Modernity in architecture - Tokyo, Osaka, Dubai, Gdańsk, Katowice

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Abstract. The article describes conducted observational studies of contemporary architectural objects in various parts of the world. Examples from Japan, the Emirates of Arabia and Poland - contemporary architecture of cities: Tokyo, Osaka, Dubai, Gdańsk, Katowice have been described. He evaluates them and draws attention to the essential elements. He conducts an original discussion on the contemporary architecture. In the subjective assessment, two elements are always important: meeting the investor's goals and the needs of users. Observation of what is happening new in a built environment is an integral part of the architect's work. Of course, it is good to look at new architectural realizations of buildings and examples of space management, not only superficially, e.g. in terms of the overall aesthetic image or an interesting detail, but also to make a somewhat deeper assessment. Evaluations, e.g. in terms of meeting the needs and satisfaction of users, efficiency and cost-effectiveness of solutions. In order for the assessment to be professional despite the fact that in the observational form (own observation) well as the architect knows the basics and techniques of qualitative research. Qualitative observational studies were aimed at identifying factors shaping contemporary architectural objects and the surrounding space. Due to the globalization, the scope of research has been established to be very wide, taking into account different regions and cultures. The result of the research was to identify various types of elements affecting the quality of architecture. The main elements of this analysis include adapting objects to the various needs of users and investors. The universal principles of typical solutions of the contemporary architecture related to the quality of this architecture were also defined.

1. Introduction

The subjects of the article are observational studies in the field of contemporary architectural objects in various parts of the world. Examples from Japan, the Emirates of Arabia and Poland - contemporary architecture of cities: Tokyo, Osaka, Dubai, Gdańsk, Katowice have been described. He evaluates them and draws attention to the essential elements.

Observations of what is happening new in a built environment are an integral part of the architect's work. Of course, it is good to look at new architectural realizations of buildings and examples of space management, not only superficially e.g. in terms of the overall aesthetic image or interesting detail, but also to make a somewhat deeper assessment. Evaluations, e.g. in terms of meeting the needs and satisfaction of users, efficiency and cost-effectiveness of solutions. In order for the assessment to be professional even though in the observational form (own observation) well as the architect knows the
basics and techniques of qualitative research. Conclusions from such observations or qualitative assessments are extremely valuable, as they draw attention to shortcomings, defects, errors and show good design practices [1-4]. It is knowledge directly from the source - from the built environment and its users.

During the study trips to the aforementioned cities, the authors conducted observational studies in the field of contemporary architecture, photographic documentations and expert assessments, complemented by interviews with users. Based on the research, they made analyzes and summaries. The article presents the most important selected applications.

2. Observational studies

The authors of the article present the Silesian School of Quality Research. They have proprietary methods for assessing the quality of objects. In the research, they pay special attention to meeting the needs of users of facilities and public spaces. The author's methodology of qualitative assessments is described in references [5], [6]. Interesting examples of research are presented in [7-9, 2, 3]. However, problems resulting from non-use of research in design are given in publications [10], [11].

3. Japan – Tokio and Osaka

Japan has always been delighted with technological progress. She also excelled in building solutions. Currently, it does not delight as it once was. Although there are many interesting buildings in Tokyo and Osaka, the Japanese lack the new investment drive they experienced in the '70s and '80s. Currently, new places on the world map are attracting attention, e.g. Shanghai, Singapore or Dubai. Interesting, spectacular objects appear there. Of course, the Japanese still want to compete. In Tokyo, in 2012, the tallest TV tower in the world, Sky Tree, was built, which is 634m high and is over the 34m Canton Tower in China (height 600m). Tourist terraces available for tourists were placed on the 350m and 450m levels. Tokyo Sky Tree is located in the district of Sumida. Due to its location and altitude, it is a significant landmark in the city, it is visible from many places whether we are near the Edo Tokyo Museum, sumo arena Kokugikan (Sumo National Stadium) or the Asakusa temple. The tower's enclosure is a multi-storey and multi-functional shopping, entertainment and catering center with numerous outdoor terraces around. In the main hall, an exhibition of a dozen or so contest proposals for the tower was presented. The service leads to the elevators from the lobby. When driving, the lift (600m / min.) Is visible on the first viewing terrace and the actual height is visualized on the display. At the level of 350m, you can admire the entire panorama of the city. Multimedia information displays help in locating objects. If you want to go higher by 100m, you should buy a ticket and take the elevator. The last terrace at 450m is multi-story with a scenic walking ramp around. During your stay on the viewing levels you can take advantage of many bars and cafes, and after going down to the lobby, visit the shop (Sky Tree Shop), followed by a shopping arcade and outdoor terraces. The combination of the technical functions of the tower with well thought-out commercial (tourist) means of importance in "earning" the object. The facility has become one of Tokyo's major and obligatory tourist attractions. An additional attraction of the object is the night-time multi-colored and changing illumination. Due to the supplementary functions, the urban space around the tower is a place where residents meet and relax until late evening hours (Figure 1, 2, 3).
Figure 1. An interesting characteristic building of the Tokyo brewery

Figure 2. Sky Tree in Tokyo, a general spatial mess in the city, a view from the height of 350m, an interesting steel structure, a backlit at night
Figure 3. Sky Tree in Tokyo, steel structure, backlit at night, detail

Such buildings have psychological and social significance for the state. It is worth undertaking bold investment challenges, they confirm in their own technical capabilities, they testify to the achieved technological level, build the faith, appreciate, and leave any complexes. They emphasize their place on the map of works of world architecture and engineering. It is worth visiting the official website of the All-Japan Tower Association (www.japantowers.jp) and see 20 other towers or buildings with view terraces of Japan.

In Osaka, there is a characteristic object in the form of a gate with a circular opening in the roof - Umeda Sky Building (173m). It is an office building, and at the same time, a tourist attraction due to its shape, and the possibility of entering the roof where at a height of 173 m there is a terrace called "floating garden observatory". Both functions are independent. The building is higher than the Warsaw InterContinental by 9m (compared to the Palace of Culture and Science is 231 m high). Tourists to the top of the object (39th floor) get from the main hall, an independent external elevator, and then slanted and suspended on the outside of the escalator. All the time while driving up the glass elevator and stairs you can observe the construction and elevations of the building and the city skyline.

Entrance to the terrace is payable. At the top, we will be delighted by the beautiful view of Osaka. We can view it from the inside of the story through glazed sloping walls, from the cafe area or directly from the open terrace. The open terrace was organized in such a way that you could conduct uninterrupted space obstacles to observe the whole panorama of the city from every side of the building. A curiosity is the "love-bench" placed on the terrace. The building in its shape creates a "gate", "arch". Two side pylons of high-rise buildings were connected at the top of a three-level exhibition and observation center with a characteristic circular hole cut in the middle. (Figure 4)
4. Dubai

An unusual place, a place associated with the desert. These are extremely difficult conditions for construction projects, where high temperatures and lack of water prevail and greenery and sandstorms. In addition, a 30m layer of sand that cannot be used for construction and other obstacles. They are Arab Emirates, and in particular Dubai. Looking at what has happened in the last few decades in Dubai, it can be said that nothing is impossible. So, when we have vision and money, there are no problems. Everything is possible. In the Arab Emirates, a huge civilization leap took place, marked in construction. Good financial prosperity and prestigious architecture go hand in hand. Dubai is a place where economic success is expressed in architecture. The number of new facilities is unusual and impressive. Many innovative ideas were also implemented here, eg the only seven-star hotel in the world (Al-Arabian Bud), the artificial "palm trees", islands, an indoor ski slope, Dubai Marina, etc. Of course, the battle with the desert continues all the time.

The king of buildings is still the world's highest Burj Khalifa (828m). But, as we know, it's not the end of challenges, it's not all. Currently, there is an even higher Creek Tower (1,350m). A building with a beautiful, slender shape in the shape of a 'spear' with stays. Thus, according to the authors, it is Dubai that can now be called the capital of modern architecture. (Figure 5-8)
Figure 5. Panorama of Dubai with the highest Burj Khalifa (828m)

Figure 6. Dubai Marina
5. Gdańsk
The port city of Gdansk boasts a beautiful old town with frontages with characteristic roof shapes. In recent years, it has been decided to free the free space of the old city for new investments. As a result of these activities, an investment boom was created. The new development complements the gaps of historical buildings. At the same time, the new high-quality architecture perfectly matches the existing one and complements it. Investors also adapt old grain granaries to new functions. New features are mainly luxury residential apartments (due to location) with accompanying functions (services, gastronomy, trade). Excellent location gives special value to investments. Also, excellent contemporary architecture gives a whole new quality. This is an example of a perfect symbiosis of historical and contemporary architecture. Modern architecture is not only a supplement but a background for historical objects, while adapted historical objects acquire an interesting character through new elements and details (Figure 9, 10, 11).
Figure 9. New, referring to the historic architecture of Gdańsk

Figure 10. New architecture of Gdansk in a historical building

Figure 11. A characteristic shape of the Museum of War, Gdańsk
6. Katowice
Katowice - the capital of Upper Silesia in recent years has changed its face thanks to modern architecture. It was decided to give a new image to the city in the mining region - a city of culture. In the center, the Culture Zone was built, which consists of several outstanding buildings, such as: the European Congress Center, the Concert Hall of the Polish National Radio Orchestra, the Silesian Museum. All objects are connected with public spaces with catering points. The Congress Center with a characteristic passage through the green roof has become a cult and favorite building of residents. Thus, through a well-planned contemporary architecture, we create a new quality and give a new image to the city. Attractive architectural objects are becoming a significant marketing element of the city (Figure 12-14).

![Figure 12. Historic and newest buildings, Katowice.](image1)

![Figure 13. European Congress Center, Katowice.](image2)
7. Conclusions

Interesting and attractive contemporary architecture gives a new quality. Modern architecture is perfect for revitalizing historical objects. Modern architecture is not only a supplement but also a background for historic buildings. Thus, through a well-planned contemporary architecture, we create a new quality and give a new image to the city. Attractive architectural objects are becoming significant marketing elements of the place. They are an expression of development, success and prestige. They attract visitors, tourists and other investors. Wise management of the built space, appropriate urban and economic decisions have an impact on the growth of the building development. The examples mentioned and tested confirm the importance of the modern architecture in urban development. Modern prestige, development and success have been expressed through the modern architecture. Modern architecture is the image of a place. Its appearance and character are of great importance for the assessment of the place. Attractive objects and public spaces are the best forms of advertising and promotion of the city.

But always remember the user, he uses the buildings and judges them. That, in an investment hurry, does not lose the essence of architecture in the service of man. The bases are well-prepared pre-design qualitative research and recognition of users and their needs.

Spectacular buildings, which often become icons of places, also have a psychological and social significance for the state.

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