Architectural Accessibility of Historic Legacy: The Social Aspect and Design Prospects

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Abstract. Due to the necessity of eliminating civilizational backwardness, the contemporary discourse concerning the tradition and post-modernity is based on the assumption that the cultural environment is a part of an integrated system, and its function and form undergo changes in the course of a constant and complex process determined by the current economic, political as well as cultural circumstances. The recognition of the value of architectural monuments is an obvious fact, however, the idea of democratizing the legacy in the context of universal spatial design is a relatively new phenomenon. Adjusting the historic monuments to the needs of people with various limitations affecting their mobility and perception is less and less frequently considered in terms of oppression or arduousness. It has started to be perceived as a potential catalyst of positive changes. Architectural accessibility might contribute to popularizing the knowledge regarding the significance of historical legacy and provide the conditions for its sustainable development and stable subsistence. It is necessary to answer the question: can the cultural space along with the preserved throughout the history tradition of the absence of the excluded groups have a universal character, so that the conditions of using and experiencing this space by people with disabilities would not exceed their capacities. Owing to the fact that the application of universal design principles is practically more complex than the intuitive understanding of the concept itself, there is a need to continue multidirectional research taking into account methods for the real application of the assumptions underlying the ideas of social egalitarianism. The aim of the paper is adding new concepts to the debate on the roots of spatial discrimination and possibilities of counteracting this phenomenon by modifying the monuments, building complexes and historic places. The conclusions have been based on the analyses of international law regulations and available literature data, but, first of all, on the experience resulting from the cooperation with the people whose exploitation of the space environments is affected by various limitations and with the institutions through which they are organized. The dynamic and competent social and scientific dialogue concerning the issue of universality cannot be possible without the involvement of persons with disabilities.

The article is a voice in the discussion on the common accessibility standards and it attempts to answer a question whether, due to the risk of degrading the original buildings tissue, the introduction of physical changes implied by the ongoing socio-cultural transformation should be limited or rather supported. The paper includes suggestions concerning harmless modifications and supplementing the existing building tissue with those elements which could play a role in creating optimal conditions for the inhabitants’ wellbeing and further socio-cultural development. The Author presents arguments supporting the statement that a proper understanding of the physical and mental needs of the users, professional experience as well as a proper level of awareness and empathy might open new possibilities to the designers, thus contributing to the effective reduction of the barriers existing in the space or even to their complete elimination.
1. Introduction

Inextricable bonds between socio-cultural patterns and architecture are illustrated by the developed throughout the century’s history of spatial exclusion of individuals with physical disabilities and those who are ill or old. Social banishment of the disabled is a natural consequence of the remote past. However, the ongoing legislative and social changes cause that assimilation of universal design principles derived from Human Rights Treaty of the United Nations: Convention on the Rights of Persons with Disabilities [1] does no longer remain the question of good will. Whereas on the theoretical level the intentions of those participating in the worldwide dialogue concerning the right to equality seem to be analogical, the multidirectional consultations regarding the realization of the accessibility principles often turn into acrimonious disputes. This situation might result from the differences in the understanding of the scope of social and professional responsibility of those who are involved in the design processes, gaps in the regulations as well as the limited number of role models for so called “good practice”. Cultural values are often considered in opposition to economic and social arguments, which leads to a conflict of interest.

Based among others on the problem of increasing the accessibility of historic monuments, it can be clearly seen that practical application of universal design principles is far more complicated than the intuitive understanding of the concept itself and there is a vital need to continue multidirectional research taking into account methods for the real application of the assumptions underlying the ideas of social egalitarianism. The aim of the paper is adding new concepts to the debate on the roots and consequences of spatial discrimination, which tends to dominate the cultural landscape, and possibilities of counteracting this phenomenon by modifying the monuments, building complexes and historic places. The conclusions have been based on the analyses of international law regulations and available literature data, but, first of all, on the experience resulting from the cooperation with the people whose functioning in the public space is affected by various limitations and with the institutions through which they are organized. The dynamic and competent social and scientific dialogue concerning the issue of universality cannot be possible without the involvement of persons with disabilities. In order to initiate such a debate, it is necessary to work towards the systematic increase in the accessibility of the existing, culturally valuable spaces to those citizens who have been so far eliminated from these environments and, as a consequence, deprived of the right to express their opinion.

2. Tradition of absence

“Whereas a healthy body is subjected to the selection of visibility, a sick body is doomed to complete silence and public absence. What does not fit into an accepted norm, does not have a right to public representation” [2].

In the multidimensional context, space parameters are not only the reason for exclusion of disabled people from the social life, but also a consequence of developed throughout the centuries social theories and traditions. Along with asking the question concerning the scientific background of the inaccessibility of historic buildings, we raise the issue of the substance of disease and disability as a scientific concept, including the stereotypical view that individuals with reduced ability are useless and pose an epidemiological, economic and cultural burden on both the family and the social level. According to the research by Georges Minois, since the beginning of time the social status of both elderly and disabled people has been determined by three factors, the first one being the physical impairments. It is followed by presumably the biggest assets such as intellectual capacity and knowledge and finally by the degradation of physical features. The acceptance of individuals or groups with certain limitations has depended among others on the civilizational level of a particular society. Their situation was the worst “in the most anachronistic societies based on the dominance of the strongest” [3].

“On the other hand, civilizations that worshipped body aesthetics, condemned ugliness and deformation” [3]. It should be noted that “in all the distant epochs the concept of removing an
individual from active life was apparently non-existent” [3], and those persons whose “inactivity” was caused by the dysfunctions of the body system were in most cases “excluded from humanity” [3]. Georges Vigarello presents a comprehensive, including the contemporary times, outline of defence attitudes toward weaknesses and physical flaws [4]. Social consciousness is to some extent shaped by the developed throughout the centuries civilizational experience resulting from a difficulty in “the quick realization of the unique character of each epidemic” [4] or disease. “The nearness of and contact with a sick person and their surrounding arouse fear. People tend to abhor the touch or breath, which leads to social rejection (…)” [4]. This sense of threat derives from the traditional distrust toward the consequences of the contact with something that is considered “impure”, although in contemporary times this term does not anymore signify total “purity” including also the moral attitude of a person [4].

An opportunity to realize the concept of social and professional activization of individuals who have so far been discriminated derives from the 19th and 20th century progress made in relation to the standards observed in the previous systems, where there were no intellectual tools which would allow penetrating the structure of the human organism and its diseases: “there has been a breakthrough in the methods of disease prevention; currently they rely on the development of individual ways of defence rather than the separation of the carrier (…)” [4]. Those changes have been established in the social consciousness due to the spread of diseases, which the hygiene experts from the beginning of the previous century happened to mention only occasionally. At the same time there arises a chance to suppress those traditional fears, thus providing the real grounds for the society to become willing to make attempts to counteract the foregoing physical isolation of people with disabilities.

3. Elements of accessibility

Particular communities create their own reality, however, buildings which provide places for common habitation, extra-individual contemplation, reflection, education and work can generate the culture of mutual acceptance and understanding, which undermines the negative attitudes [5]. In order to make a space accessible, the conditions of its utilization cannot exceed the capabilities of disabled users. It was also due to their initiative that the Polish authorities decided to create so called accessibility standards, which include indications of “good practice”, following the operative legal norms and supplementing them.

European states were obligated to create the accessibility standards by The Action Plan to promote the rights and full participation of people with disabilities in society: improving the quality of life of people with disabilities in Europe 2006-2015, accepted in 2006 by the Committee of Ministers to Member States on the Council of Europe [6]. The Act imposed on the member states a duty to create guidelines supporting the execution of the accessibility of buildings and spaces, with special attention being paid to the particular character of historic monuments. An example of the realization of the EU recommendations is the Accessibility Standard for the city of Łódź, which meets the current indication to take advantage of the cultural potential of the city and spatial organization of the city centre – a characteristic and unique in Poland and on the European scale post-industrial landscape, an area with the highest density of historic monuments. The Standard supplements the collection of guidelines for making historic buildings accessible, inspired among others by the activities of the National Disability Authority in Dublin [7]. Its simplified structure has been presented in the paper (table 1a-1d).
Table 1a. Basic issues of the accessibility standard: walking passages and driveways to a building

| Detailed issues - preliminary selection |
|-----------------------------------------|
| **Driveways to a building**             |
| PARKING LOTS AND GARAGES, including:    |
| location, size, marking and percentage of parking spaces |
| PARKING METERS                           |
| DRIVEWAYS TO THE MAIN ENTRANCES TO A BUILDING |
| CAR PARKING SPACES AND TAXI RANKS       |

| **Walking passages to a building**      |
| SIZE OF THE PASSAGES                    |
| MARKING OF THE PASSAGES                 |
| LIGHTING OF THE PASSAGES                |
| PAVEMENTS IN THE PASSAGES               |
| DRAINING OF THE PASSAGES                |
| CHANGES IN THE HEIGHT OF TIERS          |
| EXTERNAL STAIRS                         |
| ELEMENTS OF SMALL ARCHITECTURE,         |
| OTHER ELEMENTS OF SPATIAL NAVIGATION    |

Table 1b. Basic issues of the accessibility standard: entrances, horizontal and vertical communication

| Detailed issues - preliminary selection |
|-----------------------------------------|
| **Entrances to a building**             |
| VESTIBULES AND ENTRANCE HALLS, including: |
| Dimensions and type of entrance doors, size of manoeuvring space, lighting and contrast, doormats |
| RECEPTIONS AND WAITING ROOMS, including: |
| reception desks, service points, information points |
| QUEUING SPACES AND MOBILE COMPARTMENTS  |

| **Horizontal communication**             |
| CORRIDORS, including:                   |
| width of doorways, changes in the height of floors, acceptable height and shape of thresholds, moving pavements, visual contrast |
| DOORS, including:                       |
| size, manoeuvring space, recommended types of doors, materials and colouring, marking of doors/rooms, Braille Alphabet, thresholds, placement and type of door handles and locks, self-closing mechanisms, automatic and swinging doors, intercoms |

| **Vertical communication**               |
| INTERNAL STAIRS, including:             |
| shape and size of stairs, landings, contrast and textures, banisters |
| RAMPS AND INTERNAL RAMPS, including:    |
| shape and size, staircase landings, banisters, curbs |
| ELEVATORS, including:                   |
| size and finish materials, location and recommended control panels, voice communications inside and outside the elevator, alarm systems |
| PLATFORMS, including:                   |
| location and size, open and closed platforms, control panels, indicating platforms as an alternative to elevators in the existing buildings without a possibility of installing lift platforms |
| ESCALATORS, including:                  |
| size, speed                            |
Table 1c. Basic issues of the accessibility standard: finish materials and installations

| Detailed issues - preliminary selection |
|----------------------------------------|
| **Finish materials**                   |
| FLOORS                                 |
| WALLS AND CEILINGS                     |
| VISUAL CONTRAST                        |
| ELEMENTS OF EQUIPMENT                  |
| **Installations**                      |
| LIGHTING                               |
| ELECTRIC POWER                         |
| SOCKETS, SWITCHES                      |
| VENTILATION                            |
| DEVICES FOR DEAF AND HEARING IMPAIRED PERSONS, |
| including: permanent and portable induction loops, infrared systems, FM systems, acoustic fields |
| SIGNALLING AND INFORMATION SYSTEMS, including: fonts and lettering, symbols, tactile markings, Braille Alphabet, finish materials and contrast as an element of visual markings, safety marks, voice information, location of signalling and information systems |
| FIRE SUPPRESSION SYSTEMS               |

Table 1d. Basic issues of the accessibility standard: hygiene and sanitation facilities

| Detailed issues - preliminary selection |
|----------------------------------------|
| **Hygiene and sanitation facilities**  |
| PUBLIC AND INDIVIDUAL TOILETS, including: |
| size and accessibility of facilities, WC cabinets, doors, locks, WC basins, urinals and washbasins, fixtures, handles: straight, angular and detached, mirrors, dispensers, blow-dryers, shelves and bathroom cabinets, coat racks, lighting, marking, emergency and summon signalling, alarm belts, fire alarm systems |
| TOILETS FOR PERSONS ACCOMPANIED BY AN ASSISTANT, including: changing tables, wall, ceiling and slidemaster lifts |
| BATHROOMS, including: |
| size of bathrooms with a toilet and shower, size of bathrooms for persons moving on their own and with an assistant, shower cabins for elderly people or persons who have problems with moving, shower seats, bathtubs, handles |
| CHANGING ROOMS                         |

The ongoing legislative changes cause that both young and experienced architects keep searching for the sources of practical knowledge regarding the rules of creating spaces adjusted to diversified needs of people with disabilities. In the opinion of the Author it would be particularly beneficial to find solutions which could enable access to a wide variety of facilities taking into consideration the specific character of each of them (table 2). Due to the complexity of the issue, the supplementation and development of a set of recommendations should in the future become an object of multidirectional studies, which will allow providing solutions most adequate for buildings with a particular function.
Table 2. Design issues specific for some types of buildings

| Building function                                | Detailed issues - preliminary selection |
|--------------------------------------------------|------------------------------------------|
| Transport and communication facilities           | location of the facilities               |
|                                                  | length of passages                       |
|                                                  | devices and passenger services           |
|                                                  | passenger information                    |
| Office facilities                                 | internal environment and installations   |
|                                                  | office desks                             |
| Shopping facilities                              | internal communication                   |
|                                                  | display windows                          |
|                                                  | shops design                             |
|                                                  | cash registers                           |
|                                                  | fitting rooms                            |
| Restaurants and cafes                            | functional arrangements of consumption areas |
|                                                  | self-service points                      |
|                                                  | customer service                         |
| Museums, galleries, scientific facilities        | information                              |
|                                                  | typhlographics                           |
|                                                  | colour and texture elements of building navigation |
|                                                  | exhibitions and exhibits                 |
|                                                  | places of study and reading rooms        |
|                                                  | library furnishings                      |
| Kindergarten and school facilities               | spatial arrangements                     |
|                                                  | colour and texture elements of building navigation |
|                                                  | equipment and furnishings                |
|                                                  | playgrounds and playing rooms            |
| Health service facilities                        | information                              |
|                                                  | waiting rooms                            |
|                                                  | equipment of clinics                     |
| Cultural and entertainment facilities, conference facilities | auditoriums                             |
|                                                  | stages                                   |
|                                                  | lecture halls                            |
| Sports and recreational facilities               | changing rooms                           |
|                                                  | hygiene and sanitary rooms and equipment |
|                                                  | the stands                               |
| Hotels                                           | hotel rooms                              |
|                                                  | bathrooms                                |
| Architectural monuments and memorials            | conservation priorities and requirements |
|                                                  | increasing the accessibility             |

4. Accessibility strategy
In order to become part of the process of sustainable development, revalorization phenomena have to realize two parallel aims: creating an optimal environment for social functioning and development, and re-establishing the values mediated by the historic tissue. Thus complex revitalization cannot be perceived only as a renovation and construction project increasing the comfort of building exploitation. While planning the renovation procedures for historic monuments, it is necessary to take into consideration building conservation processes to ensure the realization of principles of minimal interference with the authenticity, which determines the value of buildings under protection. Due to the fact that a compromise between the intention to preserve the artistic and cultural value and the necessity to create the accessibility might be extremely complicated and is not always possible, it
requires a very high level of coordination between the activities of all persons and institutions involved in the process.

A tool which helps to plan the elimination of unjustified discrimination, supporting the proper implementation of accessibility standards recommendations through enabling disabled persons to take advantage of historic buildings according to the rules which are closest to the conditions offered to the rest of the society, is a so-called “accessibility strategy” [8]. A study which will allow determining the users’ needs and the ways of their fulfilment is particularly recommended by the experts in the cases where precious from the point of view of conservational protection fragments of buildings could be at risk [9]. A correct and well-constructed strategy should provide answers to the questions: what accessibility solutions should be introduced and what are our responsibilities with regard to buildings of historic origin [9]. This method is particularly advantageous in the cases where an individual design process requires a decision whether a change should be introduced in the physical structure of the building or it could be avoided by providing the service in an alternative way [9]. Having identified the barriers existing in the space, it is recommended to develop the concept of accessibility. The concept involves considering practical solutions meeting the needs of people with reduced mobility and perception and an analysis of reconciling conservation priorities with accessibility principles. It should be stressed that this stage requires verification of the methods of building management and sometimes their improvement, (table 3).

Table 3. Examples of the elements of building management determining the degree of accessibility

| The elements of building management |   |
|-----------------------------------|---|
| Building management – routine elements | Accessibility audit |
|                                   | Evacuation |
|                                   | User support |
|                                   | Personnel training |
|                                   | Communication and information |
|                                   | Deaf and hearing impaired persons support |
|                                   | Printed information |
|                                   | Voice information |
|                                   | Websites |
| Planning and management of the processes of buildings development and modernization and buildings conservation | Accessibility audit |
|                                   | Social consultations – diagnosing the users’ needs |
|                                   | Conservation |
|                                   | Execution of the realization of the accessibility concept |
|                                   | Monitoring of the realization |
|                                   | The role of the Access Officer |

The process of increasing the accessibility of an existing building is to a large extent based on the search for the ways of overcoming physical obstacles present in the space, which can be divided into two basic categories: elements of the building surrounding and elements of the physical structure of a building, being the result of its function, construction and form, including the architectural detail [9]. If removing the barrier poses a threat to the original character of a facility, its sensitive structure or is unjustified due to another important reason, it could be a rational solution to carefully avoid the obstacle, modify it or, in the case when none of the mentioned options is possible, to provide an alternative service. None of the modes of action is considered to be superior, however, the principles of “good practice” point to the priority which should be given to the removal or change of the physical feature creating the barrier, which is a direct outcome of the cited in the paper Convention on the Rights of Persons with Disabilities [1] as well as commonly accepted principles of universal design [10].
In the situations when the decision about a removal or modification of an important part of the space does not seem to be a right choice, changes involving supplementation of the structure with e.g. an elevator, a ramp or a platform should be taken into consideration. Although it is not tantamount to the realization of the concept of universal design, the possibility of using subsidiary or temporary elements, which could meet the current needs of the users, cannot be excluded. In the case of buildings under conservation, such solution might appear to be the most justified, due to the fact that they effectively raise the level of buildings accessibility without causing any permanent irreversible changes in the original architectural tissue. Another possibility could be retouching the foregoing function. Those corrections are connected with a minimal influence on the existing structure of a building and often involve subtle changes in the function and arrangement of the rooms. Methods exceeding standard solutions could involve a slight reduction of the barrier, which will allow avoiding its definite elimination, and a possibility of providing services in an unconventional way involving transfer of information by means of print, electronic or audio-visual media.

5. Results and discussion

The need for activating the individuals and groups that have so far been marginalized both in the society and in the labour market is being currently emphasized in the international policy, which has been expressed among others in the project Europe 2020 - A strategy for smart, sustainable and inclusive growth [11]. Nowadays the inability of the excluded groups to participate in different aspects of the social life is considered as a substantial barrier for economic growth and cultural development. The background of the ongoing activity is perceiving the persons with disabilities as independent and active participants of the market, having both their rights and duties [12], and playing the roles of not only recipients of services (e.g. buyers, patients, students) but also service providers (contractors, administrative, medical, scientific personnel and others). Thus the idea of increasing the quality of space should not be limited just to aesthetic reasons, and the efforts of public administration, professionals involved in the design of the building surroundings as well as investors and contractors must be based on the assumption that the buildings and facilities will be used by persons with reduced functionality causing the limitations in the physical and sensory ability.

In the case of the buildings with a high historic and artistic value, a radical implementation of the universal design principles in the design practice is not always possible and not always beneficial. However, the knowledge of possible means of preventing the foregoing spatial discrimination seems to be necessary. The conducted analyses prove that we can draw on a wide variety of tools for overcoming the existing barriers. Proper recognition and promotion of the methods for creating accessible buildings will in the future allow making rational choices and, in consequence, lead to the popularization of the concept of universal planning – a strategy which will hopefully become a standard in the planning of contemporary public spaces and buildings.

The concept of universal design is gaining an increasing recognition among the interdisciplinary scientific community, representatives of public institutions and designers. It is a very advantageous situation because supplementation and development of sets of good practices will require a collaboration of many expert groups, and, first of all, a close cooperation with space administrators and users. Lack of consideration and integration of activities could contribute to creating further barriers, which can be avoided without taking the risk of degrading the original value of historic architecture. In the opinion of the Author, popularization of the discussed concepts will support the processes of making socially responsible decisions meeting the users’ expectations in terms of accessibility and contributing to the comprehensive renovation of degraded buildings. Application of appropriate recommendations within the integrated methods could enable an effective realization of complex development and revitalization programs. Therefore, there is an urgent need to popularize the knowledge regarding a creation of a cultural surrounding friendly to all inhabitants and the role of accessibility in the formation of the functional and spatial structure of historic buildings as well as to draw inspiration from the right concept of universal design, wherever its assumptions are possible to be implemented in the design practice.
6. Conclusions

Due to the necessity of eliminating civilizational backwardness, the contemporary discourse concerning the tradition and post-modernity is based on the assumption that the cultural environment is a part of an integrated system, and its function and form undergo changes in the course of a constant and complex process determined by the current economic, political as well as cultural circumstances. The recognition of the value of architectural monuments is an obvious fact, however, the idea of democratizing the legacy in the context of universal spatial design is a relatively new phenomenon. Adjusting the historic monuments to the needs of people with various limitations affecting their mobility and perception is less and less frequently considered in terms of oppression or arduousness. It has started to be perceived as a potential catalyst of positive changes. Architectural accessibility might contribute to popularizing the knowledge regarding the significance of historical legacy and provide the conditions for its sustainable development and stable subsistence.

It is then essential to develop general awareness regarding the necessity to respect the principles of social egalitarianism as well as to increase the standards of and access to the architectural legacy. Although the future of the idea of exploiting the potential of the existing tissue with both its virtues and drawbacks remains unknown, it can be supposed that an increasing role will be played by the discussed in the paper synergistic activity of designers, constructors, heritage conservators, scientific environments as well as the inhabitants trying to reverse the negative trends and create accessible buildings and architectural systems, characterized by high formal and functional standards enabling the life on a high quality level.

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