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MODERN HOUSING INTERIOR: A STUDY OF CASES IN EUROPE AND UNITED STATES OF AMERICA

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ABSTRACT

This thesis examines the approach of modernism in the modern housing interiors. The study examines how principles related to modernism that are being applied to any architectural design, are reflected in interior design. Eight cases were selected for this research as examples of single-family housing, spanning between 1920s and 1950s located both in Europe and the United States of America, which are important geographies of modernism discourse. The criteria selected in this research for analyzing the modern housing interiors are materials, furniture, plan layout and colors of interior elements. These criteria are influential characteristics of interior design and cannot be overemphasized. This research helps to create a better understanding about how modernist design principles transcend into other fields and for the purpose of this study, interior design. It is aimed that the selection of cases studied will serve as a means to encourage designers to appreciate housing interiors and examine the principles or ideologies that give them meaning, providing knowledge concerned with shaping the future.

Key Words: *modernism, modern interior, housing, architecture, 20th century houses*

1. INTRODUCTION

In the 20th century, after World War I, there was no bigger issue other than housing where people needed homes, putting architects and planners to work¹ which led to the beginning of the modernist movement in architecture. One of the aims that modern architecture aspires to achieve is to create designs that are unique in each situation. In the case of residential buildings, they are often stripped down where focus is on the space itself, rather than any unnecessary detail. The house, however it may be, is the center of the family life, and should be a place where the family gets maximum relaxation, happiness and comfort.

Officially, Le Corbusier is the main author of modern architecture history written in the West. According to definitions based on this, modernism encompassed a change in architecture originating in Europe during the interwar period². For the purpose of this paper, study is on the Villa Savoye. Analysis of its interior is made by differentiating spaces into private, public and semi-public, with emphasis on the public spaces which ties other spaces together.

Modernism has played a key role in establishing architecture to what it is today. This research contextualizes modernism by making connections between the relationship of modernist principles and interior design providing further understanding and appreciation of housing interiors.

2. THE MODERN ARCHITECTURE MOVEMENT

The 20th century architecture is a period in time that involved the development of modernism, it can be stated that modernism achieved critical mass in Europe during the first three decades of the 20th century³. Modern architecture can refer to buildings of the modern period, or to be architecture that is conscious of its own modernity striving for change⁴.

The architects of the 20th century with a progressive mind deemed it essential to create a unified architectural style. Efforts were made to resolve the principles underlying architecture with rapid advancement in technology. In the earlier years just after World War I, a shortage in housing suggested new construction aimed at providing better living requirements. Machines began to emerge that led to a reducing cost through mass production⁵. The modern movement was a solution to improve the urban environment by changing living conditions.

The most effective organization responsible for actualizing the housing ideas of modernist principles was the International Congress of Modern Architecture (CIAM)⁶. These houses were to enhance everyday living and provide homes that would allow people certain comforts that came at a rate they could afford.

The transformation in living arrangements was also transcendent to other parts of the world, where the period of the 1920s was also the time when European modernism arrived in the United States, in which this early phase of modern architecture was labeled as the International Style⁷. After World War II, modernism gained global popularity, and became adopted by a number of architects and architectural educators⁸, that this concept continued as a dominant architectural style into the 21st century.

2.1. Principles of modernism in Architecture

The practices of the modernist era were required to establish solutions to the crisis that associated with their bomb-ravaged cities. Certain principles were established to create a unified building style. These principles are evident in many of the modernist projects as key realizations to their ideologies⁹. Some common themes that relate to modern architecture include:

1. The notion that "Form follows function", originally expressed by Frank Lloyd Wright's early mentor Louis Sullivan, meaning that the result of design should derive directly from its purpose.
2. To eliminate unnecessary detail that includes clarity of form and simple designs.
3. Materials should be at 90 degrees to each other.
4. To include visual expression of structural elements as opposed to the hiding of structural elements.
5. The concept of "Truth to materials", meaning that the true nature or natural appearance of a material ought to be seen rather than concealed or altered to represent something else.
6. Use of industrially produced materials; adoption of the machine aesthetic.
7. To emphasize visually on horizontal and vertical lines, particular in International Style modernism¹⁰.

2.2. Modernism in the Modern Housing Interior

The modern movement became manifest in the years between both world wars, where a group of progressive architects became committed to the idea that modern interiors mirror modern experiences¹¹. Having stated the modernist principles in 2.1 above, those that can be translated into interiors are numbers 2, 3, 5 and 6, where modernists based their design of new homes on these considerations. Modernism in house designs is understood as where the products used in interior spaces were changed by availability through the advent of mass production¹². This movement had ideologies that bought

about how to discard the unnecessary, embrace the streamlined, and design with mass production in mind.

Tradition (modernism in this case) should play a key role in design of interior spaces to meet up with contemporary requirements of the ever-changing society. According to experts, modernity in the domestic sphere would not have been realized if not through house designs that were made simple¹³. Architecture was responsible for bringing about values especially in houses.

3. Villa Savoye Interior Analysis

One of the famous pioneering founders of modernism is Le Corbusier, whose personal architectural style was with the industrial, as he was famously known for his statement “a house is a machine for living in”¹⁴. His philosophies are practiced across the world in various designs and modern architecture history cannot be mentioned without the name Le Corbusier.

He founded a set of principles in 1926 called the five points of architecture, which are best evident in the Villa Savoye. These principles are:

1. The pilotis (reinforced concrete stilts) elevating the mass off the ground.
2. The free facade, (non-supporting walls) that could be designed as the architect wished.
3. The use of long horizontal windows that provided extensive light, and allowed views of its surroundings.
4. The open plan that allowed the floor space to be configured into rooms without concern for supporting walls.
5. The roof garden, restoring, supposedly, the area of ground covered by the house¹⁵.

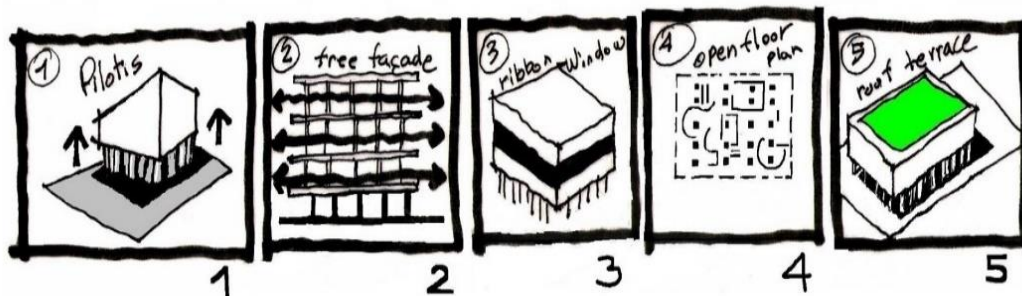


Figure 1. Illustration of Le Corbusier's five points of architecture

(<https://lh3.googleusercontent.com/QLxITf0IKUs/TXBlzMGpXI/AAAAAAAAAD4/zHtukBw54h4/s1600/le-corbusier-five-points-of-architecture0001111.jpg>)

The Villa Savoye designed by Le Corbusier best puts to display his five points of architecture. This 1929 Villa lies on the outskirts of Paris, France and was designed as a private country house. This building was quick to become one of the most influential buildings in modern architecture¹⁶ and cemented Le Corbusier's reputation as one of the most important architects of the 20th century.



Figure 2. Villa Savoye Location

(<https://www.google.com.tr/maps/place/Villa+Savoye/@48.9241892,2.029237,237m/data=!3m1!1e3!4m5!3m4!1s0x47e6894713fe71a7:0xca7c23ccbd696e16!8m2!3d48.9244245!4d2.0282804>)

Le Corbusier ensured that the design of the house would take on the physical representation of his totalitarian ideals with clear ideas that the building would occupy a center position of the site with maximized views by means of pillars, which would raise the house off the ground, by one level. The Villa remains a stunning fusion between modern architecture and its surrounding. The living room space will be the focus point in analyzing the interior of this Villa.



Figure 3. Villa Savoye view from exterior

(http://images.adsttc.com/media/images/5037/e694/28ba/0d59/9b00/035d/large_jpg/stringio.jpg?1414231174)

3.1. Villa Savoye Layout

For the plan of the interior, Le Corbusier makes use of right angles, as he thought; the right angle is the basis of human thought. By using right angles, he was able to manipulate spaces¹⁷. The layout is therefore described as open-plan making it ideal for social living and communication, bearing no ornamentation¹⁸. Le Corbusier was able to design a living room that opened out onto the terrace, with full-length windows. The ground floor of the house serves as the maintenance and service floor. On this level, Le Corbusier placed the main entrance hall, the ramp and stairs, the garage, and rooms for

the servants and chauffeur. The lower level of the house is based off an open plan idea that provokes the inhabitant to continuously move between spaces.

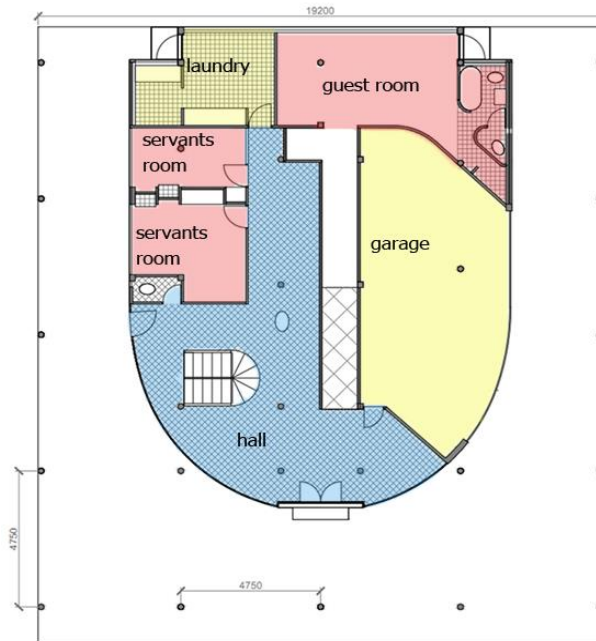


Figure 4. Villa Savoye ground floor (https://mir-s3-cdn-cf.behance.net/project_modules/disp/272aee15150133.5628d8aef2c6b.png)

private spaces
 public spaces
 semi-public spaces

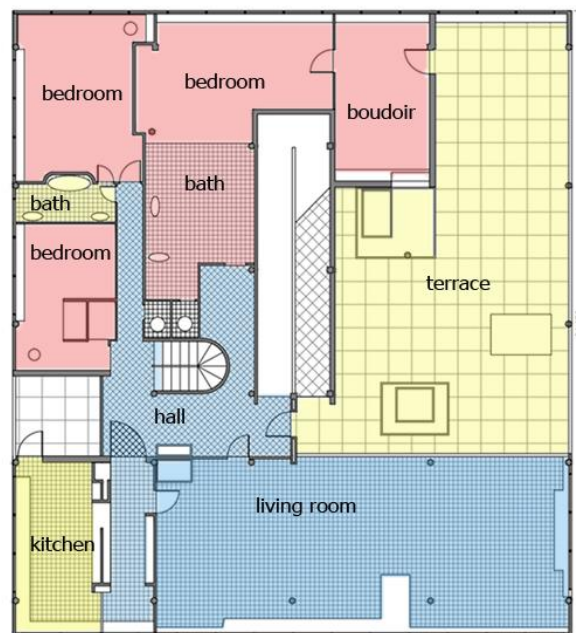


Figure 5. Villa Savoye first floor (https://mir-s3-cdn-cf.behance.net/project_modules/disp/6f307a15150133.5628d793ce8b5.png)

On the first floor is the master bedroom, a bedroom for the Savoyes' child, a guest bedroom, kitchen, living-room and external terraces. Le Corbusier situates spaces around

an outdoor terrace separated from the living area by a sliding glass wall. Upon entry from the ramp are doors leading to a terrace and the living room. A slender hallway leads to the bedrooms, which have been zoned together for privacy. A kitchen is accessed through a slim corridor housing cabinets. The last floor of this Villa has the solarium and roof terrace, which makes up the garden replacing the ground the building, is raised from.

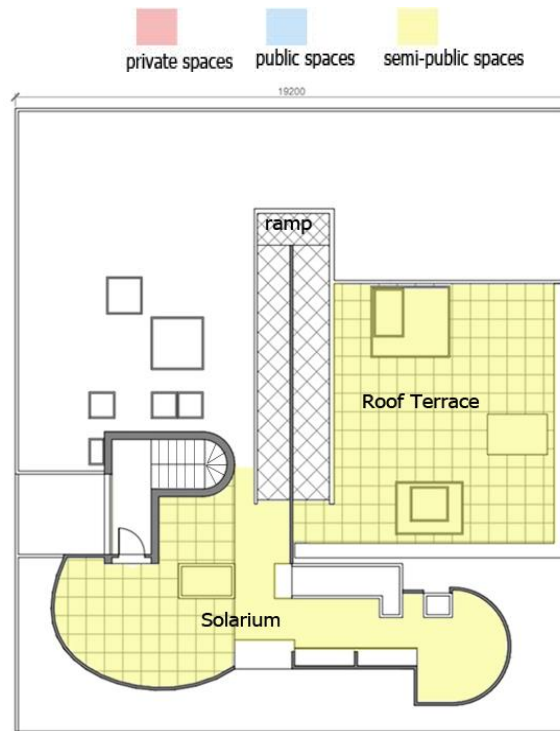


Figure 5. Villa Savoye second floor plan (https://mir-s3-cdnf.behance.net/project_modules/dis/f3808d15150133.5628d8754c4c1.png)

3.2. Villa Savoye Material Analysis

Le Corbusier uses both rough and smooth materials and their different textures to bring the building alive and create a psychological response that allows the user participate in the space. Reinforced concrete, brick, glass, wood, leather and steel are some of the materials used by Le Corbusier in this Villa to express his ideas. The use of different materials allowed one to visually experience and hear the volume as well (Morrissey, 2010) by the way echoes come off other materials.

The use of reinforced concrete is the main structural material used in this building. In its ceiling (1), it gives the space an industrial feel, and its walls plastered masonry (2). Glass walls (3) provide uninterrupted views of its landscape and the roof terrace on the second level. The use of glass also allows maximum penetration of light into the space, creating well-lit and airy interiors. Wooden parquet floor tiles (4) provide dimensionality to the living room space, adding pattern and texture to the rather plain interior. Brick (5) was also used as an accent material where the fire place is situated. The textures from the brick add an earthy feel to the living space. Leather, considered a soft material is used as upholstery for the chairs (6). This adds to the user comfort as the chairs take on the shape of its user.



Figure 6. Analysis highlighting materials in living area on first Level of Villa Savoye (http://images.adsttc.com/media/images/5037/e686/28ba/0d59/9b00/035a/large_jpg/string_io.jpg?1414231189)

3.3. Villa Savoye Furniture Analysis

Furniture design was one of the primary means Le Corbusier used to engage the human body¹⁹. In his designs, he took into consideration the nature of the human body and designed his furniture to conform to the shape of body. His original furnishings for this Villa were designed to complement the building and enhance the integration of the visitor and the building.

Original furnishings were designed to complement the building and enhance the integration of the visitor and the building. The chairs (1, 2) allowed maximum engagement and experience. The Chaise Longue (1928) (3) is a chrome-plated steel and leather chair designed by Le Corbusier to fit the needs of human comfort. This fireplace with a table top like feature (4) extends the length of the wall just under the window, which forms a sitting platform with views to the outside. Towards the end of the living room in this Villa is a free standing table (5). This simple piece of furniture made of glass and steel legs is atypical example of machine-aesthetic in this space.

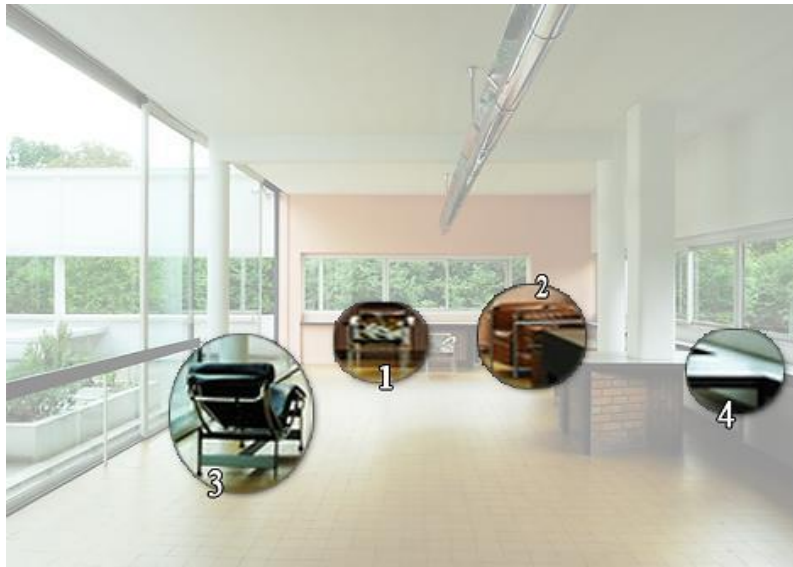


Figure 7. Analysis highlighting furniture in living area on first Level of Villa Savoye (http://images.adsttc.com/media/images/5037/e686/28ba/0d59/9b00/035a/large_jpg/stringio.jpg?1414231189)

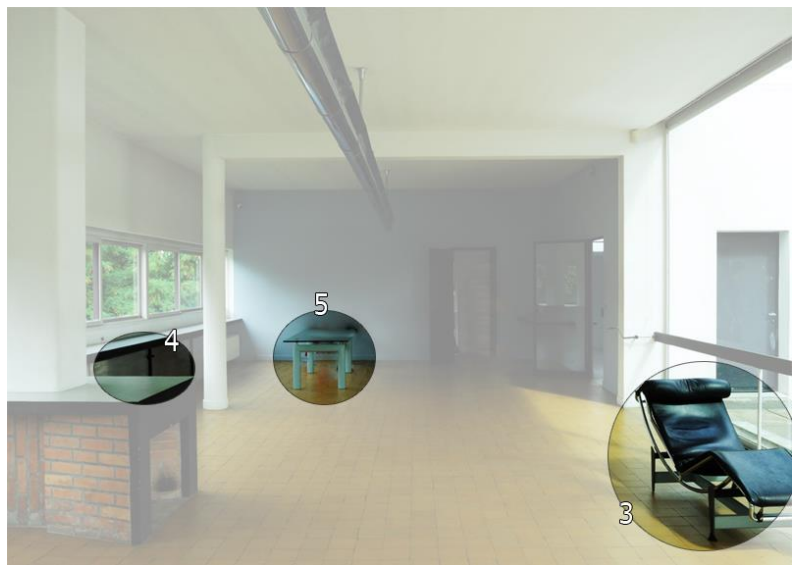


Figure 7b. Analysis highlighting furniture in living area on first level of Villa Savoye (https://static.dezeen.com/uploads/2016/07/villa-savoye-le-corbusier-france-modernist-house-flavio-bragaia_dezeen_1568_1.jpg)

3.4. Villa Savoye Color Analysis

One of Le Corbusier's preferred methods of visual interaction is through the use of color. In this Villa, he uses bright colors to capture the eye's gaze into the depths of a room. Combined with lighting, the colors are able to create a richness that is refreshing and pleasing to the eye²⁰. The stark white exterior wall has a remarkably smooth and fresh quality, which stands in contrast to the exterior. The use of solid colors comes into play through furniture pieces. Solid black and brown leather chairs adorn the living room. These dark rich colors compliment the light feel of this interior, and blend with other

shades to create a pleasing space. The effect of the continuous white finishes and brown from the brick fireplace accentuates the fresh but stark feel of this living space.



Figure 8. Analysis highlighting interior colors in living area on first Level of Villa Savoye (http://images.adsttc.com/media/images/5037/e686/28ba/0d59/9b00/035a/large_jpg/stringio.jpg?1414231189)



Figure 9. Interior color scheme in living area of Villa Savoye

4. Conclusion

This paper is a combination of modernist principles and the housing interior, with attempts made to establish a connection between both phenomena. Following the post-war years, the modern house evolved as a response to the need for mass housing. It is in the realm of house design that architects were able to stretch the limits of modernism, and it was in domestic architecture that the style found its most intimate representation.

The study analyzed the principles of modern architecture which were reflected in modern housing interiors as: the elimination of unnecessary detail that includes clarity of form and simple designs, materials at 90 degrees to each other, the concept of truth to materials, and the use of industrially produced materials. Interiors spaces of modern houses were minimalistic in design; a lesson that can be applied to our interiors today. A design need not be cumbersome in its interior, but going by Le Corbusier's "Less is more" principle, an interior can achieve its intended effect with the use of minimal interior elements.

In design of housing interiors, there should be a relationship between the inside spaces and its surrounding by incorporating the site into the interior. The layout should be a seamless flow between spaces with a hierarchy which helps in determining size and position of the space (zoning). In meeting the demands of our ever changing societies, interiors should be created with flexibility of use in mind.

Materials should be used in their true nature and not disguised to represent another. Truth to materials should be encouraged which enhances the true character of an interior. The furniture used in housing interiors defines the activities that will take place. In the absence of internal wall partitions, furniture can be used to define a smaller space (function) within a bigger space. Careful consideration should be made in color choice and applications as it has the ability to set the aura within the space. It is also wise to note they should be used in harmony with other elements that make up the entire interior.

21st century architects should design their architecture to not just care about the client, but also social issues which was the case in the preceding century. Whether or not modern housing interiors are appreciated, they represent a key moment in our history, and a time when all historical reference was thrown aside in favor of something new and unexplored.

ENDNOTES

- 1 Harwood and Powers, *Housing the twentieth Century Nation*, 99.
- 2 Bozdoğan, *Modernism And Nation Building*, 4.
- 3 Gold, *The experience of modernism*, 280.
- 4 Colquhoun, *Modern Architecture*, 9.
- 5 Chen and He, "Inspiration of the Bauhaus", 323.
- 6 Bozdoğan, *Modernism And Nation Building*, 4.
- 7 Allaback, Sarah. *Essays on Modern Architecture*, 2.
- 8 Rowe, Hayley A. "Rise and fall of modernist architecture".
- 9 Ibid.
- 10 Davis, "Modern Architecture".
- 11 Sparke, *The Modern Interior*, 9.
- 12 Ibid., 13.
- 13 Sparke, Penny. "Studying the modern home", 413.
- 14 Le Corbusier and Cohen. *Toward an architecture*, 266.
- 15 Le Corbusier, and Pierre Jeanneret. "Five Points 1926."
- 16 Sbriglio, "Le Corbusier: La Villa Savoye," 6.
- 17 Wogenscky, *Le Corbusier's Hands*, 83.
- 18 Rowe, Hayley A. "The Rise and Fall of Modernist Architecture"
- 19 Morrissey, "Villa Savoye 1929-1931".
- 20 Ibid.

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