# Villa Savoye- Le Corbusier

Figure 1: Villa Savoye

## Historical Background.

Figure 2: Watch design by Corbusier

Le Corbusier, born Charles-Edouard Jeanneret, started his life in La Chaux-deFonds, Switzerland in 1887 (Biography.com Editors, 2014). His creative prowess perhaps came as no surprise with both parents involved in creative occupations. His father, painted watch dials and his mother a musician. Corbusier began his venture of creative expression as a watch engraver (aged 13) whilst studying at his local art school. His flair and artistic interpretation began to show even at this early phase through the use of unorthodox geometric designs and application of modernist twists as shown in figure 2. At school Corbusier began to further study drawing, art nouveau and art history under Charles l'Eplattenier whom Corbusier regarded as 'his master'. Following his studies at home in Switzerland, Corbusier travelled throughout Europe before finally ending up in Paris where he began work for August Perret (Stott, 2018), before learning German in order to work for Peter Behrens in Berlin. At this period Behrens had Le Corbusier, Mies Van der Rohe and Walter Gropius working in his studio, 3 of the most influential modernist architects (Stott, 2019). Behrens clearly a great influencer and mentor. Corbusier ended his travels with a return to La Chaux-deFonds to teach during the first world war. it was during this time where his theoretical work began with a proposal for mass production that involved reinforced concrete framing (used extensively throughout his work and is evident in Villa Savoye). He named this the Dom-Ino house. After the war he began to practice with Pierre Jeanneret, his cousin, and continued to do so throughout his career.

Figure 3: Interior sketch of Villa Savoye.

Villa Savoye, built between 1928 and 1930, is widely regarded as Le Corbusier's most influential building and one that has since become an outstanding example of modernism. Villa Savoye was built as a weekend retreat in Poissy on the outskirts of Paris (Centre des monuments nationaux, 2019). Somewhere for one to escape urban chaos and enjoy a tranquil break among the white walls of the Villa. The design encompases Corbusier's 'five points of architecture', with pilotis, open plan design, ribbon windows (see figure 3), free façade and a roof garden as prominent architectural features of the villa. The villa lacks historical ornament and is laced with minimal decoration on both the interior and exterior. On the

contrary, Corbusier's careful regard of historical buildings has great influence over its design. For example, his studies and evaluations of Roman architecture inspired his use of the roof garden as a source of light.

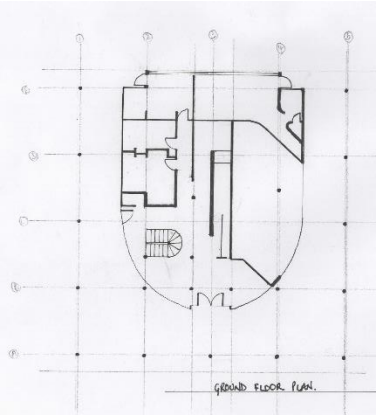


Figure 4: Ground floor plan drawing.

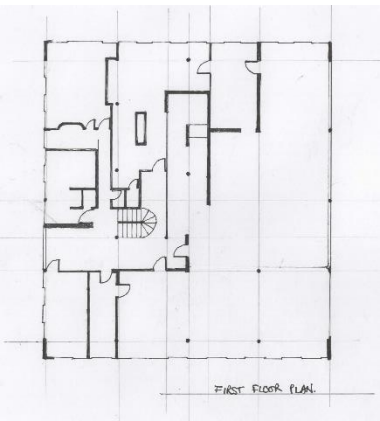


Figure 5: First floor plan drawing.

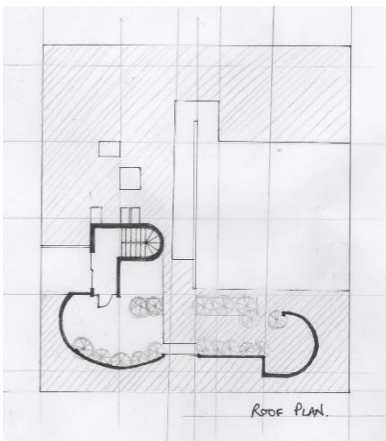


Figure 6: roof plan drawing.

**Corbusier's theories underpinning the plan, section, his use of light, and material choices.**

Le Corbusier based his designs largely on architectural concepts and theories, Villa Savoye is no exception. Prior to the construction of Villa Savoye, Corbusier published much of his architectural thinking and policies in his book *Towards a New Architecture,* first published in 1923 (Corbusier, 1986). Many of these theories underpin the design of Villa Savoye and can explain the design processes used by Corbusier. In this book he talks about 'the engineers aesthetic', and how coupled with architectural intricacy and creative thought it would achieve harmony with the surrounding environment. *Towards a New Architecture* provides readers with a glimpse at Corbusier's analysis of Liners, Aeroplanes and Automobiles and how components of each can combine to create the perfect machine in which to live. Elements of Villa Savoye, namely the roof terrace (figure 6) resembles an aesthetic not too dissimilar to that of a liner, showing a direct correlation between Corbusier's theories and his creative output.

The book shows that the plan, surface, and mass are the most important aspects of a successful scheme in Corbusier's eyes. The ground floor plan (figure 4) shows the intricate arrangement of reinforced concrete pilotis that give the building order and a foundation from which to build. From the plan we can see that the pilotis sit on a grid that defines aspects of geometry on each floor. The pilotis serve an aesthetic purpose as well. The slender design of pilotis coupled with the dark green finish to the ground floor exterior creates an illusion where the white mass seems to hover over the ground beneath it (figure 1). *Towards a New Architecture* also sheds light on how Corbusier believed that the exterior appearance of a building should respond to the internal plan. The functional spaces of the ground floor, which include the main entrance area, a washroom, garage, two maid rooms and a chauffeur's room are internally offset from the larger grid provided by the pilotis. This design decision is then reflected in the external appearance of Villa Savoye exposing the outer pilotis. Which also a contributes to the buildings hovering appearance as shown in figure 1.

Each floor is asymmetric in plan and follows basic geometry that is internally manipulated by Corbusier to further separate spaces and rooms. The linear geometry shown in the plans are carefully accented with curvature that eases circulation and allows space, light, and shadow to flow from one to another. The ground floor, as shown in the plan, offers access to the first floor via a spiral staircase and a ramp. The ramp appears in the plans of all three floors gradually climbing from the ground floor upwards towards the roof terrace. This is evident in the section drawing (figure 7). The ramp takes up a lot of space within the plans but provides an elegant pathway and a journey between each floor. His ramp, as also shown in the plans lengthens the time it would take to travel between floors and allows more time for the building to interact with the senses and offer an experience- A journey from the darker lower level upwards into the lighter spaces above.

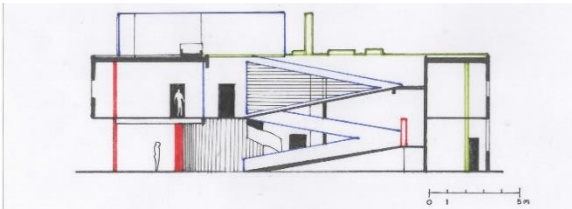

Figure 7: Section drawing.

Corbusier believed that light, shade, walls and space are key elements that create a successful architectural statement. It is therefore apparent that that his application of walls and space were carefully considered throughout Villa Savoye to appropriately sculpt light and shade. The book, *Towards a New Architecture* also shares his concept that every element is seen from the eye of a person passing through the space, and therefore for the best possible appreciation and resonation of each architectural feature, one's perspective should be adequately considered, Villa Savoye is no exception. A theory evidently used throughout Villa Savoye.

The building enjoys good sun aspects and natural lighting from all sides dependant only on the time of day and position of the sun (Berselli et al. 2014). This gave Corbusier a blank canvas on which he was free to sculpt light and shade and the effect that they would have on each space as he wished. Given the rectangular geometry and depth of the plan it provided a challenge for Corbusier to draw light into the interiors, this would not have been possible solely via the windows on the first-floor facades. The open plan first floor (figure 5) consists of the main living areas including a kitchen, bedrooms, bathrooms, and a dining room. The use of light here is tailored to each room and its function. The more secluded rooms such as bedrooms and bathrooms, for example, are exposed to light from façade windows only. Whilst the more public spaces are exposed from light falling from the roof terrace above. The light provided by the roof garden cascades throughout both ground floor and first floor, animating the concrete geometry and providing bright light into the circulation spaces. The smooth plasterwork and material unity throughout Villa Savoye allows the geometric forms and shapes cast by light and shadow to be exposed and focused. As well as providing natural light for the floors below the roof terrace is intended to be used as a solarium for sunbathing. The terrace, its plan shown in figure 6, is protected by flat and curved walls against westerly and northerly winds to create a secluded atmosphere for one to enjoy. The plan is free in form which contrasts with the geometry that runs through the main body of the villa as shown in figure 8.

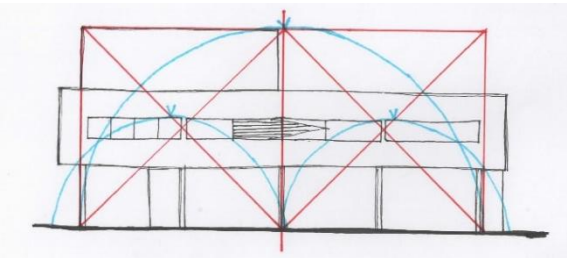

Figure 8: Sketch of façade geometry.

**Conclusion/summary.**

At first observation, one might consider Villa Savoye to be a brutal lump of white reinforced concrete that sits harshly in its environment as some sort of unearthly spaceship. But upon closer observation Villa Savoye is an intricate resemblance of Corbusier's innovative thinking and architectural interpretation hovering respectfully among its surroundings. He successfully sculpts the mechanically inspired geometry to create functional spaces and atmospheres that induce both natural and artificial lighting. The play of light and shade cast upon the plasterwork famously emphasises the sense of space and volume. Protests have saved the Villa and prevented its demolition (Devanshi Shah, 2018), which shows its importance, appreciation, and value throughout the architectural community as a piece of architectural history. The monument now stands as an outstanding resemblance of modernist design open to public viewing which hosts numerous events throughout the year. Villa Savoye, an iconic building by one of the biggest influencers in modern architecture.

1530 words.

**Reference List.**

Berselli, S., Matthias Brunner, Mondini, D. and Accademia Di Architettura (Mendrisio (2014). *"Le jeu savant": luce e oscurità nell'architettura del XX secolo; light and darkness in 20th century architecture; [convegno ... Accademia di Architettura dell'Università della Svizzera Italiana (Mendrisio, 24-25 ottobre 2014)]*. Mendrisio: Mendrisio Academy Press.

Biography.com Editors (2014). *Le Corbusier*. [online] Biography. Available at: https://www.biography.com/artist/le-corbusier [Accessed 9 Apr. 2020].

Centre des monuments nationaux. (2019). *Villa Savoye*. [online] Available at: http://www.villa-savoye.fr/en/. [Accessed 12 Apr. 2020].

Corbusier, L. (1986). *Towards a new architecture.* Translated by F. Etchells. Mineola, Ny Dover.

Devanshi Shah (2018). *Iconic House: Villa Savoye by Le Corbusier*. [online] Architectural Digest India. Available at: https://www.architecturaldigest.in/content/iconic-house-villa-savoye-le-corbusier/ [Accessed 15 Apr. 2020].

Figure 1: Photograph of Villa Savoye. Khan Academy. (2018). *Le Corbusier, Villa Savoye*. [online] Available at: https://www.khanacademy.org/humanities/ap-art-history/later-europe-and-americas/modernity-ap/a/corbusier-savoye [Accessed 16 Apr. 2020].

Figure 2: Photograph of a watch designed by Corbusier. www.thewatchquote.com. (n.d.). *The Watch Quote: Photo - Girard-Perregaud Vintage 1945 Le Corbusier*. [online] Available at: http://www.thewatchquote.com/Photo-Girard-Perregaud-Vintage-1945-Le-Corbusier-img37300_1200.htm&Girard-Perregaud%20Vintage%201945%20Le%20Corbusier [Accessed 19 Apr. 2020].

Figure 3: Interior sketch of Villa Savoye. Author (2020).

Figure 4: Ground Floor plan drawing. Author (2020)

Figure 5: First Floor plan drawing. Author (2020)

Figure 6: Roof plan drawing. Author (2020)

Figure 7: Section drawing. Author (2020)

Figure 8: Sketch of façade geometry. Author (2020)

Stott, R. (2018). *Spotlight: Le Corbusier*. [online] ArchDaily. Available at: https://www.archdaily.com/434972/happy-birthday-le-corbusier-2 [Accessed 9 Apr. 2020].

Stott, R. (2019). *Spotlight: Peter Behrens*. [online] ArchDaily. Available at: https://www.archdaily.com/619290/spotlight-peter-behrens [Accessed 9 Apr. 2020].