



Conceptual models of movement and circulation in the architectural Project

Modelos conceituais de percurso e circulação no projeto de arquitetura

Modelos conceptuales de percurso y circulación en el proyecto de arquitectura

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Abstract

This paper aims to reveal results of a research project that began in 2009 and the development of its several stages, analyzing architectural designs focusing on the circulation system and its elements. Some designs were selected for analysis of circulation system and their relationship with concept, program and *partii*. Their analyses were carried out over bibliographical review, graphic data from primary sources, visits, analysis by drawings and photos. From the research carried out, conceptual models of movement and circulation from different moments of architecture history were identified. In this study, we present a synthesis of the theory knowledge generated emerged in this research project, which relates Theory and Design of Architecture with original idea of the creative analysis of the architecture design from the circulation system and its elements, as a fundamental structure of the architectural *partii*.

Keywords: Circulation system; Conceptual models of movement; Elements of circulation; Architectural *partii*; Analysis of project.



Resumo

Este artigo se propõe a divulgar resultados de uma pesquisa iniciada em 2009, e em desenvolvimento de suas várias etapas, que analisa projetos com foco no sistema e elementos de circulação. Foram selecionados projetos para análise da circulação e a relação com conceito, programa e partido. As análises dos projetos foram realizadas por meio de levantamento bibliográfico, levantamento gráfico a partir de fontes primárias, visitas, análises por desenhos e fotos. A partir da pesquisa realizada foram identificados modelos conceituais de percurso em momentos distintos da história da arquitetura. Neste texto, apresentamos uma síntese dos conhecimentos teóricos gerados nesta pesquisa, que relaciona Teoria e Projeto de arquitetura, com ideia original da análise criativa do projeto de arquitetura a partir do sistema de circulação e seus elementos, como estruturador do partido arquitetônico.

Palavras-chave: Sistemas de circulação; Modelos conceituais de percurso; Elementos de circulação; Partido arquitetônico; Análise de projeto.

Resumen

Este artículo se propone a divulgar resultados de una investigación iniciada en 2009, y en desarrollo de sus varias etapas, que analiza proyectos con foco en el sistema de circulación y sus elementos. Se seleccionaron proyectos para análisis de la circulación y la relación con concepto, programa y partido. Los análisis de los proyectos fueron realizados por medio de levantamiento bibliográfico, levantamiento gráfico a partir de fuentes primarias, visitas, análisis por dibujos y fotos. A partir de la investigación realizada se identificaron modelos conceptuales de movimiento en momentos distintos de la historia de la arquitectura. En este texto presentamos una síntesis de los conocimientos teóricos generados en esta investigación, que relaciona Teoría y Proyecto de arquitectura, con idea original del análisis creativo del proyecto de arquitectura a partir del sistema de circulación y sus elementos, como estructurador del partido arquitectónico.

Palabras clave: Sistemas de circulación; Modelos conceptuales de camino; Elementos de circulación; Partido arquitectónico; Análisis de proyectos.



Introduction

The research presented here, linked to the Research Group “Architecture: Design, representation and analysis” (Unicamp/CNPq), started in 2009 from the Architecture Design classes at an undergraduate level and from the interest of creating a didactic material for students, involving analyses of designs and the understanding of the architectural partii, originated from the systematic study of elements and circulation systems. Some projects were selected for analysis and visits.

The idea of investigating circulation and movement in time is nothing new. Important research projects involving this broad theme are known, with different approaches and objectives, from investigations developed by philosophers, artists and also architects with functional, objective, theoretical or subjective approaches. Gilles Deleuze, Walter Benjamin, Le Corbusier, Bernard Tschumi, Helio Oiticica, just to name a few. Intuitively, this theme belongs to the architect's research universe and we can see that it is more strongly related to modernity, with different approaches and contributions.

The research proposed here focuses on design analysis and predicts investigation criteria organized for each type of program. Awarded designs and works by architects such as Frank Lloyd Wright, Le Corbusier, Vilanova Artigas, Oscar Niemeyer, Roberto Loeb, Frank Gehry, Rem Koolhaas, James Stirling, Mario Botta, Vittorio Gregotti, Álvaro Siza, Steven Holl, Zaha Hadid, Renzo Piano, Richard Meier, Daniel Libeskind, Bernard Tschumi, Peter Zumthor, Herzog & De Meuron, Tadao Ando, Rafael Moneo, Paulo Mendes da Rocha, among others, were selected, analyzed and visited, based on the study of circulation, movement and route system in architecture.

The methodology adopted in this work is based on bibliographical research about the subject, collection of information about the projects from primary sources, visits, analysis of the project through drawings and images. The graphical analysis method was adopted to investigate the projects. Important classical authors such as Geoffrey Baker, Francis Ching, Laseau and Tice, plus more recent researchers such as Antony Radford, Selen Morkoç, Amit Srivastava and Kenneth Frampton, and the vast bibliography on graphic analysis make up an important reference. The visit has become a fundamental step to fully and effectively understand circulation, movement, path, route, visuals, sensations and perceptions. As a step in the methodology, it was also established that reading the architects' own texts is crucial for understanding the concepts that underlie the analyzed projects.

The circulation system consists of routes, corridors, walkways, bridges, connections, stairs, ramps,



accesses, among other elements. This investigation originally aims to analyze, in a creative way, designs selected from the approach in the circulation system as defining and structuring of the architectural *partii*, relating design strategies¹, concept, program and *partii*. We emphasize that this research project has no specific focus on accessibility or issues related to norms.

From the analyzes performed, we were able to verify important conceptual issues regarding circulation. In this study, therefore, we present a synthesis of the theoretical products coming from the research. These are the conceptual models of movement and circulation that were identified from the analyzes, relating theory and architecture design in an interpretive way. The analysis of each project is being published individually in a detailed way according to criteria established in the methodology and in the analyzes, resulting in didactic material initially intended by the research project. It has already involved and involves under graduation students of Scientific Initiation research, graduation, under graduation and postgraduation disciplines, as well as it has produced debates, lectures, exhibitions and publications for the dissemination of knowledge.

This article is organized in three parts. First, we present, synthetically, considerations about the circulation approach in the architecture design, more specifically within the research focus, which is design analysis. In the second part, we present the conceptual models of movement and circulation that were identified from the selection of the projects and the research in development. In the third part, we present the discussion with each of the conceptual models and examples of designs analyzed. And to close, the final notes of the article.

1. The circulation system as a structurer in the definition of the architectural *partii*

“L’architecture se marche, se parcourt” (Le Corbusier, 2005: 43)

Analyzing an architecture project, considering how the circulation system was organized, can reveal fundamental aspects to the concept, design strategies and architectonic *partii* that the architect has adopted. A good design must invariably have a well-resolved circulation, involving approach to the building, access and internal pathways, visual, according to the concept and *partii* adopted.

However, in architecture, circulation is not enough only as a functional system. The articulation of the spaces, visual, the valuation of the elements, the sensation, perception and appreciation of spaces are important issues that must be controlled by the architect, considering concepts and conditioning factors.



Modern architects, in general, operate with at least three fundamental notions: space, time, and movement. In the twentieth century, the great architectural innovations occurred in the scope of the design of large integrated and fluid spaces, as well as structure and new materials. In this context, free movement through space has become one of the aspects widely explored by modern architects.

The organization of the circulation system within a modern conceptual model of space provides a broad and unobstructed space, where the route makes the user understand the whole idea. The user dominates the space by looking at it, in a freely and unobstructed route, visually and spatially. In a different approach, within the postmodern concept of architecture, the user discovers the space by walking, with surprises and gradual discoveries during the sequential course, frame by frame.

The idea that the large spaces in architecture can be fully appreciated in motion led to the idea of an architectural walk, or, as Le Corbusier called it, the “promenade architecturale.” Ramps and walkways crossing spaces give the opportunity to exacerbate the idea of walking between environments from privileged points of view.

The promenade architecturale implies in a movement trajectory with free axial disposition, impelling dynamic and asymmetrical movement, whose itinerary leads to a variety of perspectives and points of view. In the nineteenth century, the French concept of “parcours,” taught at the École des Beaux-Arts, which meant “approach route,” or a course, also approached this idea with a different focus.

The space-time notion has been widely debated at various moments in modern architecture. The so-called “fourth dimension” (Zevi, 1992), the time, was fully introduced in modern architecture as a way to overcome classical architecture, considered static. The independent structure, the creation of large spans made possible by the reinforced concrete technique, made the spaces more open and fluid, favoring the full and constant free movement in the space.

In the period known as Postmodern Architecture, contextualism was a denomination for those architects who developed designs from a careful study of the environment and its history, and incorporated these constraints to the projects. One of the most important architects of this period was James Stirling, who designed and built the Staatsgalerie in Stuttgart (1977), Germany. In the text “Graphic representation as reconstructive memory: Stirling’s German Museum Projects,” Gabriela Goldschmidt and Ekaterina Klevitsky analyze three museum projects developed by Stirling in the same period, in which the architect adopts the use of axonometric projections to study and represent the essence of the design: movement and circulation. Movement and circulation are prerogatives of



Stirling's contextualist design, which considers the building as part of the urban fabric, and circulation the essence of that building. The architect creates spaces of circulation that naturally integrate inner and outer environments of the building with the city.

In contemporary times, Rem Koolhaas is the architect who expresses much interest and inquiries about the theme of circulation in his writings and projects. The elevator, that fragments and interferes with the perception and relation of spaces, and the escalator, that leads to a continuous and slow movement through space, are elements of conceptual research for the architect, who, in a way, has a relation with contemporary life and city (Koolhaas, 1999;2010).

2. Conceptual models of movement and circulation

From the development of the research project, we considered adopting “conceptual models of movement and circulation” to designate certain strategies in circulation, which involves three terms that we consider important in the analysis proposed here.

A model is an example to be followed, mimicked or imitated. For Quatremère de Quincy (1832): “The model, as understood in the practical execution of art, is an object that must be repeated as it is; (...) Everything is accurate and known in the model.”

Concept is something abstract, however it is concretized through architecture. According to Tim McGinty (Snyder; Catanese, 1979), “Concepts are ideas that integrate several elements into one whole. These elements can be ideas, notions, thoughts, and observations. (...) Concepts are an important part of the architecture design.”

Movement is the action of moving, a route between one point and another, distant from each other. In a space, the movement is necessary to move from one environment to another, and thus perform the necessary activities. The circulation and the course, within an architecture design, are not items to be analyzed only in a functional and objective way, but also subjectively, since they involve different issues.

Among the several innovations that can be attributed to the Modern Architecture period, the concept of course is fundamental to understand meanings of spaces and their connections. There are different approaches on the subject, such as the classical composition of Beaux Arts in the Modern period, in the postmodern and contemporary context of architecture, in the eastern culture and in the Japanese Garden.



For Francis Ching (2015) circulation is part of an architectural system. A system that involves space, structure, internal and external environments, space-time movement, technology, program and context. The movement in space-time, for Ching, happens in four main stages: approach and entrance; course configuration and access; sequence of spaces; light, sight, touch, hearing and smell (perception).

The approach can be frontal, diagonal or spiral. The entrance can be marked in different ways with the articulation of architectural elements. Ramps, when present, introduce a vertical dimension into space, besides putting on temporal quality to the act of walking.

The configuration of the route defined in the design depends on several factors, such as function, orientation, hierarchy, direction, visual, sensation, perception, space appreciation, symbolism, among others. Obviously, each architect interprets the program according to its repertoire and each architecture design has its *partii* defined from each look.

Thus, based on the selection of projects and the investigation carried out so far, we have been able to identify that there are at least four conceptual models of movement and circulation in architecture, as we show in a synthetic and interpretive way:

- **Conceptual model of movement and classic circulation in Beaux-Arts:** Marche and Parcours. It is the movement through the building that makes the user notice the *enfilade*, or the sequence and organization of the environments, usually compartmentalized;
- **Conceptual model of movement and circulation in Modern Architecture:** to appreciate the space as a whole, in a circulation system presented in a wide, fluid and unobstructed space;
- **Conceptual model of movement and circulation in Postmodern Architecture:** The spaces and environments are discovered in a way to create surprises, frame by frame, stimulating curiosity and perceptions. The concern with regard to establishing the relationship with the urban fabric and surroundings is evident;
- **Conceptual model of movement and circulation in Contemporary Architecture:** Plurality and Diversity are important characteristics of this period. Therefore, we have identified a mixture of Modern and Postmodern concepts in the circulation approach, linking the fluidity and dominance of the *promenade* space with the frame-by-frame discoveries of the postmodern period.

As important as the configuration of the circulation system and the adoption, even if intuitive, of one



of the conceptual models of movement, the configuration of the accesses is also an important issue in the project. Access can have both evident and obvious character, as in classical composition, and discrete and not obvious, as in the approach of modern and contemporary architecture. The design and configuration of the circulation elements are crucial in this analysis.

3. Discussion

The change of perception introduced by modern architecture led to a rethinking of the perception of time. As Jacques Lucan (2012, 383) asserts, unlike the closed forms of classical architecture, modern architecture has brought open forms, creating conditions for a more fluid and flexible architecture, also adaptable to the constant changes.

Following, we present a synthesis of the conceptual models of movement and circulation that were identified from the analyzes, relating theory and architecture project.

- **The Static Model**

Conceptual model of movement and classic circulation in Beaux-Arts: *Marche and Parcours*.

The method of teaching and practice of Beaux-Arts architecture is a theme known and studied by important researchers such as Jacques Lucan, Alfonso C. Martinez and Edson Mahfuz, just to name a few. It is the movement through the building that makes the user notice the *enfilade*, or sequence and organization of the environments, usually compartmentalized.

The teaching method of the École de Beaux Arts de Paris of the nineteenth century worked with rules of composition and classical order. The distribution, arrangement, *partii*, *l'esquisse*, *parcours*, *marche* and other teachings were part of this method of design. Circulation through spaces was one of the fundamental items of these teachings, originated from a geometric organization based on elements, axes and symmetry. The composition of parts in a whole depended on hierarchies and the scheme of circulation. The idea of organizing the circulation of the building by “spaces served” and “servant spaces”, present in classical teaching, was later revisited by the architect Louis Kahn (Martinez, 2000).

A conceptual model of space movement based on the classical principles of composition and order. This conceptual model is intimately connected to the constructive possibilities of the period, with constructions that foresaw load-bearing walls and much more compartmentalized spaces, without the fluidity existing in modern architecture.



In the buildings belonging to the neoclassical language and its period, especially in the nineteenth century, we can verify this conceptual model of movement and circulation. Following is the schematic design of the building plan that houses the Pinacoteca of the State of São Paulo (Figure 1), designed from the office of Ramos de Azevedo and Domiciano Rossi (1900).

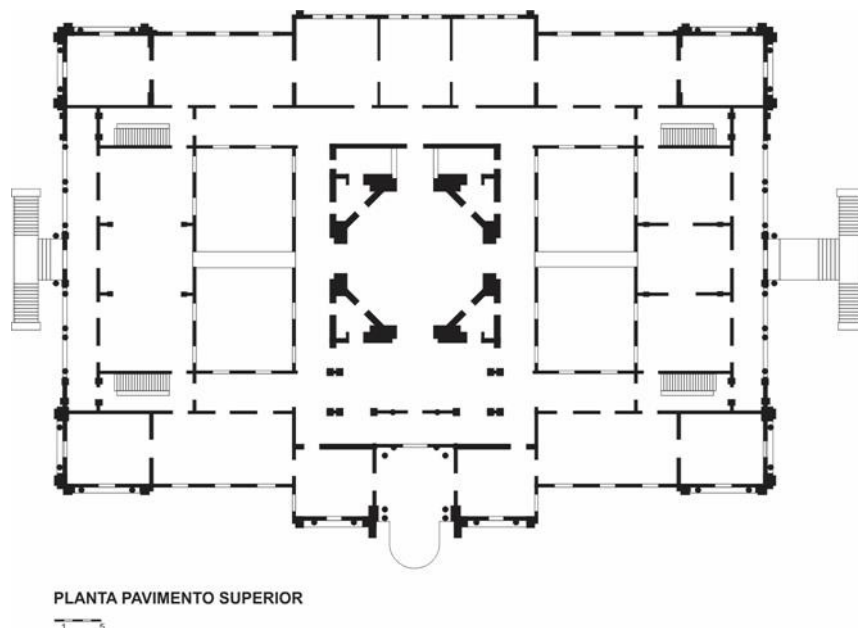


Figure 1: Schematic design of the upper floor of the building that houses the Pinacoteca of the State of São Paulo. Source: Redrawn of the author, 2017.

In the 1990s, the architect Paulo Mendes da Rocha made intervention in the historical building, precisely in the circulation system, presenting more fluidity and movement to the indoor spaces.

- **The spatial and visual continuity model**

Conceptual model of movement and circulation in Modern Architecture.

Modern Architecture is the subject investigated by several researchers such as Leonardo Benevolo, Bruno Zevi, Kenneth Frampton, Vincent Scully, just to name a few classics. The idea of route, movement and circulation as a structurer of spaces and forms is a typically modern characteristic. The temporalization of space and the visual and spatial continuity are promoted especially by the constraints of this period. It seeks to appreciate the space as a whole, in a system of circulation present in a wide, fluid and unobstructed space.

Vincent Scully (2002) notes in his book *Modern Architecture* that continuity, both spatial and visual, is an important feature of Modern Architecture. Bruno Zevi (1984) in *The Modern Language of*



Architecture classifies seven invariants of Modern Architecture, two of them being: the spatial and visual continuity and the importance of the route for reading and appreciation of spaces and forms, that is, the so-called “fourth dimension” of space, defined by Zevi.

Some examples analyzed by the research reveal this conceptual model of movement and circulation. The Guggenheim Museum in New York (Figure 2) has the program spread over five floors interconnected by a spiral ramp, forming a central atrium lit by a skylight. The FAUUSP building (Figure 3) has the program organized in half-levels interconnected by straight ramps, and configuration of a central atrium illuminated by zenith. And the Carpenter Center building (Figure 4), home to the Harvard School of Visual Arts, has a ramp that crosses the building, arranging the program in two inverted symmetry wings, offering the user, or the passer-by that crosses the block, a vision of the activities taking place in the spaces and environments of the school. The spatial and visual continuity is achieved in these architectural *partii*, in different ways, structured by the respective circulation systems.



Figure 2: Photos of the New York Guggenheim Museum, architect Frank Lloyd Wright, 1943-1959. Source: author, 2009.



Figure 3: Photos of FAUUSP building, São Paulo, architects Vilanova Artigas and Carlos Cascaldi, 1962. Source: author, 2017.



Figure 4: Photo of the Carpenter Center for the Visual Arts building, Harvard University, Boston. Architect Le Corbusier, 1959-62.

Source: author, 2009.



Architectural experience occurs when we move in space over time. The temporal appreciation is fundamental to understand the idea and spatial effect of what was proposed by the architect. As Philip Johnson (1965) put it:

Architecture is surely not the design of space, certainly not the massing or organizing of volumes. These are auxiliary to the main point which is the organization of procession. Architecture exists only in time (JOHNSON, 1965, p. 184)

The “procession” Johnson refers to is the trajectory prepared by the architect to enjoy the spatiality intended for the design. The temporal sequence of approach to the building, the frontal or diagonal access, the penetration to its interior spaces, the perspectives and multiple possible views at each moment during the journey, the relations between “full and empty,” corroborate the idea of a rite of beauty appreciation of the building as we move through its interior.

From modern examples take Mies' Seagram Plaza: the visitor usually crosses diagonally [...] Then he/she penetrates only glass, slowing slightly, to be faced with the three elevator corridors. But what corridors! [...] Where else in a modern skyscraper entry is the ceiling twenty-four meter high, or where else are the elevator lobbies in a direct line from the street? (JOHNSON, 1965, p.184)

In this sentence one can clearly notice the importance and contribution of each architectural element to the correct appreciation of the space intended for the design. The direction of displacement through space, the materials employed, the relationships of height and proportion, the connection between internal and external environments as a whole, all this define the spatial-temporal experience desired for the architecture. As Philip Johnson (1965, p. 184) put it: “Beauty consists of how we move within space.”

Much better in that regard is Guggenheim [...] The processional entrance experience is different from Mies'. It is again diagonal, but the jump into the hundred-meter high hall is exactly the opposite kind of feeling from the grand axial entry to Seagram's. The visitor comes through a tiny door (too tiny, some may feel) and is sprayed into the room. Breathtaking it is (JOHNSON, 1965, p. 184).

- **The Model frame by frame, from the sequences and surprises**

Conceptual model of movement and circulation in Postmodernity

Important authors such as Charles Jencks, Robert Venturi and Paolo Portoguesi, just to name a few, embrace the theme of their research in Architecture in the postmodern period. The spaces and



environments are discovered in a way that creates surprises, frame by frame, stimulating curiosity and perceptions. The concern with regard to establishing the relationship with the urban fabric and surroundings is evident.

Fluid, continuous and unobstructed space can be an important feature of modern architecture, with free circulation and visual domain of the whole. In the later period, we looked at other ways of organizing circulation and movement through spaces. Within a concept of postmodernity, suggesting gradual discoveries of environments, as well as visuals and surprises.

The planning of the building is carefully “tailored” with the design of the city, as it is the case of the new Staatsgalerie building (Figure 5), designed by the architect James Stirling, which establishes a connection between streets in different dimensions, passing through the center of the block, in the heart of the museum. The inner space of the museum has classic organization of the exhibition galleries. The highlight of the route occurs in the organization of the circulation and the contour of the building with the surroundings, with surprises and gradual discoveries.

In the case of the Espaço Natura (Figure 6) designed by the architect Roberto Loeb, we also observed a sequential model of discoveries and surprises, both in internal and external spaces. It is an industrial and administrative building program.

There was an evolution between the initial design and what was built. (...) The treatment of spaces, with a sequence of surprises, is completely contrary to the Renaissance conception and, consequently, to modern Brazilian architecture, in which everything unfolds from one point of view. The drawing of Natura unfolds at various moments, with surprise. (Roberto Loeb, Monolito Magazine n.25, 2015, p.22)

And the building of the Ara Pacis Museum (Figure 7) designed by the architect Richard Meier, which, in its delicacy of scale and proportion, is inserted in the urban and historical context of Rome, interconnecting levels, spaces and streets, in order to create surprises and sequences, frame-by-frame.



Figure 5: Photos of the new Staatsgalerie building, Stuttgart, architect James Stirling, 1984. Source: author, 2018.



Figure 6: Photos of the Espaço Natura, Cajamar, architect Roberto Loeb, 1996-2001. Source: author, 2017.



Figure 7: Photos of the Ara Pacis Museum, Rome, architect Richard Meier, 1995-2006. Source: author, 2013.

• The Heterogeneous Model

Conceptual models of movement and circulation in Contemporary Architecture.

Plurality and Diversity are important characteristics of the contemporary period. Contemporary architecture is the subject of study by important researchers such as Leonardo Benevolo, Josep Maria Montaner, Jan Cejka and Antoine Picon, among others.



From the analyzes, we identified a combination of Modern and Postmodern concepts in the approach of circulation, linking the fluidity and dominance of the promenade space with the frame-by-frame discoveries of the postmodern period.

In contemporary architecture, architects approach the issue of movement in space in different ways. As Wilson Florio noted in the text “Richard Serra e Frank Gehry no espaço público da cidade” (2010) that in Frank Gehry’s architecture the spaces are discovered as the user walks, generating surprises and interesting visuals, in order to provoke the sensation and the perception, as in the public sculptures created by the artist Richard Serra.

Rem Koolhaas is the architect who reveals great interest in the elements of circulation and metaphors that the circulation system can promote in architectural project, with several texts published, as well as concrete manifests in his architecture (Figure 8). By analyzing the circulation system and its elements in each of his projects, we can identify important information related to the concept and parti, as well as symbolic issues that each element carries. The culture of congestion, the fragmentation of large city spaces, and other issues of the contemporary world are present in Koolhaas’ theoretical and practical discourse in his texts and designs.

When analyzing exhibition spaces, such as the MAXXI Museum (Figure 9) in Rome and the Jewish Museum in Berlin, we understand that the circulation system is the essence of space. Each of their architects solved the problem of the program differently, based on their own concepts and assumptions. Zaha Hadid explored in the MAXXI space the idea of continuity of shape and space in a plastic way, with the aid of the circulation elements in this realization. Daniel Libeskind organized the museum program by axes and created routes that symbolize knowledge and metaphors inherent to the teachings of the Jewish Museum (Figure 10) in Berlin. The routes created, as well as the elements of circulation, are so important that they organize the *partii* of the project.

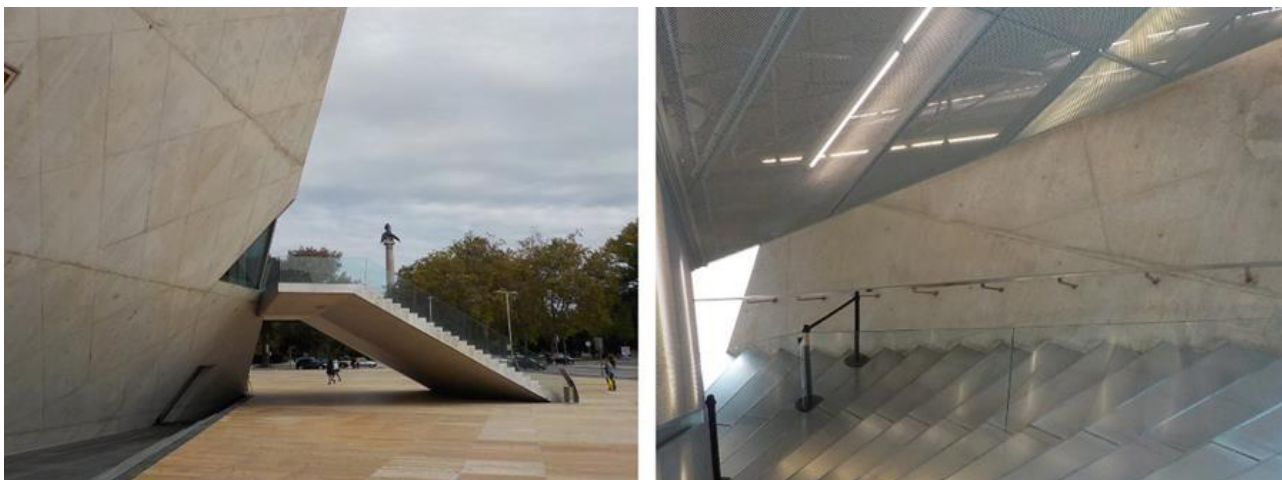


Figure 8: Photos of the Casa da Música, Porto, architect Rem Koolhaas, 2005. Source: author, 2015.

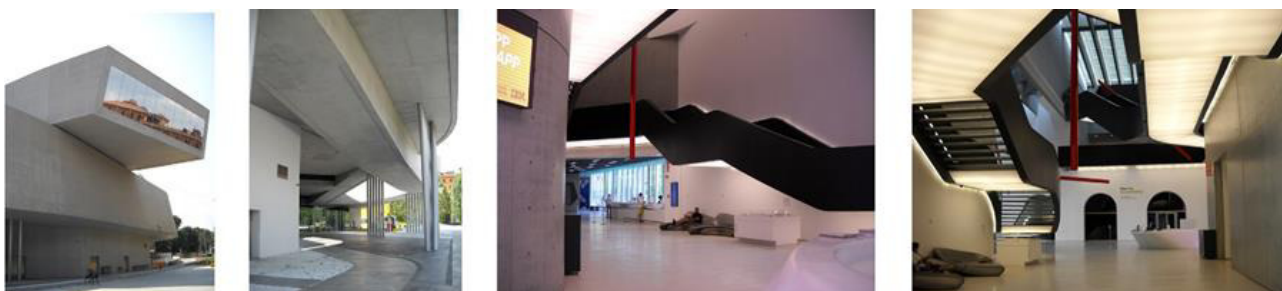


Figure 9: Photos MAXXI Museum, Rome, architect Zaha Hadid, 2009-2010. Source: author, 2013.



Figure 10: Photos Jewish Museum, Berlin, architect Daniel Libeskind, 1999. Source: author, 2008.

Final Remarks

This text offers a theoretical synthesis of the research that, in an interpretative way, analyzed architectural designs from the original approach with focus on the circulation system as essential to define the architectural *partii*.



From the development of the research project, which involved analyzes of the selected designs, we identified conceptual models of movement and circulation that were presented in this text. The idea of route, movement and circulation as a generator of spaces and forms is something important and structuring in the architecture project.

By studying the history of architecture, we verify periods and thoughts of an era, which relate objective and subjective questions, such as materials and constructive techniques, metaphors and symbolism, concepts and functionality. In the modern period, the movement through continuous, fluid and unobstructed space became an important act, explored by the architects in the planning of the spaces, with objective and symbolic connotations. Later, there was the search for a space to be discovered when walking, frame-by-frame, leaving aside, thus, the modern idea that the space can be understood in a single view, considered by some as the trivialization of space, for revealing it all.

We can establish a relationship between the concept of the route and the idea of the Japanese Garden, which has in its essence the concept of path as a learning and motive of knowledge offered by experiences, visuals and events in its course, as in a metaphor of life. Principles of spatial and visual perception, simplicity, harmony with the place permeate the spaces. The important thing is not just what is seen, but what is imagined (Kaloustian, 2010). The Japanese Garden is known, among other characteristics, for creating, in the people who walk through and appreciate it, different sensations. The spaces interfere in the perception of each individual, as in a reflection on the very existence in the world. Nothing is casual or banal. All elements, spaces, forms, visuals, materials and stimuli to the senses are carefully thought out to create conditions for the individual to think, reflect, value and imagine.

In the case of the buildings selected for circulation analysis, we observed that these questions are present according to each program and functionality. Architecture is not just function. There are subjective questions that permeate spaces.

We note that the classical static model can be predictable at the same time as it is fragmented and compartmentalized. The modern fluid and continuous model offers the understanding of the whole and also brings a certain predictability, in a different way. The postmodern sequential model rescues the gradual discovery of the classical model, but with a new format. And the contemporary heterogeneous model brings together characteristics of all the others with the language of each author.



The four conceptual models of movement and circulation identified and presented here are not final. Each one offers interpretations that can further deepen the study of circulation and architecture.

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Note: 1 - We adopted the definition of the term “design strategies” by Rafael Moneo(2004, p.2): (...) strategies. Here this refers to the mechanisms, procedures, paradigms, and formal devices that recur, in the work, of architects – the tools which they give shape to their constructions”.

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