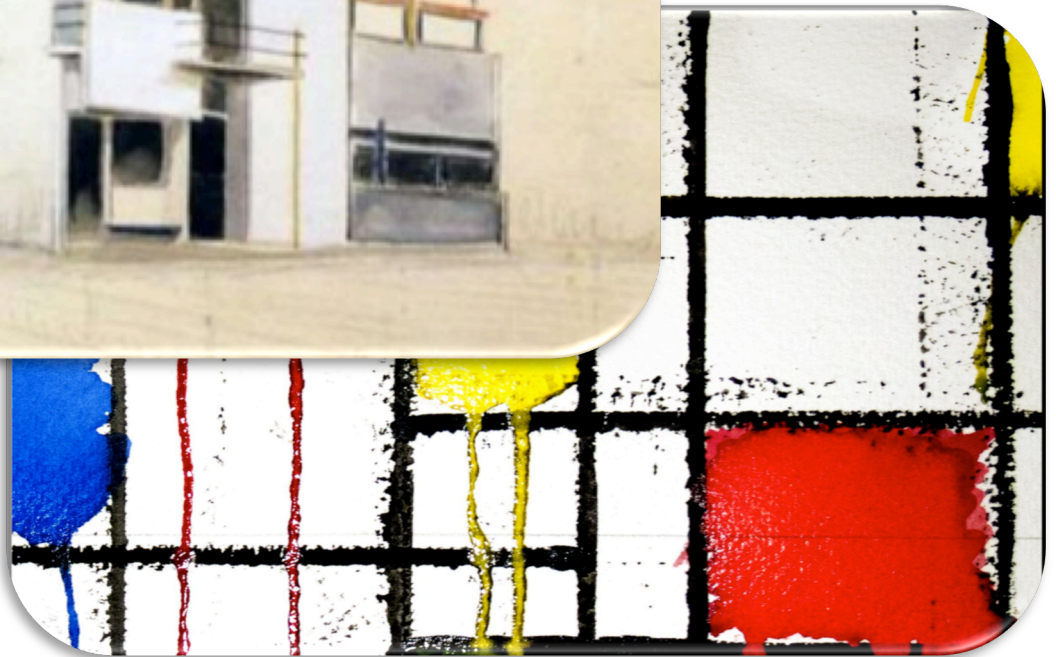


History and Theory

The Schroder House



Introduction

The end of the 19th century and the beginning of the 20th century are considered a milestone in shaping forms of architecture (YU, n.d.). Architects such as Berlage and Frank Lloyd Wright were predominantly known for their rationalistic approaches with Wright drawing the attention of the well-known Dutch magazine “Wendigen” which means change or upheaval (Sisson, 2016). This was highly accurate in describing Wright as he soon played a part, alongside Theo van Doesburg, in influencing and promoting the movement of applying De Stijl art into the designs of buildings. Doesburgs house in Meudon (1929) was an early example, which demonstrated that the philosophical belief behind this movement was a focus on abstract architecture (Fletcher, n.d.). In turn, this led to the design and construction of the Schroder House which is an exemplarily example that demonstrates the fundamental forms that derived from this movement (Fletcher, n.d.). Forms which were highly influential in the early 20th century and continue to play a role in today’s architecture (N.A, 2018).

The Rietveld Schroder House was designed by the architect Gerrit Thomas Rietveld and commissioned by Ms Truus Schröder-Schräder (Centre, 2000). The house was built in 1924 and is situated in Utrecht, constructed against a wall of the adjacent brick house at the end of a row of 20th century houses (Centre, 2000). This particular design places a direct comparison between the typical 20th century architecture and the Schroder House that is considered as an iconic movement in modern architecture.



Exterior view of the Schroder House constructed against a typical 20th century house- (Photo: Manuel Kubitza. 2004)

The Schroder House is the only building of its kind designed by Rietveld’s and it differs significantly from other predominant buildings of its time, such as the Villa Tugendhat by Mies van der Rohe and the Villa Savoye by Le Corbusier (Centre, 2000). The key differences are based upon the functionality and adaptability of the interior space. Further, the design derived from the principles of the De Stijl art that was prevalent within the Netherlands in the 1920’s, provides unique visual and formal features.

Internal plans and features

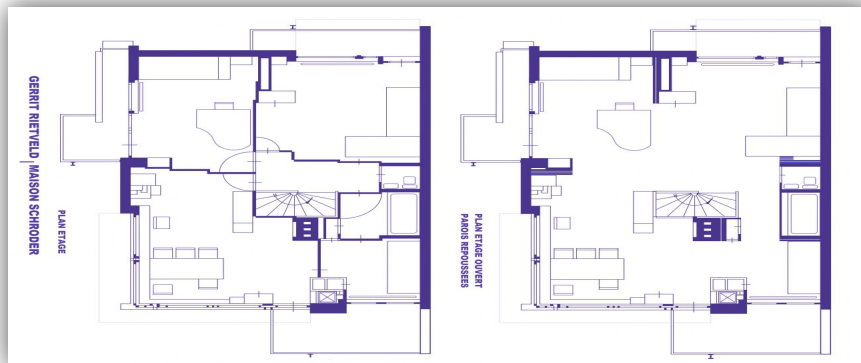
The internal and external elements of the Schroder House are fresh and playful forms of architecture. Upon entering the house, the key features are immediately identifiable. Opposite the main entrance lies a spiral staircase (N.A, 2018). This principle within the floor plan was a prominent design, in keeping with the building codes of Utrecht at the time (YU, n.d.). The spiral staircase symbolised

the core of the house, which was influential to the floor plans circulation within the building (YU, n.d.).



Floor plan showing the circulation around the staircase- (YU, n.d.)

The primary inspiration behind the internal plan design derived from “Maison particuliere” and the “Maison d’artiste” by Van Doesburg and Van Eesteren (N.A, 2018). Their influences led to the Schroder House being designed to provide open and dynamic spaces by the implementation of movable walls and internal screens (N.A, 2018). The moving partition walls, when open provide a three-room open plan space (YU, n.d.). When these walls close they adapt the living space to facilitate for family living, whereby six smaller and more private living spaces are produced (YU, n.d.). This striking element of the design, which was regarded as a feature that was ahead of its time, is a key element that separated the Schroder House to other influential architecture of its time.



Schroder House (1924) floor plans showing the adaptability of the plans- (Image: jchancerel CCBY-SA4.0)

The walls and floors are made up of shiny rectangular shapes comprising of red, blue, yellow, black, grey, and white, primary colour schemes in accordance with the De Stijl style throughout (Merchant, Shi and Ru, 2012).. These colours, alongside the natural light that is drawn in through the large windows, amplifies the light throughout the house.



Interior panels in the De Stijl colour scheme- (the rietveld schröder house, n.d.)

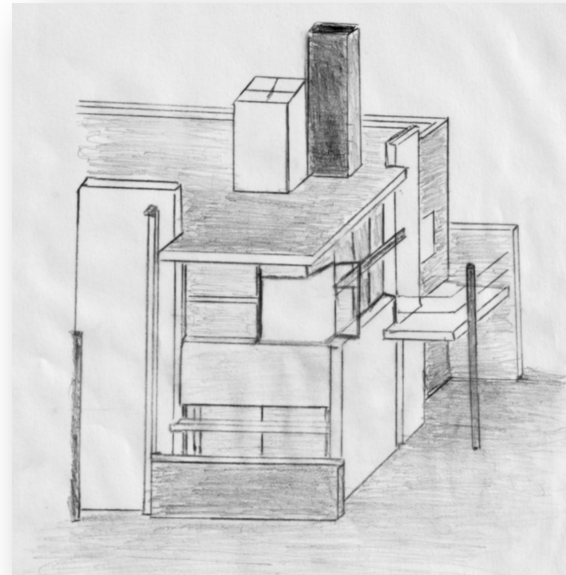


The Avant-guard apostle by Theo van Doesburg, demonstrating the use of De Stijl colours (Avant-garde apostle: Theo van Doesburg – Tate Etc | Tate, n.d.)

Rietvelds conservative approach to implementing solid structural walls into his design is further emphasised by the choice and use of the windows. The intersection of two windows is cleverly designed to, not only create the illusion that the first floor roof is floating, but also, when both windows are open, the corner of the room is removed (Unesco World Heritage in Utrecht, n.d.). According to Hielkje Zijlstra, this is referred to as an epitome of the “open corner” (YU, n.d.). These features demonstrate Rietvelds intention to eliminate the distinction between internal and external living spaces by reducing physical barriers such as walls.



The “open corner” when the windows are closed- (Muino, 2016)



Sketch of the Schroder House showing the “open corner” with the windows open. The corner is removed as there is no structural element to the corner- (Sketch. Author, 2020|)

External design and features

The house's exterior consists of symmetrical rectangular planes that are shaped by using horizontal and vertical straight cut lines, a principle that derived from De Stijl (Unesco World Heritage in Utrecht, n.d.). These panels never meet at the corners but appear to be propped together in an elegant yet strangely precarious composition (N.A , 2018). The floating panels are placed in a unique and somewhat irrational manner (Fletcher, n.d.). These, however, play an effective role in diluting any potential interpretations of hierarchy of forms within the design, in keeping with the philosophy of abstraction (Fletcher, n.d.). The exterior elevations further emphasise Rietveld's intention to reduce a clear distinction from the interior and exterior. This is maintained on the exterior through the replication of the use of a primary colour scheme that's used in the interior. These coloured panels, in the form that they have been placed, manipulate the buildings exterior visualization to create an optical illusion that the structure is ever changing (Merchant, Shi and Ru, 2012). This is particularly prominent when the natural light surrounding the building changes (Merchant, Shi and Ru, 2012). The painting of the lintels in black on the south elevation provides a particularly fascinating illusion. During the daytime the windows appear to be black (Merchant, Shi and Ru, 2012). As a result, the black lintels above the windows are optically removed from the structure, creating a visualisation that the balcony and roof are held up by the planes of the glass (Merchant, Shi and Ru, 2012). This is particularly interesting as the principle behind the design further elaborates on the intention to remove a physical visual barrier that separates the internal and external space.

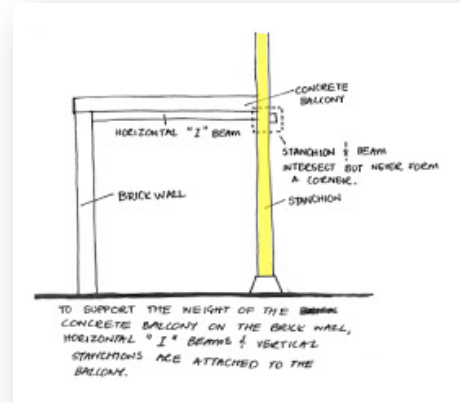


Elevation of the Schroder House showing the floating panels and coloured lintels- (Gerrit Rietveld's Schröder House: Perfect Harmony in a Home | The Art Minute, n.d.)

Internal and external materials

The external materials used did not significantly contribute to the revolutionist principle behind the building. The main construction consisted of a timber roof and rendered brick walls, which was fairly typical at the time (Sveiven, 2011). There are several factors that led to this decision. Firstly, Rietveld had an excellent understanding of how brick and plaster work (Merchant, Shi and Ru, 2012). He had a deep understanding of the technical details of loads and duress of these materials (Merchant, Shi and Ru, 2012). Further, at the time, concrete

was a particularly new concept. During this time, especially in 1923, the Netherlands was going through a time of financial difficulties, slipping in and out of a recession (Merchant, Shi and Ru, 2012). As a result, building the primary structure using concrete would have been exorbitant. Concrete was however used for the house foundations and the horizontal and vertical slabs for the balconies (Merchant, Shi and Ru, 2012). As the brick walls were not strong enough to independently support the load, a horizontal "I" beam was used to support the weight of the balconies.



Detail drawing showing an I beam supporting the load of the balcony- (N.A, 2018).

The interior movable partition walls are made with a combination of beaver boards and bituminized cork (Church, 2016). These materials were used for their lightweight properties in order to make them easy to manually move. As this aim was achieved, criticism is placed on the lack of consideration that was given to the poor acoustic qualities of these materials (Church, 2016). Throughout the interior are exposed electrical and mechanical services (Church, 2016). This contributes to Rietveld's idea of producing a simple and practical design that also provides an element of rawness to the building (Church, 2016). Wood also featured as a key material and also used for the De Stijl furniture such as the famous De Stijl chair and the window blinds (Unesco World Heritage in Utrecht, n.d.).

Design theories and historical elements

There are some aspects of the Schroder House's design that relates the house to the time it was built. An example of this is the floor plans that were partly designed to the requirement stipulated by planning regulations in Utrecht in the 1920's. Further, during the 1920's the De Stijl movement was prominent which inevitably influenced the design of the eoder House. However, there is no doubt that the Schroder House is a highly authentic and influential building for many reasons. Firstly, the design and the outcomes of the house set a precedent, demonstrating the excellent relationship and understanding between the architect and the client. It is prevalent throughout that Ms Schroders aims and outcomes were implemented within the design. An exemplary example of this is the use of movable walls that provides an adaptable floor plan that accommodates for home working. This was important for Ms Truus Schroder as it would allow her to spend more time with her children (N.A, 2018). Moreover, this principle satisfied Ms Schroder political and social convictions whereby she abstained against the idea that women were intended to be "the angel of the house", a belief that was the norm during this time (N.A, 2018). Secondly, the

Schroder House was successful in demonstrating an iconic building that satisfied the requirements of the modern movement through a radical approach that was visualized and practiced by the likes of Wright and Berlage (Fletcher, n.d.) The radical approach to the design; the simplistic geometry and use of colour: the use of space through transformation and adaptability; and the application of purity within the ideas, perfectly represent the principles of De Stijl and in doing so developing the art into extraordinary physical functioning structure (Sveiven, 2011).

In contrast to the positive elements, particular design features of the Schroder House were displaced. A particular example of this destruction occurred in the 1960's when a four-lane motorway and viaduct was built adjacent to the grounds of the house (Unesco World Heritage in Utrecht, n.d.). This took away from the key design element that so effectively linked the interior with the exterior, prompting Rietveld to express that the house might as well be knocked down (Unesco World Heritage in Utrecht, n.d.).

Conclusion

In conclusion, the design of the Schroder House clearly successfully demonstrates the radical approach that the minority of architects during this period strived to produce. Rietveld achieved in bringing a form of art and collage to life by impeccably implementing the fundamental principles of De Stijl to produce a pure original form of architecture. The Schroder House clearly demonstrates some elements that relate it to its traditional values from the early 20th century. This is particularly made clear by the unconventional design that rejected to comply with the social norms of gender inequality during its time. Lastly, emphasis must be given to the fact that the Schroder House's design plays an influential role in today's architecture, with a great focus given on open and adaptable floor plans.

Word count – 1647 (Excluding titles and references)

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