] Giblak, B.; Kunicki, W. (eds.) (2020) *Kulturräume. Räume der Kultur. Zu den territorialen Prägungen der Kultur und Literatur*, p. 23.

addition, visitors were instructed to perceive the landscape in front of them in the right way (from a hill, comparing the panorama with Leporello paintings and maps of cities and rivers).

In relation to the phenomena of the harmony of space in the early tourism concepts, it is worth considering the change of perspective of travellers in the 18th and 19th centuries and analysing the techniques of the admiring the landscapes visited by tourists. Readers of guidebooks and travelers were carefully instructed how to look at the surrounding landscape in order to 'correctly' interpret the panoramic elements described in the text. The presentation of monuments in travel guides included, besides texts, maps, panoramas (a combination of map and picture with representation of rivers and views), plans, illustrations (engravings, drawings), fans, city plans and overview maps with routes, as well as the first pictograms with symbols for castles, churches, towers or mediaeval and antique ruins. Baedeker's guides were also the first to give star symbols for the best and worth seeing objects and places (Dittmann, 2017, p. 37). Especially the towers were often constructed by touristic associations in local communities. Bismarck Towers dedicated to the Germany's most popular prime minister of the last third of the 19th century are also favourite destinations today.

The illustrations in guidebooks were initially stiches, drawings and, around 1890, photographs, following the introduction of the first individual Kodak camera. In general, tours became standarised and normalised thanks to the guidebooks.

Hans M. Enzensberger's in his famous essay *Vergebliche Brandung der Ferne. Eine Theorie des Tourismus* (1958) mentions *standardisation* (of travel destinations, creation of travel guides), *assembly* (compiled tour offer) and *series production* (organised and realised social trip) as the three achievements that gave rise to modern tourism. The change in the mode of transport (from about 1860 onwards) influenced the perception of the regions travelled. The previously panoramic view from a hill or lookout tower was transformed into a 'cinematic view that represented a tourist spectacle', especially when tourists enjoyed their journey in a luxury train wagon. 'This cinematographic view corresponded to the train journey, during which the images moved like in a movie. (…) Nature [was] experienced like a three-dimensional landscape film' (Hachtmann, 2007, pp. 75–76). The wide world seemed easily accessible and nature lost its hazarding, threatening dimension.

Although travel guides were criticised for their instructional style, the genre was also involved in the emancipation and independence of the late 19th century traveller, who now, with a red book in the hand, did not need the assistance of any local guide.

As travel become more affordable and journeys faster, the European elite and increasingly the bourgeoisie regularly visited not only the classical but also the brand new tourism destinations on the continent such as Greece, Italy, the Rhine Valley, the Nordsea and Baltic Sea spa-resorts.

Tourism has become the largest industry in history and certainly its success was based on mechanisms such as the construction of reality and the constructions of sights. This phenomenon has been transferred to works of architecture in the same way. As Hasso Spode states after Roland Barthes, tourism seems remarkably mythogenic, with symbols and being presented as reality. 'Tourism develops trough myths poetized into symbols' (Spode, 2020, p. 25). The other mechanism is the tourist *cult of authenticity*, which began in the 19th century and characterises the behaviour of contemporary tourists as well. The need of authentication was motivated by commercial needs (Spode, 2020, p. 16). On the one hand, the first tourists were looking for original sights and eye-catching objects. On the other hand, they were often satisfied with a staged backdrop such as replicas of famous buildings prepared for the world's fairs in Paris, Chicago, London, and Vienna. Alongside these international exhibitions, so called special fairs were held. These were equipped with large models of oriental cities or parts of them. An example is the fair of Vienna of 1873: mosques, houses, palaces, streets, harems and Turkish baths, Egyptian, Tunisian, Indian and Persian styles were open to public in the Austrian capital (Samsinger, 2010, p. 300). The turnaround came with the constructivism in the end of the 20th century when authenticity became negotiable (Spode, 2020, p. 22).

Orientalism of the late 19th century

The first European travel agencies such as Thomas Cook & Son and Carl Stangen developed group travels offers on luxury steam ships, primarily to the Orient: Palestine, Lebanon, Syria, Turkey and Egypt (Ottoman Empire). The fascination of Orient by the German society was motivated by the rich cultural past of these regions and the Jewish and Christian religious heritage of Palestine and surrounding areas. But the affection for the countries of the Near East existed in Germany even earlier and was initiated by the interest in Greek antiquity during the Classical period. Since Winckelmann's times, excavations in ancient lost cities have gained in prestige and after the establishment of the German Empire in 1871 they also gained in lobbying and increased funding. Earlier archaeological finds in Herculaneum and Pompeii in the 18th century encouraged further exploration. Heinrich Schliemann's later discoveries in Turkey (1873), which turned out to be the ruins of Troy, encouraged travel to these regions.

In the 1870s, antiquity and visits in the Middle Eastern region gradually became a German 'national enterprise', as Alexander Honold stated (Honold, 2004). One aim was to consolidate of the new German state and promote of its scientific achievements.

The European view onto the Oriental lifestyle and art was certainly selective and dominated by publications in the form of the first modern guidebooks, that have been issued since 1830. Particular places such as Cairo, Jerusalem, and Constantinople formed the core of the European perceptions of the Orient.

The research of the Egyptologist Karl Richard Lepsius already in 1840 inspired the German drawers, painters and engravers to travel into the Middle East. The painter William Gentz and, above all, the architect and painter Gustav Bauerfeind concentrated in their paintings onto the exact reproduction of architectural objects of Damascus and Jerusalem. The architecture of Egypt of the late 19th century was depictured in works of Hans Markart. From 1860 the first photo ateliers were established in Tunis, Constantinople, and Cairo. Photographers such as Rudolf Franz Lehnert and Ernst Heinrich Landrock represented German oriental photography (Bopp, 2004, p. 291).

The German perception of the Orient began before the British occupation of the Middle East. Egypt in particular opened up thanks to railways and the navigation on the Nile in the last third of the 19th century. The motivation for tourists to travel at that time was the admiration for the great cultural achievement of the civilisation of the ancient Egypt. The monuments of ancient Egypt occupied the same rank as the Greek Art. The temple buildings of Karnak, Luxor, Medinet-Habu and Gurna appeared to the European visitors not only colossal but also perfect in artistic detail (Rhein, 2003, p. 52). Already in 1864, the aforementioned first larger international German travel agency, the *Stangen's Reise-Bureau* owned by Louis and then by Carl Stangen, organised the first Orient Tour across the Mediterranean. In 1869, Carl Stangen conducted a cruise bringing guests to the opening ceremony of the Suez Canal. The tour programmes and guidebooks published by this travel agency included passages with descriptions of sights and views as well as copperplate engravings.

Even earlier than Egypt and Palestine, the city of Constantinople became the most popular travel destination, it served as the connection point between Europe and Asia. Many times Constantinople was the starting and ending point of the great Orient Tours organised by the first travel companies. The extraordinary magnetism of the city is connected with its picturesque panorama, stretching on both sides on the hills of Bosporus and the Golf of the Golden Horn. The various temples, Hagia Sophia, Mosques and Topkapi Sarayi were visited with great amazement. Now wealthy and emancipated members of the bourgeoisie

were able to use the new means of transport. Since one of the guiding ideals of this class was education, educational tours, which in earlier centuries were only accessible to the nobility, had now become a popular activity of the middle class. One of their first oriental destinations was Constantinople.

The panorama of the city was often depicted in the guidebooks and tour programmes. The one of 1898 published by C. Stangen presents the first impression of the city (Stangen, 1898, pp. 14–15).

> *The entrance from the Marmara Sea into the Bosporus is extremely picturesque. To the left of the entrance are the old imperial palaces of the sultans; On the hill of Stanbul reises the Agia Sofia, the Soliman and many other mosques with their slender minarets, the Seraskier tower, the buildings of the Sublime Porte and many other strange ones stretched out on the bank up to the Sankt Stephano port.*

> *To the right of the entrance, on the other hand, there is a wonderful picture of Scutari, the English churchyard and the Prince Islands lying in the Marmara Sea. Almost all travelers who have seen a lot agree that in the whole world there is hardly s more beautiful cityscape than that of Constantinople.*

<div align="right">(Stangen, 1898, pp. 14–15, trans. A. Dittmann)</div>

The main monument and symbol of the earlier Christian presence in Constantinople was for the visitors The Hagia Sophia temple.

The following excerpt is taken from the early trip reports of one the first German high society group tour to Constantinople, which took place in 1865:

> *(…) from there we went to Aja Sofia, the building from the brilliant days of Justinian, now fitted with the crescent moon (…). The view of this largest of all mosques is overwhelming. If you look up to the dome, it seems you are looking into infinity, and yet nothing seems colossal, nothing is out of proportion. The pillars that support the dome come from all sorts of pagan temples. The Temple of Zeus at Athens, the Temple of the Sun at Baalbeck, the Temple of Diana at Ephesus, the Temple of Apollo at Delos, they all had to give up their most precious monoliths to adorn this most sublime temple of the East, after which the Emperor spoke the words at the inauguration: 'I have defeated you, Solomon!' The walls are lined with all kinds of marble, without giving the impression of being coloured. Everything is beautiful and, despite the apparent simplicity, sublime, one might say divine.*

<div align="right">(Stangen, 1866, pp. 143–144, trans. A. Dittmann)</div>

Photo 3. The view on the Golden Horn – the entrance into the City of Constantinople around 1898

Source: (Carl Stangen's Reise-Bureau, 1898, p. 18)

As Hagia Sophia has been the main Christian symbol in Constantinople for European tourist groups, it is worth recalling its significant history and architectural parameters. Round buildings and small cross-shaped buildings were initially used in Byzantium as burial and baptismal temples. The new temple concept was tried out during the construction of Hagia Sophia. The wide and short central nave was a type of cross- domed church, which from then on became a basic architectural motif. This form originated in Syria, where it was widespread in the 5th and 6th century and the architects practicing these style came mainly from Anatolia, where the domed structure was predominant. The transition between stone and brick on the same wall was a typical Byzantine technique. These changes marked the definite turn away from the Western ancient tradition. The interior of the Hagia Sophia church (erected in 537 AD by Emperor Justinian I) was quite strictly divided into the monumental, illuminated space of the main nave and shaded side naves with galleries, subordinated to the central space. Justinian's intention was 'to achieve a structure unparalleled since the time of Adam' (Schug-Wille, 1979, pp. 110–111).
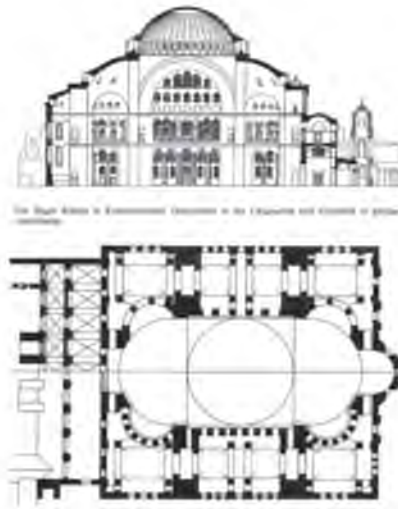
Fig. 1. Cross-section in the longitudinal axis and floor plan in the same arrangement
Source: (Schug-Wille, 1979, p. 7)

Many extremely colourful materials, such as porphyry and marble were used to decorate the temple and clad the walls and pillars. In addition, elements decorated with gold, silver, ivory and shiny stones made the interior more decorative. The light entering the temple moved on the surfaces of stones and precious metals, emphasising the luxury and splendour of the most important temple of the Empire. The 916-year history of the Christian basilica ended in May 1453, when Mehmed the Conqueror entered Istanbul. Hagia Sophia was turned into a mosque, but it remained an important building renovated by Sinan, a genius architect who added minarets and a hammam (steam bath) next to the temple (29).

Hagia Sophia underwent its biggest renovation in the mid-19th century when the Fossati brothers filled large cracks in the dome and secured it with a steel rim. Inside 35 medallions of 8 metres size hung from above, decorated with names of Allah, Muhammad, his grandsons and the most important caliphs. The mosque's time ended in 1935 when Atatürk turned it into a museum. Inside, it initially appears covered in darkness illuminated by the sun shining through windows placed high in the dome. The dome is truly enormous, slightly oval and large by 30.8 by 31.8 metres. It rises over 55 metres above the floor. The lower level is supported by 40 columns, the upper level by 64 (30). The architects Antemios of Tralles and Isidor of Millet erected the Temple Hagia Sofia in only 5 years

as a symbol of the Eastern Empire and its largest temple, incorporated on 27th December 537.

The harmony of the concept of Hagia Sophia made the European tourists embrace and adore the temple and recognise it as one of the wonders of the world. In contrast, few guidebooks or personal diary of the visitors prove evidence of similar perception of the monuments situated in Jerusalem and of the city itself. This popular destination usually left tourist confused and disappointed by the disharmony and the multiple visual and ethical nuissances caused by the atmosphere of the city. Two pilgrims traveling with Carl Stangens agency were authors of a two-volume 'Reise um die Erde' [Journey Around the World] published in 1905. They describe Jerusalem in a manner typical of many contemporaries:

One has to admit that while looking at today's Jerusalem and strolling through the today's city, he loses more and more of the solemn atmosphere for which he may have prepared himself for many months. (…)

Jerusalem's surroundings are barren and mountainous. The circumference of the city is now only half a mile. The city is built irregularly, with rather high walls and eight gates that still bear Hebrew names. The houses are made of sandstone, three stories high and without windows on the lower storey. This dead uniformity is only interrupted by the tops of the mosques, the towers of the churches and a few cypress trees. (…) The streets are also narrow, sloping and often curved; one has to pass through dull, dark cellar vaults and the ruins of former magnificent buildings. (…) Today's Jerusalem is divided into four districts named after the religion of the inhabitants: in the east the Muslim quarter with the Temple Square and the Via dolorosa (…), in the south-west the Armenian quarter, in the north-west the Christian quarter with the church of the Holy Sepulcher, the houses of the Latin and Greek Patriarchs, the German Church, etc., and the Jewish quarter with several synagogues situated in the valley.

It is easy to imagine that neither the sciences nor the arts flourish in the area of present-day Jerusalem, considering the foreign manner and indolence of the Turks and the dark superstitions of most of the Christian sects and the Jews living here. (…) In the city, the squares and buildings are shown under ancient holy names. The citadel, which is said to have been the castle of David, is a thoroughly gothic building. (…) Pilgrims usually turn first to the great Armenian monastery of the holy Saviour (…). There are a total of 61 Christian monasteries (…). The Church of the Holy Sepulcher has been the holy place in Jerusalem for a millennium and a half. It consists of several united churches (…). The 'Tomb of the Redeemer' is presented in a richly decorated, large underground chapel under a beautiful dome, with a sarcophagus of white marble. Empress Helena is said to have founded this church in the 4th century after she is said to have found the true cross. The magnificent mosque of the Mohammedans of el Haram, which they consider the greatest sanctuary next to the Kaaba, is located on the site of the Temple of Solomon. It consists of two large buildings, one of which is El Aqsa, with a magnificent dome and decorated with beautiful gilding. The other building is octangonal, and is called El Sahara; here the Mohammedans presented the footsteps of their prophet, surrounded by a golden latice, and a Koran that is 4 feet long and 2 1/2 feet wide. (…) In addition to some ancient Israelite

monuments, one can see a number of Greek and Roman monuments, several Christian ones, and especially Gothic ones that stem from the Crusades.

(Tanera, Eisbert, 1905, pp. 346–348, trans. A. Dittmann)

Photo 4. The church of the Holy Sepulcher, Jerusalem
Source: (Carl Stangen's Reise-Bureau, p. 10)

Photo 5. Street scenes of Jerusalem
Source: (Tanera, Eisbert, 1905, p. 348)

Conclusions

The first modern guidebooks published during the three last decades of the 19th century presented a well-controlled and predetermined (for commercial purposes) selection of sights from around the world. Not only romanticism but also authenticity, factuality and regularly updated information were determinants of the selection of illustrations and objects presented in the guidebooks. German middle class travellers expected above all education and easy orientation in the places they visited, which was possible thanks to the 'red books.' According to the spirit of the time of the late 19th century, an average tourist was ambitious and interested not only in the history of the visited regions but also in architectural details of the ancient and modern technological and artistic achievements. In addition, with the emergence of new scientific disciplines such as anthropology and ethnology, interest in traditional daily patterns of particular ethnic groups, their housing and lifestyle has become part of the tourism offer. Travel destinations and pre-selected monuments had contradictory characteristics and were a combination of recognised human achievements, but also quasi-authentic scenery and rituals. Classic and new objects of interest to tourists were often transferred in the form of replicas to Europe and presented at world exhibitions as models that can be considered the prototype of today's Disneyland amusement parks. Oriental painters and Disneyland amusement parks. Oriental painters and guidebook illustrators focused on original architectural motifs, while newly emerging photographic ateliers in tourist countries offered studio photography against pre-arranged backgrounds. Despite their commercial and utilitarian nature, the first guidebooks encouraged readers to travel and played a very important role in creating an educated and emancipated middle class.

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Part V Tectonics of the place

Hanna Michalak, Jerzy Suchanek
Poznań University of Technology

Dynamic harmony of modularised space

Abstract: Harmony of architectural composition, inextricably linked with modularity of architecture, can be manifested in a much more dynamic form than the name implies. Light revealing shapes of architecture shows its absence as a shadow in the city landscape and darkness in some interiors. There are interiors of concert halls, theatres and conference halls with no daylight, but entire buildings are brightened with it. The correlation of light and shadow, brightness and lightness can make phenomena which could introduce an element of variability, not destroying the harmony. When light phenomena are supported by acoustic sensations, as we have in concert halls or theatres, the final effect changes. These phenomena are especially interesting on the border zones between a concert hall and a lobby for example, where, despite acoustics and lighting, architectural elements are modularised to various extents. This paper deals with an attempt to recognise the principles of these correlations.

Key words: harmony, architectural composition, light, shadow, modularity

Light artists

The issue of light has been analysed and used in art since the dawn of time. In addition to its primary function in architecture – to enable perception, and to its decorative role, light itself is often regarded as art. 'Treating an object as a sculpture and space as a multifaceted stage' (Michalak, 2020, p. 39) to create with light, is becoming a feature of the best urban, architectural and artistic developments at the same time. Light artists such as: James Turrell, Mario Merz, Joseph Kosuth, Mischa Kuball, Rebecca Horn, Christina Kubisch, Keith Sonnier, Olafur Eliasson and their works[1] – point to the great importance and role of light in culture. The light art concept describes 'an artistic form of expression in which light occupies a central place and is the main medium and tool of expression'. In this type of art, artificial light is usually used. According to Anapur (Anapur, 2016) a light installation is not a part of art, but only its element, although sometimes related

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[1]   The Centre for International Light Art is the world's only art museum solely dedicated to light. Every installation was created with museum spaces in mind. The museum features permanent installations by a dozen of the best-known light artists www. lichtkunst-unna.de, (accessed on March 2021).

to architecture. The Weather Project, a work by Olafur Eliasson, is based on existing elements of the Turbine Hall interior, Tate Modern, London, transforming the space into an act of architectural magic (Jodidio, 2004, pp. 180–183), just as the glass façade of a building in Vienna enabled another work by the artist, the ephemeral Yellow Fog (photo 1–2), to come into existence.

Photo 1–2. Yellow Fog, Olafur Eliasson, Vienna
Source: (H. Michalak)

It is difficult not to name another artist working with light impression and perceptual art, exploring the materiality of light. James Turrell[2] is one of the most recognisable light art artists, creating individual or structures integrated with architecture. His early works were based on reasoning and constructing light and also entailed painting with light. Turell's later works included observations and discoveries on the limits of human perception shaped by light, particularly in the zones between the exterior and the interior (Turrell, 2021).

Natural and artificial light dynamics

Architecture is a man-designed space that protects people. Light not only connects this artificial object with nature, but also brings the sensuousness to

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2   The artist, like Robert Irwin, represented the Light and Space Art movement, (see Panasiewicz, 2013, p. 92). He studied light phenomena and optical illusions and their effects on visual experience. He also explained the concept of the Ganzfeld effect or the loss of perceptual fields as a result of sensory deprivation.

life. By using appropriately selected lighting, architects make it possible to read individual elements of the spatial forms and the interior, and to influence the emotions of the recipient – the user – by creating the right mood. Twarowski describes accidental effects related to direct light, which influence the composition and change the artistic expression of works (Twarowski, 1970, p. 130), and this dynamism, according to the authors, is the added value of a project. The correlation of light and shadow, brightness and lightness can make phenomena which could introduce an element of variability, not destroying the harmony of frequently modularised architecture. The art of constructing space using light, which according to Henry Plummer is the 'soul of architecture', can be achieved in many of the ways described by this American architect. Just as sunlight, saturated by the colour of stained glass, entering a Gothic cathedral, 'Plummer's' natural light can have a 'processional' character, choreographing space (Plummer, 2009). Lighting scenes in the night image can be created in a similar way. The new Hyundai Capital Convention Hall in Seoul, designed by arch. Gessler[3] through the use of state-of-the-art technology as well as excellent acoustics and innovative lighting blurs the boundary between art and architecture, and changes the way we perceive materials, light and space. Futuristic lighting used in this minimalist but sophisticated interior design makes space reminiscent of one of Turrell's previously mentioned installations. Analogously to these installations, as Solewski describes, one can experience the immateriality here, engage in contemplation of light and shadow, brightness and darkness, air, silence and sound (Solewski, 2007, p. 166). Another design, the Red Plum Culture and Creative Park in Shanyang, China, is based on linear, expositional lighting[4] (lighting design: RDesign International Lighting, Guji Hu & Raymond Lee & Yuko Wong). The live performance area in one of the buildings in the complex and in the building that has been designated as the main art gallery are unique places in terms of the designers' work with light. Custom Illuminated Video Wall (designed by Thomas Lawrence) at Horwitz Tower, Ohio,[5] like painting abstract pictures on a screen, is a 'living' work of art.

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3   Flexible, minimalist atmospheric stage lighting, including linear, sconce and recessed lighting, are used at the venue. The project was awarded the AIA Institute Honor Award for Interior Architecture.
4   The design was honoured with the 2020 Lighting Design Awards in the field of Architectural Interior Lighting.
5   The wall was created in the hospital's oncology department, where it is not only an interior element that stimulates the imagination, but also provides therapy for patients. The design also won the 2020 LDA award for medical lighting.

The conscious use of light and shadow makes it possible to bring out and emphasise shapes or to make them disappear, which affects the arrangement of space. It is about using light to harmoniously complement, not break through the darkness (Solewski, 2007, p. 168). It is the essence of many completed architectural concepts. Masters of architecture such as Steven Holl, Herzog & de Meuron, Peter Zumthor, Frank Gehry, Alvaro Siza, Alberto Campo Baeza, Rafael Moneo, Rem Koolhaas, Jean Nouvel, Fumihiko Maki and Toyo Ito as well as others are also masters of light art.

Contemporary architecture uses a variety of materials with varying degrees of transparency, glossiness, reflection, texture and structure. Sometimes unobvious material combinations produce surprising effects and optical illusions. This applies to the way spatial forms as well as interiors are shaped. When light encounters an obstacle it makes us see its shape through its own shadows and those cast on other spatial forms and surfaces. Light and shadow contrasts help us understand basic quantities, distances and depths (Rogińska-Niesłuchowska, 2010, p. 191). Strong contrasts resulting from the differentiation of the spatial forms, between light and shadow, often also herald a change in their function.

Buffer space harmony

The functioning of concert and performance halls in urban space is facilitated, among other things, by proper attention to participants during events for which they were designed. Apart from the obvious issue of managing traffic, there is a need for waiting area, need for mental adjustment to the concert or performance to come. Time is of the essence, because there may be a need to arrive early for an event of great interest, as well as the lengthy performances may require breaks. There is the matter of auxiliary functions such as cloakrooms, sanitary facilities or catering. It is worth considering the problem of spaces immediately preceding those in which concerts and performances take place: lobbies, halls. Their geometric configuration: segmentation, location in relation to the main entrance to the building, as well as the ornaments used can provide an illustration of their involvement in the process of creating an overall impression of beauty for the whole building. This also applies to its impact on the city space.

The Dresden Opera House (photo 3), designed by Gottfried Semper (1841), following dramatic situations, was rebuilt twice,[6] last time in 1985. According to

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6   The first reconstruction after a fire in 1869 was carried out by Gotfrieds son, Manfred Semper, with changes including the entrance area.

a design by Wolfgang Hänsch it has retained its external shape (of the second building, dating back to 1878), thanks to the fact that the very extensive facilities of the new opera house were designed in separate buildings (photo 4).

The entrance area, based on an axial layout, with the main entrance at the top of the arch and side entrances from covered passageways located at the base of the arch (layout plan), contains a very interesting arrangement of coupled interiors. The ground-floor corridor of the arched section is connected via a wide staircase to side hallways, which are partly open to the spacious first-floor lobbies.

The polychrome vaults of the first floor are supported by pilasters and doubled columns marking the boundaries of the passages between floors. In contrast to the ground floor, the upper floor space is well-lit and provides a view over the adjacent Theatre Square, the Cathedral and the northern wing of the Zwinger. Not far from the Semperoper there is the Kulturpalast (photo 5), a building designed by Wolfgang Hänsch, Herbert Löschau, Heinz Zimmermann (1962–1969). After the modernisation designed by Gerkan Marg und Partner (Bahr, 2011, p. 168) (2012–2015) it served as a philharmonic hall, in which a spacious foyer, of a rectangular shape, encloses the northern frontage of the market square (Altmarkt) with its glazed wall. It is not possible to feel such a well-balanced relationship between the different parts of the buffer space in this building. The modern vineyard concert hall is accessed through the side staircases (photo 6).

Photo 3. Dresden, Semperoper, view from Theatre Square
Source: (J. Suchanek)

Photo 4. Dresden, Semperoper, auxiliary buildings
Source: (J. Suchanek)

Photo 5. Dresden, Kulturpalast
Source: (J. Suchanek)

Photo 6. Dresden, Kulturpalast, stairwell
Source: (J. Suchanek)

Photo 7. Dresden, Semperoper, upper floor hall
Source: (J. Suchanek)

Photo 8. Dresden, Semperoper, east section upper floor hall
Source: (J. Suchanek)

This system is similar to the one in the Semperoper, but here, the rather spacious stairwells are separated from the daylight zone because of the neighbouring library. The proportions of the rooms in the heavily-lit foyer and the dark stairwell give the impression of such deep contrast that it can destroy the viewer's sense of continuity of function. There is no such impression in the Semperoper building, although the relationship of the individual parts of the foyer and the circulation spaces leading to the auditorium is also characterised by great dynamism: narrow corridors and stairways, and spacious, partly two-storey lobbies with numerous columns, pilasters, balustrades and a multi-bay vault, and the architectural detailing enriched by chandeliers and sconces that are precisely elaborated in form (photo 7).

The decor does not differ from that of other monumental buildings representing 19th century historicism. In this case, restoring it in a post-war appearance, in addition to meeting the monument protection requirements, also enhances the acoustic qualities of the building. The interior layout described above is built in accordance with the scheme of an acoustic silencer, i.e. a sound tube with a double cross-section step, open on both sides (Makarewicz, 2017, pp. 293–293).
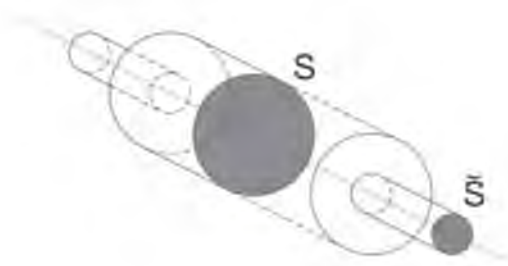
Fig. 1. Acoustic silencer
Source: (J. Suchanek)

To what extent it corresponds, whether to a real silencer or a reflective one (fig. 1), depends on the complexity of the subdivisions and the richness of the interior design, which (together) can act as an absorber present in a real silencer. The foyer, as buffer space between the building's surroundings and the auditorium, allows the audience to achieve the right comfort to enjoy music in the opera theatre auditorium.

The acoustic insulation of the auditorium interacts with the regulation of external lighting, which reaches the auditorium space (no matter how much daylight there is) to a limited extent. The opera house also requires a separation of the external light stimuli from the audience space and yet this buffer should have a clear contact with the outside light. Louis I. Kahn, by comparing designing architecture to composing music, points to the existence of a synthesis of the senses – sight and hearing in relation to space and sound (Twombly, 2003, p. 225). And he points out the need to illuminate every interior with natural light, providing orientation in time and space. It may be assumed that the boundary of this obligation is at the entrance to the audience space, which requires a complete cut-off of daylight during a performance. The method of filtering light used by L. I. Kahn in the La Jolla laboratory project (Twombly, 2003, p. 143), based on his African experiences, involved using a wall in the interior as a screen – a curtain and a reflector at the same time. Similar solutions, were also used more or less consciously in the Dresden opera house (photo 8), where the arched walls (not too far apart from the opposite windows) perform the function of light distributors in a specific way.

A similar use of curved wall and vault surfaces as elements for moderating the effectiveness of light and acoustic phenomena can be seen in the construction of the Harbin Opera House (China, Heilongjiang Province) by MAD Architects (2015). In this building (photo 9), the role of the screen-reflectors is played by the

walls and vaults based on interpenetrating curved surfaces. This principle also made it possible to use overhead lighting, which reveals a section of the structure not only directly but also as a projection onto the wall and floor surfaces (photo 10). The floor, made of polished stone, reflects the waters of the Songhua River surrounding the area adjacent to the opera house.[7]

This type of flooring in combination with a lot of glazing (walls and ceiling) and smooth plaster on the walls, can adversely affect the acoustics of the entrance area. The acoustics of the opera house lobby have been visibly taken into account by the use of wooden cladding on the large curved wall surfaces that enclose the main hall. The spiral staircase entering the space of the foyer connecting the three floors are also in the form of organic shapes with soft wood textures (photo 11). Consistency in shaping the interiors in accordance with the principles defining the external shape of the building allowed the architects to achieve appropriate acoustic comfort in combination with controlled daylight access, while at the same time meeting the design's aesthetic objectives.

A similar staircase but in a different material and colour version (white) adorns the lobby of the Szczecin Philharmonic building, designed by Estudio Barozzi Veiga (2007–2014), where, being the only element with a soft form, it emphasises the orthogonality of the shapes of the lobby and the neighbouring rooms. Permeation of spaces, their interrelationships and openings produce an effect similar to that achieved in Semperoper and the Harbin Opera House, but using completely different shapes. In the Philharmonic building, the upper foyer is suspended above the entrance hall, which makes the effect of permeating spaces even more pronounced. While there are clear differences in the sizes of the individual coupled interiors adjacent to the large main hall, the light in them seems similarly subdued during the day and rather uniform, even when only artificial lighting is in operation.

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7   Perfectly integrated into the surrounding landscape, thanks to its roof terrace, the building also provides a vantage point from which the wider context of the city's skyline can be absorbed.

Photo 9. Harbin Opera, designed by MAD Architects
Source: (J. Suchanek)

Photo 10. Harbin Opera, hall in entrance area
Source: (J. Suchanek)

Photo 11. Harbin Opera House, hall-foyer – wall of the main hall with visible wooden cladding

Source: (J. Suchanek)

This can be interpreted as an effective ('therapeutic') isolation from external noise (Purchla, Sepioł, 2015, p. 51). The configuration of the lobby and the interiors connected to it in the Philharmonic building is somewhat reminiscent of the solutions used in the Museum of Fine Arts in Leipzig (designed by Karl Hufnagel, Peter Pütz, Michael Rafaelian, 2004), where the two great halls intersect and connect with staircases and exhibition halls (photo 12–13).

The staircase is a very interesting element of the spatial game: it generally runs in dark, semi-open niches, which means that artificial lighting that is required there introduces additional visual effects and is also an easily discernible signpost for visitors (photo 14–15).

Photo 12–13. Leipzig, Fine Art Museum, permeating hall spaces
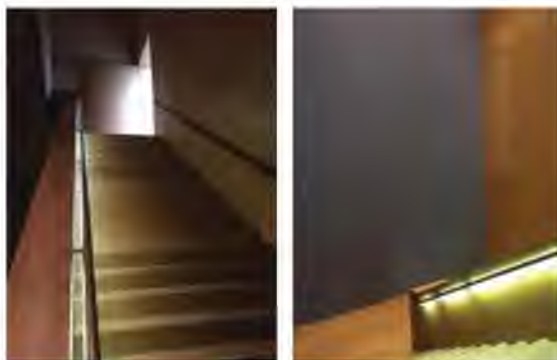Source: (J. Suchanek)

Photo 14–15. Leipzig, Fine Art Museum, stairs
Source: (J. Suchanek)

Guiding the user of a space with daylight and artificial light and the articulation of light and shadow are the most effective, manipulative[8] tools that give the right expression to architecture and provide the viewer with an intuitive interpretation of space. Just as light constitutes the aforementioned 'soul' of architecture and the 'generator of senses and meanings' of the metaphorical and

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8   According to Suman, successful manipulation of light and shadow provides a framework for our architectural experience, more: (Suman, 2009, p. 3).

abstract (Charciarek, 2017, p. 7), the shadow makes its significant role felt the moment you enter its space.[9] The uniform, modular rhythm of the 1.200.000 anthracite bricks of the Gdansk Shakespeare Theatre, designed by Renato Rizzi (2013) allows you to almost physically feel the weight of the outer walls that lead down a narrow, reflective corridor[10] to the entrance light… and then through the foyer to the heart of the theatre – the Main Hall with its openable roof allowing performances to be made under a lit sky. These deliberate treatments, 'theatrically' – literally and figuratively – create a performance on par with those of the masters (photo 16–19).
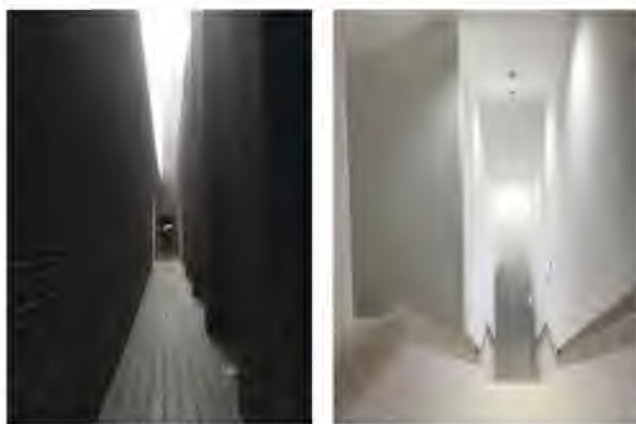

Photo 16–17. Shakespeare Theatre in Gdansk, exterior and interior
Source: (H. Michalak)

Conclusions

Spatial divisions in the boundary area between the external zone and the central rooms (functionally), which are the reason architecture is pursued, are governed

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9   Szpakowska-Loranz writes about the need to take into account the shadow in architecture, referring to the thoughts contained in the works of Juhani Pallasma and Steen Eiler Rasmussen among others, see: (Szpakowska-Loranc, 2017, p. 73).

10 This contemplation, planned by the artist while crossing the road, can be compared to the idea of Olafur Eliasson's installation Reflective Corridor from 2002, exhibited at The Centre for International Light Art. in Unna, Germany.

Photo 18–19. Shakespeare Theatre in Gdansk, Main Hall
Source: (H. Michalak)

by principles derived from the need for harmony and not only in the visual sense. Combining light and acoustic phenomena in the design of these spaces is desirable, although it is difficult to describe these relationships in a way that allows for effective application, apart from the obvious association regarding the dimensional proportions of architectural elements. Assuming that in the perception of the observer (listener and viewer), harmony is the conformity of observation with expectations (Wilczek, 2016, p. 51), one should combine experiences in both spheres (visual and acoustic) in order to create a space that facilitates the acceptance of change and prepares for the perception of changing acoustic and visual phenomena.

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Anna Telatycka
Poznań University of Technology

Harmony of sound and architecture as one of the important criteria for shaping human space

Abstract: Absolute silence does not exist. Every building 'plays'. You can hear various noises that create the acoustic background. Shaping a comfortable acoustic background through the mutual arrangement of rooms, the selection of finishing materials is an important element of architectural design.

The study attempts to record sounds produced by building partitions, stimulated by acoustic sources in the immediate vicinity. An attempt was made to answer the question: does the 'response' of building partitions 'destroy' the original sound or harmonise with it? Is it possible to consciously obtain added value of an acoustic work piece (musical, verbal) by 'tuning' the building partitions of an architectural interior?

An analogy between the interior of an architectural space and acoustic phenomena generated by musical instruments is presented. Hence, the assumption that every architectural building structure is a specific type of instrument seems to be justified. The recording of the sound of this instrument was an original experiment leading to an attempt to reproduce the architectural interior using an acoustic spatial model.

A method of composing an acoustic spatial model with the use of acoustic analogues consisting of sound tubes (pipes) was presented.

The presented modelling can be a tool supporting the shaping of harmonious relations between sound and architecture.

Key words: acoustics in architecture, harmony of sound, beauty of sound

Introduction

Each architectural building structure is an instrument of its own kind. In addition to all kinds of system noises, a person is one of the sources of sound that spreads within this instrument. A person is also a being who is inside such an instrument, therefore it is very important to treat an architectural design in such a way as to try to ensure the user's comfort at the stage of its creation.

The study analyses the space in which a person stays most often, i.e. an apartment. It consists of several rooms. In terms of acoustics, it can be a very complicated structure, because closing and opening doors to rooms changes the pattern of sound propagation inside the apartment. The existence of silence in

the room is almost impossible. Each building 'plays' in itself. In addition to man-made sounds, there are many noises that make up the background acoustics. The whole building 'plays' with the sounds produced during the use of a given space. There are many sources of sounds that affect the acoustic comfort in a room where a person is present. The harmony of sounds inside rooms is an important aspect that should be taken into account during design.

In the designed rooms, we hear many sounds that we usually do not pay attention to because our auditory system is selective. It chooses only what is most important and treats the rest as an acoustic background. Sound sources in the room stimulate all the partitions to vibrate. The sound wave can be reflected, absorbed or scattered (Egan, 1988; Everest, 2010; Kulowski, 2007; Long, 2006; Mehta, Johnson, Rocafort, 1998). How do these noises sound? They are definitely different than direct sound. They are modified by these partitions. Can you listen to the sounds in the wall? Are they just weakened or amplified or do they sound completely different? A key question can be asked here: 'Do walls have ears?', Or maybe the walls hear and respond to us or even sing, but we do not pay attention to it… The singing of a building can be the poetry of the aesthetics and beauty of the world around us.

This effect is definitely dependent on the frequency of the sound. Sometimes the partition resonates. You could say that the man-made sounds and the sounds emitted by building partitions create a kind of dialogue. It would be interesting to listen to such a dialogue. In the next part of the study, an attempt to record the sound from the building partition (using a piezo contact microphone) was made. The arrangement of the rooms undoubtedly influences the response to the stimulation of the interior to vibrations. Or maybe such a system could be represented by an acoustic pattern?

Objective and scope of the study

The objective of the study is to find answers to the following questions: how does an architectural interior affect a person's perception of the acoustic climate? Does the shaping of space influence the state of friendly relations between sound and architecture? What is the synergy of sound with architecture? Is it possible to hear the sound of an architectural structure?

The scope of the study is an experimental analysis of acoustic phenomena on building partitions, performed with the use of acoustic sources using specialised equipment and software.

Here is a list of the equipment used:

- Adobe Audition computer software,
- Edirol UA-25 audio interface,
- JBL Xtreme 2 speaker,
- Beyerdynamic DT 770 Pro headphones,
- piezo contact microphone, specially designed for the purposes of this study.

The photo below shows the constructed microphone installed on one of the walls being tested with the Edirol UA-25 audio interface used.

An attempt to record the sound of an architectural interior. Testing method

In order to record the sound of the entire interior, an attempt was made to record the sound from individual building partitions surrounding them and from selected elements inside the living room, and then all these signals were listened to and analysed, both subjectively (auditory) and objectively in a computer programme.

A piezo contact microphone, specially designed for this purpose, was used for the study. A piezoelectric transducer converts vibrations in two directions – it can serve both as a sound source and a vibration-responsive microphone (Dobrucki, 2007).

A metal, thin disc with a ceramic material sprayed on it is a sensor of vibrations transmitted by various physical objects, just like a microphone receives sound waves (Butler, 1994; Dobrucki, 2007; Sztekmiler, 2018; Żyszkowski, 1966). A piezo microphone, unlike a standard microphone, does not respond to air vibrations. Consequently, it cannot be used for voice recording. When using a piezo microphone, we ignore the reverberation or the response of the room, as long as they are not converted into vibrations of physical elements. It is therefore an ideal microphone for examining the 'response' (vibrations) of a building partition while ignoring the acoustic wave falling on it.

An attempt was made to record the 'response' of various physical elements separating the listening space in a living room to stimulation with an acoustic signal. The JBL Xtreme 2 speaker was used as the sound source, from which acoustic signals were reproduced. Vibrations were recorded on the surface of two walls with different structures (brick and plasterboard walls), the ceiling, the floor, the window and the back of the wardrobe, which is the separation of this space. In addition, the vibrations of the shelf hanging on the wall and the desk were also examined. Figure 2 shows a room plan of the room with the location of the sound source.

Fig. 1. Microphone and audio interface used during the study
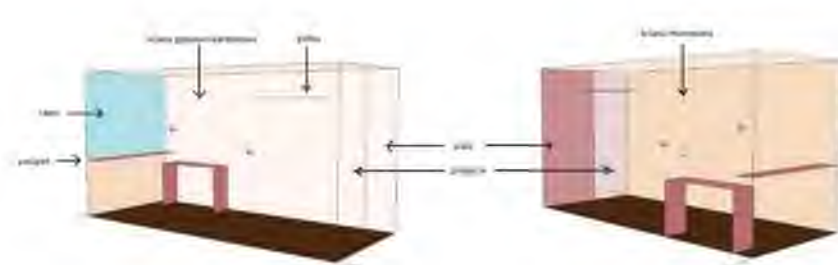Source: (original study)

Fig. 2. Room plan of the room being examined with the location of the sound source (red point A0) and the listening position (blue point 01)
Source: (original study)

The course of the study

1. Test with continuous signal with tunable spectrum

Initially, the time waveforms for the excitation with an acoustic signal were recorded – with a sinusoidal tone tuned with frequency in the range from 60 Hz to 16 kHz with an average sound pressure level of 90 dB emitted from the speaker at a distance of 1 m from the partition being tested. These signals were generated in Adobe Audition programme. Two significantly different wall structures were selected for this study. The first is a brick wall and the second is a plasterboard wall. Then, these signals were listened to and compared depending on the type of partition.

This signal was chosen because it covers the entire audible frequency range. The author wanted to investigate the influence of a signal with a wide spectrum to check how much it influences vibrations of building partitions and what changes a given partition introduces to the original signal. Listening to the sound 'from the wall' turned out to be an interesting and imaginative experience to the author.

The generated acoustic signal fell on the building partition and was transformed into its vibrations, which were then recorded by the custom made piezo microphone and the Edirol UA-25 sound card for the Adobe Audition computer programme. The recorded signals had low dynamics, despite the high pressure level of the generated signals. The time waveforms of sinusoidal signals for both tested partitions are presented below (fig. 3).
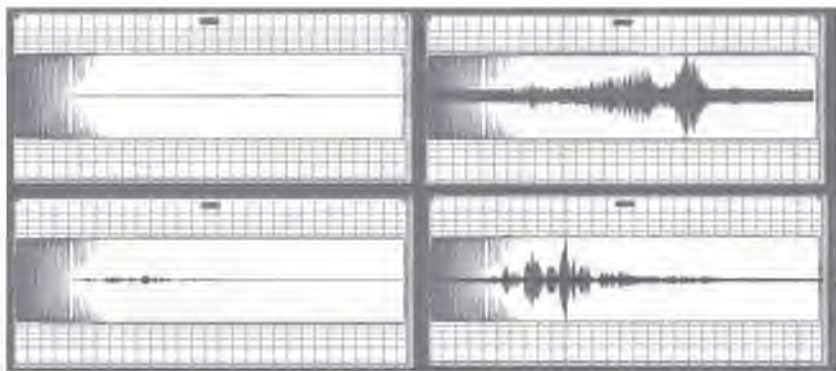
Fig. 3. Graphical representation of the superimposed time waveforms of the sinusoidal signals

Source: (original study)

The outer envelope of the signal in the figure shows the excitation signal, and the gray colour inside is the recorded signal. Situation A (brick wall) and C (plasterboard wall) refer to the recorded signals, while in the case of B (brick wall) and D (plasterboard wall) the level of the recorded signal was raised for the purpose of signal analysis.

At first glance, you can see the difference in the dynamics of the signals between the two partitions being analysed. The plasterboard wall vibrates more. As the vibration amplitude of the recorded signals was very small, the level of the

recorded signals was raised so that the maximum level was equal to the level of the excitation signal. This procedure was used in order to improve listening conditions and analyse the signals in more detail.

The analysis made it possible to state in which frequencies the tested partitions excited the most.

2. Observations

Changes introduced by building partitions in relation to the original signal:

- the recorded time waveforms of the signals significantly differed from the time waveform of the excitation signal,
- significant reduction of the signal amplitude. brick wall (more massive) vibrated less,
- the entire frequency range was recorded, there was no cutoff frequency for which the wall would not transmit a signal; vibration maxima were different depending on the type of partition; for the brick wall it was the range of 430–3660 Hz, and for the plasterboard wall it was 86–947 Hz; this fact may be related to the resonance frequencies of the walls; the obtained signal is modified – as if after using a graphic equaliser,
- adding noise to the signal (higher for the brick wall),
- we obtain a slight timbre change, but the excitation signal is fully recognisable from the signal recorded from the building partition.

Knowing the frequency ranges that a given wall boosts or suppresses and changes in other signal properties, one could create such a preset, i.e. parameter settings in a computer sound editing programme, which can simulate how the sound will sound after recording it from a given partition.

3. Real signal testing

The second part of the study was to record a piece of music played in a living space. It is an acoustic signal that each of us can listen to in such a space. The study aimed at obtaining the answer: does separating the space deteriorate the quality of the signal being reproduced, or maybe it harmonises with it, adding some unique properties to it. The track that was played: Andrea Bocelli – 'Love in Portofino.'

The acoustic signal was recorded on several different elements: plasterboard wall, brick wall, ceiling, floor, window, window sill, shelf hanging in the room, desk and the back of the wardrobe, which was the separation of this room. All these elements were located in one room around the sound source. Recorded

signals were then normalised. Normalisation, i.e. raising the signal level to a certain value, was used to improve listening conditions to and analyse the signals being tested.

Figures 4–5 show the comparison of the excitation signal with the selected recorded signals.

The presented figures show that the amplitude of the recorded signals is much smaller than the amplitude of the excitation signal. Careful analysis was performed after amplifying these signals to the excitation signal level.

Fig. 4. Graphical representation of the superimposed time waveforms of the signals. The gray colour shows the excitation signal, and the black colour (in the middle) shows the signal recorded on the plasterboard wall

Source: (original study)

Fig. 5. Graphical representation of the superimposed time waveforms of the signals. The gray colour shows the excitation signal, and the black colour (in the middle) the signal registered on the wardrobe

Source: (original study)

It should be noted that for some elements (plasterboard wall, window, desk and wardrobe) the vibrations increased and only after some time reached a certain maximum value. In the case of the remaining elements (more massive ones) such a tendency was not observed. An interesting result was obtained for the signal recorded on the wardrobe (fig. 5). At certain points, the vibrations stopped, and after a while they began to vibrate again. To check the repeatability of this effect, this signal was recorded several times and a similar outcome was observed each time. The vibrations stopped, but each time for a different time interval. In the moments where there were no vibrations caused by the excitation signal, noises were recorded – the lack of vibrations did not mean 'silence' in the recording. The back of the wardrobe being tested is a thin board, while the rest of the tested elements were much thicker.

Listening to all the signals at once can give the overall picture of the signal, which the excitation signal can be enriched with, but with a smaller amplitude. This will allow you to verify the relationship between the vibrations of a building and the aesthetic impression that a person may feel while inside. The signals were listened to on the Beyerdynamic DT 770 Pro headphones, this time to ignore the influence of the room.

The spectra of the tested signals were also analysed. Examples of the compilation of instantaneous spectra are presented in figures 6–7.

Fig. 6. Graphical representation of superimposed instantaneous spectra the signals (for 20 seconds of recording). The white colour is the spectrum of the excitation signal, while the gray colour is the spectrum of the signal recorded on the plasterboard wall
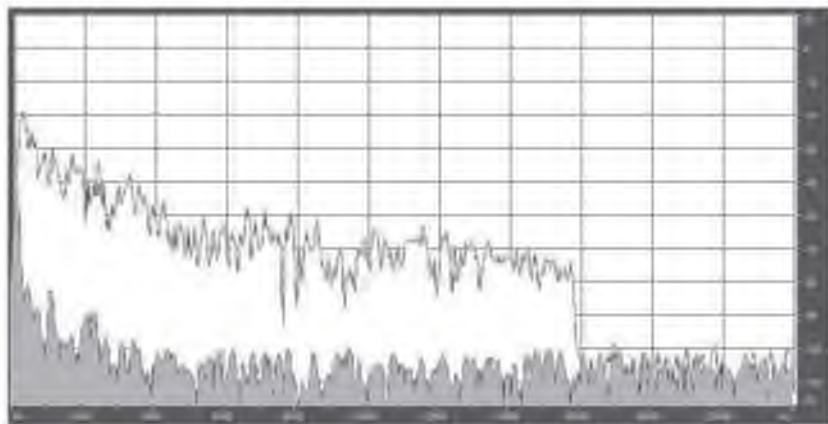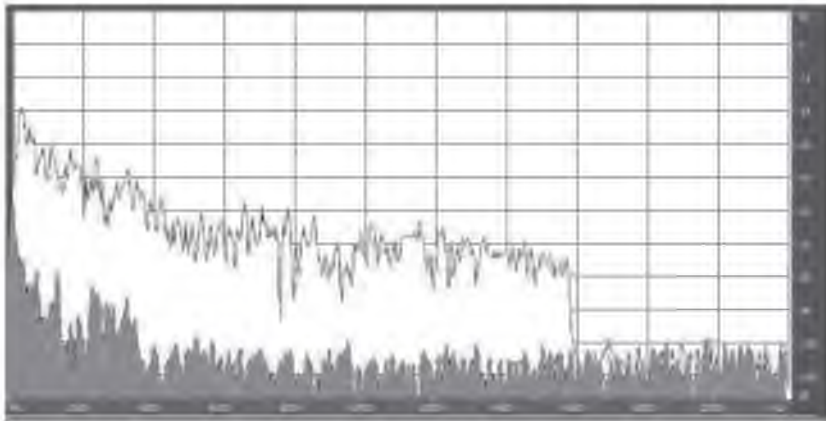
Source: (original study)

Fig. 7. Graphical representation of superimposed instantaneous spectra the signals (for 20 seconds of recording). The white colour means the spectrum of the excitation signal, while the gray colour means the spectrum of the signal recorded on the window
Source: (original study)

Similar observations in terms of time waveforms and spectra were made for the remaining recorded signals. The analysis of the spectra shows the behaviour of the examined vibrating elements as a low-pass filter.

Another interesting experiment was to create a stereo signal, in which the left channel is an excitation signal, and the right channel is a signal recorded from a given partition and normalised, and then listening to such signals. The time waveforms presented in this way perfectly reflect the comparison of the original signal with the processed one. Examples of such created signals are presented in figures 8–9. Listening to the prepared signals on the headphones gives an interesting aesthetic feeling. The signals given to both ears are similar but different.

Evaluation of the phenomenon

From the signals that were listened to, one can clearly determine what the excitation signal was. In addition to the original signal with a lower amplitude, there were also noise and other 'artefacts' observed in the recording. The effect is similar to recordings from old tapes or vinyl records. In the past, only such recordings were available. Presently the stage and microphone technology is significantly advanced, but nowadays one goes back to such recordings very often, and the new ones are styled in such a way that they sound like 'from the
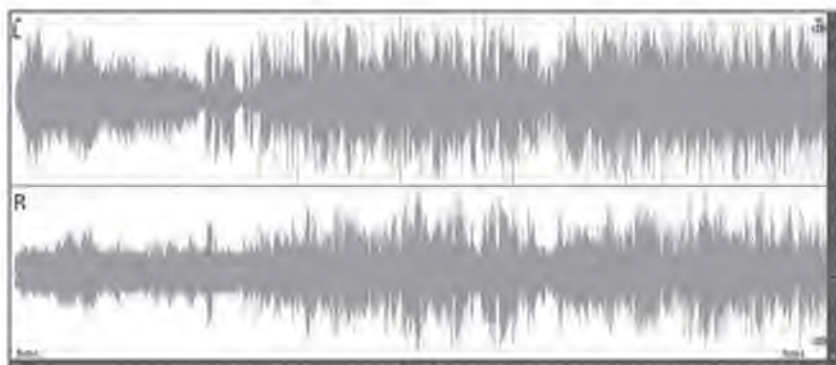
Fig. 8. Stereo signal created. The left L channel is the original signal, and the right R channel is the signal recorded on the plasterboard

Source: (original study)

Fig. 9. Stereo signal created. The left L channel is the original signal and the right R channel is the signal recorded on the ceiling

Source: (original study)

old tape.' Nowadays, the number of fans of analogue sound is growing more and more. One could say that the wall, or more generally speaking, the room, enriches the music we listen to with the 'old tape effect.' The level of these distortions is very low, but according to the author, it is deep in our consciousness while listening to music in an architectural interior. If we wanted to listen

to the same recording in an open space, the recording would sound a little different – and this is the beauty of architectural building structures. They give originality to the sounds. The same piece of music sounds a bit different in each building structure. It is influenced by reverberation, the materials which the room is made of, the layout of the building partitions, interior fittings and many other factors. Even if apartments or other building structures are architecturally designed in the same way, the differences in their furnishings affect the variability of their acoustics. Each building structure is unique and inimitable in terms of acoustics.

The analysis of the time waveforms of the original signals together with the signal recorded from a given partition and their spectra was the basis for establishing the relationship between sound and architecture.

An example of mapping of an architectural interior using an acoustic spatial model

This chapter is devoted to the method of composing an acoustic spatial model with the use of sound tubes (pipes).

It should be remembered that the source of sound inside the room stimulates the air molecules that fill the room to vibrate. The relationships that describe the room modes and resonances are known. You can calculate where there is a knot or an arrow of the sound pressure. As you know, waves propagating in a confined space are reflected, absorbed and dispersed. Architectural building structures create certain arrangements of confined spaces. The number of reflections from the surfaces separating the room affects the length of the reverberation. These phenomena are well known.

Now let us try to define the way sound propagates in a given room. Considerations will be based on a long narrow room. This is an example of a 'one-dimensional' confined space. Additionally, assuming that the width and height of the room are much smaller than the acoustic wavelength, it can be replaced schematically with a sound tube, in other words, with a pipe in which a flat wave propagates, reflecting off the two walls that end the room. Regarding organ pipes, we know that standing waves in a pipe determine the pitch and volume of a sound. Its frequency depends on the length of the pipe. The shape of the cross-section of the room (sound tube) is irrelevant here. The only important assumption for establishing the pattern is that the linear dimension of the cross-section is much smaller than the wavelength (Makarewicz, 2004). This will be an example of a sound tube closed on both sides (fig. 10).
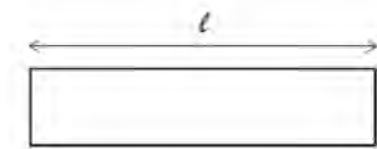
Fig. 10. Pattern of a sound tube closed on both sides
Source: (original study)

A standing wave is created in the pipe. Depending on the position of the acoustic particle, the amplitude of the vibration velocity and the pressure amplitude of the standing wave change. Each standing wave has arrows and amplitude knots of vibration velocity and pressure amplitude. Thanks to these dependencies, it is possible to calculate the fundamental resonance frequency of such a system (Dobrucki, 2007; Everest, 2010; Jaworski, Piński, 1977; Massalski, Massalska, 1980; Resnick, Halliday, 1974). There are many natural vibrations in the sound tube, not only for the fundamental resonance frequency, but also for higher harmonics. The auditory impression is determined by the pressure of the resultant wave (i.e. the sum of the pressures of the component waves).

If our room is open on one side (when we open the door), then it takes the form of a sound tube open on one side. At the outlet of such a pipe, acoustic particles become sources of spherical waves (Makarewicz, 2004; Ozimek, 2018). The particles at the outlet seem to lengthen the pipe. The pipe open on one side is the essential part of wind instruments. The behaviour of the processes that take place inside the instruments and rooms are analogous. In the case of instruments (such as a trombone or a flute), the turbulent airflow in the mouthpiece forces the acoustic particles to vibrate. Forcing waves have different frequencies, but only those that are equal to the resonance frequencies are amplified, others create a murmur sound. We have a similar situation indoors. Room layouts are selective and some sounds amplify, while others create the so-called acoustic background. The interior of our instrument, which is a room, additionally modifies the sound, which makes each of them unique and exceptional. Just as the instruments have a specific timbre, the rooms also have their own 'timbre.'

Wind instruments are divided into woodwinds and brass. This division is based on the material the instrument is made of. In our case, the term 'building' wind instrument could be adopted.

An apartment is a layout of rooms that creates a complicated acoustic system of sound tubes. This arrangement varies over time as the doors can be closed

and opened. Sound propagation is a complex process, so an attempt was made to explain such a pattern for the simplest of situations.

Standing waves generated in sound tubes are the result of reflection and interference of sounds (Templeton, 1997). Their resonant frequencies change depending on the boundary conditions, i.e. whether it is an open or closed sound tube. When we connect such sound tubes together, we get a certain acoustic system. It is a sound tube with a variable cross-section. By stimulating such a system with a resonant frequency, a standing wave is also created. In this case, when calculating the resonance frequencies, one must take into account the boundary conditions and it should be remembered that in the plane where the cross-sectional area of the surface changes, the principle of conservation of mass and energy applies. However, these calculations are more complicated.

In fact, room layouts create geometrically heterogeneous sound tubes. The simplest arrangement may have a single cross-sectional pitch. These systems can be of varying complexity. You can try to reproduce each newly designed building using such an acoustic system.

An attempt at a schematic presentation of a very complicated layout, which is an apartment, may make you wonder whether it is better in terms of acoustics, to design a standard apartment, or create so-called *open space* apartments. It should be noted that 'handling the voidness' is very important here. The sizes of the rooms undoubtedly influence the shaping of the harmony of the acoustic space. The presented question may be a premise for further research on the propagation of sounds in rooms. Each designed partition contributes to the uniqueness of the sounds propagating inside.

An example of a room in which the tests were performed can be presented schematically as the simplest model – a sound tube closed on both sides, i.e. a pipe similar to those found in instruments. You can also ask whether by changing the layout of building partitions in a room we can influence the variability of the resultant acoustic signal. Is the architectural interior an instrument that can be 'tuned'? Does a room always change our 'acoustic world' in the same way, or is it possible to find an optimal arrangement of elements that will give the most desirable sound effect inside the building structure? This is a topic worth taking up in future research.

Conclusions

Acoustic signals generated in a room excite the entire system of surfaces that limit them to vibrate. Each building partition that limits a given room has its own resonances. These elements influence the resultant signal heard by the person

inside the room by vibrating. The original acoustic signal, which is the excitation of the system, is enriched with reflected signals. It can therefore be concluded that the room gives us some information that enriches the artistic work piece.

The analysis of the presented results shows that each building partition is a kind of low-pass filter. The partition 'lets through' the entire range of audible frequencies, but it is easier to vibrate up to a certain cut off frequency. For frequencies from about 4000 Hz, it is more difficult to excite the building partition to vibrate. The spectrum of the recorded signals also shows the successive harmonics of the fundamental vibrations. The recorded signals confirm that all physical objects can vibrate and transmit various sounds. The more massive the partition, the more difficult it is to vibrate. The recorded signals are similar to the original signals, but filtered and with a much smaller amplitude.

The attempt to register the signals inside the room limiting elements showed their natural beauty manifested by adding some acoustic components to the acoustic signal. The resulting signal is often the desired effect of many sound engineers. Tone of sounds played 'from the wall' is similar to sounds played from vinyl records. This relationship is the beauty that naturally occurs inside an architectural building. The study points to the aesthetics and uniqueness of architectural building structures in terms of acoustics.

Acoustics is closely related to architecture. Generally understood sound (noise, human voice and any other sounds) is a tool for creating sound architecture. The creation of an acoustic pattern of the space being designed may contribute to further research on the shaping of acoustically comfortable building structures in the future. Skilful use of the type of building partitions between rooms also affects the comfort of their use. It can be concluded that each architectural interior is unique, has its own charm and evokes a lot of emotions.

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Part VI Friendly living space

Katarzyna Szmygin
Lublin University of Technology

Olga Górnik
Cracow University of Technology

Contemporary housing estate – urban layout in the area of the former depot of Miejskie Przedsiębiorstwo Komunikacji in Lublin

Abstract: The contemporary development of the spatial structure of cities focuses largely on architectural design detached from urban planning. The functioning spatial planning system does not guarantee rational spatial management. Local plans cover a small area of Poland, and the development conditions are the basis for issuing a building permit.

Uncontrolled urbanisation and urban sprawl contribute to the degradation of urban areas, the development of which should be a priority in the conduct of the city's spatial policy.

In Polish cities, after the political transformation in 1989, there was a lack of urban investments that would constitute a uniform whole with their scale, function and aesthetics. The city and housing estates are shaped pointwise and randomly. The article describes an example of a Lublin investment, which indicates a new direction in urban planning. The development project of Centrum Zana in the area of the former depot of Miejskie Przedsiębiorstwo Komunikacji – Helenów will be presented and analysed. Selected provisions of the Local Spatial Development Plan, the stages of creating the layout and the effect that the implementation will have on the city once completed will be discussed.

Key words: urban planning, contemporary housing estate, urban layout, local spatial development plan, Lublin, Helenów, Centrum Zana

Contemporary city – directions of development

'Europe needs strong cities and regions where life is good' (*Leipzig Charter*, 2007). The main slogan of *Leipzig Charter* provides an interpretation of the direction of the development of the modern city. In order to define the characteristics of a city in which 'life is good' it is necessary to consider which factors have the greatest impact on the shaping and development of urban structures in the 21st century.

The modern city is a conglomerate of eras, traditions and social moods. Structural diversification results in social stratification, architectural, technical

and economic degradation within one administrative unit, which is the city. Spatial disintegration, fuelled by expanding suburbs and, consequently, the devastation of city centre areas, is the main problem of contemporary urban planning.

The common ground of the discussion about the future of Polish cities should be the attempt to stop the progressing spatial chaos and the creation of an efficient system of spatial planning, in particular the formulation of local spatial development plans.

The sustainable development of the city will assume:

- *Comprehensiveness* – the development of the automotive industry and the society becoming wealthier are some of the causes of urban sprawl. The displacement of the residential function from the central parts of the city, the uncontrolled expansion of suburban areas disintegrate the urban structures, leading to the emergence of monofunctional housing estates. The city of the future must constitute a consistent whole, reflected in planning documents, such as Local Spatial Development Plans.
- *Ecology* – sustainable development, smart city, ecological housing estates are concepts that are inextricably linked with the future of cities. Rapid urbanisation has led to a situation where 50 % of people live in metropolises – almost 2/3 of the population in Europe (*World Urbanisation Prospects*, 2010). Cities determine economic and social development, which is why it is so important to focus their development on solutions that integrate many aspects of urban ecology.
- *Transport accessibility – design without barriers* – transport accessibility nowadays is not only determined by the developed road system or the number of flight connections. Today's city is primarily a city accessible to everyone, regardless of its possibilities and limitations. Cities must be designed in a universal, ergonomic way.[1]
- *Multifunctionality* – the city's functioning model has changed significantly. Industrial cities have replaced information cities (Morklyanyk, 2016, pp. 11–22). Globalisation, changing the functioning of society and abandoning the ideas of separating functions postulated by modernists have led to the creation of multifunctional complexes, housing estates and spaces. Such a complex can be characterised by the following parameters:

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[1] As an example, the document developed by Task Force No. 2/2017 as part of the work of the Accessibility Team of the Capital City of Warsaw at the Representative of the Mayor of the Capital City of Warsaw for Accessibility, Office of the Mayor of the Capital City of Warsaw – *Model Description of Accessibility*.

1. the presence of several self-sufficient functions,
2. effective space utilisation,
3. consistency of individual components (Morklyanyk, 2016, p. 17).

- *Adaptability* – although this concept is mainly related to the adaptability of cities to climate change (*Adaptation manual for cities*, 2014), cities must be planned taking into account changing lifestyle models and the pace of political, economic and cultural transformations.

Meeting the above criteria gives cities a chance for optimal development, enabling future generations to function in them. When discussing the future of a city, its individual components, including housing estates, should be analysed. The new housing estates are planned as self-sufficient, allowing their residents to meet all their needs. In the context of the above trends in the development of a modern city, it should be considered whether contemporary housing estates meet the above-mentioned criteria. The article describes the layout being implemented on the site of the former depot of Miejskie Przedsiębiorstwo Komunikacji in Lublin, designed by Centrum Zana Holding. The project was chosen due to its urban scale, unusual of in the 21st century in Lublin. The urban layout also implements the discussed components of a modern housing estate.

Characteristics of contemporary housing estates in Lublin

The phenomenon of progressive urbanisation and city sprawl is observed in Lublin. Another areas are incorporated into the administrative boundaries, and suburban plots of land are converted for construction purposes. Newly developed residential districts are characterised by high intensity of development, lack of architectural consistency and a minimum percentage of public spaces and green areas. Despite the negative phenomena resulting from such development – increased traffic, air pollution, urban disintegration, spatial chaos, there are still more and more housing estates emerging in Lublin, as well as in other Polish cities.[2]

Modern technologies, infrastructure and underground car parks offered by developers are an attractive alternative to living in large-panel apartment blocks and city centres. The primary real estate market is taking over the secondary market investors,[3] thereby contributing to the depopulation of the historic

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[2] According to data from the Central Statistical Office of Poland, over 207.000 apartments were put into use in 2019. This is the highest result in 40 years.

[3] According to data from Homebroker, a company dealing in real estate sales, in 2019 38 % of transactions concerned the purchase of apartments from the primary market. This is an increase of approx. 8 % compared to 2018, source: Homebroker – Lublin branch.

districts of the city. The influx of people to new residential districts results in an increase in the prices of real estate and investment plots of land. Such a situation causes developers to buy individual plots of land on which they build apartment blocks, irrespective of the surrounding buildings. The spreading spatial chaos, the lack of architectural consistency of building structures, the maximisation of the usable floor space of apartments and the priority of individual communication are the reasons which – according to the authors – will contribute to the degradation of modern housing estates in the near future, leaving destroyed areas torn out from the landscape.

An example of a modern housing layout is the Sławin estate. This district was separated in 2009. Despite the decreasing number of residents of Lublin (319.566 in 2020, 322.015 in 2018 – BIP Lublin), the number of people registered for permanent residence in Sławin is growing year by year (13.303 in 2020, 12.103 in 2018 – BIP Lublin). High interest in this area results in new investments and an increase in real estate prices in this district (photo 1–2).

Table 1 presents the assumptions for sustainable development in relation to the Sławin estate.

Table 1. Summary of the features of a modern city in relation to the Sławin housing estate in Lublin

Feature of the modern city	Sławin housing estate
Comprehensiveness	Lack of architectural consistency, spatial disorder, design without spatial context, duplication of service functions
Ecology	No energy-saving solutions
Design without barriers	As regards to individual investments, solutions for the disabled are designed. Individual investments do not assume functional interconnections, therefore the spaces between them do not include solutions for people with disabilities
Multifunctionality	The estate is the 'bedroom' of the city. The residential function is supplemented with small services
Adaptability	Very high intensity of development, no public spaces, car parks as the predominant non-cubature function

Source: (original study)

Photo 1–2. Sławin housing estate in Lublin
Source: (K. Szmygin)

Helenów – the history of the place

The first mentions of the former depot of Miejskie Przedsiębiorstwo Komunikacji come from the beginning of the 20th century, when the area functioned as one of the largest brick factories in Lublin – 'Helena.' In the 1950s, due to the piling up problems of the brickyard (organisational difficulties, popularisation of large-panel construction, lack of qualified craftsmen) in Helenów site, the construction of a bus and trolleybus depot was started: 'finally, own yard. In April, the construction of a new depot of Miejskie Przedsiębiorstwo Komunikacji begins' (Kurier Lubelski, 1957).

Already in 1960, the city could use the first hall, and the entire investment was completed in 1963 (*History of Miejskie Przedsiębiorstwo Komunikacji in Lublin*). Until 1986, the brickyard operated in a deteriorating condition until the chimney was blown up, which finally ended the operation of the plant (photo 3–6).

The depot of Miejskie Przedsiębiorstwo Komunikacji in Helenów in the following decades was expanded with new administrative facilities, repair halls. Other yards were included in the layout. When the depot was being built, the premises were located outside Lublin. With time, the expanding city (LSM, Węglin, Konstantynów) made the site at Aleja Kraśnicka gain in value. The city authorities decided to move the depot to Majdan Tatarski and sell the land.

The first tender, during which the site was valued at PLN 40.8 million, was announced in December 2013, the second (PLN 34.2 million) – in February 2014. During both the town hall did not find any buyers of real estate. Only as a result of the third tender, in May 2014, the plot was transferred to the company Centrum Zana Holding (CZ) for the amount of PLN 32.2 million.

For several decades, the company has been consistently implementing large-scale layouts. On the scale of the city, the CZ investments constitute significant office space and residential resources.[4] Since the first tender announced by the city, CZ has been interested in the site of the former depot of Miejskie Przedsiębiorstwo Komunikacji: 'we have always noticed the potential of this place'[5] says the company's president, Grzegorz Turski.

Photo 3. The site of the former depot of Miejskie Przedsiębiorstwo Komunikacji (Helenów district) in Lublin

Source: (10)

Idea

The guidelines for the layout in Helenów included very precise provisions of the local spatial development plan, imposing a certain appearance of the estate, the construction of which began in 2015.

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4   According to the inventory of office space resources prepared by the Lublin municipality, the Centrum Zana investments were in the lead in 2019 (12).

5   Interview with Grzegorz Turski (interview by K. Szmygin), Lublin, on 14th July 2020.

Photo 4. The site of the former depot of Miejskie Przedsiębiorstwo Komunikacji (Helenów district) in Lublin
Source: (11)

Photo 5–6. The depot site in Helenów
Source: (Załuski, 2019, pp. 117–119)

The project involves phased supplementation of the quarter with service and residential buildings. The layout, as emphasised by the company's president, after completion, is to play the role of a modern *city* with attractive architecture and an unusual urban scale as for Lublin.

Despite its phased implementation, the complex is a common whole. Thanks to the use of the same colours, the use of similar technological and material solutions, existing and designed buildings create a consistent composition, readable both in the plan view and from the human eye level. Numerous services complement the residential and office functions.

At the intersection of Nałęczowska Street and Kraśnicka Alley (plot of land marked with the symbol 1U), a service facility serving as a spatial dominant was located. Fencing ban[6] throughout the whole area makes it a generally accessible public space, combining the adjacent residential and office functions with the city. In the quarter, a public square (plot of land 1KP) and landscaped green areas (1ZP) are being designed, which – freeing the site from intensive development – allow for free ventilation and lighting of the buildings (fig. 1).

Fig. 1. The local spatial development plan of the city of Lublin, part I – western area in the area of: Kraśnicka, Nałęczowska and Wojciechowska Alleys

Source: (5)

6   Resolution No. 811/XXXII/2013 of the Lublin City Council of 27th June 2013, Article 11 item 9.7; Article 12 item 9.7; Article 13 item 9.7.

Table 2 presents the layout for sustainable development in relation to the CZ housing estate in Helenów.

Table 2. Summary of the features of a modern city in relation to the estate in Helenów in Lublin

Feature of the modern city	The CZ estate in Helenów
Comprehensiveness	Functional, compositional and architectural consistency
Ecology	Energy-saving solutions, e.g. solar panels on the roofs of the building structures
Design without barriers	Providing the possibility of using the site and buildings for all users, including those with mobility limitations
Multifunctionality	In addition to the residential function and its complementary service function, an office and administrative function has been designed in the area
Adaptability	The comprehensiveness of the area allows making decisions about its future transformations in a comprehensive manner, using new solutions for the entirety of the layout in a consistent manner

Source: (original study)

Implementation and effect

According to the investors' assumptions, the implementation of the complex is being carried out in phases.

The first cleaning works on the site began in 2015. The first phase of implementation involved the construction of an office and service complex – CZ Office Park (area marked with the symbol 1U and 4U in the local spatial development plan) and a residential building – Apartamenty Nałęczowska I (5MW, U).

The first phase of the estate was completed in 2018 (photo 7–8). The urban planning landmark which is the office building, is characterised by high-quality workmanship, ergonomics and a modern look. The building set the direction for further projects in the area of the former depot of Miejskie Przedsiębiorstwo Komunikacji, which are distinguished by the departure from the plasters used in typical, contemporary residential and service buildings, and the use of glass facades and high-quality materials.

Photo 7. 1ˢᵗ phase of the investment in Helenów CZ Office Park
Source: (K. Szmygin)

Photo 8. 1ˢᵗ phase of the investment in Helenów – CZ Office Park
Source: (K. Szmygin)

The investor implements the vision of a consistent, architecturally attractive and ergonomic residential and service estate with further building structures (photo 9).

Photo 9. Phase II of the investment in Helenów – Apartamenty Nałęczowska, Studio Residence

Source: (K. Szmygin)

The development of the former depot of Miejskie Przedsiębiorstwo Komunikacji in Helenów sets a direction in which further municipal investments should be carried out. The achieved results are not only residential and office spaces. The investment has increased the attractiveness of the neighbouring areas where new building structures are being built. The residents of Lublin indicate this area as one of the most attractive on the city map. Implementing the vision on such a scale allows for the creation of public spaces, a uniform architectural expression and urban planning order, which is missing in newly designed housing estates. Departure from design, the main assumption of which is to maximise usable space at the expense of ergonomics and quality of use, seems to be a way to create a user-friendly city, a city where life is good. The use of pro-ecological solutions and prioritisation of universal design guidelines on an urban planning scale may slow down the degradation of urban structures, which is a threat to modern agglomerations.

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Agata Pięt
University of Applied Sciences in Nysa

Selected aspects of the harmony of the housing environment

Abstract: The housing environment is an extremely important space in which every person lives. For this reason, the way it is shaped plays an important role. Satisfying the needs and expectations of residents is one of the objectives when designing residential complexes. Another one is to establish harmony in it, which can be achieved in various ways. The social aspects of the housing environment, as well as the need for diversity and experiencing nature are discussed using selected examples. The presented conclusions are based on literature and field studies. They are also the result of an analysis of the possibilities and methods of achieving harmony in the housing environment.

Key words: harmony of place, housing environment, residential architecture

Introduction

The housing environment is a space in which people live and therefore it should meet their needs and expectations. The way of solving its individual elements has a significant impact on human functioning. The complexity of the issue affects the need to search for solutions and guidelines for shaping human living environment in various fields of science: architecture, urban planning, sociology, psychology, and philosophy (Kobylarczyk, 2010, p. 33).

Various issues influence the achievement of harmony of the place of residence. The most noticeable ones include architectural solutions related to the aesthetics of the facades and the type of elevation materials used, as well as those connected to architectural and urban design such as: the scale and proportions of buildings, as well as distances between them. The functional and spatial layout of apartments are also important, as is the way in which they receive sunlight. On an urban scale, attention should be paid to how a given place is connected with other areas of the city and to the availability of services.

A separate group of factors influencing the harmony of a given place are those that are less tangible, more difficult to grasp, the ones which will involve the developed social relationships between inhabitants. The way they are shaped is influenced by the method of zoning the space within the housing complex. The context is also an extremely important aspect of housing environment, so is the

way the buildings are connected with their surroundings and how they provide access to nature (greenery or water).

Social aspects of the housing environment

The social sphere related to the relations of residents with each other, is an extremely important factor in striving for harmony of the place of residence. Obviously, the use of appropriate design solutions has an impact on developing relationships with neighbours. A special example of the residential development, in which the social sphere has a significant role (and the most important one even in the initial phase) are *co-housing* (or other bottom-up) buildings, which can only be built with the participation of the community that later lives in these buildings or residential complexes. In solutions of this type, future residents become the initiators of the entire process, so basically, neighbourly relations arise long before the investment project is completed and the physical neighbourhood is created. Thus, it is not only the applied design solutions that foster bonding, but most importantly the common will and objective that unite everyone. Of course, in such cases, the realisation of those buildings is usually characterised by a desire to establish a harmonious place that is pleasant, healthy, and conducive to the establishment of relationships between inhabitants.

One of the examples of a residential development that was created at the initiative of its future residents is Schoonschip in Amsterdam. The residents, apart from the obvious common objective of creating a place to live, also had a different idea. The new site was to become self-sufficient in terms of energy – all aspects related to sustainable design became an important element for the entire community, an element that is binding its activities (*Schoonschip Amsterdam*, no date). The initiator of the project is Marjan de Blok, who, after producing a documentary TV programme about GeWoonboot,[1] dreamed of a self-sufficient home (Van der Ende, Hannema, Mackic, 2020, p. 91). She believes that the idea of creating a complex of buildings in accordance with the sustainable development principles has become a social aspect of the designed neighbourhood. This has been facilitated by the vast amount of time it took to resolve specific issues, including technical ones. She is convinced that no one could do it alone and that

[1]   GeWoonboot is an environmentally friendly building located on the water, moored in the NDSM district in Amsterdam, which uses energy-saving solutions related to, among others, the use of solar energy and rainwater. It is intended to be used for meetings and trainings, https://www.ndsm.nl/en/location/gewoonboot/?context=345, (accessed on 1st February 2021).

is the power of the community in this project (Metz, 2020, p. 76). Schoonschip was established as a foundation, and then it became a housing cooperative, the participants of which formed groups dealing with various issues related to the implementation of the project, including communication, selection of materials, and organisation of meetings (*Schoonschip Amsterdam*, no date).

The word *Schoonschip*, as literally translated from Dutch, means 'a beautiful/clean boat', while the phrase *schoon schip maken* means 'to start from the beginning' (Metz, 2020, pp. 72–79). For this reason, this name seemed to be perfect for the complex in which the houses were the first structures to be built by their future owners. The complex is located in the Buiksloterham district of Amsterdam Noord, the wharf of which served mainly an industrial function in the past. The authorities of the city of Amsterdam decided to transform the sites into residential and office areas, and set the implementation of projects in accordance with the principles of circular economy and sustainable development as the main feature connecting all investments in this area. For Schoonschip, among other things, guidelines regarding the use of certain materials or ensuring the minimum green roof area for each building were introduced. The facilities also feature a number of energy-saving solutions, including water pumps for heat generation. Solar energy is also used to heat water and produce electricity. What is more, all apartments are connected to the municipal grid, which allows excess energy produced to be given back in the event of reduced use.

An important feature of the complex is not only the use of energy-saving solutions, but also the connected social aspect. Residents share their knowledge regarding the sustainability not only with each other, but also with people outside Schoonschip. Their mission is to educate and influence people's awareness of energy-saving solutions and ways of creating the most attractive housing environment based on these principles. It was possible to achieve the intended goals thanks to the cooperation with experts in this field: Space & Matter, Metabolic (*Schoonschip Amsterdam*, no date).

The buildings are located in the Johan van Hasselt canal by the Ij canal in its northern part (photo 1). 30 residential buildings (6 in each group) are located at 5 piers accessible from the mainland. These piers are connected with each other, enabling the movement of residents between individual buildings. They have become a social space, which includes, among others, greenery, and serves as a place for strenghtening neighbourly relations. There are also bathing areas within the complex. Each of the buildings has its own individual outdoor area for recreation: these are terraces within the buildings or on their roofs (photo 2–3). It is also possible to moor a boat in the vicinity of the buildings. There are 46 households in the complex; the first structures were moored to the piers in December 2018.

Photo 1. View of a residential building in Schoonschip. The building has two storeys above the ground level and one storey below the water level with windows close to the ceiling

Source: (photo S. Visvesh – (13))

Photo 2. View of the Schoonschip from the mainland. In the foreground, there is a green area and a building with a private terrace on the ground floor

Source: (A. Kurowska)

Photo 3. View of the pier, a public space for residents located between the buildings of the Schoonschip residential complex in Amsterdam

Source: (A. Kurowska)

Residents within their own community function well, however, it needs to be noted that as a result of the implementation of the project, an exclusive neighbourhood has been created, intended for a specific wealthy group, which does not reflect the diversity characteristic of the Amsterdam Noord district (Mackic, 2020, p. 72).

Zoning for accessibility and the harmony of the place

Another important aspect related to the efforts to achieve harmony of a given place, which in the case of residential buildings might mean achieving the feeling of peace and safety, is the zoning of space and its accessibility. These issues are related to the already discussed social aspect, the quality of relations between the residents of a given housing complex and their level of trust towards each other. The way of shaping space between buildings depends, among others, on its location in the urban tissue. In cities, there is a public space, which by definition is intended for all residents (including a public street with services on the ground floors of the buildings). Its opposite is an individual (private) space, which in the case of residential buildings can be a private garden, terrace, or balcony. A space that is intended for a specific group of users is referred to as a social space. In residential architecture it often takes the form of internal courtyards surrounded

by buildings. There are also semi-private and semi-public spaces; in practice, the border between them is often not easily distinguishable (Chmielewski, 2010).

An urban complex that represents various solutions for zoning space in a housing environment is Funenpark in Amsterdam (Van der Putt, 2018, pp. 156–164). The estate was built on a triangular post-industrial plot with an area of 3.5 ha in the vicinity of a functioning railway line. Frits van Dongen, from de Architekten Cie, responsible, among others, for developing an urban vision in a closed competition, proposed the introduction of perimeter development along two edges of the plot: from the main street (Cruquiuskade) and the railway line. This building, 550 metres long, is a barrier from the source of noise. Moreover, its linear shape and design of a larger number of storeys on its eastern side (next to the railway line) allow for the protection of the interior from railway noise. Within the courtyard, thought as an enclave in the form of a park, the city villas designed by various architects were proposed. The southern part of the perimeter building with 305 apartments, situated by the canal, is an extension of the public space of the street, which was achieved by locating service premises in the ground floor. Entrances to the property are located outside the quarter, which is available to everyone through the gate passages. The external space outside the quarter is not separated from the internal courtyard by a continuous closed fence that would prevent free passage – there are only physical elements for safety that mark the threshold points separating the zones (photo 4). Such a solution of the building complex in a subtle way indicates the change of the space character in the inner courtyard from public to social one.

City villas, designed by various architects, including Klaus en Kaan, NL Architects, are mostly operated from internal staircases. It should be noted that in some of the 16 free-standing buildings, on the ground floor there are apartments with direct entrances on the outside (photo 5). The way of organising communication for pedestrians inside the quarter plays an important role – it is a free-flowing footpath, located several metres away from the outer walls of residential villas, separated from them by greenery (photo 6). In this way, the residents of the buildings have their privacy guaranteed, and it also corresponds to the idea of living in the park, which is also indicated by its name – Funenpark.

Photo 4. View of the main entrance area to the inner courtyard of the Funenpark housing complex in Amsterdam. The courtyard is not separated from the street by a closed fence, and on the ground floor of the perimeter building there are apartments accessible directly from the inner courtyard

Source: (author)

Photo 5. View of the green area between the villas in Funenpark, some of which have entrance to the apartments from the outside, accessible from the ground level or direct exits to the green area in front of the building

Source: (author)

Photo 6. View of the footpath inside the courtyard of the Funenpark housing complex in Amsterdam

Source: (author)

What is more, it was also decided to design apartments in the perimeter building in such a way that they are facing the inner courtyard, the access to them is from the outside, and they have small front gardens – such a solution fosters the integration of residents and increases the frequency of their contacts when using the street and the footpath (Gehl, 2013, pp. 36, 187, 191). These apartments in the eastern wing of the building are accessible from the ground floor level, from the footpath (photo 4), and those in the southern wing – from the terraces, shared by several apartments, located on the second floor.

Experiencing nature

The harmony of place can be just a subjective feeling of its user, not physically measurable. Achieving harmony of the housing environment is related to its quality, and the presence of natural elements inside may contribute to its growth by improving the health and well-being of its residents (Schneider-Skalska, 2004, p. 10).

The relationship between buildings and the environment may affect the positive feelings of their users. An important element is the link between the building and nature, as well as the context of the surroundings. Green areas can be intended for users of all ages – for children there will be playgrounds, for teenagers and adults – sports places surrounded by greenery.

Contact with nature can be provided directly, e.g. through the use of green recreational areas, as well as through the possibility of growing flowers or vegetables in home gardens. Such solutions may also contribute to the strengthening of neighbourly relations through an increased number of activities and the time people spend in the common space. It has been observed that even a small green area next to a residential building is used more often than large and attractive recreational areas located at a greater distance (Gehl, 2013, p. 191).

Eco-Viikki in Helsinki is an example of a housing estate in which cultivated gardens between the buildings are available to all interested residents. It is the first eco-friendly housing estate in Finland to use a range of solutions related to sustainable development. It was implemented in accordance with the urban concept of Petri Laaksonen, who assumed the grouping of buildings into small complexes, within which pedestrian traffic is a priority, and each building has direct access to the greenery penetrating the area (photo 7) (Hakaste et al., 2005, p. 10). One of the objectives the estate is meant to fulfill in terms of ecology is biodiversity – the developers aimed to cover the site with specific plant species, ensure their diversity within individual plots intended for this purpose and introduce a layered arrangement of flora (Hakaste et al., 2005, p. 13).

Residents grow vegetables and fruit in the allotment gardens in front of the buildings (photo 8). Such an opportunity to spend free time was positively received by their users, who appreciate the fact that the gardens are not separated by a fence and therefore the boundaries are not strictly defined (Hakaste et al., 2005, p. 35). In the park next to the estate, there is also an additional area dedicated for cultivation. In the report from 2005 prepared by the City of Helsinki and the Ministry of the Environment, there are comments of residents who appreciate solar heating, vegetable gardens and community saunas the most. However they consider the development density, the ventilation system, and the unpaved surface to be less successful (Hakaste et al., 2005, p. 43).

It should not be forgotten that solutions providing only visual contact with green areas can also play an important role in enhancing environmental quality and achieving harmony.

Photo 7. Green residential space between the buildings in the Eco-Viikki estate in Finland

Source: (author)

Photo 8. The space between buildings in the Eco-Viikki estate in Finland, with vegetable gardens intended for residents

Source: (author)

An important natural element in the housing environment may also be water, which could appear in the form of garden ponds. Residential complexes can be located on land in the development line right by the wharf and water, but they could be separated from waterside by an urban barrier in the form of a road for vehicles – then the contact with nature is mainly based on visual sensations.

There are also solutions in which the properties are built directly by the water or even on the water (Schoonschip) and their location gives the opportunity to

take full advantage of the proximity of this element of nature, e.g. cool air on hot days and the possibility of mooring the boat to the bridge.

Variety

Variety, which can be observed in many aspects, also plays an extremely important role in the desire for a harmonious housing environment. It can be reflected in the building facades, as well as in their functional and spatial layouts, designed to meet the various expectations of users (Schneider-Skalska, 2012, pp. 165–166). In line with the sustainable development principles, there are also efforts to achieve social balance in the housing environment. Differences in the lifestyles, habits, and household structures influence the creation of housing estates and residential buildings of various types, both when it comes to functional and spatial layouts of apartments and their ownership status.

In the Funenpark complex, there are apartments that were designed to be of various sizes with different functional and spatial arrangements. The perimeter building includes one- or two-storey apartments accessible from an internal corridor, but also those with independent entrances from the outside (located on the ground floor or the second floor). Within Funenpark, apartments located in free-standing villas have a different, more intimate character – mainly due to their smaller scale, as well as the vicinity of greenery.

Various types of apartments have been created in Schoonschip. They were intended for individual owners, while in terms of social aspects the complex is an enclave. Despite the openness of the residents and their willingness to educate the public about solutions for sustainable development, not everyone would be able to live here due to the financial constraints related to the implementation of this neighbourhood. On the other hand, in the case of Eco-Viikki, apartments with various ownership structures were built: both private and social ones. They are located within common staircases, there is no division into social buildings and those with only private apartments.

Conclusions

Achieving harmony in the housing environment is a complex issue, which has been discussed on the example of selected housing estates. Each of them is located in a different place. Also, the context of its surroundings and the typology of buildings are different. However, despite these differences, there are common elements that are essential for attaining harmony. The social aspect is important, as well as the relationships between residents that enable them to

undertake joint activities and achieve common goals (e.g. Schoonschip). Proper social contacts will be facilitated by implementing solutions related to the accessibility and zoning of space in individual complexes. Experiencing nature is essential for everyone and it can be achieved mainly by ensuring eye contact (e.g. in Funenpark, where the inner courtyard has become a park filled with greenery) or the physical one, as in the case of the Eco-Viikki estate, where the residents were given the opportunity to cultivate the land in a shared space around their homes. The attention should be also paid to an important element of nature, which is contact with water – in the case of Schoonschip, where the houses are located on the water, it is direct and allows people to swim there, to moor boats to the piers and use water transport.

It should also be noted that in the housing environment not every solution, even the most well-thought-out, will meet the expectations of residents in every aspect – the Schoonschip estate is criticised for its exclusivity, lack of diversity that is characteristic of the Buiksloterham district. Also inhabitants of Eco-Viikki are satisfied with some solutions to a greater extent than with others. Finally, harmony can be achieved through the application of a variety of solutions, because a housing environment should, first and foremost, meet the expectations and needs of its inhabitants – and these may vary as much as the individual residents are different from each other.

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Part VII Decoration of the place

Elżbieta Barbara Lenart
Accademia dei Rampanti, Padova

Camillo Boito – an architect on the way of discovering beauty in decorative art

Abstract: Camillo Boito (1836–1914), the son of the Italian painter Silvester and the Polish countess Józefa Radolińska is one of the most valued character in the history of Italian artistic culture at the turn of the 19th and the 20th centuries. He owes his recognition to his activity as an architect with extensive competences in the field of designing and conservation of monuments, as well as a university professor, a public officer, an art critic and a talented writer. Apart from his contribution to the changes in Italian architecture and art, he is currently known as the founder of the Italian conservation school. Boito's influence on shaping a new style of architecture in the united Italy that was being created during his lifetime. It could be observed in his teaching activities and in the role of an architecture designer, of which he left numerous examples, especially in the north of Italy.

The presented study focuses on two aspects of Boito's activity. It is about his interest in ornamentation in old and newly erected buildings and in the conservation of architectural monuments, understood primarily as preservation of the artistic value of a monument, not only the historical one. The ornaments he was interested in and the ones he designed emphasised the belonging of architecture to a given time and place, developing and supplementing the iconography of the existing or newly designed object in a semantic dimension. The examples are the buildings in Padua, designed or maintained by him, such as Palazzo delle Debite, Museo Civico or the Basilica of St. Anthony.

Key words: Camillo Boito, Palazzo delle Debite, chapel of St. Stanislaus in Padua

Introduction

In the 19th century, not only in Italy, much attention was paid to decorative, applied and industrial arts. It was these art forms that were the subject of intense theoretical discussion. They involved attempts to reflect critical thought into operational practice, especially because there was a development of industry in the given period and as a result people started to produce objects on a large scale. Based on these changes, a discussion on the basic teaching methods, prepared for implementation in art institutes and schools, also has been initiated. Camillo Boito, whose part of professional activity will be presented in this article, was the main character of such discussion in Italy. Moreover, during practical implementation of projects, on the construction sites, he had the opportunity to provide

specific, practical answers when he was cooperating with contractors of various specialisations.

General information on life and career of the artist

Camillo Boito (1836–1914), the son of the Italian painter Silvester Boito and the Polish countess Józefa Radolińska, is one of the most valued character in the history of Italian artistic culture at the turn of the 19th and the 20th centuries (photo 1). He owes his recognition to his activity as an architect with extensive competences in the field of designing and conservation of monuments, as well as a university professor, a public officer, an art critic and a talented writer. Apart from his contribution to the changes in Italian architecture and art, he is currently known as the founder of the Italian conservation school. In Poland, this character is not so recognisable, although he is occasionally mentioned in the context of studies on the preservation of heritage.[1] Even the fact that this talented and hardworking architect had Polish roots does not change much, although it should be noted that a separate monograph has been dedicated to his younger brother, Arrigo Boito, a gifted librettist.

The beginnings of Camillo Boito's professional career can be dated back to 1856, when a young nineteen-year-old graduate of the Academy of Fine Arts in Venice and Studio Matematico, the mathematical faculty of the Padua Ateneum, took the position of assistant professor in the department of architecture at the first of the institutions. Soon, in 1860, he was appointed to the position of the professor of architecture at the famous Accademia di Brera in Milan. Boito ran the department until 1st January 1909. At the same time he also became the rector of the Academy, and fulfilled this function until his death.

Since 1865, Boito was also associated for the following 43 years with the Higher Royal Institute of Technology, which had been founded two years earlier

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1   There is not much information on Boito in Polish literature. The issues of the architect's attitude to the relics of the past were discussed by Janusz Krawczyk (Krawczyk, 2020). Earlier, this character was mentioned by Edmund Małachowicz (Małachowicz, 2007, pp. 39 and 507). The fourth part, which is a selection of texts, includes excerpts from the architect's letters translated into Polish (pp. 519–521). Short information about Camillo Boito as a conservation theoretician was provided by Waldemar Łysiak (Łysiak, 1972, vol. 25, No. 1, pp. 27 and 29). The first monographic study of the profile of the outstanding architect and conservation theoretician in Polish is the chapter of the book devoted to the Polish chapel in the Basilica of St. Anthony in Padua, by Elżbieta Barbara Lenart (Lenart, 2020).

and which was the beginning of the future Polytechnic University of Milan. At this university, he lectured on the history of architecture,

Photo 1. Arch. Camillo Boito (1836–1914)
Source: (photo Varischi, Artico & C Studio)

documentation and conservation of buildings, classical styles, medieval architecture and for the longest time – from 1877 to 1908 – he passed on to students his knowledge of issues related to the so-called civil architecture.

It is from Brera, a prestigious district of Milan, and from the teacher and the rector of the Academy located there, that we can derive the beginning of discussions, indications and programmes for training in the decorative arts. This aspect which is often not noticed by contemporary architects, had a special meaning for Boito. The decorations he was interested in and those he designed himself, emphasised the historical and regional affiliation of architecture to a given time and place, semantically developing and supplementing the iconography of an existing or newly created object.

On the basis of the interest in decorative and industrial art developing in Italy, in 1884 the Central Commission for artistic and industrial design has been created. This Commission has been working for 24 years, until 1908.

Its tasks included, among others reforming art schools, verification of curricula, distributing the journal 'Arte Italiana Decorativa e Industriale' created by the Commission, presenting the decorative art and the art applied in industrial production (photo 2).

Photo 2. The cover of one of the monthly Arte Italiana Decorativa e Industriale
Source: (photo author)

It is Camillo Boito who is regarded as the author of the document stored in l'Archivio Centrale di Roma, dated 1886, containing seven points of the programme of this journal (Pesando, 2009, p. 237), which he managed in the years 1892–1911 (Pesando, 2009, pp. 237–258), he published his essays there. At this point, it should be added that Camillo Boito has proved to be a gifted writer already is his youth (Lenart, 2020, pp. 25–26; Cinzia, 2014; Wojnicka, 1999, pp. 63–77) and his writing skills allow us to place his literary work in an independent position, going beyond technical texts usually written by architects and directed to them. The list of book publications by Boito and the list of articles, essays, and lectures published in periodicals with which he is associated is long and covers a wide range of fields as the issues covered in his texts are also of various types. For the purposes of this study, we will list the most important Boito's publications directly related to decorative and applied art. They include, for ex ample, *Ornamenti di tutti gli stili classificati in ordine storico* (Boito, 1881), *I principi del disegno e gli stili dell'ornamento ad un maestro novello* (Boito, 1882), or *Arte utile* (Boito, 1894). He presented the views he identified himself with and the concepts and the concepts related to the aspirations of creating a new style

of architecture to a wider audience in the publication of 1880 entitled *Sullo stile futuro dell'Archi-tettura Italiana.*[2]

Artistic and design implementations by Camillo Boito

This extremely active architect had numerous possibilities to put his theories into practice in many places in Italy, both at construction sites which he visited and supervised and during the implementation of his own projects. In this study, we will focus on a few examples about Padua, best known to the author of this dissertation because of direct participation in the development of programmes and participation in the conservation of the works of Camillo Boito. These examples also present the most important stages of development in the oeuvre of the popular Milanese.

The Palazzo delle Debite in Padua is an excellent example of such an implementation, where the new architectural design had to be included in the context of historical buildings and at the same time to improve the aesthetics of the complex of buildings considered as a whole. For a long time, the city's administrative authorities were looking for a contractor that would meet many of the seemingly contradictory assumptions of the restructuring of the former prison for insolvent debtors, set in an extremely prestigious location, in the very centre of the medieval Padua district, next to the representative Palazzo della Ragione.

The designer is rarely or never completely independent in creating his own solutions, as the client often forces the implementation of his own concepts, which also happens when the client is an institution or a public authority which imposes restrictive general rules, e.g. as part of contemporary spatial development plans or at the stage of a design competition. Boito found himself in a similar situation as the author of the project for the reconstruction of the Palazzo Debite in Padua, when his offer won in a competition announced in 1873 by the city's administrative authorities, supported by a conservation commission. The same authority has been looking for a solution that meets many assumptions for a long time, mainly due to the fact that the building was to be erected in a prestigious location of the city. The intention of the municipal administration was to completely eliminate the sad memories associated with the former prison, built shortly after the construction of the Palazzo della Ragione. Therefore, in this case, it was not about the restructuring of the building, which, after a fire

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2   The article *Sullo stile futuro dell'Architettura Italiana* is an introduction to another publication, also by Camillo Boito *Architettura del Medio Evo in Italia…* (Boito, 1872, pp. 755–773).

in 1538 – despite renovation works carried out in the 19th century – looked neglected and was in a very poor static condition. So, in 1870 – with the participation of the conservation commission (Serena, 2000, p. 84) – it was decided to completely demolish the old structure and build a new facility from scratch. As it has already been mentioned, as a result of the competition announced in 1873 the offer presented by Boito has been selected. Although the completed project follows the sequence of porticoes that characterised the demolished building and refers in terms of its decoration to motifs of architecture between the 12th and 15th centuries, found especially in Padua and its surroundings, its character is far from the austerity of a medieval prison, it rather resembles a symbol of the bourgeoisie wealth at the end of the 19th century. At the same time, it manifests synergy[3] and remains in an aesthetic symbiosis with the adjacent seat of the former court, Palazzo della Ragione, created in 1218–1306 (photo 3).

In the light of today's theory of architecture as an 'art of space', it is a good illustration of the idea of integrating technological means with the goals of aesthetics and social ethics. To this day, the implementation of the whole project is indicated as a perfect example of 'Boito style' (Zucconi, 1997, p. 175). Nevertheless, in the previous century, at a time of rapid industrial development, the building's facades were exposed to the direct effects of wind, rain, fog and air pollution, so they became heavily soiled and degraded. The damage to the external facades and the interior was caused by not very strong but still occurring earthquakes in this period. So Palazzo delle Debite has lost its original aesthetics more than a century after its completion. However, construction and conservation works that were carried out in 2014[4] including, inter alia, stabilisation of the structure and cleaning the surface of thick layers of dirt and the so-called 'crosta near', restored the building's proper statics and its original aesthetic nature. The divisions of brick or stone planes became clearly visible again. They were emphasised by intricately decorated balustrades of balconies in light stone, friezes, paintings and arches supported on rich capitals, the curves of which are crowned with an openwork attic, and the whole – despite its size – gives the impression of lightness. In addition to the exquisite workmanship of even the smallest details, the variety of carefully selected materials draws attention (Lenart, 2014b): limestone mortars covered with frescoes in some places, brick, wood, black marble, white

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3   In this sense, synergy is one of the forms of emergence in the process of creating architectural space. Cf. (Durschke, 2010, pp. 65–66).

4   The design and supervision of the works was carried out by the DMA-associati s.r.l. architectural studio. Elżbieta Barbara Lenart was responsible for the conservation works (Lenart, 2014a).

Carrara marble, light compact Istrian limestone and porous Vicenza limestone, grey shale, metal. Also the interiors, especially the 'piano nobile' that were initially intended for municipal administration offices (Zucconi, 1997, p. 160) were decorated with stucco and painted decorations. Over time, care and attention to detail have become one of the characteristic elements facilitating the recognition of works by an architect with Polish roots (photo 4).

According to the opinion of modern artists, attention to functionality and the use of innovative solutions for the designed architecture at that time are additional distinguishing features of Camillo Boito's work, what is also appreciated by modern experts of this field (Bordogna, 2018, pp. 432–437). To beauty based on the proportions of individual parts we can add the criterion of practical beauty rooted in the Renaissance ideas of Pietro Bembo, who claimed that beauty was nothing but grace originated from proportion and comfort and the harmony of things – thus opening the way to subjectivist and particularist ideas of beauty.

Another amongst several works entrusted to Camillo Boito by the municipal administration is the adaptation for the Municipal Museum (Museo Civico) of premises adjacent to one of the cloisters of the Basilica of St. Anthony, which at the time were converted into barracks and had to be adjusted to the new needs. The main task of the restructuring was to add a staircase to the existing structure as part of the main entrance, which was to lead to the first floor, and to harmonise the new appearance of the building adapted as a museum with the surrounding neighbouring ones (photo 5).

Photo 3. View of the Piazza delle Erbe square with the Palazzo della Debite in the background. On the right, Palazzo della Ragione
Source: (photo F. Benucci)

Photo 4. The facade part of the Palazzo della Debite
Source: (photo author)

Photo 5. Piazza del Santo and the Museo Civico on the right
Source: (photo F. Deutsch)

The location of the planned museum was difficult due to the small space to be developed and the immediate vicinity of the Scuola del Santo,[5] as well as buildings at Orto Botanico Street. Boito presented his proposal for reconstruction in 1875, but the final result involved subsequent improvements and changes related to the choice of materials used, as well as restoration works carried out simultaneously in the neighbouring buildings: Scuola del Santo and the San Giorgio oratorio (Bordogna, 2018, pp. 432–437). Finally, the museum was officially opened on 4th December 1880, and Padua was enriched with another building associated with an architect of Polish roots. In terms of architecture, this building is considered to be one of the examples of the implementation of Boito's views on the new national architecture (photo 6).

Photo 6. Entrance to the Museo Civico
Source: (photo author)

In the context of decorative art, let me also mention the Venetian Palazzo Cavalli-Franchetti near Canale Grande, nearby Padua, where Boito carried out conservation and restructuring works and where he created elegant interiors with clearly visible diligence and attention to every detail. The staircase

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5   The Scuola del Santo building was erected as the seat of the Confraternity of the St. Anthony. Its lower part was built in approx. 1430, the upper one in 1504.

designed by him, located in the expanded part of the palace, is still described as perfectly elegant and outstanding because of its ability to combine elements referring to the style of different eras, in this case especially to the Venetian Gothic, into one original whole. This interior, with its rich repertoire of decorative arts' possibilities, variety of representations and types of techniques, cannot be described as eclectic, it clearly reflects views of its creator directed towards the expression of 'New Italian architecture.' It is one of the most famous examples of 19th century Italian architecture (Romanelli Dai Cavalli ai Franchetti, 2009, pp. 22–34).

The Basilica of St. Anthony and its reconstruction under the supervision of Camillo Boito

The Basilica of St. Anthony was a special construction site for Boito, where he focused his efforts over many years. In the temple, the aim was to restore the original character of a building related to a specific historical epoch, which had been lost for centuries, the architect had the opportunity to present the rich and comprehensive experience gained up to that time and the ability to cooperate with people of various specialisations and roles.

Supervision over the conservation and restructuring works of the Basilica of St. Anthony to be carried out to celebrate 700th anniversary of the birth of one of Padua's patrons,[6] was entrusted to Camillo Boito in 1893. The overall goal of the Boito's vision was to restore and recreate the medieval character of the temple referring to the Italian Trecento. However, it is worth emphasising that the materialisation of this vision did not result in decisions to remove elements of high artistic value later than the medieval ones and, what is important – essential to worship.

The most important implementation of his projects in the basilica[7] which should be mentioned here due to the use of ornaments in order to complete the creative idea, include those concerning the pulpit, entrance portals, reconstruction of the Donatello altar and, which is especially important for Poles, elements of the decoration of the chapel of St. Stanislaus – called the Polish chapel.

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6 St. Anthony is also the most recognisable among Padua's patrons.
7 Detailed information about the activities of Boito in the Basilica of St. Anthony in Padua (Lenart, 2020, pp. 44–67).

The suggestion[8] to restore the 14th century pulpit is based on Boito's view that destroying the work would be a breach of history and art, and on his assumption that the pulpit, which has undergone many changes over five centuries, should be restored to its original character[9] (photo 7).

Boito, using the criterion of historical and formal analogy, proposed gothic decorative motifs in place of unacceptable for him, non-original elements (photo 8).

Photo 7. The 14*th* century pulpit inside the Basilica of St. Anthony
Source: (photo G. Baldissin Molli)

8 *Proposta intorno al vecchio pulpito della Basilica di S. Antonio di Padova* (Luisetto, 1983, p. 689).

9 *Distruggere questa opera vecchia di cinque secoli sarebbe offendere la storia e l'arte. Anzi, il Pulpito, avendo già subito alquante alterazioni attende che gli venga restituito il suo primitivo carattere.* As cited in: (Luisetto, 1983, p. 689).

Photo 8. Main entrance to the Basilica of St. Anthony in Padua
Source: (photo G. Baldissin Molli)

Photo 9. Part of the bronze main gate of the Basilica of St. Anthony
Source: (photo G. Baldissin Molli)

Photo 10. Altar of St. Stanislaus, the Polish Chapel, the Basilica of St. Anthony
Source: (photo G. Zygier)

Photo 11. Part of the decoration of the basilica entrance door
Source: (photo G. Baldissin Molli)

The attention he devoted to the new entrance door to the basilica was also consistent with the adopted vision of regothicisation, especially regarding the entrance filling the main portal. Doors, gates, as objects full of symbolic meanings that attract attention, are often objects that receive special care, principally when it comes to choosing the right iconographic and decorative programmes. It was no different in the case of the entrances to the Padua temple dedicated to St. Antoni. The wings of the main entrance and side wings are masterfully cast in bronze and decorated with ornaments referring to the iconography associated with St. Anthony and his monastery as well as images of other Franciscan saints (photo 9–11).

Extremely important for the basilica was also recomposition of the Donatello altar proposed by Boito in 1893. The first projects show the idea of grouping in one place the works of Donatello scattered throughout the centuries inside the basilica, originally forming one whole – the main altar.[10] The preparation of the offer itself was preceded by thorough studies of Donatello's art and archival research conducted both by Boito himself and by archivists cooperating with him (Puppi, 1991, pp. 126–128, 149–156).

Although the works on the design of the main altar involved the use of a new ornament decorating its individual elements and objects belonging to it, this recomposition, which Boito described as a recombination of the works of Donatello preserved in the basilica, aroused great interest for another reason than the decorative art itself. It caused a lively discussion both of the authorities of that time and of the public, due to the issues related to the monument, its conservation and use. Moreover, this discussion, extended beyond the times associated with Boito's work and it has been continuing to this day. This was all the more understandable as the matter concerned not only the temple that was important and that evoked both religious and artistic emotions, but also the works of an outstanding sculptor and creator of the Renaissance style in sculpture, as well as a new creation proposed by the author of the rigorous standards of conservation proceedings of 1883.[11] Ten years later, the architect had to face the task of restoring the form of the altar, which had been completely dismantled in the past, in a situation where its individual elements were scattered and traces of its location were difficult

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10 The altar, which was built around 1450, started to be dismantled in 1579.

11 These are the documents presented in 1883 by Boito and approved by the 4th Italian Congress of Engineers and Architects, which were later named as the First Conservation Charter (Prima Carta di Restauro).

to determine, when archival drawing and written documentation was lacking (Crova, 2017, pp. 59–61). It is worth noting that Boito referred to analogies with literature related to him in the discussion on the principles of conservation and restoration of monuments of the past. As he wrote: he wanted to 'read them with no abbreviations, supplements or redreftings.'[12] Without going into detail, both the one that relates to the historical layer and the one that is an evidence to the participation of an object in the historical process, it is impossible to read the meaning of the work, i.e., as we would say today, its internal structure. And this is the structure that gives order to the work and allows us to better discover its philological layer, which is essentially based on the fact that the understanding of man is always reflected in some language with all the baggage of symbolic and habitual references that are characteristic for it.

Arrangement of the Polish chapel in the Basilica of St. Anthony in Padua

Arrangement of the chapel of St. Bartholomew adapted to the Polish national chapel dedicated to St. Stanislaus[13] is one of the activities undertaken in the final stage of preparing the basilica for the celebration of the anniversary of its patron. It is worth remembering that at the time when this chapel was built, Poland, divided by the conquerors, was erased from the map of Europe. The fact that Boito, through his personal intervention in all the structural and decorative choices, devoted so much attention[14] to a place where memorabilia relating to Poland and the Poles were to be gathered, is understandable given the architect's Polish background, mentioned above. He had an influence not only on the iconographic programme and the choice of the artist who created the frescoes,[15]

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12 (Boito, 1893, pp. 7–8) translated by M. Kościańska, as cited in: (Krawczyk, 2020, p. 102).

13 The choice of the chapel was not accidental, because from the 16th century there was a tombstone of Erazm Kretkowski, who died in Padua in 1558, and the epigram by Jan Kochanowski has been found in the chapel.

14 Boito's involvement in the arrangement of the Polish chapel was emphasised by Francesca Castellani. See: (Castellani, 2000, p. 139).

15 The frescoes were painted by Tadeusz Popiel. ArA, Serie 24 – *Carteggio otto-novecentesco (1856 1968)*, Cat. III, cl. I, n. 17 (pp. 197–198), fasc. 24.2181: 'Dipintura cappella polacca' (written in black ink with a modern man hand), annotation by Tadeusz Popiel: 1897/09/18-1900/08/25; ibid., fasc. 3, 4, 5. See: (Kowalczyk, 2009, pp. 225–230; Castellani, 2000, p. 137).

but he also played the role of the designer of the new altar,[16] liturgical utensils,[17] and the design of the first grating closing the entrance to the Polish chapel.[18] Attention to every detail, from the design stage to the implementation of individual elements of the decor, also reflects passion and extensive knowledge of historical decorative forms. The altar contains elements in the late Gothic style, such as sophisticated decorations of the frames, weaves of mensa gothic arches, twisted columns in the upper part of the attic or the Renaissance, referring to the Nordic-German style, such as arabesques in the background of the arcades on the antepedium, or moresques in the predella and at the base of the altar.[19] The coats of arms of Poland and Kievan Rus were incorporated into the ornamentation of the predella. In the archives, apart from drawings, we also find letters and sketches supplemented with information specifying the materials that should be used for production. The analysis of the actual use of the stones from which the altar was built confirms the consistency of the assumptions made, even in cases where the acquisition of the selected raw materials was difficult. The altar is made of many types of white and coloured marble, it is locally gilded and polychromatic (Lenart, 2011, pp. 2–7).

The iron grating, polychromed and gilded, designed by Boito, originally closing the chapel from the side of the ambulatory, complemented the iconographic programme of the wall paintings. It also shows the importance of decorative aspect for the architect (Kowalczyk, 2009, pp. 253–255; Gia, 2020, pp. 142–144) – photo 12.

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16 ArA, Serie 24 – *Carteggio otto-novecentesco (1856–1968)*, Cat. III, cl. I, n. 17 (pp. 197–198), fasc. 24.2182: 'Altare cappella polacca, San Stanislao' (written in pencil by a more up to date man hand): two design concepts by Camillo Boito for the altar: 1899.10.07-1902.10.28.

17 ArA, Serie 24 – *Carteggio otto-novecentesco (1856–1968)*, Cat. III, cl. I, n. 17 (pp. 197–198), fasc. 24.2179: 'Candellieri, tables, cartegloria delle cappelle absidiali San Giuseppe e San Stanislao (polacca)', 1898–1902; (written in pencil by a more up to date hand): 1898.02.05-1901.04.07.

18 ArA, Serie 24 – *Carteggio otto-novecentesco (1856–1968)*, Cat. III, cl. I, n. 17 (pp. 197–198), fasc. 24.2183: 'Cancelli delle cappelle absidiali San Giuseppe e San Stanislao (polacca)' (written in pencil in a later hand): 1899.05.06-1900.07.20.

19 A detailed iconographic description of the altar and detailed information on its creation can be found in the article by Jerzy Kowalczyk. See: (Kowalczyk, 2009, pp. 247–253). Cf. comments in the article by Maria Beatrice Gia (Gia, 2020, pp. 139–142).

The architectural structure of the grating is based on rectangular divisions, and the ornamentation inscribed in it refers to the early Renaissance style with incorporated Gothic elements. Against the background of ornamental openwork friezes, there are the following coats of arms: coat of arms of Poland, Kievan Rus and Polish cities. Polish inscriptions have been embedded in the upper frieze, which include allusions to fight for independence (photo 13).

Conclusions

Summing up the work of Camillo Boito, one should emphasise that he used his knowledge of historical decorative forms both in conservation activities and in the projects he created. His roles of architect-designer and architect-conservator penetrated and complemented each other, confirming

that a true creator of architecture does not have to abandon the forms created by his predecessors.

Photo 12. Camillo Boito. Design of the grating for the Polish Chapel
Source: (photo M. B. Gia)

Photo 13. The Polish Chapel. Photo from 1901
Source: (Studio Fotografico Costante Agostini)

Historians have labelled Camilo Boito's designs 'the architecture of the united Italy'. This name itself makes it possible to look for elements in his works that distinguish them from others, the hermeneutical key to this distinction being the idea of risorgimenta included not only in aesthetic form, but also in a historical and educational dimension. Therefore, the area of our interest, is how buildings or projects aimed at arranging their interiors fit into the surroundings by referring to the past, without losing their innovation, reflected especially in the most interesting detail. In other words, the most important question is about harmony conceived as a way of the appearance of a given object, constituting a sequence of semantic meanings, and clear thanks to the structure encoded there. Outlined in this way, the phenomenological dimension of the work, perceived or not as beautiful, is the point of reference for all the arguments carried out. Deciding whether something is beautiful brings the question of aesthetic judgement down to the subject, who is characterised by an adequate preparation to perceive what is being judged. Educating in a specific milieu which allows the mind to archive forms and details that fit into holistic images embedded in places with their own history, produces a network of references that allows us, among other, to discover and accept new things. If an object appears at a specific

historical time, its aesthetic evaluation will automatically be related to the possibility of accepting the change in the environment in which it had not existed. Its existence is therefore very strongly influenced by its surrounding. Thus, the communicative dimension of the existence of an object depends very much on how and to what extent it may enter into a dialogue with the environment. The path taken by Boito was that the arduous studies of the history of places, objects, details, carried out in archives, allowed him to recall, recreate and propose a whole range of solutions referring in meaning to what is known, but at the same time, the elements, creating a clear whole with each other. The clarity effect here consisted in the game between the ideological pattern and the detail that this pattern materialised and caused not rejection, but acceptance.

The semantic construction of 'the architecture of the united Italy' relates the evaluation to the category of ideas that can be conveyed by architecture. Hence, the form itself, or the details so favoured by Boito, combined with each other, constituted a text that was clear at various degrees of aesthetic preparation. It allowed and it allows nowadays for the inhabitants of Italy to receive what is considered to be their own, since it was embedded in the story of the past, where the architecture evokes the myth of the greatness of own country and its artistic and cultural supremacy. Hence Boito's choices to turn towards architecture created in the period when the literature and civilisation achievements of the Apennine Peninsula countries influenced the whole of Europe. The architecture he created, the details he designed, and finally the interior arrangements he suggested, constituted a kind of record of history described by means of expression other than words. In terms of communication, however, such a brief message fulfilled the same role as the story about the culture of a nation seeking in beauty not only a sense of unity, discovering its own identity but also the pleasure of being in the environment recognised and perceived as beautiful.

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Konrad Urbanowicz
Wrocław University of Technology

Architectural glass art compositions as significant components defining the character of public interiors and urban spaces

Abstract: The article discusses the influence of individual glass art compositions on the overall perception of the character and beauty of architecture and public spaces. These unique interventions, explicitly designed to the given location and with the artist's collaboration with architects and investors, affect how people experience space by influencing many variables such as light, colours, textures, and reflections. The appropriate definition of the parameters and design of the architectural glass art compositions gives the possibility to alter the perception of space, creating the feeling of harmony and communicate the symbolic message behind the work a case study based on selected projects that were designed and implemented by Archiglass studio.

Key words: glass art, beauty in architecture, symbolism in architecture, perception of space

Introduction

The author of the article aims to present artistic glass interventions in the city's public space and interior design to analyse their components in combination with the potential impact on the quality of these spaces, the reception of aesthetics, and the transmission of symbolic or historical values.

The architect Ewelina Woźniak-Szpakiewicz in her doctoral dissertation describes in detail the impact of temporary architectural events on the public space of the contemporary city (Woźniak-Szpakiewicz, 2013). She defines the types of interventions and divides them into three groups: artistic – related to art in public spaces, spatial – in which art overlaps with architecture, and strictly architectural. The person towards which events in public space are targeted is a random spectator who discovers art in everyday conditions, unintentionally and naturally, unlike a museum visitor. The project of the glass palatium of Mieszko I and his wife Dobrawa on Ostrów Tumski in Poznań invites passers-by to act as intended by the artist and the entire design group. The aim is to provoke reflection, convey non-literal information, and inspire people to start their own research, allowing them to discover history.

The presence of artistic glass in contemporary architecture and urban space is an increasingly frequent phenomenon (Lipowicz-Budzyńska, 2012). The form and type of the designed creative solution significantly affect the nature of the created space. The glass composition can emphasise the function and mood of the interior, constitute visual identification, carry out the task of exceptional illumination or evoke feelings and stimulate the recipient's imagination. The presented design process of glass meteorites in Srebrna Góra shows how the piece of work achieves the intended visual effects and implements the above assumptions.

The beauty and character of architecture

In order to determine the impact of glass compositions on the perception of the character and beauty of architecture, one should first attempt to describe these parameters concerning space. The definition of beauty, depending on the source sought, can be very distinctive. The encyclopaedic description presents beauty as: 'a positive aesthetic value' or more specifically, 'an aesthetic ideal, historically shaped and socially established, adopted in a given epoch as the binding canon of artistic creativity' (*piękno – Encyklopedia PWN*, no date). Over time, different approaches to the subject of beauty in architecture have emerged. Architect Janusz Barnaś from the Institute of Architectural Design of the Cracow University of Technology describes the criterion of beauty in architecture as important and decisive in its shape and form (Barnaś, 2007). The beauty of architecture may depend on the right proportions, order but also reflect goodness, spirituality, or truth. According to Thomas Aquinas, to achieve beauty, one needs integrity, therefore the whole system of elements that make up and form the whole object is beautiful.

Mirosław Bogdan, in the article *The beauty of form and suitability in architecture*, describes the components of function, form, and structure in architecture and defines the primacy of the beauty of form or function depending on the type of building (Bogdan, 1992). Thus, for objects with an intense symbolic language, the beauty of form is the primary factor. The author distinguishes the concept of classical beauty from romantic beauty. The latter is a much broader approach, no longer related only to appropriate proportions or rigid rules but based on a solid feeling, experience, imagination, mystery, and symbolism.

Professor Konrad Kucza-Kuczyński discusses subjective and temporary perception of beauty in architecture, presenting reflections on three of his past personal events (Kucza-Kuczyński, 2007). The first part of the experience generates beauty in an ordinary cottage due to the author's childhood memories. The second one is the beauty present in the architectural scenery due to a mysterious

stranger who visually influences the reception of space. The third charming experience consists of getting to know the fantastic architecture of the interior of the historic basilica, aided by the grace of the liturgy and the accompanying circumstances, which translate into the beauty of the whole of Torcello in Venice.

One of the approaches then is David Hume's statement that each mind perceives a different beauty (Stróżewski, 2002). As a mid-solution, there is the famous 'de gustibus non est disputandum' (*Encyklopedia PWN*, no date). On the other side, there are specific attempts to define and describe the phenomenon of beauty. In the architectural quarterly *Rzut*, Marcin Napiórkowski presents several concepts of such a description (Napiórkowski, 2015). The definitions begin with proportion and appropriateness, consistent with the previous quotations. However, surprise as a source of beauty, characterised by Umberto Eco in *The History of Beauty* (Eco, 2012), complements the definition. Thus, the source of beauty may be an original, unique object, which arouses interest thanks to various means of artistic expression (Wala, 2009). Another way of perceiving beauty is through knowledge, which is the key to reading aesthetic experiences (Wysokiński, 2015). The recipient with a higher range of aesthetic expertise can perceive beauty in a broader aspect. These experiences can be stimulated both directly by education and by knowledge of culture, tradition, and history, or contact with various fields of art – painting, photography, poetry, and architecture.

An element directly related to beauty in architecture was historically an ornament. It was its presence that completed the character of beauty. The decorations highlighted the form and boundaries of the planes and elements, their textures, and unique appearances. The combination of contrast and colours emphasised the chiaroscuro and the shape of the object (Kijewska, 2015). 'An environment devoid of texture, colour or ornamentation can even be used as a form of punishment, as exemplified by the approach to designing prisons throughout history' (Salingaros, 2006). Nowadays, the role of an ornament gives way to the minimalist details, craftsmanship, texture, and the truth of the material. The ornament is often no longer a point element added to the structure of an object but constitutes its genuine 'skin,' building its character.

Glass art in public space – Poznań, Poland

The artistic intervention in the urban space concerning the implementation of the project of the exhibition of historic architectural relics in Poznań is a permanent spatial intervention of art in architecture. The genesis of the project dates back to 1999 when a team of archaeologists led by professor Hanna Kóčki-Krenz from the University of Adam Mickiewicz made a fundamental discovery of the

relics of the palatium of Mieszko I and his wife Dobrawa in Ostrów Tumski in Poznań, right next to the Church of the Blessed Virgin Mary (Kóčka-Krenz, 2003). According to current research, the discovered object may have been the first and main seat of the first Polish ruler. The chapel of the palace, adjacent to the east, is the first Christian building in the Piast state (*Nauka w Polsce*, 2016). The prince's residence had a form similar to a rectangle built along the north-south axis (Photo 1) with dimensions of about 11.80 metres by over 27 metres (Kóčka-Krenz, 2010). The width of g's perimeter walls of the building measured up to 1.30 metres (Kóčka-Krenz, 2015).

The way of displaying the relics of the discovered early Piast palace was a challenging issue. Architect Dominik Przygodzki from the Institute of History of Architecture and Monument Conservation at the Faculty of Architecture of the Kraków University of Technology, in cooperation with the Voivodeship Conservator of Monuments in Poznań, presented a preliminary analysis of the possibilities of architectural exposition of the building (Przygodzki, 2014). As he notes, 'the scientific, historical, educational and cultural value places the palatium with the chapel on Ostrów Tumski in Poznań among the most important monuments of early Piast architecture.' Such a vital object deserves proper exposure, although the state of preservation of the authentic elements and the manner of their arrangement with the existing church of the Blessed Virgin Mary do not allow for direct display of the original substance (fig. 1).

It was not feasible to reveal and expose the original object for several reasons. First of all, the underground exposure could damage the foundations that already are in poor condition and threaten the stability of the Church of the Blessed Virgin Mary. The possibility of later securing the exposed relics would be another important and problematic issue (*Zakończono renowację kościoła NMP na Ostrowie Tumskim*, 2020). Nevertheless, it was necessary to find an unusual and innovative way to show this historical complex with the current technical and material properties.

Such a solution was a comprehensive investment called '*Tu się wszystko zaczęło*' – *ekspozycja świadectw początków państwowości polskiej na Ostrowie Tumskim w Poznaniu*[1] implemented by the City of Poznań in cooperation with the Archdiocese of Poznań (*Nauka w Polsce*, 2016). The investment consisted of both displaying the outlined shape of the historic building around the Church of the Blessed Virgin Mary, as well as performing conservation and renovation works in the scope of the

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1   '*Everything started here* - an exhibition of the beginnings of Polish statehood in Ostrów Tumski in Poznań.'

interior of the church itself, along with preparing it for visitors, developing a multimedia presentation, and showing the original found relics.

Photo 1. Visualisation of the reconstructed Palatium; Piotr Walichnowski
Source: (Małolepszy and Walichnowski, 2017)

Fig. 1. Visualisations of the outline of the palatium wall during the day (left) and at night (right)
Source: (P. Woźny)

The archaeologists first introduced the concept of showing the historic building in the form of the outlines of the walls around the church in its actual location in the *Genius Loci* Archaeological Reserve in 2016. Architect Przemo Woźny proposed the architectural solution of raising the outline about 60 cm above the ground (fig. 2). Glass was the medium meant to show the layout of the walls in lly innovative and symbolic manner (Woźny, 2020).

Fig. 2. A model design showing the spatial juxtaposition of the historic palatium with the existing church

Source: (P. Woźny, 2020)

At the building permit design stage, the architect looked for an artistic glass solution that would allow for an extraordinary display of this unique historic structure.

The designer invited the architect and artist Tomasz Urbanowicz from Archiglass studio in Wrocław (*Urbanowicz Tomasz – Muzeum Karkonoskie w Jeleniej Górze*, no date), specialising in designing and creating unique cast glass compositions for architecture (Moor, 2006) and the author of the article, architect Konrad Urbanowicz, undertaking an internship in the studio as part of the doctoral dissertation. The search for an artistic elaboration of the spatial solution of the installation focused on showing the character of the original object in a non-literal way while maintaining the safety of people during its construction, use, and maintenance in an open public space. After getting acquainted with the history and results of archaeological research, and after conducting an in-depth analysis of the collected materials, the team proposed a glass solution combining various processing techniques. The resulting solution was meant to create a coherent and safe structure containing an educational and historical message as well as expand the value of a literal presentation of the outline of the building by its unique hand-made character (photo 2).

The project team has divided the glass wall of the palatium into vertical, horizontal, and oblique components, based on a production module with a size of about 180 cm, which was dictated by technological requirements of glass casting for this project (fig. 3).

Photo 2. Proposed initial glass character
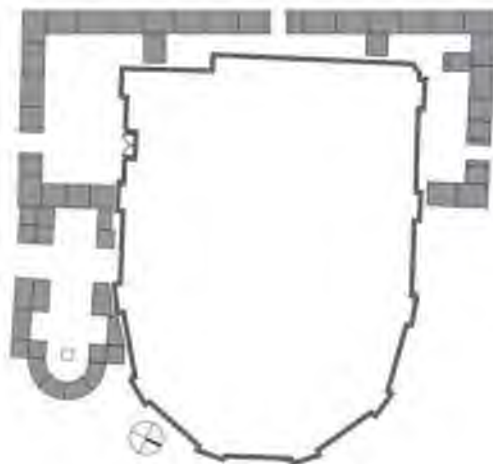Source: (author)

Fig. 3. Form of palatium – glazing system
Source: (P. Woźny)

The design guidelines required that the top glass ensured maximum safety in case of breakage, as it could be loaded with considerable weight and used directly by people. The side glass, on the other hand, hidden under the upper one and directly unloaded, was to enable a more flexible treatment and thus achieving the intended artistic effect. Both glass elements were meant to convey a historical message, construction of a modern memorial for a monument that no longer exists. The appearance of one of the walls was intended to engage the observer to search for and expand knowledge about the object. The structure for the whole

complex had to be as invisible and as light as possible to allow one to experience art without restricting the exposure to light, the contact of which with the glass is crucial. The way to achieve the goals was to raise the glass elements in space using a light structural frame, designed as modular elements made of stainless steel, allowing for independent point fixing of the glass elements while maintaining safe assembly expansions (fig. 4). The applied solutile made it possible to achieve maximised illumination of the installation and perform ongoing maintenance (Urbanowicz, 2021).
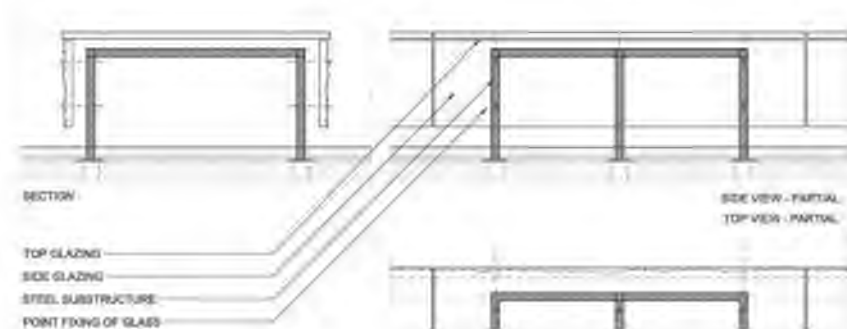
Fig. 4. Point fixing of glass to a modular steel substructure (Urbanowicz and Urbanowicz, 2020)

Source: (author)

The vertical sides of the wall were designed as kiln-formed glass casts with a base thickness of about 40 mm in a hand-made form, referring to the stone imprint – reflecting the structure and character of the foundations and walls of a stone building from over a thousand years ago (Kóčka-Krenz, 2012). After firing the glass at a temperature of 850 degrees Celsius, the mould was destroyed and manually re-created each time. Therefore, each glass is unique and the consistent development of the contact points of subsequent modules ensures visual continuity. After casting in infrared kilns, the relief glass, depending on the developed form, reached local thicknesses from 20 to even 80 mm. The variable thickness refers to the character of the original walls and gives the surface a velvety, stove-like texture. The combination of varying natural and artificial light makes the relief glass, reminiscent of a stone, sparkle, attracting the eyes of a moving observer (photo 3).

In the eastern end of the palatium, where the archaeologists found the chapel, the vertical glass elements were bent spatially in the second heat treatment process, which allowed for achieving the reproduction of the internal and external

curvature of the apse of the chapel. The forms for gravity bending of internal arches were made concave (glass supported on edges), whereas in the case of external arches, the same was achieved via convex shapes (glass supported at the centre of gravity) (photo 4–5).

Each of the arches consists of four precisely cast elements which, when folded, complete the particular form of the apse and show the curvature of the discovered chapel (photo 6).

Photo 3. Glass and hand-made mould before casting (left) and after casting (right)
Source: (author)

Photo 4. The concave form of the inner curve (left) and the convex form of the outer curve (right)
Source: (author)

Photo 5. Curved glasses, concave (left) and convex (right)
Source: (author)

Photo 6. Chapel's apse made of curved relief glass. View during the day (left) and after dusk (right)

Source: (author)

The horizontal and oblique elements of the wall, constituting the upper surface of the composition, were designed as three toughened and laminated glass layers of 10 mm with an artistic imprint that allowed for visual binding of all glass wall parts. The print graphic was developed based on a cast glass made using the same technology as in the case of the side ones (photo 7).

Photo 7. Mould for casting (left) and ready glass for graphic design (right)

Source: (author)

The cast glass, photographed and rasterised in the appropriate size, was reproduced in the form of large-scale graphics, covering the entire area of the outline of the palatium walls and the chapel, measuring about 25 x 30 metres. The graphics were overlaid with historical quotations, chosen by the investor in substantive cooperation with the Archaeological Museum in Poznań, represented by the head of the *Genius loci* Archeological Reserve, Agnieszka Stempin (*Tu się wszystko zaczęło. Ekspozycja świadectw początków państwowości polskiej na Ostrowie Tumskim w Poznaniu*, 2017). They included the records of historical chronicles and the thoughts of historians – including Thietmar, Jan Długosz,

professor Józef Dobosz, professor Roman Michałowski, professor Tomasz Jasiński, professor Tomasz Jurek and archaeologists – professor Witold Hensel, professor Michał Kara, professor Zofia Kurnatowska or professor Hanna Kóčki-Krenz, the discovery of which started the entire investment project. The quotes, appropriately incorporated into the layout of the building and placed in appropriate locations, were later rasterised according to the overall presentation concept and coherently combined with the artistic graphics (fig. 5).

Fig. 5. Part of the glazing plan within the chapel – arrangement of quotes (left), mounting dimensioning (centre), full graphics (right)
Source: (author)

The overall graphic, prepared in the above-described manner, was divided into each of the 59 upper glass elements and developed in high resolution for printing on glass in UV technology. In order to obtain the translucency of the print that could refer to the variable appearance of the relief kiln-formed glasses, the graphic file had two distinctive layers. Some parts of the print design had a white sub-layer (which was non-transparent), and others did not, which made some of their translucency intentionally lost in the lamination process. The print was made on the upper surface of the lowest of the three-layered glass panes. As a result, after laminating the glass package, the layer of applied UV dyes gained protection against the effects of sunlight through two upper sheets of glass and layers of laminating films (photo 8).

Photo 8. Fragment of the UV printed graphics in detail
Source: (author)

During implementation of the project, the design team developed a mock-up of a single module, approx. 180 cm long, 130 cm wide and 60 cm high, which was used for the purpose of approval procedure regarding all details and to conduct lighting tests at the construction site (photo 9). As a result of the performed tests, the illumination method and the assembly of lighting components, the light source, including the colours and the appropriate power, were selected, which allowed for the illumination of the installation consistently with the entire surroundings of the historic Ostrów Tumski (photo 10).

Photo 9. Mock-up of one module with lighting trials at the construction site
Source: (author)

Photo 10. Night illumination of a spatial installation
Source: (author)

In the context of the visual connection of the newly created building with the existing historic surroundings, it was crucial to choose the appropriate colours of the glass. This significant thickness of the relief cast makes float glass look more green, resembling the patinated copper helmets of the cathedral. The design team achieved a similar, slightly green effect of the top glazing by placing a graphic UV print on the lowest glass layer under the laminating films and the other upper sheets. As a result, the natural colour of float glass gives a light colour to white print areas, visually connecting the components. The installation shows the outline of the palatium, encouraging the audience to discover its geometry in space, and the view from the higher perspective allows one to fully understand the shape of the foundation of the early Piast building and how it merges with the existing Church of the Blessed Virgin Mary (photo 11).

Photo 11. Glass palatium in the context of its surroundings and the 'bird's eye view'
Source: (author)

Glass art in interior design – Srebrna Góra, Poland

The project 'Silver Meteorites' has been carried out in a private residence. However, it is possible for the public to experience the created space indirectly through the published trailer presenting this composition (Śródka, 2013). Work on the project began, as is usually the case, with the visit of the author, architect Tomasz Urbanowicz, at the construction site. Srebrna Góra is a fortress. Its character was the inspiration for the investor's private residence. The wild landscape, untouched by civilisation, 'breaks into' the interior of the designed swimming pool hall. The starry sky illuminates the surroundings at night. This landscape served as a starting point for the design of the wall composition, which was meant to create the mood of the architectural interior design (fig. 6).

Fig. 6. Concept design
Source: (T. Urbanowicz)

The idea for the composition was to reflect the character of the place using spatial relief glass and local natural stone. The dynamics of the installation, visually referring to astronomical systems, is caused by the introduction of slants and cuts in the way of arranging the stone. The wall becomes a large-scale bas-relief, the convexity of which reaches several dozen centimetres (photo 12).

Photo 12. The final result of the project with natural light
Source: (T. Urbanowicz)

Photo 13. The final result of the project with artificial light
Source: (T. Urbanowicz)

During the day, the composition is a uniform image with a play of chiaroscuro, emphasising the spaciousness and material texture of the wall. Along with the decreasing intensity of natural light, the composition is illuminated using an optic fibre installation. The shimmering multi-point light inside the glass bodies 'moves' the optically formed structure and creates an effect similar to the starry night sky. A uniform wall installation turns into a large-scale architectural image, the size of which is additionally stretched by the adjacent surface of the water (photo 13).

Obtaining the described final effect of the composition consisted in the appropriate development of its components. The author achieved the visual

homogeneity of the wall during the day by making translucent, coloured glass castings using a complex thermal process on spatial fireproof moulds. The correct selection of the natural local stone raw material and the types of metal oxides that give the glass castings colour played a key role here. The glass elements were mounted to mirror coatings adjacent to the wall, which complement the glass cast solids optically (photo 14). Dozens of holes drilled in the mirrors and filled with the endings of the optic fibre installation cover the entire surface of the wall and converge at one point in the next room. There is a mobile shutter at the other end of the installation, behind which there is one simple light source. This system, distributing light to dozens of independent endpoints, allows for easy, trouble-free maintenance and possible modification of the illumination.

Photo 14. The process of assembling glass, optic fibre installation, and stone processing at the construction site

Source: (T. Urbanowicz)

Conclusions

Considering the above definition of beauty, both of the analysed projects have features which prove that there are positive aesthetic values in the presented works.

By focusing on the most objective aspects of the analysis of beauty, we can see that it is present in deep symbolism and complicated mystery, which evoke the passers-by's imagination. Using a single glass material solution resulted in the spatial installation of the palatium becoming visually variable depending on the time of day and night, the angle of natural and artificial light, or the viewer's perspective and movement. The multi-layered symbolism carries an indirect message. The included quotes, which indirectly explain the role, arrangement, origin, and dating of the presented historical object, constitute the added value of the installation. The viewer is encouraged to look for answers and interact,

which affects the quality of perceiving the entire space. Awarded with the discovery of further information, which is visually embedded in graphics and intellectually in the intricacies of historical texts, the active observer learns about the created spatial glass structure and its significance for culture, history, and national heritage. Mannerist beauty manifests itself in provocation to reflection and understatements, both semantic and formal, which stimulate contemplation. The introduced colour, texture, and, thus, the chiaroscuro of the glass shapes generate a contemporary ornament or detail complementary to the beauty of architecture and space. For an experienced spectator, the installation becomes a display of attractive form and function through its unique components, referring to the history of the early Piast building in this place. For an interested viewer, inspired by the search for information, this space becomes a labyrinth. The available aids and tips lead to the aesthetic experiences and inspire further historical and architectural knowledge exploration.

The glass composition 'Silver Meteorites' realises a symbolic and mysterious character by making a visual reference to the arrangements of shimmering stars. It stimulates the mind with dynamic and changing forms, warming up the mood of the interior with pulsating light. The wall gives the impression of a flat, monolithic stone surface. However, upon closer inspection, a bas-relief of the form emerges, complemented by more profound relief of spatial glass and mirror image, varying texture and colour. The decreasing intensity of natural light activates the depth of light of the composition and separates the translucent material of glass castings from the solid stone surfaces. In the eyes of an amateur of astronomy, the installation will move the imagination and make it possible to relate this physical object to phenomena occurring in the sky. The ornament will show the precision and detail involved in its creation, stunning colour, and material contrast.

The romantic beauty of both works emanates through the individual properties of hand-formed coloured cast glass. Unique glass elements are subject to constant change, depending on the moment and angle of observation, which generates perpetual interest of the viewer through an object one has not encountered before.

In the Japanese ideology, *wabi-sabi* is a beautiful object with history, marked by the patina of time (Roguski, 2015). Over the years, being a natural material, the relief glass becomes dirty, curved surfaces become tarnished. In exposed places, the texture will be glossy and slippery, and in the obscured parts, it will become dull. Such an effect will complement the whole layout and integrate the installations into the surrounding space.

Final remarks

The architectural glass art installation of the palatium in Ostrów Tumski in Poznań, consisting of almost 200 glass elements with a total weight of over 13 tons, will soon be opened and used. Re-analysis and verification of the impact of this permanent artistic intervention in public space on the recipient, after the object is fully accessible and continuously functioning, would potentially allow to assign it an even broader definition of beauty, thanks to the possibility of observing the interaction and involvement of random viewers with a precisely designed object (Woźniak-Szpakiewicz, 2013). Similarly, the internal composition 'Silver Meteorites' presents the still open research potential in analysing the impact on the aesthetic character of interior design through the possible simulation of making the space available to a broader audience.

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Part VIII Towards the trans-objective (transcendental) aesthetics of place

Miloš Milovanović
Serbian Academy of Sciences and Arts

Postmodern memory. A study on aesthetics of Eastern Europe

Abstract: The focus of this paper is on the Kazimir Malevichs suprematism, which is characterised by the concept of non-objectivity that has become a synonym for the Russian avant-garde. He was an artist whose sensibility and philosophy was primarily developed through an immediate experience, excitement, and reflection of painting. Non-objective aesthetics emerged for the first time as a basic nature of art, then it was raised to the universal substance of ontology and cosmology. Starting from the black, going through the coloured, and ending with the white scenery, the paintings of Malevich wield a significant relation to the Orthodox iconography in respect of its theory as well as theological and aesthetical background. While developing a substantial geometry of the icon, he came up with the postmodern architecture rendered by fractal forms.

Malevich claimed that socialism was the last instance of modernism, whereby the next stage would require abandoning the objective art in favour of non-objectivity. The postmodern era, announced by Russian artists and philosophers, has raised novel tendencies of iconolatry which make suprematism a prototype of the restoration that is taking place. It corresponds to an update of the memory in terms of arts that substantially relate to the iconographic issue. A coincidental transition towards the Russian socialism demonstrates the great significace of an aesthetico-political project.

Key words: iconography, Russian avant-garde, suprematism, non-objectivity, fractal geometry, architecture, postmodern era

Introduction

Pythagoras is known to be the first scholar who applied the Greek concept of cosmos in order to explain the Universe. However, it supposedly referred above all to the starry firmament, since the term stems from the verb meaning 'to equip' or 'to adorn' (Coomaraswamy, 2007). The Latin word ornament has the same origin.[1] Although it is considered to be a decorative element, there is also the

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1   Coomaraswamy (2007) has pointed out that ornament or decoration is an integral part of the artwork, and not millinery as it was considered in the late modern period. The Latin word *ornare* originally meant 'to fit out,' 'to furnish,' 'to provide with necessaries,' while in the 16th century Cooper spoke of the *tackling or ornaments of a ship* and

universal significance implied. In that respect, cosmology generates a primordial language that parallels with the genetic code or mathematical symbolism. It is a testimony of the conscious memory that constitutes time and history.

The interest for ornaments was fluctuating through historical periods. The classical antiquity marginalised it. Yet, the Greek civilisation produced three style variants – Doric, Ionic, and Corinthian – and the Romans took over almost all models from the Greeks, but only for decorative purposes. The Middle Ages revived ornamental forms through the iconographic design. The concept of icon changed the idea of ornament in regards to the universal significance that it implies (Milovanović, 2013). During the modern period, such a conception was rejected in favour of the objective realism. However, the postmodern era, the focus of which was on contemporary science, has restored interest in cosmology and iconography as well (Toulmin, 1983).

The roots of postmodern thought were intertwined with the revolution in mathematics and sciences at the beginning of the 20th century (Tasić, 2001). It coincided with the revival of the icon in Russia, which resulted in an avant-garde movement superimposing the cubistic and the futuristic ones (Pellegrinaggio, 2018). A striking cognation between the Russian avant-garde and the iconography indicates continuity of the memory that the postmodernity was based upon (Spira, 2008). The concept of the Eastern European aesthetics corresponds to such an update of the memory (Milovanović, Vujović, 2019).

There is no reliable source that would provide information concerning the time when the Russian avant-garde started. One should agree a belief that the turning point was the emergence of suprematism in 1915, which coincided to with key events in science and politics. In that regard, the suprematist manifesto of Kazimir Malevich presenting a programme of non-objective art is considered to be the avant-garde mainstream (Раткин, 1978). The same year, the general theory of relativity by Albert Einstein was published, which turns out to be significant for elucidation of the Eastern European aesthetics. The iconography concerns a dynamical substance of painting, that corresponds to the curved space of relativistic cosmology (Жегин, 1970). Studying the geometry of the icon, Pavel Florensky established the art theory of the spatio-temporal continuum (Флоренский, 2010). It implies a fundamental concept of field upon which the general theory of relativity is based (Nakov, 1975). In addition,

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Malory of the *ornementys of an aulter*. Similarly, *décor* is related to *decorous* or *decent,* meaning: 'suitable to a character or time, place, and occasion,' but also to *decorum*, i.e 'that which is befitting.'

Clemena Antonova (2010) considers time to be an organising principle of pictorial art signifying presence in the icon. Milovanović et al. (2016) elaborated her conception in terms of the fractal geometry and the complex systems physics. The paper follows such a methodology in order to elucidate an update of the memory. The avant-gardists regarded artistic and social revolutions to be interdependent processes of the same continuum. That is why artists and critics often described the October Revolution as a continuation of the revolutionary process started by cubism and futurism (Erjavec, 2015). Malevich, like most avant-gardists, believed that manifestations of this could be seen in the art movement because both movements were organically inevitable. He sought to explain that the avant-garde movement implemented, within the artistic sphere, ideas that had been proclaimed by socialism and revolution (Мијушковић, 1998). But he actually revealed the same nature of totalitarian ideologies by identifying utilitarianism and the tendency towards an objective satisfaction, which meant that the revolution had been a triumph of the objective realism. One may conclude that socialism did not eliminate said system, but only developed it further while being, at best, its last stage. He finally realised that his programme was unattainable through socialism. He could only achieve it through suprematism that appeared afterwards (Malewitch, 1962). Did he indicate the postmodern era which coincided with a transition of the Russian socialism? – it is the question that inspires one to interpret the Eastern European aesthetics in terms of the postmodern memory.

Russian avant-garde and iconography. Non-objective cosmology

The avant-garde artists of Russia reached their professional maturity in 1910–1914, just when church architecture and icon painting were being rediscovered, due to collecting and curatorial activities of patrons such as Nikolai Likhachev, Ilya Ostroukhov and Stepan Riabushinsky, due to the scholarly analysis of art critics such as Igor Grabar and Nikolai Punin and the series of Moscow and St. Petersburg exhibitions that broughtitems of the ecclesial use to public attention. Furthermore, many of the avant-garde artists began their careers as icon painters or seminarists: Pavel Filonov, Filip Maliavin, Pavel Korin, and Vladimir Tatlin trained as icon painters; Boris Kustodiev, Aristarkh Lentulov, and Viktor Vasuetsov were students of theological academies. Many of them were also associated with Neonatio-nalist movement between 1880 and 1890 at Abramtsevo, where Elizaveta and Savva Mamontov promoted artists in order to show appreciation for the tradition of wood carving, embroidery, and icon painting. Only

a few kilometres from Zagorsk, Abramtsevo was a place of artistic and spiritual sanctuary for many young artists, including Mikhail Nestorov, Viktor Vasnetsov and Konstantin Yuon, some of whom supported the Orthodox Renaissance of Russia's fin de siècle, and later contributed to the revival of Zagorsk as a religious and intellectual centre in the early 1920s led by Pavel Florensky. The concept of the reversed perspective which was described by Florensky, the creator of an energetic theology of the icon, is its defining feature in the view of Clemena Antonova (2010). It forms a peculiar system, concurrent to the linear perspective mode that is shaped during the modern period (Успенский, 1970).[2]

The Russian avant-garde began to manifest fully through the primi-tivist movement that started in about 1908. The concepts of French cubism and Italian futurism concurrently penetrated Russia, which turned to be crucial for the avant-garde design (Мијушковић, 1980). The primitivism relied upon the traditions of folk art, Byzantine iconography and children drafts, insisting on spontaneity and immediacy which were originally related to the East. For Russian avant-gardists, it was substantially a national phenomenon considering the East and Russia had been inseparably linked since the Tatarian invasion (Турбецкој, 2012) – but also as much before. The modern forms of art evolved from the Byzantine ones, which took inspiration from the Armenio-Georgian art. In that manner, the Eastern European aesthetics made a full cycle, eluci-dating a primordial significance of the artistic impression (Шевченко, 1913).[3] The basic line of the impression is substantial dynamics that causes forms not to remain in an objective state, but to pattern the creation. Regarding that, futurist and cubist conceptions fell on the fertile ground of Russia, which had already cognised a dynamical substance of painting.

In suprematism, the act of painting consists of moments of energetic notes, which corresponds to the cosmology of non-objective energies (Lomac & Pandrta, 1978). According to Malevich, the category of objectivity is completely related to the concepts of practicality, usefulness, and utilitarism, which corresponded to coercion, necessity and limitation – the expressions of the human nature. Being a sharp and irreconcilable contrast, non-objec-tivity is

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2   Avant-gardists regarded the iconography to be instances of primitive art that provided an alternative perception. Henri Matisse showed the same enthusiasm during his trip to Moscow and St. Petersburg in 1911: 'The icon is a very interesting type of primitive painting. Nowhere have I ever seen such a wealth of color, such purity, such immediacy of expression. This is the best thing Moscow has to offer' (Bowlt, 2008, pp. 147–148).

3   Cezanne, Gauguin and Rousseau played an important role in the Russian art, because their tendencies were towards the Eastern traditions and forms.

defined through the opposite concepts in repulsive terms that indicate what it is not or what it does not have (Мијушковић, 1998).[4] A painter does not appoint concepts according to the elementary reality to which he relates, but in accordance to a substantial experience independent of the object (Наков, 1995). The release through non-objectivity represents a supreme state corresponding to the concept of field measured in dynamical units, discernible by an existence due to the supreme state (Nakov, 1975).

Whatever an artist tried to represent, his canvas should inevitably remain a surface. It follows that every art, including also the representational one, is substantially non-objective – however, many of the artists use it for affirmation and propagation of non-artistic ideologies. The concept of representation is perceived to be contrary to the very reality. Suprematist art tends to release a substantial reality potentiating its manifestation in a primordial state and to remove finally all incidents concerning the objective painting. Such a principle is not only artistic, but universal – which leads to the conclusion that substance of painting pertains substance of cosmology. Suprematism tends to reveal an immediate perception, to which Malevich often referred as the manifestation of the exalted Null (Malewitch, 1962).

If one assumes that mysticism transfigures the existence in an immediate perception through eliminating any mediation, Malevich would be considered a mystic (Nakov, 1977). A primordial substance is defined by him to be the Null. This way it is rendered as neither a unit nor a multitude, which corresponds to the apophatic conception of the Trinity (Лоски, 2003).[5] Furthermore, he was indicating a ternary law of perfection that constitutes any non-form, non-personality, and non-legality (Малевич, 1993a).[6] In his view, the focus of the Old

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4 The term *non-objective* was coined by Andrei Bely (1907), who used it to characterise what he felt, which was a possible dead end of art.

5 Even the manners of the Eastern Europe that have mostly departed from the Orthodox tradition retain a tendency to consider the cosmos in an ecclesiological aspect. The motifs like that exist in the religious philosophy of Vladimir Solovyov, wherein the cosmic mysticism of Jakob Böhme, Paracelsus and Kabbalah are interwoven with the sociological concepts of Fourier and Auguste Comte. They are also found in the eschatological utopism of Fyodorov, in chilialistic tendencies of the social Christianity, and finally in the sophiology of Sergei Bulgakov that is regarded to be a failed ecclesiology. For these scholars, church is fused to the concept of cosmos which comes to be depersonalised. In that respect, suprematism does not deviate from it at all. In addition, it concerns a radical restoration of the Eastern European aesthetics at a beginning of the 20th century.

6 Malevich refers to the Russian language – wherein the number three (*тройка*) is the basis of some extremely important words: order (*строй*), to arrange (*устроити*),

Testament was specifically not placed on art because it had not achieved non-objectivity. Moses in the Book of Exodus had been looking for the promised land and that is why he was far from being non-objective. Therefore it was Christ who completed Moses' law by saying: 'The kingdom of God is among you' (Малевич, 1993b).

In that manner, Malevich alludes to the iconographic issue relating his philosophy of art to energetical theology of the icon. The remark is crucial for elucidating the Russian avant-garde in regard to its continuity. It was a restoration of the Eastern European aesthetics relying upon the Orthodox Christianity. The Black Square, which was set at an exalted position in the corner that had belonged to the icon, pointed out that such a place should not remain vacant (fig. 1).[7] For Malevich, it was much more than art – it was a formula which all the surface and the volume structures were derived from. His architecture completely arose from the painting energies of suprematism (Харџијев, 1988). He continually rejoiced in the various meanings of the suprematist icon maintaining an atmosphere of the cult sacrament, reminiscent to that what had been the Tetractys for the Pythagoreans (Lomac & Padrta, 1978).[8]

to ruin (*растроити*) – wondering why the order of things should imply tripling and not doubling. Is there only one culture of the tripling, in whose law any existence has been formed? Is it just a mere coincidence, and could it be considered that there is concurently a quintupling or a septupling? The term *Perestroika (Перестроика)*, which refers to the restructuring of the Russian socialism, follows the same rule.

7   Malevich added that he viewed his square as a *gateway of revelation* (Nakov, 2010).

8   Malevich was an embodiment of spirituality in the supreme sense, stating it was actually the manner that discerned him from non-objective painters abroad (Харџијев, 1988). In that respect, one considers his note on transfiguration of church which is regarded to be a critique of the modern iconoclasm. The ecclesial painting is distorsion of the God image which is buried under the layers of the fake glamour. It is masked by abstraction, skill and elaboration of one's own idealisation which is a bunch of unnatural combinations. The novel church should shake off all covers of the Gospel, in order to remain the divine Logos like a pure grain. Malevich points out that breaking bread by hands is intrinsically related to Christ and that it should present primordial connection with the earth. However, the ritual of breaking bread and drinking wine in the church takes on an objective character which is inadmissible, terrible and even nasty, vulgar and shameful (Маљевич, 2010b).

    According to Malevich, there is a connection between the bread and the earth. Suprema-tism makes one more aware of the connection with the earth, but it competely changes the architecture of its objects merging them to dynamical monoliths of planetary system (Малевич, 1920). The *Black Square* concerns weight of the earth – four

Substantial geometry

Filonov stated in 1912 that Cubo-Futurism had come to a dead end, due to mechanicism in its fundamentals. The geometric representation of volumes and dynamics in space and time was achieved, but substantial dynamics that would generate life was beyond its reach (Kovtun, 1992). Whilst dynamics in the futurist experience is always regarded objectively, suprematism postulates a non-objective dynamics – independent of the mechanical laws that apply to the spatial phenomena, but not to a painting surface (Мијушковић, 1998). On the other hand, cubism is a conception that everything one could perceive is defined by cross-sections between planes and surfaces (Andersen, 1974). In that respect, Cubo-Futurism – that had been specifically Russian synthesis – corresponded to an objective geometry of the spatio-temporal continuum.

Suprematism started from the last futuristic exhibition in Moscow in 1915, which was titled 0.10. The Black Square was exhibited there, which, according to Milner's (1996) interpretation, signifies the origin of the geo-metrical system. Malevich divided the canvas into arshins and vershoks, which were the obsolete Russian units of measurement. As there are 16 vershoks in an arshin, the canvas should be divided into 2, 4, 8 and 16 parts – which is usually disregarded concerning the Black Square, since in the case of centimetres or inches all measures become arbitrary. It is fascinating that rhythmic relations within the painting were also present among his other paintings.

They were exhibited on two different walls, while the Black Square was hung at the top corner connecting them all (photo 1). It was an icon not only due to its location, but also due to the significance – in that respect the suprematist paintings are ornamental figures that communicate among themselves as well as to the observer.

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elements that constitute the cosmos – whist the whiteness emanating from the depth makes it non-objective. The geometric reduction of cubism and separation from any referentialism are there to denote not only that it is constituted in own incommensurability, but also that it becomes a sensual restoration of the silent nullity which is an unattainable source of the existence (Siena, 1978). It corresponds to the *tessera* that is a building block of mosaic which is used in the basic technique of Byzantine iconography (Betancourt & Taroutina, 2015). Regarding that, the ornament corresponds to a dynamical substance of the Orthodox icon which is inseparable from the ecclesial use (Цветковић, 2009). The significance of magic squares in iconography is also evident (Ernst, 2001).

Fig. 1. The Black Square by Kazimir Malevich
Source: (71)

Removing referential relations from the plastic and the conceptual structure, however, such art does not imply neither personality of the observer, nor any circumstances of perception – since there is no human space making a personality existent (Мијушковић, 1998). The observer is present neither in the centre of a painting, nor outside it, nor in the third place – but it is figured through a dynamical substance, which is what the icon does. In that regard, the Russian avant-garde restored the iconographic paradigm in order to escape representational art. The substantial elements of iconography, which should be discussed in relation to that, are: perspective, colours and geometry.

Photo 1. Paintings by Kazimir Malevich at the last futuristic exhibition 0.10 in Moscow 1915
Source: (80)

Perspective is a fundamental fact of the iconography. Unlike the modern concept that became a dominant mode of representation during the Renaissance, the iconographic perspective corresponds to a dynamical substance of painting (fig. 2). The binocular vision, which is a blend of two images from different viewpoints, gives some interesting results in this case (fig. 3). This kind of vision allows one to obtain a cubo-futuristic description of the spatio-temporal continuum implying a perspective depth related to the time domain (Antonova, 2010).[9] What lacks, however, to realise the substantial geometry of the icon is non-objectivity, since the iconography does not represent reality but the original creation. Rosalind Krauss (1986) considers the avant-garde to be a discourse of the originality which is an imperative of starting from the Null, due to abstraction from the avant-garde practice the grid structure that is a paradigm of the nullary stage (fig. 4). Concerning the structure of a grid, the avant-garde indicates that originality is an operational hypothesis arising through repetition. In terms of substantial geometry, the grid corresponds to spatial rhythms defining a scale hierarchy.[10]

The colour flow was initially achieved in the icons by applying the light reflective paints to the clothes flowing into the background of the image (Шевченко, 1913). The colours are not regarded to be just decorative element, but a subtle symbolism of transcendence (Sendler, 1995). According to Malevich, painting is a sense for colour which is the constructive principle of creation. The colour flows and the original unity turns into painted energies arising the artistic sense (Малевич, 1993c).[11] In the coloured stage of suprematism, until 1917,

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9   The relativistic cosmology introduced time into artistic space through the concept of curvature (Жегин, 1970). Diachronic images by Pablo Picasso, such as *Les Demoiselles d'Avignon*, are characterised by the cubist geometry that concurrently presents diverse viewpoints whose sum makes up a given object (Miller, 2001). The futurist avant-garde efforts to represent movement and dynamism, such as Giacomo Balla's *Dinamismo di un cane al guinzaglio*, concerns the same point (Carlevaris, 2020).

10   A link between perspective and rhythms is clearly discernable in the meander which is an ornamental form of iconography. Its geometry generates a spatial flow that is twisted into depth, which concerns the dynamical substance of painting (Марјановић, 1995).

11   The painting process is defined by Malevich through an intuitive calculus constituting the colour theory of suprematism. Social phenomena are also expressed in the various colour scales. And so is the culture upon which it is based. Paints are the most dilute in the rural areas and the most dense in the cities. The final point is a metropolis where the colouration has been overcome and colours disperse in the white light. Such a hierarchy is the social generalisation concerning the three stages of suprematism – the black, the coloured and the white one.

Fig. 2. The Last Supper. On the left: the iconographic perspective corresponding to substantial art. On the right: the modern perspective corresponding to representational art

Source: (author)

Fig. 3. The binocular vision giving a cubo-futuristic description of the spatio-temporal continuum

Source: (author)

non-objective painting was constituted on canvas by means of colours together with a strong contrast between black and white. Thereafter, the colour scale disappeared in white and the architectural suprematism proclaimed the basic element to be the form (Маљевич, 2010a). The suprematist whiteness (fig. 5) corresponds to the substance of painting. It appears in the same manner in the Orthodox iconography in the form of white areas on the robes of angels and saints (fig. 6).

After the disappearance of the colour scale, Malevich considered transfiguring it into the white colour, which unifies all colours into one. There is a million of colours at rest, whereas only single one in time (Малевич, 1993c). In that respect, scaling designates the time domain of iconography related to the

Fig. 4. Construction No. 90 by Aleksandr Rodchenko
Source: (79)

Fig. 5. The White on White by Kazimir Malevich
Source: (74)

perspective depth. The icon of Transfiguration highlights the von Koch curve – Christ is presented to his apostles through time, which is coincident with spreading of the mountain massifs towards the image interior (fig. 7).[12] The icon established this way refers to the dynamics manifested in the transition from a

12 It is worth noting that the scale hierarchy also includes a relief element in the left corner, which related to the earth in the form of fractured and cracked rocks.

Fig. 6. The White Angel. A mural icon from the Serbian monastery Mileševa where were the relics of Saint Savas before having been burned in 1595
Source: (75)

horizontal position, through a semi-vertical one, to a vertical one in relation to the central figure of Christ. The substantial geometry corresponds to the self-similarity of fractal forms, which are dynamical patterns of non-objective energies (Milovanović & Tomić, 2016).

Geometry plays an extremely significant role in icons. Not only perspective is geometrically involved, but the composition too, which is often consciously regarded as geometrical. The forms of cross, circle and triangle are central in both the iconography as well as suprematism.[13] The Knife Grinder by Malevich is a remarkable example of Cubo-Futurism, having a perspective that constitutes the spatio-temporal continuum (fig. 8).

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13 Malevich favourite form seems to be the cross (Bowlt, 2008). Influenced by the neoprimitivism, he initially imitated icons and exhibited the *Studies for a Fresco Painting* in 1908.

Fig. 7. Transfiguration. Left: The von Koch curve that indicates scaling wherewith Christ is presented to the apostles. Right: Substantial dynamics reflected in progression from the horizontal, through the semi-vertical, finally to the vertical position in respect to Christ's figure

Source: (70)

Fig. 8. The Knife Grinder by Kazimir Malevich
Source: (81)

A motion of geometric elements suggests self-similarity, considering that objectivity is broken due to the cubistic stratification of the scene.[14] The instance

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14 Through his teaching activities, Malevich referred to cubism in explanation of non-objective painting (Nakov, 2010). In Diego Rivera's opinion, 'cubism broke down forms as they have been seen for centuries and was creating out of the fragments new forms, objects, patterns and ultimately – new world' (Erjavec, 2015).

indicates significance of ornamental forms for generating fractal design, which is an important topic in elucidation of the suprematist art (Тарасенко, 2007).

Fractality and Postmodernism

1. Fractal Architecture

The term fractal was coined by Benoît Mandelbrot (1975) from a Latin adjective meaning 'fractured,' but also 'irregular' in the manner of fragmentation.[15] Despite being like that, their structure implies a recurrent order called self-similarity – which is about figuring a pattern at different scales through a hierarchical description. It is a generative property related to growth of the organism, in each particular case defining a substantial geometry of the matter discussed. Through implication of artistic time inherent in the texture of a picture itself (Souriau, 1949), fractals relate to the dynamical substance of geometry.

Malevich's non-objective architecture is based upon the existence of dynamical substance that overcomes any weight (Nakov, 1977). In that respect, it coincides with the relativistic cosmology whereat gravity has been incorporated in a geometrical structure of the theory. However, a link between the general relativity and the fractal geometry is not an elucidated issue – which is necessary for elaborating his conception that concerns ability to create construction that is not dependent on relations between forms and colours, but founded upon weight, speed and expansion (Малевич, 1915).[16] The complex systems physics using geometrical hierarchy to express dynamics in a concise manner is the appropriate framework for such an activity (Prigogine, 1980).[17] In that relation, one has realised their remark on the complexity which concerns a strict law generating life (Малевич, 1989).

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15 The concept is primarily related to the earth relief and some instances of geography such as the seacost of Great Britain, the left bank of the Vistula, the mountain massifs and the demarcation lines, wherewith there are significant differences in data of neighbouring states concerning the common frontier. The instances like that require a hierarchical description, which makes them irreducible to stationary figures. According to that, emergence of fractals in geometry is regarded to be re-examination of its foundations in the basic sense – measurement of the earth.

16 It concerns the concept of field flowing beyond canvas in order to involve the observer. Such a transformation potential of painting is woven into the spatial conception whose dynamical substance is not restricted by the edge of canvas.

17 The complex systems are defined by increasing complexity in the temporal domain, which corresponds to the perspective depth of iconography. The use of geometry to express dynamics is coincident with the basic concepts of general relativity.

According to energetical aesthetics of suprematism, the system serves as a weight distribution method, since there is no weight in the system. It denies a static nature of matter due to the substantial dynamics, which makes Malevich responsible for complete revolution in architectural design (Nakov, 1977). His architectons, i.e. the scale-free patterns of suprematist architecture, indicate a unification of the interior and the exterior by dissolving façade's primacy (fig. 9).[18] Impressive and uniform faces of architectons coincide with the later paintings of Malevich, which present weightless bodies reminiscent to geometrical figures without any individuality or personality (Crone & Moos, 1991). The last instance of depersonalisation is an absent face, resembling the manner of how imams are portrayed in the Shiite Islam (fig. 10). The exclusion of faces was regarded by him to be a crucial achievement of non-objective art (Мијушковић, 1993).[19]

Fig. 9. An architecton by Kazimir Malevich. The scale-free patterns indicate unification of the interior and the exterior by dissolving façade's primacy

Source: (78)

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18 Architectons and planits are regarded to be a direct response to the demand of the general upsage of interest in the applied and decorative arts through 1920s (Bowlt, 2015).

19 Accroding to Malevich (1978), the face is not the human substance neither the switch is the electrical power. The same conception is used by Pavel Florensky when considering the icon. He states that the concept of the window is defined by light, since without it the window would be only treated as wood and glass (Флоренски, 1990). In that respect, the later paintings of Malevich are immediately related to theologico-aesthetical background of the Orthodox iconography.

Fig. 10. Absent faces. Left: The Woman with Rake by Kazimir Malevich. Right: Imam Ali portrayed in the Shiite Islam

Source: (76)

Photo 2. The Temple of Saint Sava in Belgrade, built at the palace where his relics were burnt in 1595

Source: (77)

Photo 3. The Yellamma Temple in Saundatti, photographed by Paul Prudence
Source: (72)

Postmodern architecture, rendered by fractal forms, is primarily based upon contemporary science (Jencks, 2002). The three-dimensional sphere, which is a basic model of the general theory of relativity, appears likewise in the traditional cosmology being a vision of the afterlife (Lipscomb, 2014).[20]

Since it is partially presentable in terms of fractal geometry, one is not surprised by the fact that self-similar patterns occur not only in the Orthodox iconography – but also in the sacral architecture, which is the realisation of the Eastern European aesthetics (photo 2). Fractals are present as much in the Hindu temple as in the cosmological model of increasing complexity (photo 3). An evolving cosmos which is dynamical and self-similar is not typified merely by scaling, but there is an increase in complexity in terms of geometrical elements (Trivedi, 1993).[21]

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20   *The Divine Comedy* by Dante Alighieri constitutes a model of cosmology that includes the Empyrean which is the abode of God. Dante regarded the Empyrean to be a mirror image of the Aristotle cosmos, bonding their boundaries together in order to make the three-dimensional sphere (Peterson, 1979).

21   The geometrical elements of circle, triangle, and square are assigned special symbolics to typify the basic energies. They are combined in increasingly complex figures to

2. Postmodern era

The Russian avant-garde has remarkably stepped out from the frame of Modernism, coming near to a postmodern view. Contrary to the modernist attitudes, it does not favour a strong demarcation between the old and novel art considering such classifications to be meaningless – which stems from a specific perception of past and future, tradition and history, originality and nation in artistic creativity. Reconsidering the modern conception of linear time, one suggests an assumption that creativity is already contained in the tradition which indicates a comeback to the origin. The paradigm like that implies continuity, inheritance and restoration of artistic experience that makes a struggle against individualism, which comes from conviction concerning the cosmological significance of art. It corresponds to iconographic style that is a common creation whose key tag is the absence of an individual personality (Мијушковић, 1998).

The upcoming era, that should appear after Modernism ended, was announced by Berdyaev who suggested a rather significant influence of the Eastern Europe in its establishment (Берђајев, 1989).[22] He discerned that in Russia there had been no individualism which Modernism was characterised by. The Russian intelligence was principally presenting a model of community and organic culture, as opposed to the modernist concept of universalist and cosmopolitan one (Берђајев, 1987). Relating that, the avant-garde art did not demand to represent but to transfigure world – which coincided both with the social and with the scientific revolution. Avant-gardism differed from traditionalism only because it was considered that the modernist destruction could not be resisted by traditional methods (Groys, 1992).[23]

In that respect, a continuity of the Eastern European aesthetics has been observed in socialism and postsocialism as well (Spira, 2008). When the

present particular qualities embodied in some aspects of creation. Such a creative aesthetics is inherent to the Orthodox iconography, but to the complex systems physics as well (Milovanović & Medić-Simić, 2020).

22 The Eastern Europe experienced the end of modernism even though it did not experience modernism itself, which is contemporaneity and originality of its history. The Russian philosophy of history has always been apocalyptic. The same applies to the Russian revolution which also arrived to the apocalyptic issue.

23 The Socialist realism is usually considered to be an antithesis of the avant-garde. However, Stalinism satisfied the fundamental demand that art should cease representing life and began transfiguring it through an aesthetico-political project.

German army came to Moscow during the Second World War, the plane with the icon of Our Lady of Kazan flew three times over the city (fig. 11).[24] A collapse of the Nazi army was accompanied by this ritual procession performed in the air. During the postmodern era some novel tendencies of iconolatry emerged (Никољскаја, 2013),[25] which make suprematism a prototype of the ongoing restoration. It corresponds to anupdate of the memory in terms of arts that substantially relate the iconographic issue (Yates, 1966). The comprehensive synthesis tempered in the furnaces of the mystical tradition is not subject to any aesthetic or scientific particularism, much less ethical or religious one (Меденица, 2013). The substantial geometry to which it refers is permeating the diversity of life (fig. 12).

Conclusions

The Kazimir Malevich's suprematism is characterised by the concept of non-objectivity that has become a synonym for the Russian avant-garde. Non-objective aesthetics emerged for the first time as a basic nature of art, then it was raised to the universal substance of ontology and cosmology. Starting from the black, going through the coloured and ending with the white scenery, the paintings of Malevich wield a significant relation to the Orthodox iconography in respect of its theory and theologico-aesthetical background. The substantial elements of iconography, which have been discussed in relation to the above, are: perspective, colours and geometry. Developing the substantial geometry of the icon, he came up with the postmodern architecture rendered by fractal forms. It denies a static nature of matter due to the substantial dynamics, which makes him responsible for complete revolution in architectural design.

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24 October 22th in the Orthodox ecclesial calendar (which is November 4th in the Gregorian one) is the feast day of Our Lady of Kazan, due to the deliverance of Moscow from Poles in 1612. Since 2005, it has likewise been celebrated in Russia as the *National Unity Day*, replacing the *Day of Great October Socialist Revolution* and also the postsocialist *Day of Reconciliation and Agreement*, both of which were held on October 25th (November 7th).

25 Contemporary relations have extended domains of some icons. The God's Mother and the Unburnable Rose-bush is recognised to be a protector of firefighters, Saint Matthew the Apostle has become a patron of the tax officers and bankers. Saint Elijah the Prophet is a protector of the airborne army, Holy Great Martyr Catherine is one for the rocket army, presumably because of the first multiple rocket launcher nicknamed *Katyusha* – due to a popular wartime song by Mikhail Isakovsky.
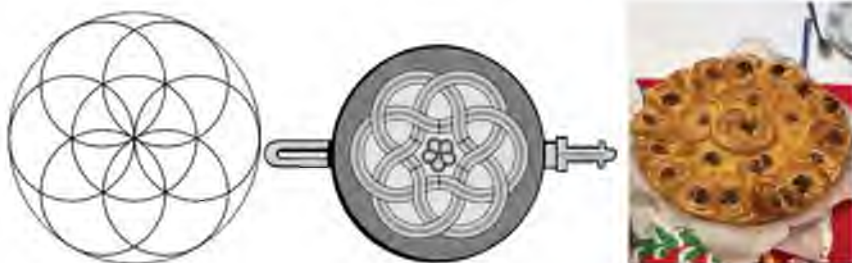
Fig. 11. Our Lady of Kazan
Source: (73)

Fig. 12. Left: The Flower of Life which is a pattern attributed to Leonardo da Vinci. Middle: Depiction of Ali's sword and his shield in the Shiite Islam. Right: A cake that is baked for Christmas in the Serbian Orthodox Church
Source: (author)

Malevich claimed that socialism was the last instance of modernism, whereby the next stage should require abandoning the objective art in favour of non-objectivity. The postmodern era, announced by Russian artists and philosophers, has raised novel tendencies of iconolatry which make suprematism a prototype

of the restoration that is taking place. It corresponds to an update of the memory in terms of arts that substantially relate to the iconographic issue. A coincidental transition towards the Russian socialism demonstrates the great significance of an aesthetico-political project.

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Henryk Benisz
University of Opole

Will to power in architecture.
Nietzschean inspirations

Abstract: Nietzsche, having presented his interpretation of the Greek tragedy in which the Apollonian and Dionysian elements interact, developed a comprehensive theory of art in which the will to power plays a fundamental role. He also became increasingly interested in the idea of architecture as an art created out of the will to power and embracing the highest human aspirations. It can be assumed that, as far as the architectural space is concerned, the Apollonian is beautiful, and the Dionysian is sublime. Both elements are dialectically synthesised in the form of the will to power, which is the most powerful form of spontaneity. It is this will that brings to life the great art that supports man in his transformation into a overman. In order for this ontological transformation to take place, an architectural object must be a place that gives man the opportunity to withdraw from the commotion of the world and to freely reflect on himself in the perspective of eternity. The architect's task, or rather his specific vocation, is to design appropriate objects that would meet the Nietzsche's criteria of the great art of building.

Key words: architecture, beautiful, sublime, Nietzsche, Apollonian, Dionysian, will to power

Introduction

Nietzsche's aesthetics reach beyond the well-known interpretation of Greek tragedy, which refers to the Apollonian and Dionysian spontaneity. Among the issues related to art, there are also important considerations on the creative process in terms of physiology and psychology. In the late stage of Nietzsche's work, the will to power became the central philosophical idea, the effect of which extends to the entire sphere of aesthetics. In this essay, I intend to show that Nietzsche conceived the theory of great art on the foundation of his early aesthetic theory, and that architecture plays a significant role in it. I will also try to present the objectives of object design that correspond to this vision of architecture as an art encompassing the entirety of vital matters of (over)man.

Initial assumptions of the Nietzsche's architectural design

In his first work, *The Birth of Tragedy*, Nietzsche used the notions of the Apollonian and Dionysian. In the opinion of this classical philologist and philosopher, the Apollonian dominates in visual arts and epic poetry, while the Dionysian in music and lyric poetry. In Greek tragedy, the elements are so mixed that sometimes it is impossible to distinguish them, or it seems that one of them is acting as the other. Nevertheless, the tragedy was born from the spirit of music and – as Nietzsche adds – 'the music of Apollo was Doric architecture expressed in sound' (KSA 1, 33). The Apollonian and Dionysian cooperation contributed to blurring the differences between the actors and the audience and to creating a feeling of unity among all participants of the performance, which is why young Nietzsche considered the Greek tragedy to be the most perfect work of art. Each tragedy played on stage was dedicated to Dionysus and it was this god who was its protagonist. He also provided a certain aura of sublime to everything that happened at that time: 'The architecture of the scene appears as an illuminated picture of a cloud, which the Bacchae gaze upon, as they swarm down from the mountain heights, as the majestic setting in the middle of which the image of Dionysus is revealed' (KSA 1, 60).

The concepts of the Apollonian and the Dionysian appear not only in *The Birth of Tragedy*. We also find them in other Nietzsche's texts, such as *Twilight of the Idols*, a work that belongs to the late phase of his work. They are usually inseparable, although it is not difficult to notice that Nietzsche was much fonder of the Dionysian. For it best represents life, which is a series of spontaneously occurring changes, while the Apollonian, in some sense, pulls man away from the daily reality and takes him into the world of dreams, thus enclosing him in the narrow confines of an illusory unchanging being. It seems that the Greeks were deeply rooted in life understood in this way. Their spiritual culture was based on the Dionysian mysteries and plays, the former being of religious and the latter of artistic nature. This Greek specificity is also reflected in material culture, as many sacred buildings were erected in honour of Dionysus. It is worth noting that Greece was densely covered with vines which also symbolised Dionysus. Sensing the atmosphere of the ancient Greeks, Nietzsche fell under the spell of the god of wine and in his youth, as he sincerely confessed, he made 'an innocent sacrifice with great respect' (KSA 11, 685) to Dionysus. His fascination with philosophical and religious Dionysian symbolism was isolated and, in fact, quite unique. In this regard, he had no followers, and it turned out that he reasonably considered himself 'the last disciple and devoted to the god Dionysus' (KSA 5, 238).

Although Nietzsche's work did not lead to a specific cult of Dionysus, the division of the elements into the Apollonian and the Dionysian within the scope of contemporary aesthetics became extremely popular. People began to talk about the Apollonian and the Dionysian in various fields of art. Where there is rationality, moderation and order, the influence of the Apollonian is indicated. On the other hand, where there are irrational factors, lack of moderation, and disorder, the influence of the Dionysian is indicated. Thus, Nietzsche's early aesthetic theory, originally related to Greek tragedy, began to live its own life, and became a theory of art in general, a theory describing various artistic phenomena in the domain of individual arts. Wojciech Kosiński advocates the application of Nietzsche's early aesthetic theory to the description of the history of architecture. Comparing the coexisting within contemporary modernism irrational ('superrational') tendencies in deconstruction and rational in minimalism, he stated that deconstructivism is of Dionysian nature because it is immeasurable and expressionist, while minimalism is Apollonian because it is measurable and relaxing (Kosiński, 2018, p. 36).

The Apollonian and the Dionysian ideas also began to play an important role in cultural studies, as exemplified by the transdisciplinary study by Tomasz Drewniak and Ewa Smolka-Drewniak, devoted to the normative dimension of culture. Its authors, by refering to the views of the ancient playwright Euripides and the modern expert on matriarchal myth Johann Jakob Bachofen, show how the understanding of male eroticism (Apollonian, spiritual, paternal, political) and female eroticism (Dionysian, corporeal, maternal, domestic) functioned in Greek culture. The historical, philological, and philosophical methodology used in this work made it possible to discover the existence of the Apollonian and the Dionysian also in the previously hidden, intimate sphere of ancient Greek life and to see how the elements influenced other spheres of their lives (Drewniak, Smolka-Drewniak, 2015). This work also shows that Nietzsche, who knew the texts of Euripides and Bachophen, conceptualised his aesthetic theory as a broad-based theory of culture in which aesthetic phenomena were combined with many other phenomena occurring in the sphere of human creativity, creating a coherent theoretical structure. It would probably be justified to refer this composition of Nietzsche's philosophical views as aesthetic and cultural architectonics.

Even though in Nietzsche's early texts there are concepts taken from the dictionary of the art of building, at that time this thinker had not yet explicitly expressed his thoughts concerning architecture. Only in one of the notes on the physiology of art, dating from the late period of her creativity and later included by his sister in the controversial compilation *The Will to Power*, under

point six is raised an extremely important issue: 'The question: where does archi-
tecture belong?' (KSA 13, 529). However, no answer emerges from the unclear
context. Fortunately, Nietzsche tried to answer this question by carrying out a
kind of genealogy of art in *Twilight of the Idols*. There he noted that the actor,
mimic, dancer, musician, and lyricist are remarkably similar to each other. They
all share the same instinct and are essentially one, except that the multiplicity of
separate specialisations has separated and even contradicted their professions.
The lyricist with the musician, representing the Dionysian, and the actor with
the dancer, representing the Apollonian, remained the longest connected. After
this brief systematisation of the main aesthetic ideas, Nietzsche stated that 'the
architect presents neither the Dionysian nor the Apollonian state; here is a great
act of will, the will that moves mountains, the ecstasy of great will that desires
art' (KSA 6, 118). In deliberations on art and the man of art, undertaken in the
late stage of his creativity, there is a philosophically significant theme of the will
to power. The profession of an architect grows up to a special vocation, aimed
at erecting buildings that express triumph over the heaviness of matter and, in a
way, challenge nature with its law of gravity. Architects find in themselves rich
reserves of power and draw it from those who employ them and support them
in their creative process. Then this power permeates the resulting buildings and
manifests itself in great style, affecting all who come into contact with it.

Of particular importance is a small note that Nietzsche made for his future,
never finalised, comprehensive aesthetic theory: 'The action of art against cog-
nition. In architecture: human eternity and greatness. In painting: the world
of the eye. In poetry: the whole man. In music: his feeling – admired, loved,
desired' (KSA 7, 109). Architecture has been clearly separated from the visual
arts, exposed, and associated with the highest creative powers. It can be assumed
that architecture should somehow integrate visual arts, lyric poetry, and music.
By bonding with these arts, it raises them at the same time towards something
that is highest, simply unattainable. With this ascent, it expresses the power of
humanity, which, with the will to power, even exceeds the limits of time and
reaches eternity. Architecture ceases to be an ordinary art of building and
becomes 'great architecture of culture' (KSA 2, 228). As such, it unites even
opposing powers with itself, not by suppressing, or oppressing any of them,
but – on the contrary – by allowing them to become even stronger. Nietzsche
believes that the proper age of architecture is approaching, in which one will
again build for eternity, as the Romans used to do (KSA 9, 135). They were the
ones who brought to life 'the most admirable work of art in a grand style' (KSA
6, 246). Before that, no public utility buildings had been built on such a large
scale *sub specie aeterni*. Moreover, even the evil emperors could not destroy the

monumental architectural concept. Independence from the ill will of individuals is a feature of Roman architecture and at the same time 'the first principle of all great architecture' (KSA 6, 246).

Nietzsche would like contemporary buildings to become once again impressive concretisations of the will to power, but also to be places where man can reflect on his own life. Searching for suitable models of timeless architectural art, he also drew attention to the long-known and admired villas in Genoa. Perfectly integrated into the landscape, they reflect the need for crossing the boundaries of finitude and reach eternity. In these solidly constructed buildings, surrounded by exquisite gardens and terraces, one can feel the spiritual presence of many generations of brave people who did not intend to succumb to the destructive pressure of time: 'They lived and wanted to live on – this is what they tell me with their homes, built and decorated for centuries, not just for a moment' (KSA 3, 531). In the 280th section of *The Gay Science*, entitled *Architecture of the Knowers* (*Architektur der Erkennenden*), Nietzsche's thought looks to future buildings that will satisfy the (over)human need for perceiving eternity. Especially in large cities, full of everyday commotion, spacious edifices with high vaults should be created, where one can calm down and contemplate matters of the highest importance. There should be cloisters in them that allow one to walk while thinking. The gardens adjacent to the buildings are to serve a similar purpose, although they symbolically express the idea of walking on their own paths, being outside the mainstream of public life. Thus, the architectural objects as a whole should express 'the sublime of reflection and walking on the sidelines' (KSA 3, 524).

Architecture seems to be a form of art, which inspires a creative man to explore reality so much that he even transcends it. Seen from this point of view, it is akin to religion, especially in its mystical form. Here and there, the limits of what it is possible to know are radically crossed. By the way, this exploration means climbing upwards, towards heaven, heading towards the ontic infinity and eternity. A spiritual religious work and a material architectural work express the pinnacle of human, or already overhuman, creativity. It might seem that churches have all the essential features of Nietzsche's glorified architecture, but Nietzsche treats them with reserve. For him, they are houses of God, 'beautiful temples for experiencing supernatural' (KSA 3, 524), in which priests exercise power over human souls with great pathos of seriousness. His intention was to break the monopoly of clergy for meditation and to make the *vita contemplativa* independent of the *vita religiosa*. Non-religious or even ungodly people, in the traditional sense of the word, should also have the right to contemplation. Above all, they are to be independent of any authority, so that they can listen to themselves and 'think with their own thoughts' (KSA 3, 524). Nietzsche states

that 'we want to walk within ourselves by walking in these halls and gardens' (KSA 3, 524).

In the name of preserving spiritual and artistic freedom, Nietzsche also distances himself from anything in which he somehow senses Christian religiosity. He disregards such widely recognised works of art as, for example, '*Divina commedia* [Dante's *Divine Comedy* – HB], paintings by Raphael, frescoes by Michelangelo, gothic cathedrals' (KSA 2, 180). The authors of said works served God or the Church, and thus defamed true art. With a truly anti-Christian fervour, Nietzsche also criticises David Friedrich Strauss, who rejected belief in the divine origin of the Bible and the divinity of Jesus Christ, and yet in his existence, ultimately remained faithful to religion because he valued Christian morality. In his opinion, Strauss plays the role of a 'metaphysical architect' (KSA 1, 199) who wants to rebuild the collapsed world of old ideals, using already worthless prefabricates for this purpose. He does not have the courage to face the truth and accept that the universe is empty, cold, and that there is no ruler. Nietzsche doubts his creative powers, doubts whether 'he is able to build his edifice as a writer and whether he really knows the architecture of a book' (KSA 1, 209). It can be assumed that the terminology used in Strauss's criticism is not accidental. Nietzsche thought about architecture, which is why in his various texts we find vocabulary characteristic of the art of building.

Synthetic understanding of Nietzsche's thinking about architecture

Nietzsche was a radical thinker, he was not afraid to use the greatest philosophical, religious, and artistic ideas. When interpreting his views, one should also show courage and boldly develop especially those thoughts that he gave us only in the seed form. In this way, it is possible to cooperate with him in designing a comprehensive aesthetic theory, closely related to the art of building. However, Nietzsche's views were not always treated constructively. At times, their significance was minimised, or attempts were made to 'reverse' them, just as he had 'reversed' Platonism before. In order to preserve research reliability, it should be mentioned that Richard Wagner spoke out against the Dionysian. In the opinion of the outstanding creator of a 'music drama' (*Musikdrama*), implementing the assumptions of a comprehensive work of art (*Gesamtkunstwerk*), the expression of the spirit of Greece, which is built on a sense of creative freedom, was Apollo. Wagner spoke of him as 'the proper chief and national god of the Hellenic tribes', who in Greece became 'the executor of the will of Zeus, (…) the Greek people himself' (Wagner, 1904, p. 6). In recent times, Giorgio Colli also took the side of

Wagner, and therefore the Apollonian side. The Italian classical philologist and translator of Nietzsche's works, however, stated with a certain degree of inconsistency that 'Nietzsche knew only a part of the historical evidence concerning the cult of Dionysus, but he was able to complete with surprising insight and consider the importance of god in his totality' (Colli, 1994, p. 83). It is hard to resist the impression that Wagner and Collie lacked Nietzsche's radicalism. Both thinkers preferred to express views in line with the spirit of Christianity, which favours the Apollonian, and even – of course, only in the cultural sphere – are inclined to compare Jesus with Apollo. Thus, the god of solar harmony, beauty and moderation overshadowed the god of indulgence, who knew no measure in enjoying life to the fullest and in rising to the heights of existence.

While Wagner and Colli did not approach Nietzsche's views constructively, the opposition between them and Nietzsche can be interpreted in a constructive way. The starting point for this undertaking, the main goal of witch is to develop the Nietzschean idea of great art, will be the almost classical division of arts into Apollonian and Dionysian. It is worth noting here that the former arts are static, whereas the latter are dynamic or ecstatic. Hence, the former are associated with the beautiful that we calmly perceive in order to enjoy the perfection of the work itself, while the latter are associated with the sublime, which usually exerts so much power that it somehow throws us out of the state of aesthetic balance and takes us into another dimension of existence. In other words, the Apollonian aspect of beautiful focuses our attention on the work itself, and the Dionysian aspect of sublime distracts us and, through the work, refers us to something else, higher, and almost incomprehensible.

Kant was right when he claimed that the sublime causes emotion (*Rührung*) (Kant, 2006, pp. 141, 165, 173), admiration (*Bewunderung*) or respect (*Achtung*) (Kant, 2006, pp. 165, 197) and is related to the idea of infinity (*Unendliche*) (Kant, 2006, p. 173). In his opinion, the feeling of the sublime expresses itself in the movement of the mind, while in the case of the beautiful there is only calm contemplation (*ruhige Contemplation*) (Kant, 2006, p. 168). It is significant that in his main treatise on aesthetics, Kant was able to analyse categories of the beautiful with great precision, while the sublime eluded his strict analysis. As a result, he wrote little about the sublime, and through his desire to thematise it somehow, he dealt with various aspects of the judgment of taste, the concept of art and various kinds of art. This is not a critique of the Kant's *Critique of the Power of Judgment*. The problem is more closely related to the enigmatic properties of the sublime itself, about which it is not easy to say anything specific in a rational discourse. The sublime seems to be hidden behind the beautiful, which in turn implies that the beautiful and the sublime can be understood in a similar

manner as Heidegger's ontological difference between *das Sein* (English: Being) and *das Seiende* (English: being). The beautiful, like *das Seiende*, is in the foreground. We see that a specific object exists, and therefore it is *das Seiende*. We also can observe that it has been constituted in such a manner that it is beautiful. However, we do not see *das Sein des Seienden* (English: the Being of the being) and the sublime of a beautiful object. It would follow from this that they play a subordinate role, since *das Sein* and the sublime could not exist without *das Seiende* and the beautiful, but it is quite the opposite, *das Sein* adds to *das Seiende* and completes it, just as the sublime adds to the beautiful and completes it, so *de facto das Sein* and the sublime play a key ontological and aesthetic role.

The above interpretations are valid and, moreover, suggestive, but not yet sufficient. They lack a power factor that was essential for Nietzsche. I propose to treat the Apollonian and the Dionysian as opposing aesthetic elements which, intertwining with each other, create a qualitatively new form of spontaneity, a form imbued with the will to power and identical with the great art expected by Nietzsche. The principle of the emergence of art understood in this way is Hegel's dialectic, in which contradictions sublating each other so that their synthesis is a qualitatively new creation. The association of Nietzsche's views with the Hegel's view may raise doubts, as Nietzsche expressed his reluctant attitude towards idealistic philosophy, which is confirmed by his radical criticism of Plato's views. However, he was one of the nineteenth-century thinkers and, like them, was overwhelmingly influenced by the great German dialectician, without even realising it. In many aspects, his philosophy of life is idealistic, and some of his important ideas clearly resemble Hegel's dialectic. The idea of the three transformations of spirit found in *Thus Spoke Zarathustra* (KSA 4, 29–31) is a good example of it. It expresses the dialectical need to transform from a camel to a lion, and then to a child. The camel symbolises the passive attitude of accepting all burdens in life (thesis), the lion – the active attitude of freeing oneself from the burdens (antithesis), and the child – the simultaneously passive and active attitude of affirming life in all its manifestations and the imaginative, expressed in the formula of play, creating the world (synthesis). The Nietzsche's child, with the features of a future overman, is a powerful creator who, it seems, is sensitive to the beautiful and feels the need for the sublime.

Nietzsche was a transdisciplinary thinker. His first 'aesthetic' work did not satisfy philologists, because its content was unknown to them so far, not scientific in their opinion. Nietzsche was inspired by cavernous philosophical, religious, psychological, and physiological ideas. He wanted to use the available arsenal of knowledge to show that the infinite multitude of life opportunities cannot be summarised in simple maxims. Rather, one should throw oneself into the

whirlwind of perception as into the current of a rapid river or into the deep waters of an endless ocean. By preferring the Dionysian, Nietzsche also expressed his preference in terms of body experiences, which contained knowledge directly acquired, not mediated by the intellect using rigid logical constructions. He placed his reflections on art in the area of 'artist psychology' (KSA 6, 116) or 'art physiology' (KSA 12, 284). The will to power is carnal in nature and manifests itself in ecstasy (*Rausch*), but the broadly understood corporeality (great mind) also includes rationality (small mind) (KSA 4, 39), so the will aimed at increasing power is not an irrational factor. Interestingly, Nietzsche saw the highest form of rationality in the artist's work (KSA 8, 36), therefore the creative process must also be characterised by rational actions. Through the participation of the will to power, art strengthens both its creator and its recipient (KSA 13, 296). In art, which is a synthesis of the Apollonian and the Dionysian, power must grow to the greatest possible extent.

Let us try to see how 'synthetic' great art could function as exemplified by architecture. The Apollonian, that defines it, is the classically understood beauty. Marcus Vitruvius Pollio writes that ancient architects, when erecting a building, prioritised its durability, purposefulness and beauty. The three properties are also called 'the Vitruvian triad' (Stachurski, 2018, p. 78). It can be considered that durability and purposefulness are the pragmatic properties of an object, while beauty is its aesthetic property. Beauty appears when many detailed design principles are considered, of which, I believe, symmetry and the closely related eurhythmia come to the fore. The Roman construction textbook shows that the beauty lies in the symmetrical layout of the structure and in the 'proper arrangement of individual elements' (Vitruvius, 1956, p. 15), i.e. in maintaining the appropriate relations between the height, width and length of the building elements. The most beautiful architectural objects were created taking into account the perfect proportions presented in Leonardo da Vinci's *Homo Quadratus*. For architects, it was a model of complexity, while the finger-width, used in the canon of Polykleitos, was a model of the simplicity of a beautiful work. In both cases, the classical understanding of beauty is anthropocentric, which should not be surprising, considering that art, and especially the art of building, is created by man for man. Nietzsche rejected the concept of art for art in which dehumanism is manifested and a distorted 'defamation of reality' occurs (KSA 12, 572). His ideal is 'art for artists, *only for artists!*' (KSA 6, 438), but he also counted the so-called recipients of art as artists, following the example of the Greek tragedy in which all participants of an artistic performance merged into one artistically stimulated community.

The feeling of unity arises when the Dionysian sublimes the participants of the spectacle or the users of the building. For Nietzsche, the Greeks were the masters of the sublime, they could evoke ecstasy with small masses of objects. Other nations have tried to express the sublime in a less subtle way, using large masses of objects and large numbers of them. Nietzsche believes that Athens, Paestum and Pompeii are good examples of sublime architecture (KSA 3, 151). It can be concluded that the Romans took over from the Greeks a rare ability to produce sublime through light architectural constructions. They lead people to ecstatic states, that is, people experiencing the sublime feel that the applied static solutions used suspend the conventional understanding of stability, that instead of permanently being supported on foundations placed in the ground, the building seems to emerge from the ground and soar towards the sky.

In the early phase of his work, Nietzsche came up with the idea that 'the primordial artist of the world (*Urkünstler der Welt*) expresses himself through art' (KSA 1, 48). Perhaps that artist is identical with the Great Architect, whom Plato described as the creator of the world, although Nietzsche generally associated him with an undefined force or will underlying all being. In this approach, art appears as an unearthly, cosmic phenomenon. Earthly architects are not true creators of the art of building, but only expressors of the creative powers of the mysterious will (KSA 1, 47). Young Nietzsche believed that art is 'an artistic game in which the will, in its eternal fullness of joy, plays with itself' (KSA 1, 152). However, he later revised his views, what is reflected in the shift of his way of thinking, from nature to man. He no longer saw in the nature the primeval background of phenomena, the mystery of existence and the mysterious author of becoming being. Nature itself is devoid of artistry, 'the more we dehumanise nature, the more empty and meaningless it becomes for us' (KSA 8, 458). Art is created by earthly artists and is to be 'mocking, light, fleeting, independent of the gods (*göttlich unbegelligte*)' (KSA 6, 438). Nevertheless, it should be 'divine-artistic art that lights up like a pure flame towards the cloudless sky!' (KSA 6, 438). The vocation of architects is to design buildings in which people will experience the sublime and rise above themselves, anticipating their future overhumanity. The sublime art of building faces the divine or expresses the will to give people divine qualities. The broadly understood divinity is the creative omnipotence, and therefore the culmination of the will to power.

In the dialectical development of man towards the overman, only great art matters, which deals with great affairs and makes man great. In antiquity, the Greek tragedy was such an art. Today, it can be replaced with the art of building, because it also has ambitious goals and serves higher purposes. The sublime architectural object is, in a way, a stage on which unfolds the drama of the

contemporary man, who is torn between earth and heaven, between ordinary humanity and overhumanity. To further enhance the impact of this object, it is worth supplementing it with classical artistic forms. Let its walls be adorned with Apollonian visual arts and let Dionysian music resound inside it. The interaction of one with the other will add a sense of Greek unity to contemporary drama. Thus, in the current time, the past will be constructively used for the future and become the beginning of eternity. By creating in the perspective of eternity, the Apollonian beautiful is constantly synthesised with the Dionysian sublime, and thus the antithetic elements are sublated (*Aufhebung*) in order to obtain the qualitatively highest and power-filled art. In implementing his artistic idea, Nietzsche used philosophy as an appropriate tool of expression. He explained it as follows: 'Philosophy is essential to creation, because it *incorporates knowledge* into the artistic concept of the world and thus ennobles it' (KSA 7, 436). Architects should also care about ennobling the art of building. Where there is nobility, there is power for what is right, and that power always unites rather than divides.

An attempt to concretise Nietzsche's idea of architecture as great art

In order to implement the vision of architecture presented by Nietzsche, it would be necessary to design objects with a slender, light structure that would boldly move upwards, but with strong foundations, reaching deep into the ground. For the overman, although he rises above the average, including above his own human littleness, and wants to face the gods, is firmly rooted in the earth and should remain faithful to the Earth, being its meaning or master (*Sinn der Erde*) (KSA 4, 14; 4, 99). In the architectural object he is using, he must be able to think freely, not disturbed by the noise of the world, also in a figurative sense. As Heidegger would say, this facility must be his refuge where he would feel at ease and truly at home (Heidegger, 2000, p. 147). What is more, the mentioned facility should be surrounded by a green area (park or garden), allowing one to ponder while walking. It would be best if there was a covered walkway in this area, modelled on the Greek stoa. It does not seem possible to create a universal project that would then be adapted to local landscape or geological conditions. Nietzsche has repeatedly mentioned the multitude of life opportunities, so it would be necessary to prepare an equally rich offer of projects that would reflect the creative power of life and the creative will of the architect. These projects should include those that (a) prioritise the possibility of immersing oneself in contemplation or participating in some form of parareligious rituals, (b) combine the possibility of

contemplating with gaining new knowledge and participating in the worldview discourse, and (c) allow for spending time in solitute or with family in conditions of complete privacy.

Despite Nietzsche's clearly expressed reluctance to use the existing objects of religious worship, it should be considered whether this position is justified. After all, it is known that historically many architectural objects had different functions and were used in various ways by their owners. The early Christians did not have their own churches at that time, they worshipped God in catacombs. When the first churches began to be built, their architectural model was alike the Mycenaean and Greek secular buildings – the megaron and the basilica. Often pagan temples were taken over and adapted to Christian needs, or some elements of demolished or ruined pagan temples were used during construction. For this reason, one can speak of transreligiousness or the denominational universalism of sacred objects. Authors of the documentary *Geheimes Rom. Der Petersdom*, filmed by Stanislas Kraland in 2019, say that even the most prestigious building of the Catholic Church, St. Peter's Basilica in Rome (photo 1), contains pagan elements. When Pope Julius II ordered the demolition of the old basilica, which was in danger of collapsing, and entrusted the construction of a new one to Donato Bramante, the Pope was guided by the conviction that the remains of paganism should be Christianised in the walls of the Christian temple. Following his command, not only stone blocks from pagan temples were built in the walls of the new basilica, but also the design of the dome was based on that of the Pantheon – a building so majestic that at that time it was considered to be the work of Satan. The Pope wanted St. Peter's Basilica to be even bigger and much more impressive. This was also the case in the Renaissance, but its construction, associated with the sale of indulgences, initiated the Reformation, and led to the division of the Church.

The transreligious character has not only the most important temple of the West, but also, and even to a much greater extent, the largest temple of the East. The Church of the Holy Wisdom of God (Hagia Sophia) in Constantinople (photo 2) underwent a doctrinal reorientation, when on the order of Emperor Leo III the Isaurian, who supported the iconoclasts, the images of Jesus Christ, the Mother of God and many saints were destroyed. Then it was senselessly desecrated and robbed by the knights participating in the Fourth Crusade. However, after some time the images of Jesus, Mary and the saints returned. Then, after the conquest of Constantinople by the Ottoman Turks, it was renovated, four minarets were added to it, and it became a mosque. This time, the holy images were not destroyed, but the ones that were not accepted by Muslims were painted over, and a mosaic of Mary was left. In the next stage of history, this church

was turned into a museum, and recently, by the will of the President of Turkey, Recep Erdoğan, it has become a mosque again. The fact is that many churches, including churches of particular importance to the community of believers, have often periodically served or still serve purposes other than religious. Nowadays, in the era of the widespread secularisation of life in Europe and America, such functional transformations are a form of saving them from complete destruction. Allan Woods' publications show that a lot of such changes are taking place in the Canadian province of Québec, where, for example, Église Saint-Esprit in Limoilou (built in 1930) has been transformed into a circus school (The Quebec Circus School) (photo 3–4), Église Christ-Roi in Sherbrooke (built in 1940) into a climbing hall (photo 5), Église Sanctuaire du Rosaire et de Saint-Jude in Montreal (built in 1905) into a gym (photo 6), Église du Très-Saint-Rédempteur in Montreal (built in 1927) into a restaurant (Chic Resto Pop) (photo 7), Église Saint-Luc in La Motte (built in 1937) into a multi-purpose common room (photo 8) and Église Saint-Pierre-Apôtre in Joliette (built in 1953) into a library (photo 9) (Woods, 2015).

It can be assumed with a high degree of certainty that Nietzsche, after revising his uncompromising attitude to Christianity and its cultural heritage, would have readily accepted such sacred and post-sacral objects, even if they did not fully meet his expectations. Lou Andreas-Salomé mentioned her first meeting with Nietzsche in 1882, which took place under very unusual circumstances in the St. Peter's Basilica in Rome. Salomé was then sitting with Paul Rée in the confessional and assisted him in revising the manuscript of a future book. Nietzsche sat down next to them and after a while he was so impressed by the newly met young woman that he uttered an incredibly significant sentence: 'From which stars have we fallen to meet each other here?' (Andreas-Salomé, 1951, p. 80). The context of this encounter and its spiritual aura are almost mystical and transcendent. A little more frivolity appears only in the biographical film *Lou Andreas-Salomé*, directed in 2016 by Cordula Kablitz-Post. That very ambitious and large-scale cinematographic work adds spice to the meeting of three intellectuals, and atheists. After the initial presentation, Salomé went to the place normally reserved for the confessor and listened to the confessions of both gentlemen. They seemd to need a kind of sacramental setting for an intimate exchange of thoughts. Here, confidentiality turned into familiarity and sublimated the intimate relationship between Nietzsche, Salomé and Rée. All of this happened in an amazingly free and natural way. We are not sure whether such a meeting really took place, and if it did, whether it was held in place in that manner. If, however, the film showed a real event in Nietzsche's life, the encounter would harmonise well with his vision of architecture as art

that sublimates man to a higher level of being, where incredible things happen in an obvious and unforced way.

Apart from the erroneous thesis that Nietzsche's philosophy is at the root of the great ideology that promotes the political vision of overmen as the future master race, it is worth considering whether Nietzsche would look favourably at the architectural designs of the Nazi Albert Speer and the urban concept of Germania. It seems unlikely, if only because of the enormous dimensions and equally enormous weight of the designed edifices. Nietzsche opted for architectural lightness, which is one of the conditions for the possibility of the sublime. Meanwhile, for example, the Great Hall (Große Halle, Halle des Volkes) (photo 10), occupying a central place in this unusual and controversial project, was designed to accommodate up to 180.000 people, which would be an expression of construction gigantomania. It is not known how many technical problems related to the operation of such a large facility could be solved at all. It would probably be an impossible task to create a proper atmosphere of peace and tranquillity in it, enabling a man to ponder. Probably Nietzsche would also not like objects of socialist realism, designed and built under the dictation of the Soviet authorities, for example, the Palace of Soviets in Moscow (Дворец совстов) (photo 11), that never reached its final form. Their monumentalism was to consolidate the masses of the proletariat and make them obedient to the communist party. The assumptions of the architectural designs are egalitarian, while Nietzsche was a supporter of elitism. The architects of this epoch, when designing the building, certainly did not take into account the need for inner silence of man and for conducting deep reflection on the individually understood human being, which, by overcoming its own weaknesses and attachment to harmful ideologies, would sublimate to the anticipated overhumanity. With some reservations, it can be said that Nietzsche's philosophical principles fit much more closely to the Pyramid of the Sun with a temple at its top (photo 12), located in Teotihuacan, a pre-Columbian city found and so named by the Aztecs. Nietzsche's architectural objects created according to this pattern would be modern places for reflection – places where people become gods.

The vital needs of *homo duplex*, a man torn between the sacred and the profane, are well satisfied by hybrid structures. An excellent example of this is the *Paulinum* complex at the University of Leipzig, which serves as a church and university hall (photo 13–16). It was designed by the Dutch architect Erick van Egeraat and opened in 2010. It is a place where evangelical services, weddings, scientific lectures and lectures popularising know-ledge, meetings promoting culture and art as well as serving the spiritual development of man are held. The facility has a modern technical and IT infrastructure, which makes it a

combination of tradition and modernity. Thomas Schmidt-Lux notes that the concept of hybrid structures responds to the need for integrating what is religious with what is secular. This concept goes beyond the idea of the autonomous existence of both spheres, but also the idea of extending one of the spheres with elements of the other (e.g. a commercial or treatment facility with a chapel) (Schmidt-Lux, 2017, p. 121). Indeed, in this case religiosity is inextricably intertwined with secularism, somehow universalising the highest values of the human world. Émile Durkheim, Rudolf Otto and Mircea Eliade continued to focus on the duality of human needs, while Nietzsche, with his philosophy of the overman who takes the role of God or gods, opened the possibility of a comprehensive understanding of human nature and creating of architectural objects that fully correspond to our nature. Of course, for this thinker, religiosity, should one use such a term to define the deepest spiritual needs of man, remains essentially dependent on humanity itself and is independent of transcendent divinity. A building modelled on the *Paulinum*, in which Dionysian religiosity would be intertwined with Apollonian scientificity, would certainly gain Nietzsche's approval.

Apart from functioning in the public sphere, man also spends his time, which is considered important, in the family circle, therefore it is also necessary to take care of the architectural aspects of the private sphere. Buildings intended for living should be well integrated into the natural environment, this way expressing human attachment to the Earth as the host of all creatures, and should be built in a manner that is sturdy with the right materials, what corresponds to the human need of eternal existence in the world. Vivienne Brophy and J. Owen Lewis have produced a very good handbook for those who design and build 'sustainable' objects, that meets the requirements of the Nietzsche's notion of architecture. The authors of this handbook have presented with reliable knowledge and visionary creativity theoretical assumptions of the art of building, which takes into account the optimal selection of materials and the way of managing water, energy, and waste (Brophy and Lewis, 2011). The art of building is founded here on the art of living in harmony with the surrounding nature. A man who respects the laws of nature and skilfully uses its riches, in particular using renewable energy, can expect that nature will repay him back with a similar care for the quality of his life and will provide him the appropriate conditions for constructive reflection. Green Vitruvius is an idea that goes back to the rules of building established long ago, but binds these rules even more closely with the fundamental requirement of environmental protection. If the overman is really to be 'the meaning of the Earth,' he must take responsibility for the Earth and cannot do anything to harm it. The principle of mutual respect

has a universal importance in broadly understood architecture, although we are probably best aware of it when we need peace and quiet after work and other forms of social or political activity. There are already many buildings that meet the Green Vitruvius criteria. For example, we can mention the charming ecological 'forever home' (Jenkins, 2021), which Jan and Diana Thompson built for themselves in England in 2018 (photo 17). This *Eco Home* would certainly appeal to the author of *Ecce Homo*, because it is firmly rooted in the ground and well-integrated into the natural environment, and at the same time definitely reaches towards the sky, rising above the mundane. Designing single-family houses seems to be the initial stage of implementing the wide-ranging Green Vitruvius idea. Over time, this idea should dominate architectural thinking and guide the design of all building structures. Such a direction of development of thinking would certainly suit Nietzsche. For we are dealing here with essential aspects of Nietzsche's vision of art: with the harmony of the place provided by the Vitruvian beauty of the architectural object, with being rooted in life through bonding with nature, and with openness to the 'divinity' of the future overman as an expression of the enigmatic and ecstatic metaphysics of sublime.

Photo 1. St. Peter's Basilica in Rome
Source: (15)

Photo 2. The Church of the Holy Wisdom of God (Hagia Sophia) in Constantinople
Source: (16)

Photo 3. Circus school in a former church in Limoilou (facade)
Source: (Woods, 2015)

Photo 4. Circus school in a former church in Limoilou (interior)
Source: (Woods, 2015)

Photo 5. Climbing hall in a former church in Sherbrooke
Source: (Woods, 2015)

Photo 6. Gym in a former church in Montreal
Source: (Woods, 2015)

Photo 7. Restaurant in a former church in Montreal
Source: (Woods, 2015)

Photo 8. Multi-purpose common room in a former church in La Motte
Source: (Woods, 2015)

Photo 9. Library in a former church in Joliette
Source: (Woods, 2015)

Photo 10. Great Hall in Germania
Source: (17)

Photo 11. Palace of Soviets in Moscow
Source: (18)

Photo 12. Pyramid of the Sun in Teotihuacán

Source: (19)

Photo 13. University Paulinum complex in Leipzig (facade)

Source: (20)

Photo 14. University Paulinum complex in Leipzig (interior 1)
Source: (21)

Photo 15. University Paulinum complex in Leipzig (interior 2)
Source: (22)

Photo 16. University Paulinum complex in Leipzig (interior 3)
Source: (22)

Photo 17. Jan and Diana Thompson's house in England
Source: (Jenkins, 2021)

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Bogusław Szuba
University of Applied Sciences in Nysa

Harmony and mysticism of the Albertine Hermitages in Kalatówki in Zakopane

Abstract: The Albertine Hermitages in Kalatówki in Zakopane present a special kind of harmony of the place. It is here, where mutual interactions of the beauty of the surrounding nature intertwine with each other. The nature which is embedded in the depth of regional architecture and the brothers and sisters filled with prayer who, from over one hundred years have been helping for the people who are in need, the poor people, with diseases, people with depression or the ones who are addicted. There are many places on Earth where similar senses of harmony can be felt, and it is not important where they are. Probably every person has the opportunity to be there, during 'journey to oneself.'

Albertine hermitages are the perfect place to perceive the presence of visible and invisible beauty that shows the way to live in a beautiful way…

Key words: semantic value of architecture, silence in space, hermitage

Instead of an introduction

'Man's nature demands silence. This is part of the truth about its beginning, birth, and growth. Silence places amazingly in the act of creation because man was not created with words, but in a wordless act of breath, in creative silence' (Genesis 2,7). At its deepest layer, it is a silent being, open to God and related to Him. This strange silence covers the mystery of man, it belongs to his essence, it is, in a way, a *fundum animae*, a kind of secretiveness of being. It is also a form of access to oneself and a way of having oneself, as St. Ignatius of Antioch in his Epistles to the Ephesians:

It is better for a man to be silent and be [a Christian], than to talk and not to be one.

Human life begins in the silence of the mother's womb, which is at the same time the place to meet oneself and to grow, and it is interrupted in the first cry after birth.

Silence belongs to the essence of man in the sense that in solitude, in the silence of external stimuli, he can experience his own depth, learning the ability to listen, to receive and learn the open-minded nature. Thanks to it, the surrounding of man is more clearly noticed and read.

Silence leads to the silence of man: thoughts, desires, imagination and heart, and at the same time it forms and purifies the sphere of meeting: manifestation, expression,

exchange of views, opinions, and finally allows to experience closeness and communion with others (Zawada, 2011).

Harmony of the three pillars of the human environment

The hermitage complex in Kalatówki in Zakopane is a place where the mutual relations of three components of the local human environment: nature, culture and architecture create a harmonious whole. From a formal viewpoint, this state can be defined as the environmental system.

'The environmental system combines the influences of the natural, socio-cultural environment in the local human environment creating a harmonious whole. The environmental system presents the state of coherence and balance of the interactions that change over time, occurring in the local human environment' (Szuba, 2012).

This place, not big in geographical terms, is widely known and visited due to the activity of St. Brother Albert, surrounded by common reverence and respect.

The natural environment – the place

It is said that the mountains purify man, the mountains are silence, solitude, this is a place of exceptional beauty, which one cannot resist and notice that man is a part of nature.

> We depend on nature not only for our physical survival. We also need nature to show us the way home, the way out of the prison of our own minds. We got lost in doing, thinking, remembering, anticipating – lost in a maze of complexity and a world of problems. We have forgotten what rocks, plants, and animals still know. We have forgotten how to be – to be still, to be ourselves, to be where life is: Here and Now. Whenever you bring your attention to anything natural, anything that has come into existence without human intervention, you step out of the prison of conceptualised thinking and, to some extent, participate in the state of connectedness with Being in which everything natural still exists. To bring your attention to a stone, a tree, or an animal does not mean to think about it, but simply perceive it, to hold it in your awareness. Something of its essence then transmits itself to you. You can sense how still it is, and in doing so the same still-ness arises within you. You sense how deeply it rests in Being – completely at one with what it is and where it is. In realising this, you too come to a place of rest deep within yourself (Tolle, 2003).
>
> Oh, how beautiful is the Lord our God on a sunny day; how pretty in the beauty of the blue sky; how wonderful in the breeze; how mighty in the sound of a flowing stream; oh, how great is God in His visible and invisible works (Jabłońska, 1988).

The complex of Albertine Brothers and Albertine Sisters monasteries is located in Zakopane, in the Tatra Mountains in Kalatówki (fig. 1).

To get to these places, you need to start from Kuźnice along the blue trail leading to the steel cross located at the top of the Giewont.[1]

Fig. 1. Way of Brother Albert – trail to Giewont
Source: (27)

The cross[2] is a gift from the residents of Zakopane. It was created on the initiative of then Zakopane parish priest, Kazimierz Kaszelewski on the 1900th

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1   For visitors to Zakopane, the shape of the Giewont mountain massif is associated with the silhouette of a sleeping knight. However, some people still say about the Knights of the Crown, who have been sleeping at the foot of the Tatra Mountains for centuries. When our homeland is in danger, they are to rise, take their swords, saddle the horses, to defend the Tatra Mountains and the whole Polish land against enemies.

2   The steel structure of the cross was made in the Górecki factory in Kraków, it consists of 400 elements, it is 10.5 m high. The parts of the cross were carried to the top of the

anniversary of the birth of Jesus Christ and erected in August 1901. In favourable weather conditions, its silhouette can be seen from any place in Zakopane. The cross on the Giewont has become an object that attracts people from all over Poland, tourists and numerous pilgrimages. The beginning of the trail to the Giewont is the Way of Brother Albert, starting from Kuźnice. The Albertine hermitages are located above (Albertine Brothers Monastery on Śpiąca Góra (Sleeping Mountain)) and below (Albertine Sisters Monastery). Both hermitage complexes are embedded in a forest thicket. On the eastern slopes of Kalacka Turnia, a little higher, above the Albertine Sisters Monastery, there are the Bystra karst springs. They are inaccessible, hidden by trees. You can hear them because the water flowing from the slope makes a lot of noise. The research carried out by the tinting method suggests that this water flows through the Bystra Cave before it appears in the karst springs. It is presumed that the water flowing out of the Bystra karst springs comes from the upper regions of the Kondratowa valley, the Giewont massif, and even the eastern regions of the Czerwone Wierchy massif. The water flowing out of the karst springs, as in other places, is very cold, its temperature does not exceed 5°C.

The surrounding nature favours concentration and tranquillity. Here you can experience a time of silence and stillness that encourages deep contemplation, touching and perceiving the space of the sacred. Discovering this space is not an easy task, it requires effort and internal preparation, rejection of what constantly connects us with the surrounding world, internal openness and adopting the approach to waiting for spiritual experiences (Eliade, 1996).

> Sister Bernardinas friendship with Jesus developed in the harsh climate of the Zakopane hermitage where the sister stayed. The beauty, silence, and isolation of this place created good atmosphere to pray. Sister Bernardina, open to listening to the desires of Gods Heart, becomes a wise power of love that is given to her in the relationship. The hermitage is a place where the hustle and bustle of the world fades away, and its friendship with God deepens (Faszcza, 2014).

Socio-cultural environment

The founder of the Congregation of the Brothers of the Third Order of St. Francis Servants of the Poor was Brother Albert (Adam Chmielowski, born on 20th August 1845 in Igołomia near Kraków, died on 25th December 1916 in Kraków) – photo 1.

'Sleeping Knight' with the help of horses and by hands of highlanders. The installation took six days.

Photo 1. Brother Albert
Source: (Reproduction of the painting by D. Szala, M. Szala – (23))

He participated in the January Uprising, studied painting in Warsaw, was a student of the Technical University in Ghent (Belgium) and the Academy of Fine Arts in Munich (Germany). Among others, he was a friend of Józef Brant, Stanisław Witkiewicz, Józef Chełmoński, Aleksander Gierymski, Leon Wyczółkowski and the Gierymski brothers. The paintings of Brother Albert, filled with religious themes, were characterised by simplicity of means, naturalness, and moodiness.

He survived an unsuccessful attempt to live in the Society of Jesus. He was fascinated by the figure of the Poor Man of Assisi, and became a member of the Third Order of Saint Francis. He started to wear the Tertiary habit in 1887 and took the name of Albert, and a year later he made tertiary vows. He established the Congregation of Albertine Brothers Serving the Poor, later known as Albertine Brothers. In 1891, however, he became the founder of the Congregation of Albertine Sisters.

Brother Albert's mission was the work for the homeless and the poor, despite the fact that he was one of them, he was crippled by a serious illness. However, he created shelters, orphanages, old people's homes, and kitchens for poor people.

Saint John Paul II raised Brother Albert to the glory of the altars during his beatification in 1983 in Kraków, and then, he was canonised in 1989 in Rome. The relics of Saint Brother Albert are in the Ecce Homo Sanctuary of Saint Brother Albert in Kraków. In the chancel of this church there is one of the most famous paintings by Adam Chmielowski, *Ecce Homo* (photo 2).

Albertine Brothers help the poorest, homeless people, often with serious health problems. They look after men and women living in shelters in Kraków, Ojców near Kraków and near Kęty. They also work abroad in Zaporizhia and Lviv in Ukraine, where the house they run includes a kitchen and bathhouse for the poor. The hermitage complex in Kalatówki in Zakopane is a specific Albertine monastery, where young Albertine Brothers make a two-year novitiate.

Photo 2. Ecce Homo
Source: (23)

Brother Albert's hermitages could be compared to a kind of higher school of practical perfection, where one practised all kinds of virtues to the point of heroism. "Brothers and sisters – Brother Albert used to say – must be exceptionally physically and morally toughened, because they serve the most unhappy people, and in the worst conditions, sometimes in a bad atmosphere, and therefore their lives must be very hard and harsh, so that weaker natures, favouring softness could immediately give up". In spite of such a renunciation and physical and moral hardening, and the exercise of heroic acts of virtue, which could probably be compared with the hermits of the first centuries of Christianity, in these hermitages there was such a radiant joy, golden humour and a kind of breath of charming religious poetry that these places with their residents were called "a phenomenon from the Middle Ages, miraculously brought into our times" (Lewandowski, 1927).

Brother Albert was the author of the strictly obeyed rules of the daily routine of brothers and sisters residing in the hermitages.

Please follow strictly what I wrote, first obedience, then household. No pictures, carpets and such elegance, it should be as poor as possible (Faron, 2006, p. 112).

The built environment

1. Visible beauty

The beginning of the history of the Albertine hermitages is associated with the donation of land for development by the then Count Władysław Zamoyski. Funds were collected by working on the construction of the road from Zakopane to Morskie Oko and the path to Czarny Staw.

After careful consideration and long prayer, Brother Albert chose a place, a small area, marked it on a tree by carving a cross, said the Te Deum, and then sent the brothers to clear the forest and build a hermitage. In the spring of 1898, with the help of the local highlanders, the construction of the monastery began, in which Brother Albert personally helped by carrying a tree, carrying materials necessary for the construction, and even breaking stones by the road himself, "to feel the weight of the day and the heat with his own skin, to try everything by myself, as poor people work hard" (Faron, 2002, p. 14).

The sign of the cross cut out on a tree shows not so much the designation of the place. Brother Albert dedicated this place to God. Prayer introduces man into the reality of God. *Te Deum laudamus* in Poland appeared in the Middle Ages. Among the fourteen stanzas of the hymn, the content of the first and last seems to be a witness of Brother Albert's life:

1. *We praise thee, O God: we acknowledge thee to be the Lord. All the earth doth worship thee: the Father everlasting. (…)*

14. O Lord, have mercy upon us: have mercy upon us. O Lord, let thy mercy lighten upon us: as our trust is in thee. O Lord, in thee have I trusted: let me never be confounded.

Brother Albert offered himself to God and the poor. He went to live with the homeless and, imitating Jesus, became as good for them as bread.

I am the bread of life. Whoever comes to me will never go hungry, and whoever believes in me will never be thirsty (Gospel, John 6:35).

Stanisław Witkiewicz gave his support in the implementation of the project. After several years of use, the brothers handed over the hermitage to the Albertine Sisters. This place was used as a novitiate house of the Congregation of Albertine Sisters, and then as a space for recovering health and spiritual strength for sisters tired with hard work, helping the homeless and the poorest in various shelters throughout the country. The brothers built a second hermitage on the slope of Krokiew.

2. The form of architectural objects

The outline of the architectural forms of the Albertine hermitages refers to the Zakopane style, which was created at that time, the authorship of which is attributed to Stanisław Witkiewicz, who carried out research on the culture and art of Podhale in the 1980s.[3]

The Zakopane style is recognisable by a number of characteristic features:

- high wall bases,
- a large number of bends, faults, and breaks,
- decorative terraces, porches, displays, and small attic rooms, the so-called 'wyględy,'
- large decorative chimneys,
- a large number of wooden vertical ornaments (so-called 'pazdury') at the ends of numerous canopies at the ends of principals,
- lace along the ridge,
- a large variety of shapes of window openings,
- 'sosrąb' (the main beam supporting the ceiling beams) usually did not have a structural function, but rather a decorative one,
- construction of flat logs,

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3   Having arrived to Zakopane in 1890, he became the designer of the Koliba villa, the first Zakopane-style building erected in 1892–1893 at Kościeliska Street. Then, S. Witkiewicz implemented other houses and guest houses in this style: 'Skoczyska,' 'Pepita,' 'Staszeczkówka,' 'Oksza,' 'Zofiówka,' 'Nałęcz,' 'Pod Jedlami.'

- single-bay or two-storey buildings, where the top floor was situated in relation to the front of the ground-floor part,
- there was often an open porch from the south under the eaves,
- ornaments in the form of lynxes, dogs, sun.

Designs of Stanisław Witkiewicz were popular. Apart from Podhale, many objects imitating the Zakopane style were built.[4] The Zakopane style aspired to the national style based on folk patterns.

> It was believed, following Witkiewicz, that in Podhale the pre-Polish, Slavic-origin architecture and native, authentic ornamentation had been preserved. Hence, the promotion of the "Zakopane region" outside the Podhale region was treated as a revival of national architecture and ornamentation (Jagiełło, 1979, p. 11).

When Stanisław Witkiewicz died, the Zakopane style started to disappear. It is assumed that the Zakopane style functioned in the years 1891–1914, and its territorial range is limited to Podhale.

The features of the Zakopane style, greatly simplified due to the austerity and simplicity of the Albertine rule, can be found in the spatial forms of the Albertine hermitages, which are the only such complex of sacral buildings in the Tatra Mountains.

3. Hermitage of the Albertine Sisters

The hermitage was built by the Albertine Brothers in 1898–1902 (photo 3). It was built of raw wooden logs. The Holy Cross Chapel is a special place. It is there, where under a wooden antique cross[5] Brother Albert prayed, supervised during days of recollection and where he also was a supervisor of retreats. He lived in a small cell of a cottage built near the chapel. As a result of the efforts of Bishop A. Nowak, in 1908, Pope Pius X granted permission for the permanent storage of the Blessed Sacrament in the chapel.

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4   The followers of the Zakopane style were, among others: Andrzej Galica – 'Orkanówka' in Poręba Wielka, Bogdan Hoff – villas (for Dr. Julian Ochorowicz, 'Słoneczna' for Henryk Dynowski and 'Zacisze' for Bishop Juliusz Bursche) in Wisła, Józef Kaspruś – The Szymanowski Museum in 'Atma' in Zakopane, Jan Witkiewicz-Koszyc – the villa 'Witkiewiczówka' in Zakopane, 'Chata' for Stefan Żeromski in Nałęczów, Tadeusz Prauss – shelter at Morskie Oko.

5   Brother Albert received a cross from the Pauline Fathers in Kraków. The name of its creator is unknown. There is a legend from which it is known that Brother Albert's long reflections and meditations in this place were a source of renewal of vitality, which he dedicated when he was serving the poor.

Initially, the hermitage was inhabited by seven sisters in strict cloister. The building was the novitiate house of the Congregation of Albertine Sisters and it was a resting place for the sisters serving the poor in their shelters. The most important building of the hermitage is the Holy Cross Chapel (photos 4–10).
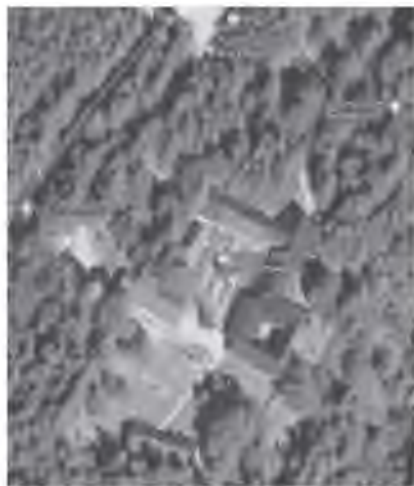
Photo 3. The urban layout of the hermitage of the Congregation of Albertine Sisters
Source: (25)

Photo 4. Probably the oldest photography copies of the Holy Cross Chapel in Kalatówki in Zakopane from 1902. You can see traces of the forest cleared by the Albertine Brothers in this place
Source: (Archives of the Congregation of Albertine Sisters Serving the Poor in Kraków, CSAPI)

Photo 5. The chapel connected with the building where sisters serve the poor (1952)
Source: (ASA)

Photo 6. The chapel connected with the building where sisters serve the poor – now
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 7. The Holy Cross Chapel in the winter of 1952
Source: (ASA)

Photo 8. The Holy Cross Chapel (now)
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 9. Interior of the Holy Cross Chapel (1952)
Source: (ASA)

Photo 10. Interior of the Holy Cross Chapel (now)
Source: (photo s. Bernarda D. Kostka CSAPI)

A special object of that place is the Cottage of St. Brother Albert built in 1901 (photos 11–12), and there is a small room inside. Modestly equipped with a wooden bed, chair, and table, it was the cell of Brother Albert, who for the last time lived here on 20th December 1916. In 1968, during a powerful storm (photos 13–14), the cottage survived in an elusive manner, despite the fact that it was crushed by eleven comely trees (photo 15). The storm took place during the 70th anniversary of the beginning of the construction of the hermitage in 1898. Breaking huge trees as if in a symbolic way it signalled the need to 'purify the world.' The year 1968 was a special time for the world, some believe that it was the year that changed the world.[6]

The cottage was built in 1901. The object is very modest, it has got two rooms and a small porch with a vestibule. One of the rooms was Brother Albert's cell, the other was used as a room for priests celebrating a Mass in the chapel (now there is a memorial room for St. Brother Albert). This place was visited by famous people of the Polish intelligence, including Stanisław Witkiewicz, Stefan Żeromski, Karol Hubert Rostworowski, Stanisław Przybyszewski, and Józef Konrad Korzeniowski. Here, on 6th June 1997, John Paul II prayed for the beatification of Sister Bernardina Jabłońska.

After Brother Albert's canonisation, a wooden reliquary containing the saint's remains was taken to the cell. Its form depicts a hand holding a bread. It has now been slightly changed (see photo 35).

Since 2001, all the buildings of the hermitage are under the protection of the conservator of monuments. It is visited by tourists and pilgrims wandering around the Tatra Mountains.

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6   During the lecture entitled '1968 – THE YEAR THAT CHANGED THE WORLD,' which took place on 20th June 2018, organised by the Department of the History of Culture and Historical Education of the Jagiellonian University, Dr. Yaron Jean from the Sapir College in Negev, Israel, presented the phenomenon of the student protests of 1968 in an international perspective, focusing both on the most important events of that period and on the issue of the intergenerational conflict. It was then that demonstrations took place all over the world: from Poland, France and Germany to the United States and Mexico. The atmosphere also reached such distant places as the young state of Israel just after the end of the Six-Day War. There have been such times in history when revolutions have taken place. The year 1968 was special in this respect because it was then that the civil rights movement was popularised, the shadow of World War II was rejected along with the post-war ideologies, and television and mass media started to be used as political forces.

Photo 11. The Cottage of Saint Brother Albert (1952)
Source: (ASA)

Photo 12. The Cottage of Saint Brother Albert – now
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 13. Entrance gate, remains of the forest, damage to the area around
the hermitage after the hurricane in 1968
Source: (ASA)

Photo 14. Work on repairing the damage around the hermitage after the hurricane in 1968
Source: (ASA)

Photo 15. The Cottage of Albert covered with fallen trees after the hurricane in 1968
Source: (ASA)

4. Hermitage of the Albertine Brothers

The buildings of the hermitage of the Albertine Brothers form the 'U letter' closed with a wooden fence (photo 16). On the north there is a chapel and a refectory. The cells of the Albertine Brothers were placed above the refectory. On the east there are small rooms for guests. On the south there is a forge, stable and utility rooms. The austerity of the internal stone courtyard is broken by the greenery located in its centre. The original building was made of wood. On the night of 17th September 1977, it was completely destroyed as a resultt of a fire (photos 17–18), and then, it has been rebuilt with great difficulty.

Photo 16. The urban layout of the Albertine Brothers' hermitage
Source: (25)

Photo 17. Fire of the hermitage. Photo taken at night
Source: (photo A. Liberak)

The hermitage of the Albertine Brothers, like that of the Albertine Sisters, has always been a place of retreat, of prayer and contemplation of the things of God, of renewal of the spirit, and of the strength lost in the service of the poorest people. Brother Albert sought a sufficient number of hermitages, 'because then there will be strict discipline and true religious life will take root in the Congregations with the great glory of God, and in the huts and other houses, everything will be fine. If there are no hermit houses, it will not even be possible

Photo 18. Fire of the hermitage
Source: (photo A. Liberak)

to arrange shelters for the poor, because there will be no persistence, dedication, and strength to manage them' (Hermitage of the Congregation, accessed on 1st May 2021).

The most important part of the hermitage is the Chapel of Saint Albert (photo 19–22, 25–26). The buildings of the hermitage surround a stone courtyard (photo 23–24).

Photo 19. View of the Albertine Brother's hermitage from the north before fire
Source: (photo J. Werner, 1st May 1966)

Photo 20. View of the Albertine Brothers' hermitage on the north side after reconstruction

Source: (photo Brother Hieronim (J. Moroz), 8th April 2021)

Photo 21. View of the Albertine Brothers' hermitage from the south before a fire

Source: (photo J. Werner, 1st May 1966)

Photo 22. View of the Albertine Brothers' hermitage on the south side under reconstruction

Source: (photo Brother Hieronim (J. Moroz), 8th April 2021)

Photo 23. View from the side of the courtyard to the southeast before a fire, the brothers are standing in front of the refectory

Source: (photo J. Werner, 1st May 1966)

Photo 24. View from the courtyard after reconstruction
Source: (photo Brother Hieronim (J. Moroz), 8th April 2021)

Photo 25. The interior of the chapel before a fire
Source: (photo J. Werner, 1st May 1966)

Photo 26. The interior of the chapel after reconstruction
Source: (photo Brother Hieronim (J. Moroz), 8*th* April 2021)

5. Signs, symbols, relics that are found in this place, the narrative function of symbolism

We are led into the hermitage of the Albertine Sisters by a wooden gate, topped with a small cross, recalling Brother Albert's sentence *Be As Good As a Bread* (photo 27). Going through its gate, we can find a small well next to the path on its right side. The well was destroyed by a hurricane in 1968, in the early 1970s, it was reconstructed. On the well, Brother Albert placed a picture of Our Lady of Czestochowa with a Franciscan prayer (photo 28).

Glory be to God
eternal glory be to God,
tribute to Mary, honour to the saints of the Lord, peace for those who live,
eternal rest for the dead,
health for the sick,
truthful penance for sinners,
staying good for the fair people,
peace for sailors at sea,

a successful way for travellers.
May the Blessed Virgin Mary bless us with Your Son. Amen.

Photo 27. Entrance gate to the hermitage of the Albertine Sisters
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 28. A well and a cup for the Albertine Sisters at the hermitage
Source: (photo s. Bernarda D. Kostka CSAPI)

In the vicinity of the chapel, there is an obelisk commemorating Pope St. John Paul II (photo 29). In this place, on 6th June 1997, he beatified the Sister Bernardina Jabłońska and visited the hermitage of Saint Brother Albert.

The inner courtyard of the hermitage of the Albertine Sisters is a garden. A statue of the Virgin Mary rises above the flowers and plants (photo 30) The figurine was erected on the occasion of the 50th anniversary of the sisters' stay in the hermitage. Its consecration was made by the Primate of the Millennium, the priest Cardinal Stefan Wyszyński on 12th May 1953.

Photo 29. Plate commemorating the beatification of Sister Bernardina and the visit of John Paul II to the hermitage

Source: (photo s. Bernarda D. Kostka CSAPI)

The sculpture standing in the garden is dedicated to the person of Saint Brother Albert, symbolically holding bread in his hands and sharing it among the poor (photo 31). Below, there is the figure of a beggar. Sitting on the ground, looks like he was pleading and asking for support. The lying crutches probably prove that this is a disabled person.

Photo 30. Figurine of Mary – Hermitage of the Albertine Sisters
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 31. Sculpture – Brother Albert and a beggar
Source: (photo s. Bernarda D. Kostka CSAPI)

In the hermitage of the Albertine Sisters, there is a stone commemorating the person of the priest Idzi Ogierman Mański (photo 32). He was a Salesian. He was one of the most outstanding composers of contemporary, background religious music in Poland. His creative work contributed to stressful situations and exhaustion. He was seeking vital power in mountain hiking and spent his

free time in the Tatra Mountains. He was a Tatra guide. He walked along the shepherd's paths and collected rare species of herbs.

Photo 32. Stone commemorating the priest Idzi Ogierman Mański
Source: (photo s. Bernarda D. Kostka CSAPI)

The highlander tradition was an inspiration for the priest's musical works. 15th August 1966 The priest Idzi went to Giewont through Suchy Żleb. His intention was to collect archangel root herbs that he wanted to pass on to Mother General of the Albertine Sisters. Unfortunately, going down the trail of the so-called Długi Giewont, he died tragically.

The cross, as a symbol of the Passion, finds a special place in individual rooms of the Albertine hermitages. The distinguishing feature is their ascetic simplicity of the design (photos 33–34).

The Lord Jesus in Gethsemane had no less love than on Mount Tabor. The love of the cross is based on the will to be like Christ, on agreeing to His will. In the cold, unimpressed soul decides on the naked cross' (Faron, 2006, p. 273).

'I give the Lord Jesus my soul, mind, heart, and everything I have. I sacrifice myself for all doubts, inner coldness, spiritual anguish, and torment, for all humiliations and contempt, for all sorrows of body and sickness, and for that I want nothing either now or after death, because I do so out of love for the Lord Jesus Himself' (Faron, 2006, p. 286).

Brother Albert's presence is evidenced by his relics. One of them is located in the glazing space of Brother Albert's cell door (photo 35). The external form of the reliquary, representing a broken loaf of bread, fully reflects the message of Saint Brother Albert.

Photo 33. The cross in the Brother Albert's cell
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 34. Sisters' hermitage, cross, and plate above the entrance to the religious choir
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 35. Relics of Saint Brother Albert
Source: (photo s. Bernarda D. Kostka CSAPI)

6. Architectural interior design - richness of detail or emptiness?

The architectural forms of the Albertine Brothers' and Sisters' hermitages, in particular the Holy Cross Chapel, are characterised by extraordinary simplicity (photos 36–37).

The restrained use of detail and interior furnishings can be seen in the surviving historical and contemporary photographs of the hermitage (photo 38–41).

The exception is a carved crucifix of unknown authorship located in the chapel, which was found by Brother Albert in the Church on Skałka in Kraków and restored by Stanisław Witkiewicz (photo 10).

Photo 36. The oldest part of the hermitage of the Albertine Sisters
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 37. The oldest part of the hermitage of the Albertine Sisters, photo on the opposite side

Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 38. Entrance to the Holy Cross Chapel in the hermitage of the Albertine Sisters in Kalatówki

Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 39. Entrance to the St. Albert Chapel in the Albertine Brothers' hermitage in Kalatówki

Source: (28)

Photo 40. Refectory in the hermitage of the Albertine brothers before a fire, Brother Stanisław Żyroński in the photo

Source: (archival photo held by Brother Jerome)

Photo 41. Saint Brother Albert's cell in the cottage
Source: (photo s. Bernarda D. Kostka CSAPI)

During Brother Albert's ministry, the refectory of the Albertine Brothers' hermitage also functioned as an oratory. Photo 40 shows the benches where the brothers leaned on their knees on the floor. Below them were small benches for sitting down. The photo shows Brother Stanisław, famous for his simplicity and obedience (he was nicknamed 'Husband'); source of information: based on descriptive materials currently remaining at the disposal of Brother Jerome.

7. Architectural and symbolic codes

Among the characteristic elements of the forms of architectural details of the Albertine Brothers' and Albertine Sisters' hermitage in Kalatówki in Zakopane, the most significant are those that connect Christian symbolism with utility values (photos 42–44). Some of them, seemingly against the obligation of silence, fill the place of the hermitage with sound.

Photo 42. The steeple above the Holy Cross Chapel
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 43. Bell – hermitage of the Albertine Sisters
Source: (photo s. Bernarda D. Kostka CSAPI)

Photo 44. Bell holder for the monastery gate. Hermitage of the Albertine Sisters
Source: (photo s. Bernarda D. Kostka CSAPI)

Invisible beauty – felt, perceived

1. The importance of a place for consecrated persons

The Albertine Brothers and Sisters base their spirituality on the imitation of Christ, whom they see in every human being, especially in the abandoned, homeless, tired, sick, and socially unaccepted people. Working among the poor is physically demanding, requires sacrifice and heroic involvement. In their service to the poor, the Albertine Brothers practise the counsel of poverty, living modestly in the simplest of ways.

Following Christ who gives Himself as the bread in the Holy Mass is seen by the Albertine Brothers as their duty. They practice it with the poor, they feed the hungry with the bread of their goodness. It is not an incapacitating support, its aim is to show the way to emerge from the crisis: for those who are addicted to quit the habits, for those who are helpless to train for various professions, for those in need of health care – medical support. The poor regain their self-esteem and dignity. Eventually, these people became independent and some of them, wanting to return the favour by working for those who are in need, joined the Congregation of Albertine Brothers.

The Albertine hermitages are an oasis for the brothers and sisters to recover their material and spiritual strength to continue their service for the poor. This place helps to calm down and to strengthen your relationship with God. The brothers and sisters feel his presence in the surrounding nature, in the ever-present silence and, above all, in the daily Holy Mass.

In the hermitage, enclosure and silence are followed and obligatory.

> Sons should speak to no one except their mothers and the minister, and their custodian, if the latter, with God's blessing, wishes to visit them. Let sons sometimes take over the role of mothers in the order that they arrange among themselves (Synowiec, 2015b, p. 35).
>
> (…) More than one bishop made annual retreats in Kalatówki and wrote down his memories in words with shaking emotions. Archbishop Szeptycki of the Greek rite in Lviv regarded it as extraordinary grace that, due to lack of space, he could sleep in the Brother Albert's cell. This blessed coincidence allowed him to observe his friend's secret: "Was it the pain in the cut leg? Is it hard bedding? It is sure that Brother Albert had sleepless nights. Whenever I woke up, he was lying there with his eyes open, immersed in God" (Winowska, 2001).

In the hermitage of St. Albert, his confessor, father Czesław Lewandowski CM, wrote in his memoirs that he repeatedly witnessed Brother Albert's ecstatic states.

2. The importance of the place for believers and non-believers

The inner part of the hermitage is a place of seclusion and tranquillity for the Albertine Sisters (photo 45). It is not used by other people. The sisters also do not have any accommodation facility for people from the outside.

Despite the enclosure life of brothers and sisters, the Albertine hermitages are not hermetic. Tourists and pilgrims have access to the Holy Cross Chapel and the adjacent area, together with the cottage of St. Brother Albert.

Photo 45. Hermitage of Albertine Sisters from the inside
Source: (22)

> Successively, various great scholars and famous writers made pilgrimages to Kalatówki. Among them were notorious atheists, such as the near-conversion of a French family member, Prof. Baudonin de Courtenay (Winowska, 2001).

Pilgrims following the trail to the Cross on the top of Giewont visit the Albertine chapels to meet God in the silence of prayer. The summit of Giewont is a place where pilgrimages come twice a year, in August and in September on the occasion of the Feast of the Cross. This year, there is 120th anniversary of the erection and consecration of the cross.

There are also people who come to the Albertine hermitages every year to draw spiritual strength for the coming year. The hermitage is filled with daily prayer. On Sundays and holidays, and on weekdays, Masses are regularly held in the Holy Cross Chapel, available to everyone who visits this place. The community of sisters makes a novena daily through the intercession of St. Brother Albert and Blessed Sister Bernardina for those visiting this place and benefactors. For this intention, and for all those who ask for the intercession of St. Brother Albert and Blessed Sister Bernardina, every 17th day of the month, a Mass is celebrated. Masses available to the believers in the St. Albert Chapel are celebrated every Sunday.

> Modern man can be described as *homo ecologicus*. This means that the ecological dimension of life is very important to him, and his concern for living in harmony with

nature, and especially with the rhythms of nature, is reflected in his various activities, products, lifestyles, and work as a distinctive feature among other beings living in the world. However, human existence is not limited to the natural (bodily) sphere. For man as a spiritual and corporeal being, faith plays an important role. The Holy Mass as "the source and summit of Christian life" is the epicentre of religious life (Kluczkowski, 2017).

3. The perception of the place, the touch of the Unknown

Among the many sensations of the people living in the place of the Albertine hermitages, one can notice the joy and pleasure of taking in nature and all that is most beautiful in it: the closeness of the forest, the presence of the sun's rays penetrating lazily through the trees in the morning, the song of nature – the sound of the stream, the sound of insects, sometimes the whistle of a wood-pecker. Those who visit the sites of the Albertine hermitage may experience the impression that:

> Brother Albert's heart beats in the raw beams of the Kalatian hermitage. The wooden walls remember the touch of his hands and the drops of sweat as he struggled to raise them. The room in the "cottage" where the great and the small of this world came together is a witness to meetings and conversations that sink deep into the soul, and the ancient cross in the chapel has heard the prayers of the first brothers and sisters serving the poor (Pytel, 2010, p. 2).

This place teaches us how to live a little slower and with more attention, to take time to listen to ourselves, to discover in silence our own interior overflowing with experience:

- admiration and respect for the good of nature,
- missing the primal harmony and beauty of nature,
- willingness to thank for the good received,
- feeling of passing and discovering unity with the spiritual world,
- gratitude and praise to the Creator,
- temporal encounter, a mystical union with God.

> ..silence and meditation joined together spiritually become for the soul a source of great peace and the beginning of perfect contemplation (Synowiec, 2015a, p. 39).

The last one is the act of touching the space of the sacred, which, according to M. Eliade, takes place in myths, symbols, and various kinds of objects called hierophanies (Eliade, 1996, p. 7).

> The sacred has two dimensions for Eliade: an object dimension (in the form of numerous hierophanies – physical manifestations and ways in which the sacred manifests itself

through symbols, myths, and rituals) and a subject dimension (in the human psyche as a primordial element of its structure, and not, as evolutionism wanted, a transitory stage of development). He assumed paradoxically that the sacred, as opposed to the profane, is real. It is the subject of the religious behaviour of a religious man who, thanks to the common content of religious experiences inherited over millennia, is able to distinguish them from the profane. Each phenomenon is a potential hierophany and may become the cause of access to non-historical time (Bronk, 2007, p. 16).

Even the subtlest experience of the Creator's presence turns *homo ecologicus* into *homo religiosus*.

Conclusions

The composition of the architectural, artistic, symbolic, and meaningful elements of the Albertine hermitages is oriented towards the message of God's love for man, the resulting Decalogue, the constant care and concern for His creation.

Albertine hermitages present a special kind of harmony of the place. It is here, where mutual interactions of the beauty of the surrounding nature intertwine with each other. The nature which is embedded in the depth of regional architecture and the brothers and sisters filled with prayer, who for over one hundred years have been helping for the people who are in need, the poor people, people with diseases, with depression, or the ones who are addicted.

Time goes by, brings many words and questions, leaves and returns. The visible and invisible beauty of the hermitages makes the sense of the passage of time here only an illusion. We are immersed in the Eternal.

The chorale still continues, it is the daily whisper of nature, prayer, and song. Its power and beauty calms, inspires to discover the richness of the 'human interior,' stimulates to the transcendence of God, encourages the dialogue between man and God, makes the penetration of His goodness into the human heart perceptible.

The fullness of stillness and soothing silence is the language in which the Creator speaks, and the humble person unites with God.

There are probably many places on Earth where similar feelings of harmony can be felt, and it does not matter where they are located. Probably every person has the opportunity to find himself in them on a 'journey to his own interior,' a temple smelling of incense and illuminated by the rays of the sun penetrating the colourful stained glass windows, paving the way back to the Creator. On this journey, if you have not yet felt His presence or heard His voice, He will surely hear yours.

Acting with the grace of God, Brother Albert encourages us to:

- Make peace with the past,
- Live here and now,
- Look to the future with hope.

Afterword

The harmony of the place of the Albertine hermitages affects a much larger space than just the place in which it is located. It moves the interior of a person.

> Whoever hikes the Tatra trails should not miss this place where St. Brother Albert left his indelible mark. Do not be afraid of emotions… Enter into the silence of the hermitage to ask yourself the most important question: WHO IS GOD FOR ME? WHO IS THE SECOND MAN?
>
> Forget for a moment the valleys full of hustle and bustle, think of the peaks waiting to be conquered. Brother Albert did this simply: he fed the hungry with the bread of his goodness.
>
> What is more common than bread? Everyone needs it… this for the body and this for the soul. Today so many people are hungry! Listen to what Brother Albert says to you:
>
> "One should be good as bread; one should be like the bread that lies on the table for everyone, from which everyone can take a bite for himself and feed himself if he is hungry". Think, can you afford it… daily, everyday sanctity? Answer before you leave (Faron, 2002, p. 56).

Man is a citizen of two worlds material and spiritual, entering one of them and recognising it facilitates the discernment of the other (Gałkowski, 1996, pp. 5–15).

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Tomasz Drewniak
University of Applied Sciences in Nysa

Emptiness as the openness of the place. Contribution to the reflection on the phenomenon of kenosis in architectural space

Abstract: The article addresses the ways in which the divine and human kenosis are represented in architectonic and existential space. With reference to the idea of openness of the place (Ch. Norberg-Schulz), the fundamental aspects of place affecting its relationship of place to the *axis mundi* are presented. Then, on the basis of the characteristics of structures placing the human being in the world (home, church, work, cemetery), it was shown that homelessness, as a lack of belonging to a place, is increasing in contemporary societies, resulting from the excessive possession and greed that lead to the construction of architectural forms that are closed to the world and other people (cathedrals of consumption). The opposite function, as demonstrated by the examples of the nativity scenes and the Chapel of Our Lady of the Heights (*Chapelle Notre-Dame du Haut*), is fulfilled by the so-called things that remain open to an emptiness where they can give, receive and pass on the place. The kenotic aspect of the place, along with the heart, makes a person's hands free to receive and give, activating, instead of taking and retaining, the circle of mutual giving of oneself.

Key words: kenosis, place, centre, axis mundi, poverty, sacrifice

Introduction: theology and aesthetics of kenosis

The concept of kenosis, and more broadly the phenomenon of humiliation and depriving God of God's glory, is deeply rooted in the Christian tradition. Its sources go back to the biblical images of the suffering servant of Yahweh and the theology of St. Paul, who presents the cross of Christ as an indignation and insanity (1 Cor 1:18), and in the letter to the Philippians, in a Christological hymn, he indicates the humiliation of the Son who, 'being in very nature God,/ did not consider equality with God something to be used to his own advantage;/ rather, he made himself nothing by taking the very nature of a servant,/ being made in human likeness./ And being found in appearance as a man,/ he humbled himself by becoming obedient to death – even death on a cross!' (Phil 2: 6–8). The divinity in Christ remains hidden and manifests itself at the moment of its utter humiliation in the Passion and death. St. Paul's staurology (gr. *stauros* cross),

continued among medieval mystics (e.g. Master Eckhart), underpins Luther's distinction between the theology of the glory (*theologia gloriae*) and the theology of the cross (*theologia crucis*), and is the inspiration for contemporary philosophy and postmetaphysical theology (Caputo, 2006, 2019; Moltmann, 1993).

In Christianity, the kenosis of God takes on a real, historical and spatial form, is put into a place, manifesting itself in the form of emptiness, distance, flaw, smallness. God transcends 'that which is "greatest" so that it is too small for him, and penetrates to the smallest thing, because nothing is too small for him' (Ratzinger, 2012, p. 147). The epiphany of God is therefore not an epiphany of power, a kratophany, it is a dispossession, a voluntary relinquishment of power, greatness and existence. 'Kenosis is an event in which God and man make room for each other. (…) The sacred can only happen if there is an empty space, if not all meaning has been filled by omnipresent God or a self that strives to maintain itself' (Riessen, 2007, p. 200). The place for God is opened thanks to the humiliation of man, the emptiness of the desire to be for one's own benefit in life, which becomes evident, as G. Vattimo points out, in the lives of the saints and martyrs (Vattimo, 1999, pp. 80–81). It involves going beyond idolatry, which, according to H. Cox, author of *The Secular City*, is fostered by the crisis of discursive, symbolic and institutional forms of Christianity, reflected by the metaphor of the 'death of God.' They are purged of the *quasi*-political representation of God as king and ruler, basing their imaginaries on a discourse of power characteristic of the urban political community, in turn transcending the rural image of kinship (Cox, 2013, p. 311). The basic experience of contemporary human socialisation is *team work*, which consists of performing common tasks, being with each other (Cox, 2013, pp. 311–312).[1] Hence, the relationship between God and man does not appear as a hierarchical relationship of father to child or ruler to subject, but it is based on the mutuality of the relationship between father and son, which does not focus on the father as such, on his power, which he takes over and by means of which he orders the world, but on the interaction with God, who is not a God of power but God of weakness (Cox, 2013, p. 312), making his son an heir (Gal 3:29–4:1), and at the same time remaining close to him, teaching him responsibility. God, without being or Being, gives himself to man, he becomes tangible, and at the same time he cannot be embraced, enclosed in a specific

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[1]   Regarding the personal and ethical value of *team work*, opposite view is represented, for example, by R. Sennett (Sennett, 1998). Perhaps from the historical and theological point of view the joint work of Jesus with Joseph, during which a new figure of fatherhood was revealed would be more relevant.

space or discursive and symbolic system. Illustrating the kenosis of God, Jean-Luc Marion records the word God with a deletion (Marion 1995, pp. 108–110), just as Heidegger wrote the word Being: in kenosis God expropriates himself from his majesty and this fact, symbolised by this intersection of two segments, constitutes his divinity. Indeed, in the Crucifixion, of which Marion's record is an icon, God experiences nothingness, death, loving man to the end and giving himself entirely to him. He becomes crucified love (*agape*), and therefore love as such, freeing man 'from God' (Master Eckhart, 1986, p. 3), from the presence of God in his infinite greatness and remoteness.

How to translate 'theology of poverty' (Krasicki, 2020, pp. 213–231) or the phenomenology of God – human poverty into an architectural form so that it gives place for emptiness, non-existence? How do place and existence take nothingness into themselves? That is: how are place and existence, along with man, opened up to the absorption of their own nothingness, giving it space? The above questions lead us to distinguish two aesthetics as two orders of existence – the aesthetics of kenosis (imperfect existence) and the aesthetics of perfection. The aesthetics of kenosis is the opposite of the classical aesthetics of beauty and perfection, which are identified with the fullness of existence, or even its mathematical ratability. The fullness of power and exaltation, greatness, openness, permanence, eudaimonia and wisdom are distinguished from: lack, ugliness, weakness and humiliation, insignificance, secretiveness, ephemerality, self-destruction and foolishness (1 Cor 4:10). The servant of Yahweh mentioned above is described by Isaiah as follows: 'He had no beauty or majesty to attract us to him,/ nothing in his appearance that we should desire him./ He was despised and rejected by mankind,/ a man of suffering, and familiar with pain./ Like one from whom people hide their faces/ he was despised, and we held him in low esteem' (Is 53:2–3). The impossibility of reducing the aesthetics of kenosis to the aesthetics of beauty as power (perfection) was clearly realised by Fyodor Dostoyevsky, who, in his novel *The Brothers Karamazov*, in the words of Dmitri speaks about two ideals of (feminine) beauty, the ideal of the Madonna and the ideal of Sodom. In Fyodor Mikhailovich's works, heroines embodying architectural beauty dominate over heroines representing the ideal of Madonna, who give way to the former in beauty and intelligence, but at the same time embody maternal humility, love and devotion (Зандер, 1960, pp. 63–98), and through them they give place to human life. However, they glow with an inner brightness, an iconic luminosity, making God's merciful love present in the world, such as Sonia Marmeladova or Sofia Andreyevna, and, unlike Nastasya Filipovna and Catherine Ivanovna, are able to lead the protagonists to spiritual resurrection.

Relationality and openness of the place

When we intentionally refer to a place that is real to us, that we recall in our memory or that we make present in our imagination, the structure to which the place belongs, that is part of it, becomes more or less explicit. A place, delimited by boundaries, always refers to its environment from which it is distinguished. If we assume that a spreading tree marks out a place with its branches, this immediately implies the question of the location of the place, of its place, and therefore of what allows it to be a place in a spatial, functional and symbolic sense. It is not space itself, as it derives from place and its location. It is an abstract representation, based on the experience of a place and at the same time derivatively constructing it. Similarly, the room is in the house, the house stands on a plot of land, which in turn is on the street. Therefore, the place's boundaries connect it to a place, which gives it a place: the isolation of a place, then, transforms it into a non-place, depriving it of its connection with the surrounding place, thus depriving it of its location. Place is thus co-defined with an overall horizon that may remain initially unexplained, but at the same time contains the possibility of differentiation: in the forest, individual trees, clearings, paths can be distinguished, just as the plot of land and the street, marking the location of the house, can be further characterised. The essence of place therefore contains a holistic character, and place itself does not complete this whole, but forms its moment, having its 'beside,' 'under,' 'over,' and thus place is always situated in a broad topological relationship. The place distinguishes itself, but at the same time is not separated, is part of the whole, centred around (through) the centre as a topocosm.

The *axis mundi*, the sphere in which the wholeness of the existence is connected, runs through the centre. The original manifestations of the centre are religious in nature and involve a distinction between the sphere of the *sacred* (divine space) and the sphere of the *profane* (ordinary human life). This distinction is at the same time sense-creating, it gives meaning to human life in relation to *the sacred*, it also allows man to function at a certain distance from the divinity, the communication with which remains subject to certain rules, introducing spatial and ontological distinctions between the human and divine worlds (the divinity does not make itself present as a demonic, a destructive force for man) (Patočka, 1996, pp. 99–102). Relating to the centre does not mean that man fills the centre with himself. The relationship to the centre gives a man the right measure. In the centre of the Garden of Eden there are the trees of life and the knowledge, of good and evil, also four rivers flow out of Eden. If we treat Eden as an archetype of place (inhabitation), we get the following

characteristics: the place has four areas (rivers), a sphere of the *sacred* (prohibition), in which a life-giving power is present (the tree of life and the tree of knowledge, connecting the above with the below) and which requires care (man is supposed to cultivate and care for the garden of Eden). It also has its 'beyond' which is de-centralised by the sin, the wholeness of existence becomes distanced from the centre together with man, and is subjected to the omnipotence of death. Man retains a connection with Eden (the centre) insofar as he is obedient to God and therefore he takes the position of a child (son). The centre, therefore, does not belong to man, he cannot dispose of it without restraint – he has to become mature in relation to it and also guide others to maturity, thus becoming akin to the divine fatherhood. We can interpret the fall of Adam and Eve as an archetype of the realisation of the desire to conquer the centre, to place oneself at the centre as the master of the totality of existence, the banishment from Eden can be interpreted as a pattern of the loss of one's original place, settlement and centre, while religious symbolic activities as seeking to recreate a relationship with the centre (e.g. in Christianity, the cross reconstructs and overcomes the dialectic of life and death of the Edenic tree of knowledge).

Translating the above analyses into the relationsip between place and architectural form, we can assert that a place is in interaction with its environment: on the one hand it separates itself from it in the horizontal perspective (wall, fence) and vertical perspective (roof, floor), on the other it opens up to it (door, window, gate, gateway). Place as a habitat implies an openness (the possibility of interaction with the environment), and the way in which this openness takes place is one of the fundamental aspects determining the character of a place, defining the nature of interpersonal relationships. In a strict sense, this interaction of man with his environment occurs through the road and the form of its architectural representation such as stairs, corridor, bridge. Christian Norberg-Schulz, referring to the Heideggerian concept of inhabitation, in which the most important aspect of place is concentration, observes: 'The *genius loci* of the human settlement in fact represents microcosmos, and cities differ in what they gather. In some, the forces of the earth are strongly felt, in others the ordering power of the sky, others again have the presence of humanized nature, ore are saturated with light. All cities, however, have to possess something of all these categories of meaning to make *urban dwelling* possible. Urban dwelling consists in the assuring experience of being simultaneously located and open to the world, that is: located in the natural *genius loci* and open to the world through the gathering of man-made *genius loci*' (Norberg-Schulz, 1979, pp. 77–78). Place, while retaining its own identity, is characterised by its openness on a semantic and social level; it brings man, as Heidegger writes, into the 'Open,' i.e. into the horizon of

a non-objectified relationship with the wholeness of existence, in which there is no opposition between 'Self' and 'Non-Self,' in which the person of the Other, his personal otherness is reduced to 'Non-Self' (Heidegger, 2002b, pp. 229–230). As 'The Open is the great entirety of all that is unbarred' (Heidegger, 2002b, p. 212), the place, whilst remaining within itself, allows that which is different in a mutual complement.

Consequently, a place, while being a kind of shelter, cannot at the same time represent a return of man to his mother's womb, the archetype depicted in Plato's cave, in which man does feel safe, but at the same time his existence becomes of an embryonic nature. Not only does the cave confine, but for its slave inhabitants chained to its walls, it is deprived of any relation to what is beyond it. In Plato's deliberation, it constitutes, like Atlantis, the anti-type of place, developing in its extreme form one of its aspects: a closure arising from enslavement or openness arising from greed. If birth – that is, leaving the mother's womb – guarantees the possibility of human development, going beyond the place opens a man to the world. The way in which a place is open to the world, to other places, also to places that in the strict sense do not have their own place (imaginary, ideal, utopian places), determines therefore not only its character, but also the shape of human interaction with its environment.

The original experience of place is related to home, which places man in the world, pointing to the constant reference of his 'from where' and 'to where,' but also to embedding human existence in the order of birth and death. At home, man finds closeness to people and things and, on the basis of this closeness, he moves towards the world (Tischner, 2006, p. 181). Home, not only as a spatial construction but also as a social and spiritual structure, teaches people to live in relationship and to respect boundaries. The loss of home, also as a loss of the connection to a set of values and traditions that define a person's permanent identity, is associated with the loss of the deepest-rooted sphere of meaning that gives value to existence.

The inevitability of passing away is inscribed in man's relationship to place. On the one hand, it is the result of the moving of the human existence and on the other, makes it possible to return, from the other side of mortality, to abandon the place and the emptiness that the loss of a loved one leaves in it. This leads to the conclusion that the place should also be open to man's journey towards death, the proper placement of his mortality in the world, learning the kenosis of illness, old age, and finally death, a reference to the 'beyond' into which man passes away.

The universalism of Christianity and the openness of place

The understanding of death, not only in terms of its inevitability but also its finality, is grounded in the nature of the place, in the dominance of closed architectural forms. The author of the concept of resurrecting all the dead, the Russian philosopher and utopian Nikolai Fedorov, noted that shelter very often takes the form of protection from other people and therefore, through its architectural form, it expresses mutual hostility. Referring to the English saying: *My house is my castle*, he points to its direct connection with modern individualism, implying spatial and social separation. The *genius loci* of a place is established by the form of human relationships and this is then reflected in the social organisation (way of working) and architectural form. Personal relation – these motifs are a common heritage of the critical theory of the modern city and find a synthetic form in the sociological concept of L. Wirth (Jałowiecki, Szczepański, 2010, pp. 22–24) – charaterises a rural community, the people of which cultivate the memory of their ancestors and which also remain, through their farm work, in close relationship with their land. The city is a space in which one forgets one's own roots, and this is where the instrumentalisation and shallowness of interpersonal relations as well as spatial and spiritual disharmony come from. Although it brings people together by concentrating them in a small area and making them spatially closer to each other, it also distances them psychologically from each other and sets them apart. The countryside, in turn, guarantees the proper nature of the location and openness in the daily life perspective of the house, the church, the workplace and the cemetery. According to Fyodorov, the difference between the city and the countryside corresponds to the difference between the West and the East, as places of the epiphany of Satan (Antichrist) and God, self-love and love, pride and humility, being for oneself and offering oneself to others, neo-paganism and Christianity.

The place and the architectural space that forms it should be connected with the relationship of filiation, the genealogy of man, which for Fyodorov, who was associated with the Orthodox Church, has a threefold form: firstly, man is a born being, a corporeal being, having his parents and further on, his ancestors; secondly, he is born in a specific cultural environment, in which his way of 'being-in-the-world' (morality) is formed; and thirdly, man is a son of the Father God. Fatherhood, to generalise, is in this conception a formula for giving and shaping life on the bodily, intellectual, moral and spiritual levels. Cultural symbolism – the symbolic function of architecture plays an important role here – it makes fatherhood patterns present, perpetuates them and enables them to be reactivated. The image of the real father must be assimilated, which means critically rethinking it

in relation to the image of the Father, so that the son becomes the image of the father in Christ, who in turn has called a man to raise the dead. The consequence of the non-fulfilment of this imperative will be the end of life on earth, as well as the Judgement Day, which will result in the separation of human beings into the saved and the damned, and thus the culmination of the ontological catastrophe initiated by sin.

Sonship is not a condition, but a constant realisation of the potential hidden in man. The son thus becomes the son of the father through the assimilation of heritage, through a recursive movement in which the relationship between them is recognised. The passage 'into the depths,' to the interior of the earth, for the 'body of the father' to the depths of oblivion, precedes the movement upwards, towards heaven, towards resurrection; the anamnesis, which is the turning towards the past, determines the action to be performed in the future: 'Sonship is the descent of the soul into the tomb of the ancestor' (Фёдоров, 1995, p. 204). The Easter Passover, which illustrates the actual dynamics of the sonship, proceeds along the *axis mundi* and restores man to his vertical position (Фёдоров, 1997, pp. 317–318), *axis personae*. The horizontal direction, the extreme form of which is the arrangement of the coffin in the grave, expresses the frontal and confrontational positioning (Фёдоров, 1997, p. 318), i.e. the territoriality of humanity with marked boundaries, areas of domination and control over oneself, and at the same time of interpersonal struggle (Фёдоров, 1995, p. 118). Boundaries materialise in walls, fences and take form of separation from others (which is why the resurrection takes place outside the temple), also then architectural forms protect the ashes of their own fathers, the most perfect example of which, according to Fyodorov, is the Kremlin as a place of power and mutual violence. Man's 'inhabitation' draws a clear line between one's own and strangers, excluding the latter from the community: the home, which is supposed to provide shelter from animals, adverse weather conditions and to be a place of rest, is transformed into a fortress (Кожевников, 2004, p. 326). 'Room'/'Peace,' in Russian (as in Polish) ['room' and 'peace' have a common reference: 'pokój,' 'pokoj' it is a homonym in Polish and Russian] is associated with accommodation, a state of mind and relations with others, and is therefore understood, as Kozevnikov points out, as a separation from enemies rather than a revocation of hostility as such (Кожевников, 2004, pp. 325–326). Peace has its permanent counterpart, yet temporarily located outside the boundaries giving a sense of safety and security, in anxiety and fear. Man needs a boundary that separates him from others in order to overcome the fear of them. Such reasoning opposes individuals to a group and groups to other groups in the sense that peace is always to come from someone. Fear is a passive hostility, just as hostility is a fear activated

in aggression. Hostility and fear do not make each other invalid, but they condition and reinforce each other, leading one to another. Meanwhile, personal co-existence that is constituted in brotherhood transcends the boundaries established by the walls of the house and the temple, of being closed in on oneself and to others (Фёдоров, 1995, p. 104).

Global peace, which is reconciliation and not separation, is reflected in the Old Slavic word 'mir' (peace as harmony and freedom of all creatures). This horizontal dualism depicted above constitutes a world in which peace is cultivated in the private sphere, and therefore in separation from others, while competitiveness and mutual hostility are cultivated in the social and public spheres. Doors, with their openness, no longer encourage people to enter, expressing trust in neighbours and strangers. They are locked in fear of others. Love, as being together and for each other, overrules horizontal demarcation and separation, 'there is no fear in love' (1 Jn 4:18). After the Resurrection, Jesus comes to the disciples 'in spite of closed doors' until finally the doors of the Upper Room are opened on the Day of Pentecost (Acts 2:1–41). The peace of Jesus is without fear of others, without seeing evil in them, and therefore makes human communion possible. Separating and contrasting horizontality because of its reference to the entity at its centre: such a way of perceiving spatial relations is introduced by Renaissance and anthropocentric humanism (Panofsky, 1993, p. 72) is not the right way of placing human beings in the world, since the line of actual reference runs from 'below' (from the graves of the dead or the abyss in which they remain) to 'above', to God and the kingdom of heaven. Man does not so much live 'under' the heavens, (this is the way in which a horizontal orientation directs him), but 'towards' heaven: his aim is not to live on earth, but in the universe; an assumption, this is what the 'universalising' of Christianity is all about, it is to become not only global, but cosmic. Man's destiny to Christianise the cosmos does not make invalid his connection with the earth, the mother of all living beings and the grave of his ancestors. He does not abandon the earth but, by relocating it to the energy centre of the cosmos, saves it from imminent destruction.

The structure of the horizontal reference centred in the individual also includes the relation between the 'Self' and the 'Non-Self', in which the 'Self' objectifies and opposes the 'Non-Self', constituting itself in this opposition in order to subsequently transform the wholeness of existence into such an objectified representation. As a consequence, the 'Self', as the Absolute recognises itself in the other, reducing otherness, including the otherness of the other person, to its own representation. The German Romantic Jean Paul observed the close connection between the absolutisation of the Self, taking place in modern philosophy, and nihilism, the absence of the meaning of life: although each Self becomes its own

father and creator,' it simultaneously experiences an existential emptiness, a lack of meaning in existence, through the exclusion of the self-limiting personal relation (Ponomarev, 2010, pp. 129–140). The human condition limits man on the path of self-deification: for this is, as Dostoevsky clearly demonstrated in his novels, a path of disintegration and self-destruction (Girard, 1965, p. 255).

For Fyodorov, the epiphenomenon of the objectification of horizontality is the city, which sets both distance and horizontal remoteness, as well as the heaven itself, which refers to fatherhood as the earth does to motherhood. In the city, the distinction between East and West, day and night, good and evil, life and death, sacred and demonic, *sacred* and *profane* is disappearing. This is to prevent the prodigal son from seeing the connection with fathers and the Father (Фёдоров, 1997, p. 366), to deepen him into forgetting the call to raise the dead and ascension, to lead him to lose the reference to the centre, which is the father's house. Christianity turns the described form of placing the human being in the world into an open horizontality, including everyone and everything, and therefore going beyond the architectural form and the place associated with it, where it is impossible to experience the distance, opening up to the non-familiarity of the neighbour and the otherness of God, to the unity of the whole of existence that is centred in Christ.

The closure of a place as the closure of a human's heart

The Polish phenomenologist Józef Tischner, parallel to Fyodorov's approach, considers human spatiality in relation to four places that merge into a holistic structure. The home, the cemetery, the church and the workshop form a quadrilateral in which man's relationship to other people, things, the earth and God is realised. In the model of European rural and small-town society of the time before the rise of the industrial city and before the spread of urbanity as a form of life, the quadrilateral was a basic reference of meaning and sociality in which domesticity was understood as an attitude of mutuality and self-giving. And so, home binds us to family while offering us a place to stay. The workshop brings one into relationship with the community, giving the person a social identity, expressed in the occupation and the social role associated with it (care for others and for oneself). The church expresses the idea of sanctification of man, who becomes sanctified by the sacrifice of God in order to learn to sacrifice for others, to learn 'to be for Others,' by which a man becomes himself (Tischner, 2006, p. 185). Finally, the cemetery represents a multi-generational community in its historical dimension – a meeting with ancestors and future generations. The cemetery brings dignity to human life by sharing in the dignity of the ancestors

(Tischner, 2006, p. 186). It also indicates that life has its end and its purpose is not fulfilled entirely on earth (home, work, community), that being laid to rest in the grave illustrates man's powerlessness in relation to earth and death.

Let us note that the field of the quadrilateral contains the circle as the repetitive rhythm of work, the seasons, life and death, and finally the divine infinity and the cross to represent the suffering and the lack of fulfillment that are part of human life. This structure, its centre, as in Fyodorov's work, is the church, therefore it remains open to the presence of God in the world, in other people, and finally to the divine promise of the Kingdom of God on earth; it settles man in the world and at the same time opens him to the world (Tischner, 2006, pp. 186–187).

According to Tischner's assessment, modern man is overcome by greed, a desire to possess, to take possession of the earth, to own it for himself. These tendencies are present in the nature of man (Christianity refers here to original sin), but since the Renaissance they have been liberated from social, institutional and symbolic constraints, and, moreover, scientific and technological developments have put forward and refined tools for their realisation and escalation. Since man has set his own will free from the will of the Father who forms obedience and moderation, the world and life are to give him everything he wants. Thus, he takes control of his actions, creating a symbolic system that legitimates self-determination and self-realisation (Vitz, 1994, pp. 15–16): 'I am allowed what I can. The limits of force are the limits of law. (…) This changes the sense of domesticity. What changes is the settling, the rooting, the sanctification, the embracing of traditions. In each way of domesticity, the motive of retaliation against the people and the motive of violence against the earth begins to emerge. There are no more places in the world around us. Man stands helpless on earth, as a homeless and rootless being. What happens to the place of reciprocity?' (Tischner, 2006, pp. 188, 190–191). Evil and retaliation invade the place of reciprocity; they activate the power of destruction in the world and deprive man of his place in the world: 'The evil destroys. What does it destroy? It destroys places, houses, workshops, it annihilates churches, it profanes cemeteries. The beginning of destruction can be seen in the transformation of the attitude of domesticity: domesticity is transformed into desire' (Tischner, 2006, p. 213). The modern prodigal son accuses his father and thus breaks the relationship of filiation,[2] as well as the boundary that defines him and protects him from

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2   As P. C. Vitz indicates, a role reversal from the parable of the prodigal son takes place, which is reflected in the paraphrase of the son's statement: 'Father, you have sinned, and are no more worthy to be called my father' (Vitz, 1994, p. 65).

self-destruction. In evil, an anti-human force becomes present, turning against man by destroying the personal nature of place, which, as an existential space, is also a meaning and social space. Both dimensions are ordered by the rule of co-existence, which makes possible a balanced relationship between people and things, by delimiting the field of the possible and the field of the impossible, the boundary within which human freedom can persist. This boundary, the primary meaning of which is to unite the diverse and complementary, is transformed in architectural, discursive and social space into opposition and separation.

Man's sense of life is revealed in his way of co-existing with others, which is distorted by evil. At home, man fences himself off from others (hides with his fears, frustrations, wounds), becomes afraid of others (even the householders) and tries to 'keep them at bay,' and consequently loses his sense of settledness. Home is no longer used for living and turns into a 'warning and an imminence' (Tischner, 2006, p. 192). At work, one struggles for mastery over the matter and other people, establishes a relationship of struggle with the earth (raw material, material, object) as well as with and fellow workers. The pace and form of work are separated from the pace of the earth, and work is transformed into a relationship of power. The churches become desolate, transforming into, as Nietzsche stated, 'God's graves,' since religion is transformed into a form of resentment – God's revenge on those who have caused harm, with divine justice being a mask for human vindictiveness. More effective instruments for the realisation of revenge as judgement and bringing justice may be, moreover, ideologies and the virtual public space (e.g. hate on the Internet). The cemetery scares; the dead are laid in luxurious graves and the care for the graves is fetishised and exposed in public, but at the same time their real message is ignored. Therefore, the dead appear to modern man as blaming spectres, which he tames in a way of trivialising and forgetting his own mortality. Loss of place leads to the experience of existential emptiness, unfoundedness and pointlessness of human existence, and thus to atrophy of the will to live (Klibansky, Panofsky and Panofsky, 1979, pp. 246–249; Marion, 1995, pp. 108–138). This emptiness, in contrast to kenosis, does not give place to life, does not give place to man, instead it absorbs him into itself, which ultimately destroys him.[3]

The architecture, inspired by man's greed, becomes an expression of the will of power, of extending control over matter and over other people. The greed (Tischner is a Christian philosopher and Catholic priest deeply rooted in the

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3   Melancholy in its symbolic aspect is associated with Saturn (Kronos), who devours his
      own children.

culture of the Polish highlander community) is man's retaliation for the 'cross,' mortality, and the lack of fulfilment that is part of the life experience; therefore, he seeks satiation through all means. Retaliation is based on rejecting the image of God as 'crucified love,' 'impoverishment,' 'self-giving,' an image that is unclear and repulsive when viewed from the perspective of greed. Meanwhile, the poor man (Mth 5, 3), without keeping anything for himself, is at the same time with God, he has his place, although he does not possess it.

Excess and dialectic of non-place

Poverty is the opposite of possession, in its extreme form it involves a lack of own place as homelessness. Martin Heidegger, however, points out that homelessness, which characterises Western societies in a spiritual sense, is not the result of a lack of things, but of a lack of thingness in things, which transforms them into non-things, objects. Modern technology, together with the economic system integrated with it, makes it possible to produce an excess of objects beyond man's usual needs, for which the essentially insatiable desire to possess more and more, newer and most efficient things is crucial. These are objects of consumption rather than things, thus transforming the man from 'being-in-the-world' as a multi-level structure of meaning, into a single element of the set, consuming and consumed (Ritzer, 2005, p. XI). Satiation, and even excess, is supposed to be the pattern of the wholeness of existence. Man therefore becomes objectified; he objectifies himself in what he possesses and reads himself out of who he is. This creates an infinite and illusory horizon of desire, making man unreal and losing his connection with the world. The atrophy of things results in an atrophy of meaning, the desire for which cannot be satisfied by mere consumption or ideologies, which are brought down, according to Heidegger, to the different forms of the 'will of power' found by Nietzsche. Modern man strives for self-realisation by 'self-assertion' (Heidegger, 2002b, p. 216), establishing himself in being, while at the same time losing the connection with Being, formed by the sacrifice. As it does not sacrifice himself, he becomes a sacrifice, transforming himself into an existence placed in a vicious circle of struggle for power, the intensification of power and its loss, being motivated by mimetic desires and competition (Girard, 2010, pp. 30–42).

At this point, it is worth recalling G. Ritzer's work entitled *Enchanting a Disenchanted World. Revolutionizing the Means of Consumption*. According to him, the act of consumption takes on a *quasi*-religious nature, hence the aforementioned scholar analyses the spatial and functional structure, and its social and economic impact, among others, using the examples of Disney World, Las

Vegas, Easton Town Centre in Columbus (Ohio), Pigeon Forge (Tenesse), shopping malls, and chain shops, (Ritzer, 2005, pp. 9–23), introducing the concept of *cathedrals of consumption*. Consumption (more precisely, eating, consuming) is linked to religious rituals (communion, Last Supper, Christmas Eve Supper, Passover) establishing man's unity with the divine power. It is accompanied by a symbolic setting and an appropriate structure of sacred space. *Cathedrals of consumption* establish a new *sacred*, separating it from the *profane* of daily activities (Lehtonen, Maenpaa, 1997, p. 144), and at the same time connecting man, in a such constructed space, with nature and other people (photo 1). In the spatial and functional structure, they have a clearly marked centre, but at the same time the spaces are diversified in such a way to suit the diversity of needs. This *sacred* imitates (reproduces) religious symbolism and its spatial solutions, making consumption a ritual act of consumerism – a new global religion (Ritzer, 2005, pp. 93–147).

The consumption ideology deconstructs the relationship of rational entities controlling their desires and taking into account, in their pursuit of profit, the interests of their transaction partners, correlating the instrumental aspect with the axiological aspect, a relationship on which the functioning of capitalism was based until the 20th century. The lifeworld is split between, on the one hand, there is a rational, profit-maximising enterprise and, on the other hand, consumers who behave irrationally, spending more than they have and buying what they do not need, and the 'cathedrals of consumption' allow for such duality. The mechanism that organises the needs and choices of the modern consumer are illusions, imaginations, instincts, not reason. The sphere which was treated with particular suspicion in Protestant ethics: carnality, sexuality, pleasures as hostile to rational work and life order, is now freed from the control of reason, together with its foundation: the myth/fiction of satiating and making man happy with goods, through the return to childhood memories or the realisation of dreams and expectations. In the spatial dimension, consumption zones are created, forming the *landscape of consumption*, e.g. the interior of a shopping mall, sports stadium, casino, where a person realises his/her primary need (e.g. watching a football match) and additional needs (food, buying gadgets). They are characterised by the disappearance of the distinction of places and related services and forms of activity (the principle of differentiated services), and along with this the disappearance of the distinction between the purchase of goods and fun, the activity of adults and children (photo 2), shopping and gambling (Las Vegas), tourism and consumption, restaurants and places of entertainment (McDonald's), consumption and ideology/environmental activities (Starbucks), the airport and a shopping mall (the so-called duty-free zones), between shops in the countryside

and in big cities, between remote places, between home and market, day and night, future and present (future income is consumed now), between human body and animal carcass (neo-cannibalism which is to guarantee immortality) (Wolniewicz, 2018, pp. 313–316; Wolniewicz, 1993, pp. 259–263), and finally a place and a non-place (photo 3).

Photo 1. Mall of America. Socialisation and being in one place as being next to each other and isolation; the centre as lack of meaning

Source: (44)

Photo 2. Mall of America as an ideal city

Source: (44)

Photo 3. New York Hotel, New York, Las Vegas. Experiencing a place as the place of all places

Source: (42)

The logic of consumer hedonism is that one pleasure causes boredom, becomes ordinary and prosaic; therefore, the new pleasure carries the promise of greater joy and greater happiness. Taking part in the consumption process requires the creation of new needs and the provision of new experiences. Man is exposed to increasingly intense stimuli (promotions, advertising, sexualisation of advertising, total advertising, loans, seasonal change of scenery, reorganisation of the interiors), encouraging him to undertake successive acts of consumption as an experience of fleeting happiness. In the material dimension, goods imitate food – they are supposed to provide temporary satisfaction and cause another desire (one cannot eat for life, for a month, for a week, for a whole day), the fulfilment of which involves repetition and, at the same time, variety. Hence, they have a short-term functionality and quickly go out of fashion, even if they do not stop working.

To own more means to consume more, which in turn means to exist more, look better and get more satisfaction from life. 'The highest goods are: more money, more food, more property, more health, more opportunities. More means less for Heidegger: evil is too much in the face of good, sex as lewdness is too much in the face of love, talking is too much in the face of silence, the city is too much in the face of the countryside, acquaintance in the face of friendship' (Drewniak, 2020, p. 70). The openness of being, as co-existence with others, is not possible when based on excess and the recurrent return of excessive acts of consumption. This is, as Heidegger's former student, Jan Patočka, pointed out, a structure specific to pagan demonism (Patočka, 1996, pp. 95–118). Multiplied and hyper-real impressions, objects, imaginations, desires, advertising images, profile pictures shade a Being that is characterised by weakness, it cannot penetrate or dominate them. The Being needs a distance, asceticism, anachoresis, simplicity, place, things and empty hands.

The kenosis of things as the kenosis of place

A human being, through his relationship to the earth (other people), expresses his relation to heaven (divinity), thus the establishment of man's divinity is realised by taking the earth into possession. This act of killing God recreates its archetypal consequences, manifested in the fall of Adam and Eve: possession deprives man of closeness, co-existence and place as a proper focus on the *axis mundi*. A thing, in Heidegger's conception, finds its foundations in the earth, not only because every thing rests on the earth (through other things), but also because every thing is made of matter, and thus of that which belongs to the earth itself. Moreover, the thing reflects the earth with itself, in the thing the

earth, secret to itself, remaining as if in a dream, achieves openness in its essence (Heidegger, 2002a, pp. 29–43). Only then, reflecting within themselves the truth of the mother earth, and with it the truth about man, do they find their place. Things remain, as Heidegger's analysis of the jug, the bridge and the hut demonstrates, open to the emptiness through which they can give place, receive and pass on (Heidegger, 1978, pp. 157–175).

Let us briefly illustrate the above relationships with two examples. In the tradition of nativity scenes, begun in the 13th century by St Francis of Assisi, the ontic insignificance of the nativity scene is linked to the kenosis of the Incarnation. In the words of the ascetic who beloved poverty and the poor, the aim of the composition is to 'celebrate simplicity, glorify poverty, emphasise humility.' The born Jesus lies in a crib, on a place for animal food, on straw, adored by animals and shepherds. Next, there are Mary and Joseph, the figures of a poverty that enables closeness to the God himself (photo 4). A child deprived of his own home finds a place, but at the same time it does not give him full shelter, making its vulnerability and openness to the world visible (photo 5). The lack of grandeur of the folk representation, often stopping at the iconic outline of the figures, reflects the humility of the divinity more fully than the artistry of the representation of the great masters (photo 4). The wood used to make the nativity scene, like the crib in which Jesus lies, refers back to the earth, the tree of the cross, the Passion and the sacrifice (photo 4).

Man looks down on God, only the act of kneeling reverses this perspective (photo 6). God is always in the lower, the humiliated, deprived of perfection. In approaching God, man must descend, approach the lowest. The exaltation of the cross should therefore be understood as demonstrating the fullness of God's weakness. The crib gives a place to God and gives a place beside God to the extent that man adopts an attitude of humility, humbling his will, his intellect, and also his body.[4]

In the above context, to give place is to withdraw, making place for someone else, it is also to give up one's due place resulting from the order of authority.

Another example of operating the emptiness can be found in The Chapel of Our Lady of the Heights designed by Le Corbusier (*Chapelle Notre-Dame du Haut*, 1955). It is located in the place of a temple destroyed during World War II (turned into a defensive point by the Germans), which was a place of Marian cult. The church offers shelter, it opens to the outside with small windows and doors,

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4   After professor Jan Krasicki: the nativity scene has a high threshold and a low ceiling. St Francis' cell near Cortona is constructed in a similar way.

Photo 4. A folk nativity scene. The bareness of the shelter and figures, the so-called 'świątki' (figures of saints carved in wood, for example of Christ or Virgin Mary), with hard and painful outlines. They express reflection and sorrow rather than joy, prefiguring the Passion and death of Christ

Source: (45)

Photo 5. Giotto, Adoration of the Magi. The exaltation of insignificance and the lowness of greatness. The architectural form, apart from the canopy, remains open, leaning against the rock at the back, which emphasises, like the Star of Bethlehem, the vertical orientation of the shelter

Source: (42)

Photo 6. Paul Rubens, Adoration of the Magi: Humiliation of power before weakness, sheltering in the ruins of an ancient building

Source: (40)

and its silhouette points towards the sky (sun) (photo 7). It is firmly embedded in the earth: in Catholicism and Orthodoxy, the Mother of God expresses a connection with the earth, the wholeness of existence. She is therefore not just the Mother of God, but the mother of all people, especially mother of sinners. The Church does not as much rise to heaven as it draws heaven, admits it into its interior and into the darkness of man's soul. This expresses man's inseparable connection with the earth and the wholeness of existence, in that man's salvation lies in the transformation of the earth, the openness to God that characterised Mary in her modest daily life.

The light pours in through the window above the cross, displaying the statue of the Virgin Mary that was recovered from the destroyed church, the only figurative representation in the entire chapel. Only through it can we see the cross of Christ, a self-offering love. The emptiness of the church, containing only the forms necessary for liturgy and prayer, brings man and God closer together, reducing the symbolic aspect to a minimum (photo 8). The suffering son of the Father (not visible in any representation) becomes the figure of the

Photo 7. The Chapel of Our Lady of the Heights (Chapelle Notre-Dame du Haut)
Source: (41)

Photo 8. The Chapel of Our Lady of the Heights
Source: (43)

kenosis of God, reconstructing the *axis mundi*, the condition of which is descending into the darkness, the greatest distance and the subsequent conversion (Resurrection). It recreates the bond of all existence – connecting 'below,' 'on' and 'above' the earth, indicating that suffering (letting go of selfishness) unites earth and heaven. After death, Christ descends into the abyss, into the 'interior of the earth,' for sinners, following, like the good Samaritan, downward after the sinner, and this idea can be read from the lowering of the level of the church towards the cross. In the simple construction of the church, the Christianity is revealed in the simplicity of its truth: the suffering of God together with man, the divine sacrifice and man's responsibility for the salvation of all. The greatness of God is not expressed in his infinite difference from man, what is encoded by monumental architecture, reflecting man's desire to objectify himself in an

architectural form that displays power (Gidieon, 1944, pp. 552–553), but in his infinite closeness, he is closer to man than the man is to himself.

Conclusions: place and the kenosis of heart

The kenotic simplicity of things gives man his rightful place on earth, by placing things and other people in the simplicity of his heart. The mother teaches her son to sacrifice, to give himself to others, and carries him, like the Sistine Madonna in the original space of the painting, towards the altar and the cross, towards the vanity of the transformation of bread and wine into flesh and blood (Heidegger, 1983a, pp. 119–121). The simplicity of the heart means its non-distortion by the desire to be for oneself, to close oneself off to others. Simple means noble, righteous, obedient; his love, as we read in St Paul, 'is patient, is kind' (1 Cor 13:4). This is what the Heidegger's ideal of 'poetic inhabitation' in the midst of the 'night of the world' consists in; that through suffering, the refusal of Being, its hiding in nothingness beyond existences, at the same time leads to the purification of the human heart from the will to power and greed; the sense of sacrifice, gratitude, friendliness, which make possible and locate 'what is free and open for the habitat and inhabitation of man' (Heidegger, 1983b, p. 206). The kenotic aspect of the place, along with the heart, makes a person's hands free to receive and give, activating, instead of taking and retaining, the circle of mutual giving of oneself. The giver and receiver switch their positions and the hand movement performs the complete 'from' and 'to' sequence. The circle of goodness is closed, however, not to close in on itself, but to become a catalyst for other circles. The goodness joined in a circle by places and things opens people's hearts and begins to circulate in its extraordinary nature, teaching at the same time that goodness grows through giving. As Heidegger states, Being is an event, 'enowning' (*Er-eignis*) (Heidegger, 1989, p. 4; Heidegger 1999, p. 19), an endowment that gives itself through its own diminution (expropriation) in relation to existence (beings). *'Es gibt'* (enowning) manifests itself in community, a communion of mutual sacrifice (Benisz, 2015, pp. 547–563).

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Bogusław Szuba / Tomasz Drewniak (eds.)

Beauty in Architecture

The subject of the monograph is a multi-layered interpretation of beauty in architecture, the analysis of key ideas, attitudes, and concepts related to the art of shaping space focused on perfection and harmony. An integral approach to significant problems related to shaping the spatial order, taking into account a wide range of social, cultural, aesthetic, and environmental factors related to the beauty and harmony of a place, is a distinctive feature of the monograph. The statements of many theoreticians and practitioners of architecture from Poland and abroad, emphasize the beauty in architecture as an important feature of human surroundings. Architecture, apart from the features of utility and the required technical correctness, should lead to delight, deep reflection, and emotion.

The Editors
Bogusław Szuba – professor at the University of Applied Sciences in Nysa, Poland. His main areas of research include studies on aesthetics, philosophy and art in architecture
Tomasz Drewniak – professor at the University of Applied Sciences in Nysa, Poland. His main areas of study concern philosophy, and sociology of art.