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EXPERIENCE OF VERTICAL PASSAGE – MUSEUMS OF MODERN ART

DOŚWIADCZENIE PRZEJŚCIA WERTYKALNEGO – MUZEA SZTUKI NOWOCZESNEJ

Abstract

Modern art museums are examples of buildings where main circulation routes are designed with great attention to the quality of space, and the trajectory of visitor movement anticipates the perception scenario. This work aims to present users' experiences while moving through this type of facility while ascending to the subsequent floors. The choice of five objects included in the study was dictated by the author's personal experience. A comparative analysis method was used, based on empirically collected materials. The results show that certain features of these spaces are repeated: a varied interior topography, a multi-story hall that aids orientation, and open views to the exterior. The popularity of simple, clear geometric layouts, along with the individuality of the solutions used, was also noted.

Keywords: *motion-based architecture, museum of modern art, user experience, vertical passage*

Streszczenie

Muzea sztuki nowoczesnej stanowią przykład budynków, w których główne ciągi komunikacyjne są projektowane z dużą dbałością o jakość przestrzeni, a trajektoria ruchu zwiedzających przewiduje scenariusz percepcji. Praca ma na celu przedstawienie, jakie doświadczenia umożliwia użytkownikowi przejście przez tego typu obiekt podczas pokonywania kolejnych pięter. Wybór pięciu obiektów objętych badaniami został podyktowany osobistymi doświadczeniami autorki. Zastosowano metodę analizy porównawczej materiałów zebranych empirycznie. Wyniki pokazują, że pewne cechy tych przestrzeni powtarzają się; są to: różnorodna topografia wnętrza, wielokondygnacyjny hol, który pomaga w orientacji, oraz otwarcia widokowe na zewnątrz. Dostrzega się też popularność prostych, czytelnych układów geometrycznych, a jednocześnie indywidualność stosowanych rozwiązań.

Słowa kluczowe: *architektura doświadczana w ruchu, doświadczenie użytkownika, muzeum sztuki nowoczesnej, przejście wertykalne*

1. INTRODUCTION

Walking through the various levels of a museum displaying art is a precisely planned walk through architecture. The public space is designed for users in constant motion, passing through successive exhibition zones. The architect guides visitors by planning sequences of frames of the building's interior.

Visitors to a modern art museum are focused on movement and aesthetic experience. They can also appreciate the museum space, which, while providing a setting for the exhibited works, is often itself sculptural. Furthermore, unlike most exhibition spaces, where natural lighting is absent or diffused, this space interacts with daylight, providing an additional stimulus for the viewer. The interplay of surfaces, shapes, and light, flights of stairs and ramps, as well as stops "threaded" along the user's trajectory – landings, galleries, mezzanines – this carefully designed "inner landscape"[1] of modern art museums creates meaning and influences the viewer's emotions. The concept of experiencing architecture through movement is central to the analysis – "architecture functions as a medium that constructs narratives through movement"[2].

2. SUBJECT OF RESEARCH AND METHOD

The research was based on empirical material collected by the author. The main vertical circulation zone in five museums of modern art was analyzed: the *National Gallery of Canada* in Ottawa (designed by Parkin/Safdie Architects Planners, 1988), the *Pinakothek der Moderne* in Munich (designed by Stephan Braunfels, 2002), the *Art Institute of Chicago*, *Modern Wing* (designed by RPBW, 2009), the *Tate Modern* in London (designed by Herzog & de Meuron, 2016), and the *Museum of Modern Art* in Warsaw (designed by Thomas Phifer and Partners, 2024). The analysis was deepened thanks to literary review – particularly the books *Odczuwanie architektury* by Steen Eiler Rasmussen[3] and *Spacer przez architekturę. Pierwsze kroki z psychologią środowiskową* by Łukasz Wojciechowski[4]; the article by Maja Piechowiak, in which she compares an architectural work with a film, was also inspiring:

> Film generates spatial experience through montage, framing, and rhythm, whereas architecture is encountered through bodily movement, sequencing, and duration. This perspective positions architecture and film as interconnected systems of narration and perception, wherein spatial meaning emerges from temporal experience.[5]

The first part of the paper presents descriptions of experiences of vertical passages through each building. Aspects analyzed include spatial solutions, accessibility, intuitiveness and attractiveness of the user's path, lighting, visual openings, and stops along the route – landings, mezzanines, and terraces. A reflection on the emotions that can accompany moving through subsequent sequences of the analyzed space is also presented. This is followed by a comparative analysis. The conclusions are presented in the summary.

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[1] Ł. Wojciechowski, *Spacer przez architekturę. Pierwsze kroki z psychologią środowiskową*, Fundacja Bęc Zmiana, Wrocław 2023, p. 38.

[2] M. Piechowiak, *Architecture and Film: Narrative Space and Filmic Structures in Architectural Design*, [in:] D. Winnicka-Jasłowska, S. Widzisz-Pronobis (eds.), *Space – technologies – society. Directions of scientific research in contemporary architecture and urban planning*, Wydawnictwo Politechniki Śląskiej, Gliwice 2026, p. 162.

[3] S.E. Rasmussen, *Odczuwanie architektury*, Karakter, Kraków 2015.

[4] Ł. Wojciechowski, *op. cit*.

[5] M. Piechowiak, *op. cit*., p. 162.

3. SPACES OF VERTICAL MOVEMENT IN MUSEUMS OF MODERN ART – EXPERIENCE

3.1. NATIONAL GALLERY OF CANADA IN OTTAWA

From the main plaza in front of the *National Gallery of Canada*, one can see the long, glazed south facade, preceded by a rhythm of thin, doubled concrete buttresses. The eye is drawn to the glass, cascading, multi-walled dominant shape emphasizing the southwest corner of the museum. You get the impression that you are standing in front of a "cathedral of art". From the entrance hall, a gently sloping ramp leads to the first floor, running along the entire length of the rhythmic facade, toward this dominant glass volume. There is no doubt that this is the entrance to the exhibition. The open space upstairs is also glazed. Soaring concrete pillars are also present inside. Large-scale drawings stretch flat above visitors' heads. The monumentality and yet lightness of this interior are striking. The *Great Hall*, under a glass vault, is lightly shaded by a system of nylon sails, which simultaneously improve the interior acoustics. From here, the visitor paths branch off in two main directions; you can also access the temporary exhibition spaces. It is also a place for relaxation. Through the window, you can see the treetops and the Parliament Building. An elevator from the entrance hall leads to the opposite end of the gallery, accessible from the *Great Hall*, and to the first floor. Stairs located in the corner lead directly from the *Great Hall* to the second floor – two flights of stairs that branch off in opposite directions, meeting above the landing and leading visitors to the gallery level. An elevator is also located nearby. Alternatively, you can take the slope-stairs, which run along a glass-enclosed corridor. Finally, you can take the long corridor ending with the stairs leading to the second floor. Next to these stairs is the main entrance to the *Contemporary Art* exhibition. Intuition is misleading. One must be careful not to miss any of the exhibition wings. The monumental architecture of this building – interiors finished with a light pink stone cladding, long, high walls with small openings – is reminiscent of ancient Middle Eastern structures. On the second floor, the two main staircases are connected by a long gallery. The glass-enclosed *Great Hall*, visible from each staircase, facilitates orientation. However, moving through the building can feel like walking through a labyrinth. The varied topography of the interior enhances the experience of traversing long distances. The scale of the space is somewhat overwhelming. It feels like stepping into a timeless palace of art (Ill. 1). This is in line with the designers' intentions, as they described the building's interior: "The impressive museum collection is organized by a network of glazed ceremonial and processional spaces expressing activity to the exterior, and linking a series of large scale, day-lit exhibition halls"[6].

3.2. PINAKOTHEK DER MODERNE IN MUNICH

Both high, glazed entrances – from the southeast or northwest – located toward each other diagonally, intersecting the central circle in the building plan, are flanked by a buffer zone with a roof supported by thin concrete pillars. On either side – passing the café area on the

[6] *National Gallery of Canada*, "Safdie Architects", https://www.safdiearchitects.com/projects/national-gallery-of-canada (access: 15.05.2026).

south – one enters the rotunda, illuminated from above by a glass dome. This area, which serves as both a relaxation area and a large-scale exhibition space, is surrounded by two levels of galleries.

In this building, the need to ascend to the upper floor is balanced by the need to descend. Wide, trapezoidal staircases branch off from the rotunda in two diagonal directions. The *Design* wing descends. From the main hall, a huge, illuminated shelf displaying exhibits is visible; along the way, the landing itself becomes an exhibition space – visitors are invited to descend – as if casually "drawn" into the exhibition space. We move forward, but lose track of which part of the building we are in. However, we return to the starting point and find ourselves once again under the glass dome.

The monumentality of the two main staircases gives importance to the entrance to each exhibition area and helps build drama. The wide, main staircase to the first floor immediately introduces the visitor to the art space. A colorful installation surrounds the column resting on the landing, and paintings can be seen on the walls. Nearby are the exhibition rooms; entrances to other rooms lead from the gallery surrounding the main hall. A different flight of stairs can be used to descend. The elevator is located in the southern part of the building. From the rotunda space, even narrower flights of stairs are accessible – semicircular ones on opposite sides of the rotunda, and straight ones connecting levels 0 and 1. The simplicity of the interior finishing – white walls and light gray flooring – allows you to focus on the perception of the interior geometry and brings out its proportions (Ill. 2).

3.3. ART INSTITUTE OF CHICAGO, MODERN WING

The *Modern Wing* is accessed from two sides of the main, elongated lobby, located on a north-south axis: from *Millennium Park* to the north, and from the old section of the *Art Institute of Chicago* on two levels to the south. Daylight enters the lobby from three sides, including through a glass roof that runs its entire length. The walls are white, and the light reflects softly off the wooden floor. On the first level, the two wings connect through a mezzanine bar area. Along the eastern wall runs a gallery with a suspended steel structure, partially enclosed by sections of solid wall. Glass balustrades add visual lightness. Walking along this gallery, you can descend to the lobby, where you have access to the exhibition and education areas, or continue on to the contemporary art exhibition area. Another flight of stairs accessible from the gallery leads to the top level of the new section of the museum. The elevator is located in the eastern wall between the two flights of stairs. The stairs and landings were constructed using the same technology as the gallery; there are gaps between the wooden steps. Wooden handrails balance the "coolness" and hardness of the glass. The entire space of this vertical transition zone, stretching half the length of the hall, feels remarkably light. It does not pretend to be a work of art; it harmonizes with the architectural expression of the entire structure.

Navigating this facility is uncomplicated and intuitive. Walking up the stairs, we constantly maintain visual contact with the outside. The subtle geometry is based on the rhythm of modular divisions, emphasized by the lines of the steel structural elements. It feels as if we are moving in a world of lines. As we frame the interior, we do not get the impression that the architect is trying to communicate something or capture our attention. What matters is the function itself and its implementation.

3.4. TATE MODERN IN LONDON

The new wing of the Tate Modern in London – the dynamic, brick tower of the *Blavatnik Building* – is accessed from the main hall of the entire complex – the Turbine Hall. On this lowest level, visitors are overwhelmed by dark, raw concrete interiors. The visual inhospitability is somewhat softened by the soft lines of the stairs leading to the upper floor. Elevators are located next to them. Overhead, black stripes connect long lamps reminiscent of industrial fluorescent lighting. Moving up, on level 1, one reaches a small, glass-enclosed shop, from which one passes to the old part of the *Tate Modern*. To ascend, a different flight of stairs is required. Along with the landing, they cut into the corner of the building, while the soft line of the concrete balustrade guides visitors from the interior side. On the next floor, soft seating has been placed against the sloping exterior wall, offering a view upward thanks to offsets in the ceilings of the upper floors. The facade is covered with brickwork; in places, horizontal glazing provides unobstructed views of the outside. The structural elements, as well as the walls of the elevator shaft, are finished with a smooth concrete surface, while the floor is covered with light-colored boards, which "warms up" the interior. The space is intimate. On the second floor, there is only one exhibition area, which is difficult to miss. Another flight of stairs leads to level 3 – initially straight, enclosed by concrete walls. The second landing is illuminated by daylight streaming in through the window. The structural breaks visible from the outside result in a vertical, "broken" path through the building. Despite these changes in direction, we do not get lost. The path upward curves. Upon entering, the fully sculptural form of the fan-shaped staircase leading upward is revealed. Both flights are subtly connected by the soft lines of the concrete balustrade, which frames the oval wooden seat. At the bottom of the stairs is a large window, allowing western light to stream in. The flights are further illuminated by evenly spaced elongated lamps. We proceed to the exhibition area, only to emerge again in the lobby, where the elevators and stairs meet. Level 4 is the top floor, showcasing contemporary art. From here, one can access the *NB Building* via a walkway or take the stairs up to the observation deck located on level 10. This entrance is captivating thanks to a cutout in a section of the wall. The terrace offers panoramic views of the city.

The transition from the austere, dark interiors of level 0, through the scattered, diversely shaped flights of stairs, to the observation deck, is a route that allows one to discover much (Ill. 3). The interior frames on each floor are unique and create a narrative filled with emotion.

3.5. MUSEUM OF MODERN ART IN WARSAW

On the website of *Thomas Phifer and Partners*, the designer of the white, rectangular structure of the museum, photos from the project show numerous narrow frames of the open staircase located in the central part of the building[7]. Visible from the main entrance, it is the most sculptural element in the entire structure. The architect's means are very simple, even irreducible – geometry based on a square plan, architectural concrete; the "perceptible"

[7] M. Wirkus, *Museum of Modern Art in Warsaw*, "Thomas Phifer and Partners", https://www.thomasphifer.com/projects/museum-of-modern-art-in-warsaw (access: 10.07.2026).

weight of blocks[8]. The double outlines of the massive balustrades suspended between the rectangular columns create a dramatic spatial arrangement of straight and diagonal lines. Two flights of stairs, originating from a single point in two directions, lead from the ground floor to the second floor (Ill. 4).

At the MSN, the central section, lit by a small skylight, serves as a large exhibition area. On the ground floor, chairs and cushions are placed here. To climb the stairs, visitors intuitively choose the right-hand side.. White balustrades are illuminated from below with warm light. On the first floor, facing southwest, the crowns of small, delicate trees growing along the facade are visible through the large glazing on each floor. To enter one of the exhibitions – located in the north or south part of the building – one can immediately turn right or walk along the wall with a window. One can perch by the window – on a chair or on the windowsill. The view of the nearby trees and the warm daylight partially offset the cold and austere concrete volumes inside the building. The gallery balustrade around the stairs is made of openwork metal; it does not compete with the monolithic appearance of the enclosed flights of stairs with a landing seen from the side. The elevators, located near one of the entrances on the ground floor, open onto a wall displaying information about the upcoming exhibition. Only after turning left, does one enter the central staircase.

On the second and top floors, through a wide window, the Palace of Culture and Science and Warsaw's contemporary skyscrapers are visible; afternoon western light streams in, casting soft shadows on the floor and walls around the stairs. This area, even more than the first-floor gallery, encourages lingering and captures the viewer's attention. The view outside the window seems to be one of the paintings.

4. COMPARATIVE ANALYSIS OF SPACE EXPERIENCED IN MOTION

The experiences gathered at five major museums of modern art allowed for a comparative analysis of the design of vertical passages in such buildings.

A variety of spatial solutions were observed for the "internal landscape," with a multi-story hall layout dominating. Movement between successive flights of stairs is most often organized in relation to this space. It serves as the main plaza – a space for rest and recreation, where all the main visitor routes converge. Thomas Phifer, referring to the Museum of Modern Art, called this the "social space"[9]. This is the place where the visitor's route most often begins and ends. This arrangement creates a hierarchy within the space, serves as a reference point during a museum visit, and supports intuitive navigation through the facility.

The second factor that plays a significant role in shaping the main vertical circulation space is the geometry of the plan and cross-section. Simple shapes and volumes predominate. Through geometry, the designer builds the main narrative thread – it becomes the canvas for the story[10].

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[8] See: S.E. Rasmussen, *op. cit.*

[9] J. Gonchar, *Warsaw's Museum of Modern Art is a Lesson in Contrast*, "Architectural Record", 2.12.2024, https://www.architecturalrecord.com/articles/17231-warsaws-museum-of-modern-art-is-a-lesson-in-contrast (access: 8.07.2026).

[10] See: M. Piechowiak, *op. cit.*, pp. 162–164.

The individuality of the solutions is noticeable, making each passage a unique experience. The attractiveness of a user's route is influenced by "landscape diversity" (e.g., museums in Ottawa and Munich) or the play of solid geometry (MSN Warsaw). The ability to choose stairs allows for a more varied route. However, where scale and an imposed narrative begin to dominate the visitor (e.g., the Ottawa museum), the user's route becomes less intuitive.

Light also plays a crucial role in vertical transitions. The lobby space is typically flooded with daylight, which usually enters from several directions, often from above. When using stairs, we usually have visual contact with the outside. Carefully designed artificial lighting discreetly enhances the architectural message.

Viewing openings frame the best views of the surroundings, allow for spatial orientation, and avoid the feeling of being enclosed or dominated by the structure. They appear where stops along the route or culminating points are planned.

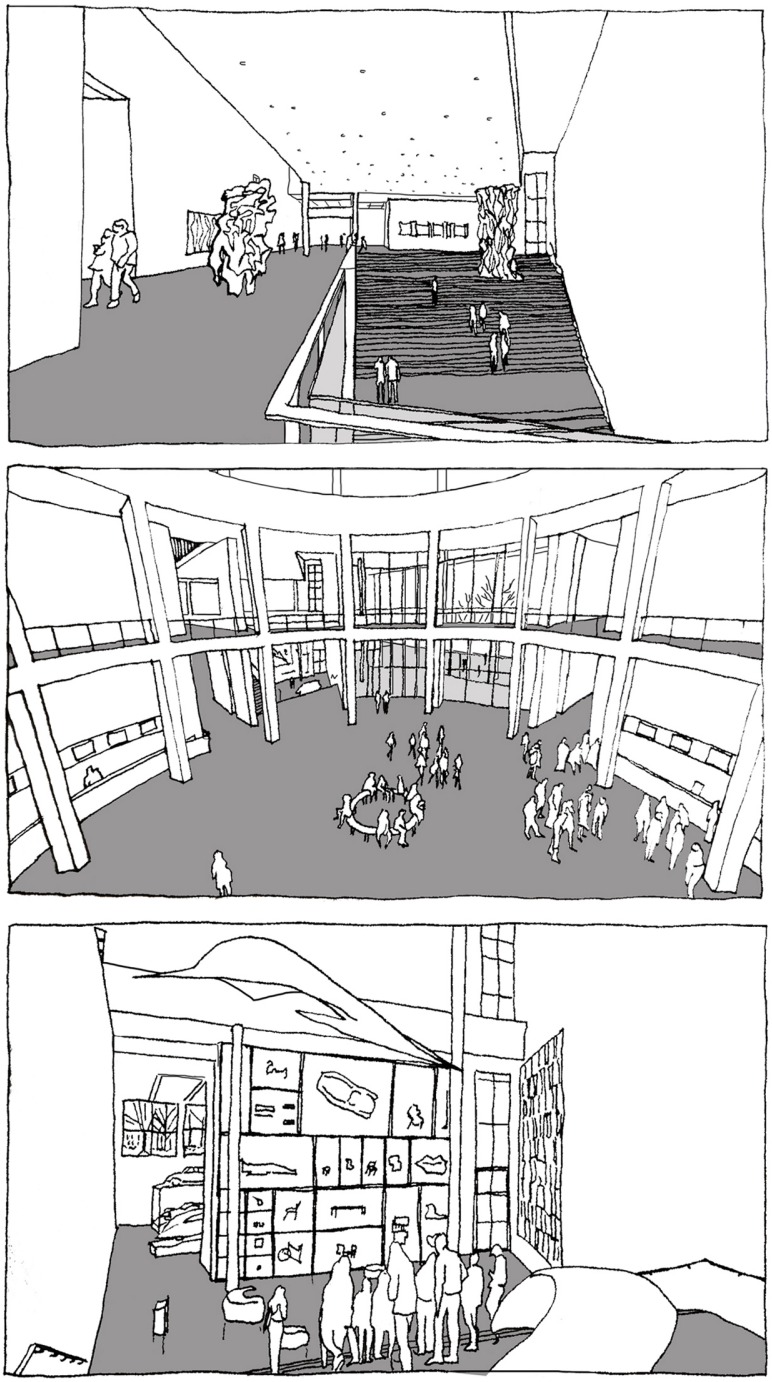
An additional observation is the frequent differences in special orientation between stair and elevator users.

5. SUMMARY

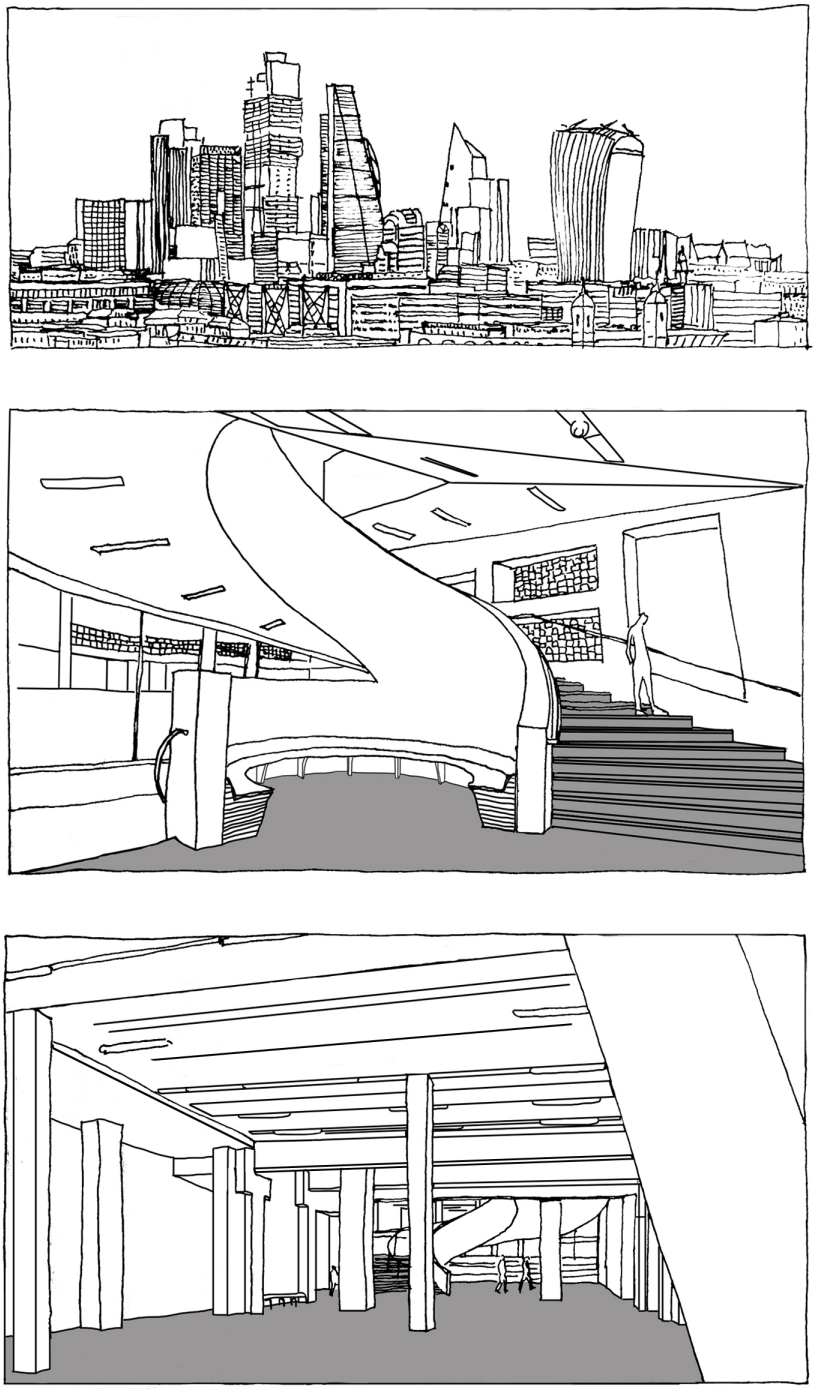
The vertical passageway through the museum of modern art provides a carefully designed user experience. Through the design of the main circulation space, the architects express their style and connect with the audience. Using a variety of means of expression, they strive to stimulate user's curiosity, influence their emotions, and create a comfortable space for fluid movement, relaxation, and contemplation.



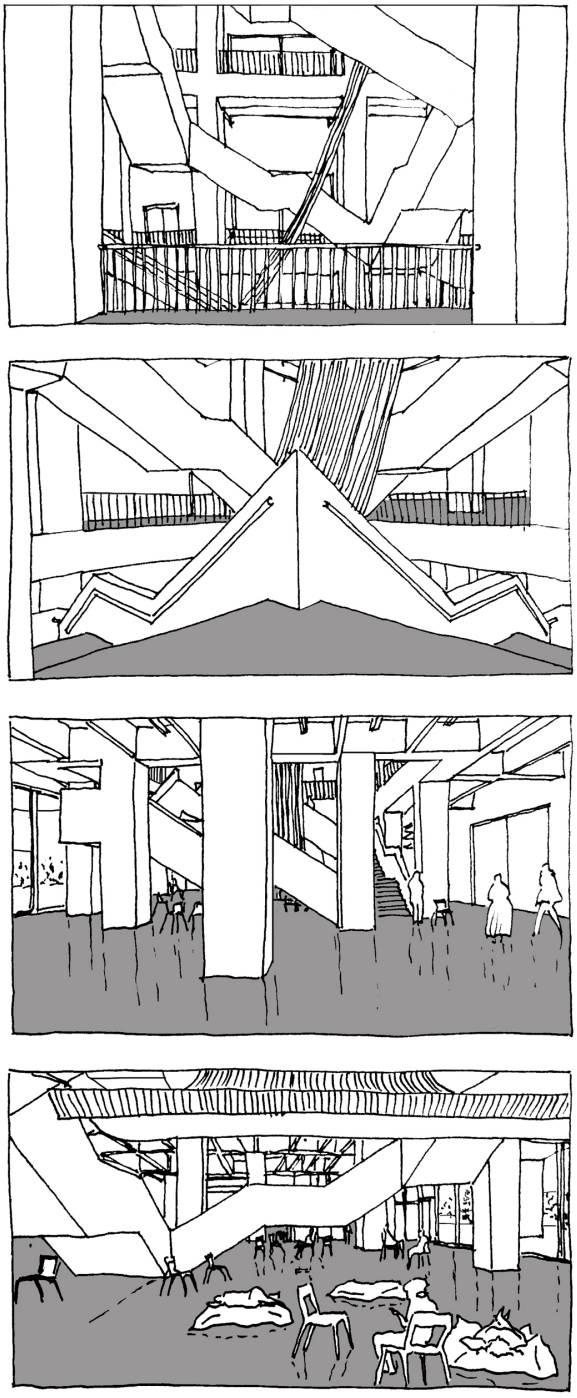
Ill. 1. “Processional spaces” – sloping stairs and ramp, and a gallery on the second floor at the *National Gallery of Canada* in Ottawa; drawings by the author



Ill. 2. *Pinakothek der Moderne* in Munich – main staircases and central rotunda; drawings by the author



Ill. 3. Stills from the passage through the *Tate Modern, the Blavatnik Building*: industrial zone -1, fan-shaped stairs, view from the terrace on the panorama of *The City*; drawings by the author



Ill. 4. The central staircase at the *Museum of Modern Art* in Warsaw – stills from different levels; drawings by the author

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