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Sport facilities and their social meaning – in the past and present

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Obiekty sportowe i ich społeczne znaczenie – w przeszłości i obecnie

Streszczenie

Społeczne znaczenie obiektów sportowych, ich funkcja i rola zmieniały się na przestrzeni wieków. W niektórych aspektach te zmiany są płynne i harmonijne, w innych – szybkie i dynamiczne. Dzieje się tak z powodu wielorakich przyczyn, ale u ich podstawy tkwią zawsze najbardziej zasadnicze przesłanki: obiekty sportowe mają za zadanie odpowiadać na aktualne potrzeby i oczekiwania społeczne. W Europie od ponad trzech tysięcy lat rozwojowi poszczególnych dyscyplin towarzyszy ewolucja obiektów sportowych. Aby sprostać tym potrzebom, oczekiwaniom i wymaganiom – architektura obiektów sportowych powinna być niezwykle zróżnicowana. Ta różnorodność przejawia się w różnorodności stylów, konstrukcji, materiałów budowlanych, form i funkcji – w zależności od epoki, funkcji, cech przyrodniczych i krajobrazowych, oczekiwań społecznych, a także możliwości realizacji i sytuacji politycznej. Ponadto kształt, wielkość i program użytkowy obiektu sportowego zawsze zależą od dyscypliny i przepisów sportowych. Jednak ich główna rola jest uniwersalna: wielka użyteczność dla społeczeństwa, zaangażowanie w tworzenie tradycji i tożsamości miejsca. Powinny zawsze dobrze odpowiadać na niezwykle silne sportowe emocje, utożsamiając piękno i szlachetność z użytecznością i etosem sportowej rywalizacji – te wartości są niezmiennie.

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W roku 2020 wybuch pandemii COVID-19 udowodnił, jak ważna i cenna jest możliwość sprawnej adaptacji obiektów sportowych do nieoczekiwanych sytuacji i pilnych społecznych potrzeb.

Słowa kluczowe: sport, architektura, obiekty sportowe, społeczeństwo.

Abstract

The social significance of sports buildings, their function and role, have been changing within centuries. In some aspects, they are constant and harmonious, in some – quick and dynamic, but their ways are to answer the needs and expectations of their host society. In Europe, for more than three millennia, the development of individual disciplines has been accompanied by the evolution of sports facilities. To meet these needs, expectations and requirements - the architecture of sports facilities should be highly diverse. This variety is manifested in various styles, constructions, building materials, forms, and functions – depending on a given era, on the role, on the environmental and landscape features, on the social expectations, and the possibilities of implementation and political situation. However, their prominent role is universal: great usefulness for the society, their involvement in creating the tradition and identity of the site. They should always respond well to the emotions of extreme sports, equating beauty and nobility with the utility and ethos of sports competitions. In 2020, the outbreak of the COVID-19 pandemics proved how important and valuable is flexibility, the readiness of sports facilities to meet unexpected challenges and new situations.

Keywords: sport, architecture, sports buildings, society.

Introduction

The social meaning of sports buildings, their function and role, has been changing for centuries. In some aspects, they were constant and harmonious, in some – rapid and dynamic, but always meant to respond well to the needs and expectations of the local communities. The meaning and ethos of physical culture – is an ideal model, a pattern of values and norms related to the style of sports. Therefore, if and how can athletes follow such expectations and deals in the sports facilities? However, as it turns out, such efforts have been made since ancient times, often with excellent results. The functionality of sports architecture can be discussed in the light of inspiration originating from tradition and history. However, it is also influenced by new ideas. The significance of sports ethos and the social role of sports architecture can be found in the function and program, construction and aesthetics of sports facilities [1, 11, 12, 15].

The history of sports is also the history of our civilisation. In Europe, for more than three millennia, the development of individual sports disciplines has been accompanied by the evolution of sports facilities. It covers the period from the Ancient Olympic Games to modern sports architecture. It covers a wide range of constructions: buildings erected for the needs of the most extraordinary sports events, such as the Olympic Games, and sports facilities accompanying education of children or daily recreation of urban residents [3]. To meet these needs, expectations and requirements – the architecture of sports facilities should be highly

diverse. This variety is manifested by various styles, constructions, building materials, forms, and functions – depending on a given era, on their role, on the environmental and landscape features, on the social expectations, and the possibilities of their implementation and political situation.

Moreover, the shape, size and program of a sports facility always depend on the sports discipline and rules. However, their primary role is universal: it is their usefulness for a local community, their involvement in creating the tradition and identity of the site. They always respond well to the emotions of the extreme sport, equating the beauty and nobility with the ethos of sport competition – these values are unchanging. In 2020, in the year of the outbreak of the COVID-19 pandemic, it was clear how important the flexibility and readiness of sports facilities is for unexpected changes and how valuable are these sports edifices (stadiums, sports halls) which could be quickly and efficiently adapted to the new functions, meet the challenge of the new situation (converted into temporary hospitals, or sports stadiums meeting all sanitary safety restrictions for organised events) [23].

The presented material was prepared based on the statutory research projects (ds-144 and ds-316) conducted at the Józef Piłsudski University of Physical Education in Warsaw. These research projects, focused on the history of sports architecture in Europe, understood as an outline from ancient times until present times, were undertaken based on the Ministry of Science and Higher Education grants. The research was focused on systematic collection and analysis of data related to the history of European sports facilities – in the past and nowadays. To achieve those goals research process involved a variety of methods, research techniques and valuable tools: historical research (extensive literature survey connected with the problem), contemporary sports building and facilities requirements (extensive literature, sport federations regulations and documents survey together with a case study, undertaken in the selected sports facilities in Warsaw, surveys performed with the use of structured forms together with photography documentation). Analysis and interpretation of the collected data (primary and secondary, qualitative and quantitative) allowed formulating conclusions. This article presents selected research results, synthesis of the general character of research studies, supplemented with the recent impact of COVID-19 pandemic on the function of sports facilities [5].

The social significance of physical culture seen in the sport facilities

Many historical and modern sports facilities are outstanding buildings, documenting the fantastic achievements of our civilisation in the field of engineering structures. In ancient times – the Coliseum in Rome with timeless, functional solutions, and in modern times – an innovative sports hall in Raleigh, designed by

a Polish architect, Maciej Nowicki, or the Olympic Palazetto dello Sport in Rome, designed by the architect Pier Luigi Nervi. Examples of the extraordinary aesthetic qualities in the antiquity period can be seen in Delphi, perfectly harmonised with the surroundings and, in modern times, in the outstanding construction of the suspended roof of the Olympic Stadium in Munich or the sculptural forms of the Olympic Swimming Pool in London. Other monumental objects that have become milestones for sports buildings, highly valued for their beauty and harmony of composition, are the Hockey Stadium at the University of Yale, USA (designed by a Swedish architect Eero Saarinen, 1958), the Olympic Complex in Tokyo (designed by a Japanese architect Kenzo Tange, 1964), the Olympic Complex in Sydney (designed, among others, by a Polish engineer Edmund Obiał, 2000) or the Olympic Complex in Beijing (designed by an international group of architects from Hertzog & de Meuron, ArupSport and Architecture Design & Research Group, 2000) [14, 17, 18]. In December 2020, Wojciech Zabłocki (1930–2020) passed away. He was one of the most famous Polish architects and sportsmen, internationally recognised author of many sports facilities in Poland and abroad (sports halls in Warsaw, Puławy, Konin, the velodrome of Pruszków, a sports centre in Syria).¹

One should note that among the outstanding works of architecture, often opening an entirely new chapter in the history of sports constructions, are predominated by objects constructed for the needs of the Olympic games. Significant sporting events are catalysts for introducing new products and construction innovations, new technologies, building materials and aesthetics. These monumental sports facilities arouse admiration and very often become icons of their home cities, their precious landmarks. They are given nicknames by the proud inhabitants of the cities where they have been built – like the Olympic Stadium ‘Bird’s Nest’ in Beijing.

The most critical historic sports facilities of recognisable value are unique parts of cultural heritage. The most outstanding ones, recognised as pieces of important human estate, are inscribed on the UNESCO World Heritage List: e.g. ancient Roman amphitheatres of the Coliseum (Italy) and El Djem (Tunisia), thermal Baths in Bath (UK), antique arenas in Arles and Orange (France), together with ancient Greek sports and sacral facilities in Olympia, Delphi, Ephesus, Aphrodisias, Thermessos and Hierapolis [22].

¹ Wojciech Zabłocki (1930–2020), prof. PhD. Eng. arch., Polish architect and swordsman, a student of the Hungarian swordsman Janos Kevey. He participated in four Olympic Games, and won two silver (Melbourne 1956, Rome 1960), and one bronze Tokyo 1964), medals in team sabre fencing. He participated in the FIE World Championships in Fencing and won four gold (team: 1959, 1961, 1962, 1963), one silver (team: 1954) and four bronze medals (individual: 1961; team: 1953, 1957, 1958), and he was a five-time Polish champion. In 1953 he became the individual world junior champion. He graduated from the Faculty of Architecture at AGH in Krakow. Wojciech Zabłocki was author of many outstanding projects of sports facilities, monuments, residential architecture, books, paintings and drawings (his works were exhibited in Poland and abroad).

Prestigious sports facilities are expensive buildings, but their investors usually do not hesitate to make them beautiful and fanciful. Elegant and opulent architecture not only well harmonises with the sporting ethos and significant sports events, but it has commercial significance as well. In modern times, in the era of visual domination of TV, it becomes an inherent attribute of a sporting spectacle, making excellent scenery for the 'sports theatre', which has millions of viewers around the world. Today's stadiums, sports halls and swimming pools must be eye-catching and dominant over their neighbourhoods because their owners consider them essential business cards. Being a proof of power and significance (of a city, financial institution, corporation or a sports club), they have become a 'living advertisement'. Crowds of tourists fascinated by those mega-buildings visit huge sports stadiums only out of curiosity, intrigued by the unusual building structures and their beauty, their history – also when there are no sports events organised in a given facility. In response to these needs, famous stadiums, for example, the Manchester United Stadium, FC Barcelona Stadium, National Stadium in Warsaw, Olympic Park in Munich, Beijing Olympic Village, provide different opportunities to visit the site, having developed various tourist routes [19, 20, 21].

From the beginning of the 20th century, we dealt with sports facilities erected temporarily, especially for specific occasions and taken apart when they were over. They included certain sports facilities prepared for the Summer Olympic Games in Amsterdam (1928), the Winter Olympic Games in Oslo (1952), the Summer Olympic Games in London (2012) and in Rio de Janeiro (2016). Naturally, solid facilities, calculated for use in the long term, predominate. These latter types are usually impressive in scale and costly investments, placed in the most prestigious locations, owned by prominent corporations and banks, state governments or vibrant cities. Renowned football clubs are welcome by city authorities, which are often willing to subsidise sports facilities – only to keep such a famous team at home.

Today, in many European cities, large stadiums and monumental sports facilities are built with combined funds called hybrid investments. They are called 'Public-Private Projects' ('P-P-P'): the city usually contributes to the form of land, and a private investor finances the construction. In the case of the EU countries, the government (or local government) is most often the sole investor financing the construction of non-commercial sports facilities (in schools, public parks or other sports facilities for residents) - to meet the needs of the local community.

In the case of very high-level sporting events (as of Summer or Winter Olympic Games, world championships, European championships), governments feel responsible for financing sports facilities, as the dimension of such events is global and will undoubtedly be of great importance for creating the desired image of the country, region or city [6, 7, 17, 18].

The function and form of modern sports facilities

Nowadays, like in ancient times, some buildings are specially designed and erected for a given function. In the case of the majority of the sports facilities, it is a fact. However, sometimes, primarily for economic reasons, sports buildings have other functions than sports (permanently or occasionally) functions. This rational attitude and the multilateral use of a sports facility are associated with high costs of the investment and its maintenance. Furthermore, there are also specific social benefits of such a solution. This common-sense approach to sports buildings use has not changed for millennia. The amphitheatres built in ancient Rome were used for sports games, entertainment shows (including 'nautili' shows), state and religious ceremonies, assemblies and political rallies. The function of the currently erected large football stadiums is not different. For example, in the National Stadium in Warsaw there are such events as football matches, athletics competitions, competitions in water sports (windsurfing), political rallies, religious ceremonies, and concerts of pop music organised [5].

Such diverse functions of sports facilities require considering many conditions, including good visibility of the arena from seats in the stands. Hence, there was a considerable evolution in the shape of the stadiums: from a horseshoe shape characteristic of ancient Greece to an ellipse invented by the Romans. Today, a slightly corrected form (an oval shape) dominates in the plans of sports stadiums.

When leaving a large stadium, the safety requirement for spectators turned out to be ideally solved as early as 2000 years ago. The Romans, when solving this problem for the Coliseum, designed logical vertical and horizontal communication paths. As a result, both in the 1st century AD and today, evacuation of an audience of more than 50,000 spectators takes only about 8–10 minutes. All this is possible because Roman architects applied the innovative concept of dividing the audience into separate sectors and provided a transparent communication system of staircases and corridors [3].

Despite the possibility of using the ancient experience, the growing technical requirements and expectations of users regarding the sports infrastructure force designers to constantly search for new solutions concerning construction, materials and technology. In consequence, we can observe significant progress in sports buildings construction and technologies. There are new solutions to improve the functionality of facilities, increasing their acoustic and thermal comfort, energy efficiency and safety. Today thanks to these new technologies and construction solutions, objects with an unknown earlier function are created – for example, indoor ski slopes. The first indoor ski slope was the LaLaport Skidome SSAWS in Chiba, Japan (1999), covering 99,000 m². Inside, a constant negative temperature (–5 degrees Celsius) is maintained. These wonders of 'artificial nature' require complicated technology and construction and generate substantial maintenance costs in such a facility. Another novelty is the so-called 'intelligent

stadiums', prepared for performing different functions, in various weather conditions, for different audience capacities – which can be applied automatically. An example is the Satima Arena under Tokyo (2000), the movable roof and grandstand construction of which allows creating small (6,000 seats), medium (35,000 seats) or large (80,000 seats) audiences [14].

The Great Circus in Rome withstands 250,000 spectators is considered to be the largest sports facility in the ancient world. Modern design and technical capabilities allow the construction of stadiums with a comparable audience capacity. For example, Maracana Soccer Stadium in Brazil, completed in 1952, has places for as many as 220,000 spectators. However, due to the limited visibility and the considerable distance of the furthest rows from the arena, very high maintenance costs and problems with ensuring safety – such huge facilities are no longer being built.

There are numerous exciting analogies to the sports architecture of ancient Rome. For example, as in ancient amphitheatres (Coliseum), today all significant sports facilities have shops, restaurants, and special VIP lounges. The 'VIP Suites' of various sizes are becoming more and more popular. Some are small, having a few seats only, and some are large enough to have few dozens of seats, their lounge bar, vestibule, toilets and private elevator connecting directly to the parking lot. In antiquity, special 'VIP' spectators, such as heads of state, were distinguished in the same way. In the same way, for example, in the great Circus Maximus in Rome, the Imperial Lodge had a direct connection via the underground corridor with the Palatine Palace.

Tradition and individuality of sports facilities expressed in their names

In Europe, the tradition of naming monumental sports facilities is over 2,000 years old. In most cases, it was the name of the investor of the edifice, for example, Flavian's Amphitheatre (Coliseum), Karkalla's Baths, Hadrian's Baths, Diocletian's Baths. In modern times, we can observe another practice: the right to the name of the monumental sports facility is often sold to an institution or person who had nothing to do with constructing a given building. This phenomenon can also be observed in Poland, and we have at present: PGE National Stadium in Warsaw, PGE Arena in Gdansk, INEA Stadium Poznan. This is the practice applied to the newly erected and already existing buildings. As it may sometimes happen, the names of sports club sponsors (or the edifice owners) change so often that sports fans may miss them.

Consequently, they persistently use the 'old' name, which they have become accustomed to for decades. It also happens that sports fans, who have respect for tradition and historical continuity, vigorously protest against the name changes.

For example, in Ireland, under the local community pressure, the traditional name ‘Lansdowne Road Stadium’ has been restored to the Dublin Stadium.

Sports facilities – tragic and proud witnesses of the history of humankind

We all are aware of the tragic events, which took place at the ancient Roman amphitheatres. Unfortunately, modern history has also forced sports facilities to have tragic roles: stadiums have witnessed wars, executions and other bestialities – just like Roman amphitheatres. First of all, we should remember Velodrome d’Hivier in Paris, stadiums in Cambodia, Chile and Syria. In Poland – self-immolation, in a gesture of despair and political protest, of Ryszard Siwiec took place in 1968 at the Warsaw Stadium. In Germany, during the Summer Olympic Games, the Olympic Village in Munich (‘Olympisches Dorf’) was tragic events known as the ‘Munich Massacre’. On October 5, 1972, members of a Palestinian terrorist organisation assassinated athletes from Israel, [3]. In Europe, in the years 1935–1945, one of the ominous signs of fascism was the mass transformation of stone synagogues (Jewish prayer houses) into swimming pools or sports halls. For example, the Nazis decided in 1941 to convert the New Synagogue in Poznań into a swimming pool for Wehrmacht soldiers and the synagogue in Bierutowice into a sports hall.

After World War II, sports facilities were regarded (like other public edifices) as an architectural symbol of the new power and the new political system in the totalitarian states. It was nothing new, as it is impossible to separate sports from politics, for the simple reason that sporting events and successes are trendy elements of propaganda. Consequently, the noble sporting ideals can easily and cynically be used for particular purposes of any political game [2]. On the other hand, as we should remember, sports facilities also witnessed great and noble events that changed history – like the ‘Olivia Hall’ in Gdańsk, where the memorable Congress of ‘Solidarity’ took place in 1981.

In 2020, the year of challenging and tragic COVID-19 pandemic time, some of the urban sports facilities (stadiums and sports halls) were converted into temporary hospitals, as the World Health Organization strongly recommended isolation of patients [23]. One example is the National Stadium in Warsaw, others – sports buildings in Szczecin and other Polish towns. These are examples showing how sports facilities could quickly respond to the current social needs and help with the difficult time [21].

At this point, it seems reasonable to quote the Latin sentence, slightly changing the original: ‘stadiums have their fate’ (*habent sua fata libelli*). Like books, sports facilities sometimes turn out to have a unique and colourful history, closely related to the fate of societies and the history of European civilisation. Undoubt-

edly, over the past centuries, sports facilities have been authentic documents of our everyday life, our needs and expectations, and we can admit that they materially express the ethos of sports [9, 16].

Summary and discussion

The consistent continuity of the development of sports infrastructure in Europe is rational, inspired by the past, but not abandoning the constant search for modern solutions. It is necessary, as the sports facilities need to obey the law and must follow the changes introduced in the federation regulations. Most of the magnificent sports towers, erected in the past and present, are exemplifications of due respect for the ethos of sports standards of behaviour, values and physical culture traditions.

We have proof of this philosophy in the new buildings and the attitude towards historical edifices. We have numerous examples of careful legal protection and care for historic sports facilities, renovation and modernisation. It should also be emphasised that European societies have always treated sports facilities with pride and due respect, as extremely important for significant events and solemn celebrations, and needed in everyday life. In the past and at present, sports facilities were often built based on local initiatives of residents and then maintained by the effort of the entire urban community. These buildings are so important, that their location, program, function and external appearance cause extensive discussions and endless considerations; entrusted to be designed by outstanding architects and famous constructors. This attitude has not changed until today.

In the second half of the 20th and the 21st century, the concepts of sports facilities are characterised by a constant search for new, effective and at the same time functionally, constructively and materially rational solutions. It does not mean, however, that modern architects do not use experience. It is quite the opposite: it is enough to compare the functional program (not design, installation, material solutions – but the principle of use) of ancient thermal springs and modern assumptions for water parks. It turns out that not only the function but also their program rules are amazingly close and similar.

Will future societies consider sports a vital matter and see the necessity to erect new stadiums and sports halls? They certainly will, as recently almost 90% of inhabitants in 33 countries, will support the idea that international sports events matter for socialisation and integration, which was confirmed by an investigation conducted in 33 countries on the sample of 44 000 citizens of different sex, age and social backgrounds [9]. However, as we experienced in 2020, the impact of coronavirus disease 2019 (COVID-19) on sport can fundamentally change the way sports events will be organised in future. Consequently – the way the sports

buildings (stadiums and sports halls) will be designed and redesigned to respond better to the need for social distance and sanitary safety requirements [4, 23].

Therefore, it is exciting whether contemporarily erected monumental sports facilities, which we admire and consider as outstanding works of architecture, will prove to be timeless solutions. Hopefully, these towers, which so perfectly reflect the essence of sports, will meet the expectations of future generations and be consistent with the ethos of physical culture – also in the perception of their prospective users.

Moreover, let us hope that they will serve only the noble and fair play ideas, using the words of prof. Henryk Sozański – ‘for the ennobling training and sports theatre’ [13].

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