

**Le Corbusier's Ideas of a New Architecture,
shown with the Example of the Villa Savoye,
and their Influence on English Architecture**

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1. Introduction

This essay presents the prevailing architecture in the inter-war years through the main ideas of Le Corbusier, one of the most important and influential architects of the 20th century. By introducing Le Corbusier's developed '*Dom-ino*' system, his influential publication '*Vers une architecture*' and his exemplary '*Five Points of a New Architecture*' against the historical background, the Corbusian concepts and ideas of a new modern architecture will come clear. The practical use of his ideas will then be presented with the example of his masterpiece, the Villa Savoye. Afterwards the development of the modern movement in Britain in the 1930s will be portrayed to give the historical background for the presentation of several selected buildings in Britain. Along with the intentions of their architects, these buildings will show the influence which the Corbusian ideas and the Villa Savoye have exerted on English Modernism.

2. Le Corbusier's ideas and the historical background

Le Corbusier, whose real name is Charles-Edouard Jeanneret, was born on October 6, 1887 in La Chaux-de-Fonds, Switzerland. He did not take the name 'Le Corbusier' until he was thirty-three and already a great architect, as well as a painter, sculptor, urbanist and writer. By then he had already worked in Auguste Perret's atelier in Paris, where he learned the basic lessons of reinforced concrete and in Peter Behrens' office in Berlin, where he assimilated the idea that a new architecture must be based on the idealisation of types and norms, which must meet the modern society's needs, while being in harmony with the means of mass production¹.

These lessons prepared him for the development of a concrete housing system, the so called '*Dom-ino*' system, which he introduced in 1914 - 15. This system was meant to rapidly reconstruct war-ravaged Europe with the use of a mass-produced basic set of components, producing a six-point support concrete skeleton with cantilevered slabs². The skeleton consisted of three horizontal slabs; the upper two were supported by six square posts of concrete and the lower slab was lifted from the ground on squat concrete blocks. The architectural innovation

¹ W.J.R. Curtis, *Architektur im 20. Jahrhundert*, Stuttgart 1989, p. 46

lay in the free arrangement of the external wall, now being freed from its supporting function, since the weight of the building was now borne by the skeleton. The 'Dom-ino' system allowed new freedoms in the interior and exterior design and arrangement of a building and of every single room. The exercise of Corbusian ideas following afterwards have partly been made possible only by this 'Dom-ino' system. We will find this principle realised in the Villa Savoye later on, like it has also been realised in some other individual private houses as well.

The after-war developments were on the one hand characterised by a resumption of pre-war elements of modernism, which had been interrupted by the war and on the other hand by the introduction of new building materials like concrete, steel and glass. The new style favoured regularity, a free plan, new building techniques (based on steel and concrete), uninterrupted 'free façades', flat roofs, well-balanced asymmetry and the exclusion of conventional ornament. Some kind of machine aesthetics had been accepted³. A 'modern' style had been established. In 1923 Le Corbusier declared in '**Vers une architecture**', the most influential book about architecture in the 20th century, the house to be a 'living machine', understanding a house as being an article of daily use, like a car. Le Corbusier's principles of architecture, which had been stated in '**Vers une architecture**' have been absorbed and applied on many buildings constructed afterwards. This development has been international and spokespersons of four countries (the Netherlands, Germany, the Soviet Union and France), who supported the ideas of modernism, stood at the peak of the development and spreading of the 'International Style', as it was called afterwards⁴.

The principles proclaimed by the new modern style have been recorded by Le Corbusier in his '**Five Points of a New Architecture**', written in 1926. These five points created a vocabulary which was based on reinforced concrete construction and applicable to all tasks of modern industrial civilisation⁵. The 'Five Points' consist of: the pilotis, the roof terrace, the free plan, the 'free façade' and the 'fenêtre en longueur'. The **pilotis** (thin cylindrical piers) were the central

² W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 46

³ S. Kostof, *Geschichte der Architektur– Vom Klassizismus bis zur Moderne*, Stuttgart 1993, p. 650-1

⁴ S. Kostof, *Geschichte der Architektur*, p. 651

⁵ W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 113

element and starting point for the other elements. They lifted the building above the landscape and therefore allowed the natural ground surface or traffic to pass underneath, as far as urbanist ideas were concerned, with the upper level for living and the lower level for traffic. In this way the piloti, as generator of the new architecture and the new city, became a cult object and focal point of attention⁶. The **roof terrace** was one of Le Corbusier's means to reintroduce nature into the city. At the same time it contributed to the insulation of the flat roof. The **free plan** had been made possible through the supporting function of the pilotis. As a result the interior and exterior walls could be arranged as functional and aesthetic intention demanded. Thus the free plan allowed the rooms which were integrated into the steel-concrete-skeleton to be of different sizes. The '**free façade**' could be of any kind, depending on the demands of view, climate, privacy and composition. In the 1920s Le Corbusier preferred a horizontal strip window, reaching from one axis of the building to the next, otherwise a total void running from slab to slab or a thin membrane could have also been possible. The strip windows, or '**fenêtres en longueur**', have been preferred by Le Corbusier, because they let in most light and also conveyed the impression of repose, transparency and planarity of the façade. The '*Dom-ino*' system had been the basis and condition for the practical exercise of these points. Le Corbusier's '*Five Points of a New Architecture*' had already been applied more or less in earlier buildings, but now they were put together in a single system with a broad range of application possibilities⁷.

By the late twenties all these ideas concerning a new architecture provided Le Corbusier with an international reputation. Readings of his book '*Vers une architecture*' largely spread the ideas of the modern style, which have perhaps been even more a philosophy than a style. Architects engaged in the current social problems after the world depression of 1929, undertaking a new role in society with political implications. Their tasks lay in slum clearance and urban renewal, which was to be implemented through mass housing concepts⁸. To realise these concepts, architects all over the world picked up and developed Le Corbusier's urbanist ideas of the '*Ville Radieuse*', a whole town built on pilotis, as well as his ideas of the mass-production house. In this context Le Corbusier's masterpiece,

⁶ W.J.R. Curtis, *Le Corbusier: ideas and forms*, Oxford 1986, p. 76

⁷ W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 114

the Villa Savoye at Poissy (1928 - 9), served as an example of „definitive perfection of form which modern architecture could achieve in the new machine age.“⁹

3. The Villa Savoye at Poissy

The Villa Savoye at Poissy (1928 - 9) unites as a single work of art the personal vocabulary of the architect, the Corbusian '*Five Points of a New Architecture*' and the '*Dom-ino*' system, as well as the currents of that time, the abstraction of the machine and its mass-production in the new machine age. Being the 'machine à habiter' par excellence, the Villa Savoye has had a strong impact on the work of architects at that time and also on the generations following afterwards. According to the changing times of the new machine age, elements of change and movement also show very clearly at the Villa Savoye. They appear in some individual architectural elements, and they can even be seen when conditions of weather and light are changing, presenting the Villa Savoye always in a different way.

The Villa Savoye lies about 30 kilometres northwest of Paris on the outskirts of the small town Poissy on a free site surrounded by trees on three sides and with a wide view over the valleys of the French department Ile de France on the fourth side. This was the first time Le Corbusier could construct a fully plastic building without the restriction of adjoining buildings.

Approaching the building, one gets the impression of a white horizontal box, which is elevated on posts of concrete, the pilotis. "The approach is by car and as one passes under the building (a demonstration of urban doctrine), and follows the curve of industrial glazing (of which the geometry was determined by the car's turning circle), it becomes clear that one is to be drawn into a machine-age ritual."¹⁰ A chauffeur is assumed and one is dropped off on the axis, while the car follows the curve and turns into the parking places under the building. Passing the flanking pilotis, one enters the building and enters the vestibule, which is embraced by curved walls of glass. Straight ahead a ramp leads above; on the left hand side a spiral stair connects the garage and the servants' quarters with the upper level. Both, ramp and spiral stair, express the above mentioned elements of movement.

⁸ B. Ford, *The Cambridge guide to the arts in Britain: The Edwardian age and the inter-war years (Vol. 8)*, Cambridge 1989, p. 217

⁹ D. Dean, *Architecture of the 1930s: Recalling the English Scene*, New York 1983, p. 14

A free-standing wash-basin probably poses as an industrial ‚ready-made‘ and contributes to the Villa’s function as a ‚machine à habiter‘, so to speak as a „pristine health house“¹¹. All this underlines the clinical atmosphere that fills the vestibule.

The plan of the building is quadratic, the ideal form for Le Corbusier. In accordance with his ‚*Dom-ino*‘ system, the Villa Savoye consists of three horizontal slabs, separating circulation area, living area and entertainment area. The contrast between curved and quadratic forms, which appear everywhere in the Villa Savoye, creates a spatial tension¹². The ramp, as spine of the whole building, guides the ‚promenade architecturale‘, a ceremonial walk through the building. It connects the different realms of sensory perception, such as the “[...] sense of rising up into an illuminated realm, or the intensive lyricism of sun-lit geometries seen through layers of semi-reflecting glass. The building imposes its own order on the senses through sheer sculptural power.“¹³

The ascent of the ramp leads to a ‚piano nobile‘ on the first floor. Here are the living rooms, which are arranged around the roof terrace, which appears like some kind of a room in the open with its unglazed row of windows surrounding it¹⁴. The roof terrace contributes to the illumination of the house, and along with that it contributes to a healthy living in the ‚machine à habiter‘. This function is supported by the grass and trees, partly covering the roof terrace.

The biggest room in the house is the salon, separated from the terrace through wide glazing. On the other side of the roof terrace lie the kitchen with its own small terrace, the guestrooms, the bedrooms, boudoir and bathrooms. The tiled ‚chaise-longue‘ in the bathroom and the solarium at the top level announce a cult of health and hygiene – which architect and client may have shared¹⁵.

¹⁰ W.J.R. Curtis, *Le Corbusier: Ideas and Forms*, p. 95

¹¹ W.J.R. Curtis, *Le Corbusier: Ideas and Forms*, p. 94

¹² W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 189

¹³ W.J.R. Curtis, *Le Corbusier: Ideas and Forms*, p. 96

¹⁴ W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 189

¹⁵ W.J.R. Curtis, *Le Corbusier: Ideas and Forms*, p. 96

The ramp leads further above to the upper level. The fact that the ramp itself is a symbol of movement is underlined through its diagonal pavement. The upper level offers a fantastic view over the hills and meadows of the Ile de France. Nature has played an important role in Le Corbusier's ideas of a new architecture. That is why it is just as much celebrated as the idea of the Villa Savoye as a 'machine à habiter' or the machine-age ritual of the car's arrival. Furthermore the Villa Savoye was intended as a summer house and as such it frees one's view to the beautiful wide landscape, while one is standing under the open sky and surrounded by greenery in the landscape as well as on the roof terrace. Even while one is standing inside the house, long windows offer stunning views over the landscape, facing in all directions.

The roof terrace also celebrates the spiritualization of the machine according to the machine-age fantasies of the 20s. Nautical elements such as a ship's railing of tubular steel and a ship's funnel, containing the end of the spiral staircase, make the roof terrace appear as if it rides above the landscape like the deck of a well-to-do-liner¹⁶.

The last rise of the ramp leads to the solarium. It crowns the ensemble with its curved forms, which are meant to resist wind pressure and constitute a very rich architectural element¹⁷. A small window is cut into the wall. Standing on the bottom of the ramp, one sees the open sky with its passing clouds; standing on the top of the ramp, one has a stunning view to the remote valleys. Because of this small window on top and the row of unglazed windows surrounding the roof terrace, the Villa Savoye appears hollowed-out and open for the penetration of its surroundings. This impression is supported by the strip windows, which run around the whole building, being one of the '*Five Points of a New Architecture*'.

The Villa Savoye united the former Corbusian ideas, and also developed them further to a maximum of expression within Le Corbusier's vocabulary. Concerning the period of the 1920s, the Villa Savoye has been some kind of a final product. On the one hand it contained elements of a former time and was related to the past, as the pilotis' affinity to the columns of a greek temple indicate. On the

¹⁶ W.J.R Curtis, *Le Corbusier: Ideas and Forms*, p. 94

other hand, being the classical building of the modern architecture, it announced a new era, delivering suggestions for further developments for many succeeding architects.

4. Influences on English Architecture

In the late 1920s modern architecture had achieved its peak in France, Germany, Holland and Russia, but in England it was only just beginning. With the beginning of the second World War, many architects left countries like Germany, where the modern movement had been repressed, and immigrated to England. They transferred the flourishing movement to the island, where it gained a foothold, even though it had to overcome some obstacles. A certain insularity, a general post-war complacency, the lack of progressive clientele and talent and a strong resistance from traditionalists impeded the introduction of new architecture in Britain¹⁸.

Le Corbusier's '*Vers une architecture*' contributed to the upswing of the modern movement. Published in England in 1927, this key book contained a full range of ideas, which young progressives had been waiting for. Le Corbusier's Villa Savoye served as shining example for perfection of form, which modern architecture could achieve in the new machine age¹⁹.

Advocates of modern architecture joined forces against the complacency and insularity of British architecture and founded, in 1933, the Modern Architectural Research Group (MARS). This group of younger architects formed an intellectual élite, which intended to drive on research of the nature of modernism and its promotion, covering a wide area of technology and design, including town planning. They adopted the principles enunciated in Le Corbusier's '*Vers une architecture*' and those taught by Walter Gropius, who had been Director of the Bauhaus at Weimar and Dessau from 1919 to 1928. The first chairman of MARS had been Wells Coates, a Canadian born in Tokyo, who came indirectly to architecture. He immediately secured the participation of Maxwell Fry, an English

¹⁷ W. Boesiger/H. Girsberger, *Le Corbusier 1910-65*, Zürich 1993, p. 58

¹⁸ W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 223

¹⁹ D. Dean, *Architecture of the 1930s*, p. 14

architect with a passion in architecture. Maxwell Fry and Wells Coates were the acknowledged leaders of the modern architecture movement²⁰.

At the beginning of the 1930s the concept of the old, settled, permanent home was becoming outmoded, as Wells Coates pointed out in 1933²¹. He was developing ideas about minimum space requirements in dwelling houses. In the 1920s the concept of a minimum dwelling had also been announced by Le Corbusier. The current ideas of rationalisation, standardisation and minimal housing had already been presented at the Weissenhof housing exhibition in Stuttgart in 1927, a project of Le Corbusier, Walter Gropius, Peter Behrens, Mies van der Rohe and other major European figures²².

Wells Coates too wanted to transfer his ideas to the construction of smaller homes, which were more economically planned and more cheaply built. Realising these ideas through mass production and standardisation, decent homes for everyone could be provided. Probably the first British building to reflect the philosophy of the modern movement was Wells Coates block of flats in **Lawn Road, Hampstead** (1932-4), the so-called Isokon flats (for they were constructed by the construction firm Isokon, 'Isometric Unit Construction'). The 29 individual flats were packed side by side in the four storey block like ship cabins, integrated into a simple oblong form. The open cantilevered balconies on the road side stressed the horizontal line, which was on one end transformed into a diagonal line through the fire escape staircase²³. Elements of Le Corbusier were evident, especially in his sketches with its 'regulating lines' and its dynamic perspectives²⁴. In the British context, the Lawn Road flats symbolised a new way of life.

Coates' Lawn Road dwelling place represented one of the central buildings to the British movement, as did Maxwell Fry's **Kensal House** in Kensington, London. Kensal House (1936) was a co-production of Maxwell Fry and Elizabeth Denby, a specialist in housing theory and practice. Designed for the Gas-light and Coke Company, it comprised not only flats, but also a club, a school and a circular

²⁰ B. Ford, *The Edwardian Age and the Inter-war Years*, p. 238-40

²¹ D. Dean, *Architecture of the 1930s*, p. 47

²² D. Dean, *Architecture of the 1930s*, p. 47

²³ D. Dean, *Architecture of the 1930s*, p. 49

²⁴ W.J.R. Curtis, *Architektur im 20. Jahrhundert*, p. 226

playground. In the Kensal House, Fry and Denby realised a humane and cheerful building, which combined architectural design and construction with a socially conceived programme. Considerations of style were minimised to an acceptable visual pattern.

The outstanding architect of the 1930s in Britain was undoubtedly Berthold Lubetkin. Born in 1901 in Russia, he had been trained in Russia, Berlin and Warsaw and in the 1920s he moved to Paris, where he adopted, like Le Corbusier, the concepts of reinforced concrete construction in Perret's atelier. In 1930 he went to England to practise in partnership with 'Tecton', a group of AA graduates.

One of Lubetkin's and Tecton's first commissions was **High Point I** (1938) at Highgate, London. This eight-storey block of luxury flats "[...] was the first such building in London to be designed on strictly modern principles and with the freedom of plan facilitated by reinforced concrete construction."²⁵ The body of the building was lifted up on pilotis, similar to the Villa Savoye, but here the whole ground floor became a free open space. The roof terrace also reminds one of Le Corbusier's Villa Savoye, providing contact with nature and free air for healthy living in the city, supported by the surrounding greenery. Constructed on a Cross of Lorraine plan with one flat per storey in each of the four arms, two in the central spine, and one at each end, the building contained 60 flats in all. This arrangement secured complete privacy and maximised views, cross-ventilation and contact with the outside, all being elements Le Corbusier had also advocated. All in all, High Point I intelligently adapted Le Corbusier's *'Five Points of a New Architecture'* and was an exercise in community living.

Another example for the Corbusian influence on English architecture is the **De La Warr Seaside Pavilion** at Bexhill in Sussex. Designed by Erich Mendelsohn, who immigrated into Britain in 1933 to escape Nazi persecution, and the Russian-born but English-educated Serge Chermayeff, it won the open competition of 1933.

²⁵ B. Ford, *The Edwardian age and the inter-war years*, p. 243

Lying on the English Channel, this health resort was meant to serve relaxation and entertainment purposes. It therefore was equipped with a theatre/cinema, bars, a cafeteria, some offices and a bandstand. The layout of the plan showed careful logic, composing each building element in the most profitable way. The theatre/cinema on the west side of the whole complex was designed as a closed, rectangular box, since it scarcely needed sunlight. The bar, restaurant and cafeteria were arranged on the other end of the complex on a long strip. Through the use of cantilevered trays and a 'free façade', wide horizontal windows were fitted in, providing much sunlight and long views. The two main zones on both ends of the complex were connected through a hallway, characterised by means of curved glass pavilions at each end. In this way Mendelsohn and Chermayeff had also picked up some Corbusian elements for the construction of the Bexhill Pavilion.

5. Conclusion

These were only some selected buildings to show Corbusian style in English architecture. Of course there are many more examples of private houses and community buildings, as well as there have been other influential architects in Britain in the 1930s. Also a lot of succeeding architects have taken up elements of Le Corbusier's ideas. Even today one finds Corbusian components, such as the pilotis, his 'fenêtre en longuer' or the '*Dom-ino*' system realised in current buildings. Since Le Corbusier himself has picked up elements of a past architecture, his developed architecture of the 1920s connected past and future. In this way he has contributed to a timeless solution of a always newly interpreting architecture.

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