



Barbara Widera*

At the senses' edge. Multisensual architecture

Vision

Designing buildings at the beginning of the 21st century became a field in which the development of technology and design support software resulted in a clearly visible trend to move the barriers which until recently were considered ultimate architectural limits. This is in line with the expectations of both investors and end users who are accustomed to the swift exchange of information and to the performance in virtual reality. Contemporary society which is oriented to consumption driven by the media and accustomed to quickly satisfy their needs, naturally impose similar requirements on architecture. At the same time this is only the first level of expectations. Advanced users of modern architecture, apart from a high level of complexity and functionality, want to use it to experience the contact with art in its broad sense and recently more and more often also with nature.

Designers do not hesitate to introduce some elements of surprise. They try to encourage the end user to join the process of creating architecture, arranging interactive solutions. Many authors seek to enable the visitor to experience the contact with architecture as deeply as possible.

They try to achieve that by creating a unique atmosphere, characteristic of not only one specific building but each visit, the season of the year or the time of the day or simply individual mood of the user. In order to maximize the experience architectural objects should affect several senses simultaneously. The advance of that phenomenon can be seen in the Blur Building designed by Diller/Scofidio (Expo 2002) which is permanently shrouded in a cloud of fog or in wood smelling Peter Zumthor Swiss Pavilion (Expo 2000). The degree of complexity of the solutions can obviously greatly vary in respect of applied effects and technology from quite simple to very complicated ones. It is worth noting that for instance providing interiors with LCD monitors displaying any landscape, which only a few years ago was considered advanced technology, nowadays is considered the basic level of complexity. The phenomenon of multisensual architecture increasingly relates to cultural sites (museums, exhibitions, theaters or concert halls), recreation spaces (SPA facilities), commercial areas (retail and services) as well as private homes.

Body and movement

Designed by Asymptote in 2003, Carlos Miele Flagship Store in New York was inspired by the beauty of human body. The space in fluid forms was created on the basis of observation and analysis of movements of professional dancers. The silver gleaming dancer's dress and the scarf flowing around her figure became a permanent symbol of a woman's rich and lively nature. The arches outlined by the edges of flowing fabrics mark the irregular

curves of the structure, limiting specific sections of the interior, whereas the expressive movements of the naked dancer symbolized the purity of form and natural elegance of body. The elements of interior decoration were designed on the basis of averaged graphs of the man's movements. The combination of fragments generated in this way resulted in a retail space as well as exhibition and theater sections. Despite the palpability the dancers' movements frozen in architectural forms, the spectators and customers visiting the store, moving around unusual structures, assume the role of actors. The clothes from the latest collection, just like the elements of the theatrical set

* Wrocław University of Technology, Faculty of Architecture, Institute of History of Architecture, Art, and Technology.



Fig. 1. Interior of Tribeca Issey Miyake Store in New York (2001), design by Frank O. Gehry. Photo by Barbara Widera

design, are suspended on thin strings fixed to the ceiling. Dresses, levitating in a mystical glow generated by light

rings in the floor, are perceived as unusual exhibits, stimulating curiosity and becoming objects of desire.

Tornado

Tribeca Issey Miyake Store (2001) is another New York clothes boutique designed by Frank O. Gehry for Issey Miyake whose interior design was inspired by a tornado whipping through space. The space of the store was divided into smaller sections, however, the intention of the author was to maintain a sense of a large, single-space interior. In order to do that a glass shaft was installed at the lower floor to provide eye contact between two levels of the store¹ [1]. Especially spectacular effects were achieved on the ground floor which has access directly from the street and which is the upper, more representative part of the boutique. This is where Gehry decided to affect simultaneously several senses of the visitors of the parlor. He used steel bands, suspending them in space like metal curtains undulated by strong wind and frozen in that state (Fig. 1).

Just like in nature, each element is unique in this amazing landscape. In the opinion of the author these differences and diversity determines their beauty² [2]. As a result the character of the interior became more contemporary and surprising, but not technological. It corresponds well to both the style of clothes designed by Issey Miyake and to the dangerous, heavy and cold yet still fascinating nature during a hurricane. In order to more closely experience the effect created by Gehry one should hold two furthestmost steel sheets fixed to the pillar in the middle and gently shake them a few times. As a result of spreading vibrations the store interior is filled with a distant and gradually growing sound of thunder. The impression is strong enough to cause a change in the spectator's perception of space through eyesight, touch and hearing.

¹ Hubertus Adam, *New York Architecture and Design*, teNeues Düsseldorf 2003, p. 155.

² Compare also: Frank O. Gehry, [in:] *Gehry Talks*, Mildred Fridman (ed.), Thames and Hudson, London 2003, p. 210.

Water and air

Next group of objects includes the ones which use architectural means and scenery to engage all possible senses. A good example of that is Atomic Spa Suisse at the Exedra Hotel in Milan, designed by Italian architect Simone Micheli in 2009. The spectacular effects created

in that facility provide the visitors with relief and deep relaxation, which is in line with the idea of wellness. The combination of colors and LEDs creates a mystic atmosphere and discretely marks the boundaries between specific spaces. The soft, fluid shapes of white furniture and



Fig. 2. Atomic Spa Suisse in Milan, Italy (2009), design by Simone Micheli. Photo by Jürgen Eheim

biomorphic, tree-like supporting structures match the soft music flowing from loudspeakers which are invisible to the users. Mind and body are stimulated in such a way as to facilitate full relaxation. As this is a Spa facility, water is present there in different forms and seems virtually

ubiquitous. The theatrical attempt at creating architecture within architecture is supposed to take the recipient to a three-dimensional, multisensual space – totally palpable and perceived with the use of senses yet still unreal due to its unusual character³ [4]. Its exceptional quality is achieved by mirror macroscopic half-spheres made of plastic, coated in shining chrome (Fig. 2). Fixed above water, on the walls and under the ceiling, they resemble air bubbles. The visitors of the Spa can feel they are under water, where they can see, hear and feel their breath which, in the opinion of psychologists, greatly aids complete relaxation. Additionally, the silver bubbles can, in the opinion of the author of the project, evoke associations with bubbling champagne, resulting in a sense of euphoria and joyous relaxation⁴ [4].

³ Simone Micheli, *Atomic SPA Swiss*, Press Release 2009, <http://www.simonemicheli.com>, 03.05.2010.

⁴ Ibidem.



Fig. 3. Interior of the main building of the new addition of the Nelson-Atkins Museum of Art, Kansas City (1999–2007), design by Steven Holl Architects, copyright by Andy Ryan

Journey

The designers of museums and exhibition spaces make use of a lot of methods engaging different senses of the viewers. In some cases the most sophisticated solutions are applied in a quite simple form. This principle was applied in the new addition of the Nelson-Atkins Museum of Art (NAMA) in Kansas City (1999–2007) designed by Steven Holl and Chris Mc Voya. According to the author: *As visitors move through the new addition, they will experience a flow between light, art, architecture and landscape, with views of from one level to another, from inside to outside. The threaded movement between the light-gathering lenses of the new addition weaves*

*the new building with the landscape in a fluid dynamism based on a sensitive relationship to its context created by the architect*⁵ [3].

Both the process of creation and the ultimate character of architecture perceived by its users are dedicated to a specific journey undertaken by the visitors of the museum. Each time their experiences can be totally differ-

ent as open circulation enables the multiplication of paths going through various exhibitions. The system is based on chaos theory. Similarly to other museums designed by him such as Cranbrook Institute of Science in Bloomfield Hills (1992–1999), Steven Holl uses the strong potential of the Lorenz attractor⁶ [6] (Fig. 3).

⁵ Steven Holl, [in:] Francesco Garofalo, *Steven Holl*, Universe Publishing, New York 2003, p. 196.

⁶ Detailed description of the conception of the expansion of NAMA, [in:] Widera B., *Bloch Building – Muzeum nowej generacji. Rozbudowa Nelson-Atkins Museum of Arts, Kansas City, Steven Holl, Chris McVoy 1999–2007*, Archivolta, 1/2008, p. 8.

Limits of architecture

Modern systems, including construction solutions as well as multimedia technologies, offer designers an exceptionally broad selection of possibilities, enabling them to execute virtually every vision. Consequently, imagination is the ultimate limit of architecture. Regardless of sources of inspiration, architects evidently strive as much

as possible to engage the user in the man–architecture relations. The trend promoting the multi-level perception of architecture and including various types of perception in that process helps the development of multisensual architecture, and ultimately, so called virtual architecture breaks the barrier of senses [5, 7].

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Na granicy zmysłów. Architektura multisensualna

W dobie błyskawicznego rozwoju technologii granice możliwości architektonicznych stają się coraz bardziej umowne. Odbiorcy, przyzwyczajeni do szybkiej wymiany informacji oraz funkcjonowania w wirtualnej rzeczywistości, oczekują od obiektów architektury wysokiego poziomu funkcjonalności i złożoności, pozwalającego zaspokoić ich potrzeby. Projektanci nie wahają się również wprowadzać elementy zaskoczenia. Starają się włączyć końcowego użytkownika w proces kreowania architektury,

tworząc rozwiązania interaktywne. Wielu twórców dąży do umożliwienia odbiorcy jak najpełniejszego przeżywania kontaktu z architekturą. W tym celu obiekty architektoniczne mają oddziaływać na kilka zmysłów jednocześnie. Zjawisko architektury multisensualnej dotyczy w coraz większym zakresie obiektów kultury (muzea, powierzchnie wystawowe, teatry czy sale koncertowe), przestrzeni rekreacyjnych (obiekty SPA), komercyjnych (strefy handlowo-usługowe), a także prywatnych domów.

Key words: multisensual architecture, senses

Słowa kluczowe: architektura multisensualna, zmysł