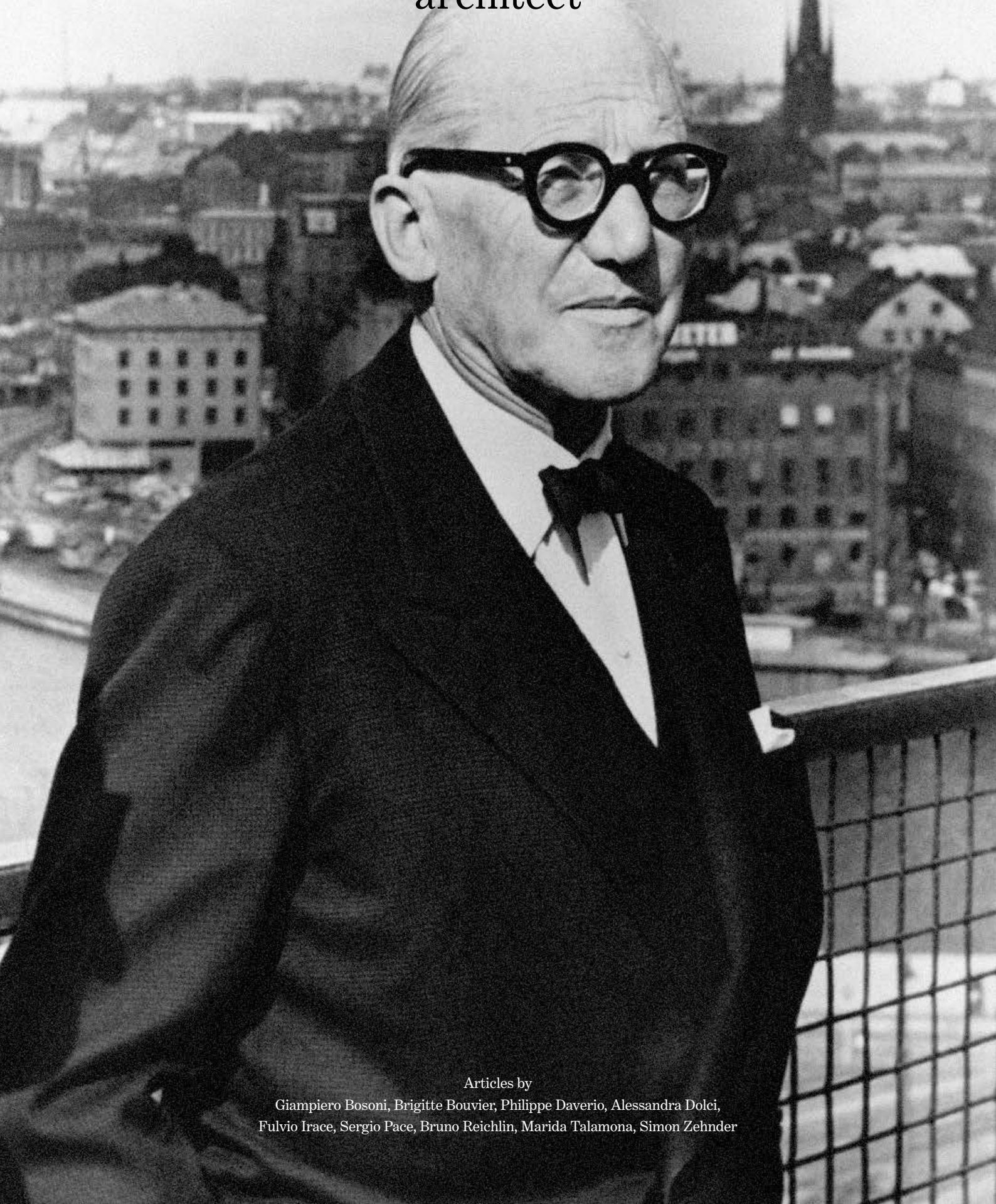


LE CORBUSIER

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# The many different faces of a revolutionary architect



Articles by

Giampiero Bosoni, Brigitte Bouvier, Philippe Daverio, Alessandra Dolci,  
Fulvio Irace, Sergio Pace, Bruno Reichlin, Marida Talamona, Simon Zehnder



## Introduction

*“Le Corbusier changed architecture – and the architect”: this glowing tribute from André Malraux to Le Corbusier is as relevant now as it was then. Born Charles-Édouard Jeanneret, Le Corbusier (1887-1965) was the most inventive and influential architect of the 20<sup>th</sup> century.*

*An architect, furniture designer, painter, sculptor, theoretician and poet all rolled into one, he designed 75 buildings in 11 countries, devised 42 urban development projects and wrote books. He left behind 8,000 drawings and over 500 paintings, sculptures and tapestries. Designed and constructed between the early 1920s, when the modern movement was in its infancy, and the 1960s, when this avant-garde architecture took hold, Le Corbusier’s buildings mark a clean break with the styles, technologies and practices of the “past”. Disdaining the weight of academic thought, Le Corbusier revolutionised the techniques and vocabulary of architecture when, in 1927, he set his “five points of modern architecture” – pilotis, roof gardens, a free design for the ground plan, a free design for the façade and the horizontal window – against the five orders of classical architecture.*

*The unique symmetry between the buildings he designed and the theory he wrote, disseminated from 1928 onwards by the International Congresses of Modern Architecture (CIAM), would make him the spokesman for modern architecture. The global dimension that all of his work took on broke new ground in the history of architecture. Le Corbusier, who never stopped travelling in his quest to learn, pass on his theories and build his buildings, was really the first architect to work on several continents at the same time, carving out a reputation for himself before the era of the “global architect”.*

*At his Paris office at 35 Rue de Sèvres, he also welcomed young architects who came from all over the world for his tuition. Inspired by the “Esprit Nouveau” (“new spirit”) that Le Corbusier so championed, they would go on to revolutionise architecture in their home country: Balkrishna Doshi, winner of the 2018 Pritzker Prize, in India; Kim Joong-Eop, in Korea; Junz Sakakura, pioneer of the modern movement in Japan.*

*“Full hand I received, full hand I now give”: his work, founded in an inexhaustible curiosity for the city and all its transformations, embodies his desire to make architecture into a social art. His ambition was to meet the needs of society of his time while at the same time creating an architecture that was both human-scale and humanist. Le Corbusier was interested in all the programmes that shaped the 20<sup>th</sup> century: individual and collective housing, but also public, cultural, religious and industrial buildings.*

*Despite being a pioneer of sustainable architecture and the mind behind landmark buildings such as the Villa Savoye in Poissy, the Cité radieuse in Marseille, the chapel in Ronchamp or the Chandigarh Capitol Complex in India, Le Corbusier was nevertheless attacked for his avant-gardism for a long time before UNESCO recognised his work as an Outstanding Contribution to the Modern Movement, including 17 buildings and sites on its World Heritage List.*

**Brigitte Bouvier**

Director of the Fondation Le Corbusier, Paris.

Front page:  
Le Corbusier in  
Stockholm, c. 1960

Left:  
The Swiss architect  
at his house in  
Boulogne, France.  
Here, he is sitting in  
his studio with  
paintings leaning  
against and hanging  
on the walls, 1950.





# The life of Charles-Édouard Jeanneret-Gris, also known as Le Corbusier

by Sergio Pace\*



Left:  
The intense face of a young  
Le Corbusier in the 1920s.

This page:  
With his wife Yvonne at  
Le Piquey (France), c. 1930.

As he had done for over 15 years, in the summer of 1965 Le Corbusier spent a few weeks' holiday in his "cabanon", looking out onto the beach at Roquebrune on the Côte d'Azur. The mild weather on the morning of 27 August saw him go out for his usual solitary swim. A quick dive and a few strokes towards the open sea. Two passing tourists noticed he was having trouble swimming. Minutes after the Menton fire brigade intervened, his lifeless body was brought to the shore: there was nothing else to be done. He was buried beside his partner Yvonne in the small cemetery overlooking the sea, in a tomb that he had designed himself, decorated simply with a headstone in white, light blue, yellow and red. On 1 September, a world away from the moving intimacy of that place, André Malraux organised a farewell ceremony in Paris in the Cour Carrée of the Louvre.

So ended the life of the 20<sup>th</sup> century's most famous architect, Charles-Édouard Jeanneret-Gris, known as Le Corbusier, first in solitude on the shore of the Mediterranean, and then among the crowds in the French capital. A life that began on 6 October 1887 in the town of La Chaux-de-Fonds, set in a valley 1,000 metres above sea level in the Swiss Jura.



The grave where he is buried alongside his wife Yvonne, Roquebrune-Cap-Martin.

Right: *Barques sur le Bosphore*, graphite pencil, black ink and watercolour on Canson paper, 1911.

The young Charles-Édouard was trained in the watchmaking industry, the main activity in the town of his birth. In 1900, his father enrolled him in the local art school, where he met the painter and architect Charles L'Éplattenier. In 1905, L'Éplattenier displayed excellent foresight in organising an advanced course dedicated to the latest trends in the decorative arts,

particularly Art Nouveau. Architecture was one of the subjects offered and the brilliant Jeanneret quickly soaked up all that he was taught, going on to design and build his first project, Villa Fallet, in 1906. Having completed his advanced studies, his outstanding academic performance propelled him on a journey that took him to Italy, Austria, southern Germany, eastern France and finally to Paris. The resourceful traveller succeeded in contacting some of the leading figures in contemporary architecture, from Josef Hoffmann to Tony Garnier. But it was in Paris, from 1908, that he reached a turning point. Having met the Swiss architect Eugène Grasset, who first introduced him to technical drawing, he secured a job as a draughtsman at the studio of the Perret brothers. There he soon earned the trust of Auguste Perret, completed his first apprenticeship in architecture and construction, and was put to the test with the construction of Villa Jacquemet (1907) and Villa Stotzer (1908), both in La Chaux-de-Fonds.

He worked for the Perret brothers for around 16 months. In April 1910, on assignment for his old school, he set out on a long trip during which he got to know Germany better; in Berlin he worked for eight months in the office of Peter Behrens. In the summer of 1911, he went further still, to the Balkans, Greece and Istanbul, returning via Naples, Rome, Florence and Pisa. On this trip he filled notebooks with extraordinarily accomplished drawings and took hundreds of photographs: this was his "voyage d'Orient". Once back in his home town, he experimented with a full-on rebirth of his own





From left to right:  
Amédée Ozenfant,  
Albert Jeanneret  
and Le Corbusier,  
in the *L'Esprit  
nouveau* offices,  
Paris, c. 1920.

Front cover of  
the first issue of  
*L'Esprit nouveau*,  
October 1920.



figurative language with the Villa Jeanneret-Perret ("La Maison Blanche") for his own parents (1912); although not his finest project, he made up for it with a second house ("La Petite Maison"), which he built for them in the Swiss village of Corseaux on the shores of Lake Geneva (1923-24). During the war, he lived between Switzerland and Paris, with brief visits to Germany, continuing his research into reinforced concrete buildings. This led to the creation of that icon of structural form, and of 20<sup>th</sup> century architecture in general, which Charles-Édouard named his "Dom-Ino" house, combining the terms "domus" ("house") and "innovation".

Neutral Switzerland remained a safe haven during these turbulent years. 1916 saw him build two more masterpieces in La Chaux-de-Fonds: Villa Schwob and the La Scala cinema. Nevertheless, it was clear that he would only be able to fulfil his dreams elsewhere. In 1917 he returned to Paris to open his first independent atelier, at 20 Rue de Belzunce, later moving to 29 Rue d'Astorg. In the fervent atmosphere of the immediate post-war period he met the leading lights of the avant-garde movement, in particular the painter Amédée Ozenfant, with whom he would collaborate on some extraordinary projects. Together with him and Paul Dermée, he launched a wide-ranging cultural project: in the summer of 1920, they first published *L'Esprit nouveau*, a review that would showcase modernity in all its guises through a series of short articles, texts and illustrations, almost all of which were penned by its founders-cum-editors.

To disguise their numerous contributions, many of the pieces were attributed to pseudonyms: borrowing the name from an Albigensian ancestor, from that point on Jeanneret became known as Le Corbusier. He published three collections of articles in the review under the moniker, entitled *Vers une architecture* (1923), *Urbanisme* (1924) and *L'Art Décoratif d'aujourd'hui* (1925), which would become key architectural texts of the 20<sup>th</sup> century.

He was not content to restrict his career solely to architecture, however. For example, it was extremely important for him to be recognised as an artist in the broad sense, and from his first exhibition in Galerie Thomas, he created an extensive body of work in sculpture and particularly painting. It was an equally momentous period in his private life: in 1922, through Ozenfant's partner he met Jeanne-Victorine Gallis (1892-1957), known as Yvonne, a Monaco-born model with a strong personality. While always remaining in the background, she would greatly influence the course of Le Corbusier's personal and professional lives as his lifelong companion.



From left to right:  
Fernand Léger,  
Charlotte Perriand,  
Le Corbusier, Albert  
and Pierre Jeanneret,  
Jean Badovici.  
CIAM, Athens, 1933.

Bottom:  
Le Corbusier's  
identity card.



In 1922, thanks to the decisive contribution of his cousin Pierre Jeanneret, who had also emigrated from Geneva to Paris, he left Rue d'Astorg and opened a new studio at 35 Rue de Sèvres, which served as his base for all subsequent projects and became a meeting place for different professions and cultures. Among other collaborators, from 1927 the two Jeanneret cousins were assisted by the designer Charlotte Perriand (1903-99), particularly in designing furnishings, while André Wogenscky (1916-2004) played a key coordinating role from 1936.

Thanks to this new professional structure, initiatives and works appeared that would lead the group to international glory. At the 1922 Salon d'Automne, Le Corbusier unveiled the "Citrohan" house, a housing model conceived using a production process similar to that used for cars. It marked the beginning of an immensely successful period, featuring houses and villas built for the capital's cultural elite which were quickly recognised as 20<sup>th</sup>-century masterpieces.

In the meantime, he became a French citizen: his profession was noted on his identity card as "homme de lettres". That same year, he married Yvonne, moving with her four years later to the top two floors of the "Immeuble Molitor" at 24 Rue Nungesser-et-Coli, designed together with Pierre Jeanneret (1933-34). He travelled countless times between Europe and the Americas, often to undertake prestigious commissions: these experiences formed the heart of his own intervention at the fourth International Congress of Modern Architecture (CIAM), held in Greece in 1933, and the *Charte d'Athènes*, published ten years later.

Although most of his city plans remained on the drawing board – for example the "Plan Voisin" for Paris (1925), the "Plan Obus" for Algiers (1930-34) and the "Ville Radieuse" (1935) – these designs became icons of contemporary architectural culture, demonstrating their creator's commitment to the public sphere, in search of support to bring his ideas to fruition, regardless of the political regime. As the global conflict drew near, having closed his studio in 1940, Le Corbusier first took refuge in a small Pyrenean village before returning to the war zones in search of support from among the ranks of the Pétain government in Vichy. Indeed, he moved to the city in 1941-42, attracted by a vague idea of modernisation that did not take account of the oppressive, racist and anti-Semitic nature of the collaborationist regime.

In spite of everything, bolstered by the confluence of international fame and national support, the post-war period was a time of new, exciting projects for Le Corbusier, particularly promoted through the Association des Constructeurs pour la Rénovation Architecturale (AsCoRAI), conceived of during the last years of the war to prepare







his professional return in expectation of the inevitable Reconstruction. In January 1943, the studio at Rue de Sèvres reopened its doors; two years later, after the war had ended, it would be restructured to better incorporate skills associated with construction and building sites, with the creation of the Atelier des Bâisseurs (AtBat), which Le Corbusier led together with the engineer Vladimir Bodiansky (1894-1966) until 1948. It was not long before commissions began coming in for increasingly imposing projects. A series of residential and/or monumental projects undertaken during this period were greatly studied during the 1950s and 60s: the “Unité d’habitation” in Marseille (1945-52), the chapel of Notre-Dame-du-Haut in the French town of Ronchamp (1950-55), the Dominican priory of Sainte-Marie de La Tourette in Évieux, also in France (1953-60), the Carpenter Centre for the Visual Arts in Cambridge, Massachusetts (1961-64) and, above all, the political and administrative centre of Chandigarh (1950-65), in the Indian state of Punjab, a tour de force made possible by the constant presence of the indispensable Pierre Jeanneret.

The Swiss master’s triumphs were constantly celebrated, even shortly before his death, when Jean Petit published the first biographical work based on original archive documents: *Le Corbusier parle* (1967). Numerous studies, research projects and prizes were named after him at the initiative of the Fondation Le Corbusier, created by the architect in 1957 to perpetuate his fame and memory by conserving his personal and professional archives.

This marked the definitive beatification of a man who has long been a popular icon of the 20<sup>th</sup> century, not least thanks to the careful use of his own image, featuring a number of unmistakable elements that have been disseminated worldwide by the massmedia: principally his imposing black-framed round glasses, most recently immortalised in the portrait which has appeared on the 10 Swiss franc note since 1997. When he died in the waters of the Mediterranean, in front of his tiny beachside cabin, the young and ambitious apprentice watch engraver from La Chaux-de-Fonds, later painter, sculptor and architect as well as a tireless polemicist, had by then become a legend of contemporary architecture for having built projects in eleven countries on four continents, and above all for having embodied feats and contradictions of 20<sup>th</sup>-century modernity.



**\* Sergio Pace**

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Department of Architecture and Design,  
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Le Corbusier’s colleagues in his studio at 35 Rue de Sèvres, Paris, 1950s.

Right:  
Le Corbusier on the construction site of Notre-Dame-du-Haut, Ronchamp, 1950s.



## A man with a many-sided personality

by Alessandra Dolci\*



Left:  
Murals by Le Corbusier in Jean Badovici  
and Eileen Gray's "Villa E1027",  
Roquebrune-Cap-Martin, c. 1939.

This page:  
Le Corbusier and Pierre Jeanneret  
on the beach at Le Piquey, 1933.



The aim of this text is to illustrate the iridescent and explosive figure of Le Corbusier through the authoritative essays that make up this supplement, focusing on his visionary farsightedness and the wide-ranging experimentalism that he applied to a number of disciplines.

The French painter Fernand Léger described him in curious and highly personal terms, recalling the first time they met in Paris in 1920:

“I saw coming towards me, quite stiffly, an extraordinary mobile object, a kind of Chinese shadow topped by a bowler hat, with spectacles and a clergyman’s overcoat. This object advanced slowly on its bicycle, scrupulously obeying the laws of perspective.”<sup>1</sup>

Le Corbusier was certainly not the sort to pass unnoticed, always being very careful with his attire, rigorous and attentive to the smallest details. In 1947 he even had a jacket made for him, known as the *Forestière*, designed above all for its convenience, in which numerous pockets always ensured pencils, pens and notebooks were close to hand.

But who was Le Corbusier, beyond his works? According to many, he was a prickly character, and therefore particularly sensitive to criticism, who at times felt robbed of his own ideas (many had stolen ideas from him, even after having panned them) and who fought with all his strength to impose his undoubtedly radical views against a certain academic community “without culture, without gifts and without passion”. But he was also extremely sensitive. Recent studies of his extensive private correspondence have revealed the intensity of his personal relationships with his mentors, friends and collaborators, showing the more intimate side of his personality and offsetting the angularity and apparent stiffness of his public persona, which he himself deliberately cultivated. He was a brilliant man, a prolific writer highly skilled in various literary registers and an artist of many talents and interests

including photography, cinema, music, graphic design, nature and biology. He worked in many apparently contradictory areas of research at the same time and succeeded in combining them to bring definitive change to the world of his time (and ours). He was a tireless experimenter, but perhaps above all a “man of letters”, as it said in his identity card: this is because he had a much broader view of architecture and artistic creation that was deeply linked to the culture of Humanism in which the visual and figurative arts, philosophy and literature were considered a simple, wonderful whole at whose centre was man, the harmonious measurement and standard of all things. It is no coincidence that he invented the *Modulor*, the system of proportions that could be used to unify all elements of buildings and thereby define a living space “on a human scale”.

Le Corbusier divided his days into two parts: in the morning he painted alone in his workshop, and in the afternoon he worked in his famous studio in Rue de Sèvres. He considered himself both a painter and an architect, and in fact painting was the secret laboratory where he created shapes, the primary elements of sculptural emotion. Painting and architecture were two complementary parts of a single artistic universe, which would later be joined by sculpture and all contemporary forms of artistic expression, including acoustics and electronics.

When considering his ingenious thinking, what impresses most is his farsightedness, always looking further ahead to meet the needs of man and society. He was a pioneer of sustainable architecture, and from the 1920s onwards he “incorporated” nature in his projects through structures on pillars, known as *pilotis*, where space “runs” uninterrupted below the building and with the invention of the roof garden, an absolute innovation for that period. Le Corbusier was ahead of his time, seeing the role of vegetation as increasing the well-being of inhabitants and reducing energy consumption. Sunlight, modulated according to the season and the time of day, was part of his architecture and of man’s *joie de vivre*.

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<sup>1</sup> Francesco Tentori, *Vita e opere di Le Corbusier*, Laterza, Rome-Bari, 1986, p. 51.



Building economically, addressing the problem of the extraordinary growth of cities and the shortage of housing are just some of the topics he focused on.

With the publication of *La Ville Radieuse* in 1935, he described his ideal city, which needed to be functional and well organised, and which already contained insights that would turn out to be fundamental in the years to come: the construction of a certain number of residential skyscrapers should occupy only 12 per cent of the surface area to leave room for green spaces and areas for sport, with pedestrian walkways, raised roads and underground public transport. Ideas that at the time were considered the utopia of a capricious and visionary man became reality in 1950 when the Indian prime minister, Pandit Jawaharlal Nehru, commissioned him to design Chandigarh, the new capital for Punjab. With this master plan, Le Corbusier implemented a new conceptual tool, the climatic grid, divided according to the intensity of the sun in the different seasons in order to study possible architectural orientations, devise ways to create shade, encourage air flow and create a rainwater runoff system during the monsoon season.

As an example of Le Corbusier's exceptional capacity to look "beyond", I like to mention the letter he wrote on 5 October 1962 to the mayor of Venice, Giovanni Favaretto Fisca, drawing attention to the artistic heritage and fragility of the city on the lagoon:

"Venice ... is a miracle. You organise tourism, but a tourism that is adorable, admirable, human, fraternal, for poor

people as well as aristocrats and millionaires ... You have a treasure trove on a human scale which it would be an atrocious crime to violate or plunder! It's easy! Make precise rules about the biological aspects of architecture: "open", "aerate", "ventilate". And you still have to defeat the mosquitoes (I have achieved results in a difficult climate!)."

A surprising sensitivity when compared with our own time, when climate change is exacting a heavy toll.

Le Corbusier the man died in 1965 in Roquebrune-Cap-Martin, where he was on holiday in his "cabanon", a human-scale refuge measuring 3.66 metres by 3.66 metres and fashioned from wood and corrugated concrete. Le Corbusier the architect, meanwhile, continues to leave his indelible mark on every single modern building.



**\* Alessandra Dolci**

*Freelance editor working for various publishing houses, editorial offices and institutional clients.*

Le Corbusier  
in front of the  
Scuola Grande  
di San Marco,  
Venice, 1963.

Le Corbusier  
wading into the sea  
at Roquebrune-Cap-  
Martin, c. 1964.





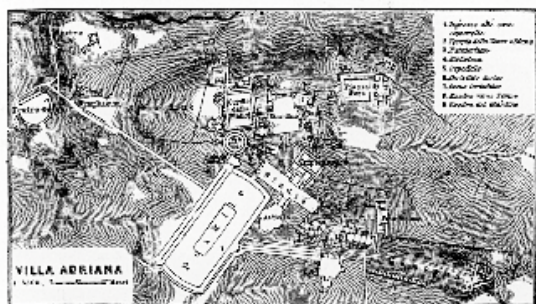
## The lesson of Rome

by Marida Talamona\*



Left:  
The Baths of Caracalla photographed  
by Le Corbusier, Rome, 1911.

This page:  
A young Le Corbusier  
on the steps outside St Peter's,  
Rome, 1911.



# ARCHITECTURE

## LA LEÇON DE ROME

PAR  
LE CORBUSIER-SAUGNIER

In issue 14 of *L'Esprit nouveau*, which came out in January 1922, Le Corbusier published a 17-page article entitled *La Leçon de Rome*, written upon returning from his second trip to the Italian capital the previous August.<sup>1</sup> The text was republished a year later in *Vers une architecture*,<sup>2</sup> the first great manifesto of Corbusian thought. Here, like the pages on the Acropolis of Athens, it occupies a strategic position in his discourse on contemporary architecture in relation to history, from Antiquity to the Renaissance. It is the result of studies, direct experiences and reflections that the young Le Corbusier (then Charles-Édouard Jeanneret) had made during the 15 years before the article saw the light of day, in Germany in 1910, in Rome in 1911 and in the National Library of Paris in 1915.

### Towards a classical architecture

Le Corbusier's first study trip to Tuscany and in Southern Italy in 1907 was meant to end in Germany. While in Vienna, however, he decided to interrupt his journey and set off for Paris, where he would be able to refine his architectural education and learn the techniques of modern construction.<sup>3</sup> His 16-month stay in Paris at the office of the Perret brothers was to prove decisive for two reasons: Auguste Perret taught the young Le Corbusier to see architecture as an intellectual project, instructed

him in the rules of monumental symmetry and guided him towards the principles of Viollet-le-Duc<sup>4</sup> and a reading of mediaeval architecture that was far removed from the Ruskinian view, linked to logic and constructive rationalism. Finally, he made him study classical French monuments. Given his dismay at realising how little he knew about construction, from Paris Le Corbusier wrote to L'Éplattienier:

"... I went to consult the ancient ones. I chose the angriest wrestlers, those to whom we of the 20<sup>th</sup> century are ready to be similar: the Romans. And, for three months, I studied the Romans, at night in the library. And I went to Notre-Dame and I followed the end of Magne's course in Gothic art at the Beaux-Arts... and I understood."<sup>5</sup>

He returned to La Chaux-de-Fonds in December 1909 for three months. The following April, Le Corbusier left for Germany to devote himself to the study of modern urban planning and to work on a manuscript on the Construction des *villes*, with which he first presented the new ideas of "art urbain" to French-speaking Switzerland. In this academic context, his Italian lesson on closed urban spaces played a central role. At the Bavarian State Library in Munich, Le Corbusier drew the plans of many Italian piazzas (some of which he had visited in 1907), reproducing them from those published in the book by Camillo Sitte.<sup>6</sup> He studied the *Platz und Monument* of Erich Albert Brinckmann,<sup>7</sup> which extends the study of ancient and mediaeval urban outlines to Renaissance and Baroque piazzas. His research into modern urban planning intersected with his burgeoning interest in classical architecture, nurtured decisively by the Swiss writer and art critic William Ritter, whom Le Corbusier met in Munich in May 1910. The scholar opened his immense library to his young friend so he could fill gaps in his classical education, directed him towards Slavic culture, on which he was a great expert, and finally helped him to prepare for his "voyage d'Orient".<sup>8</sup> On top of Ritter's intellectual influence came his apprenticeship in Berlin in the firm of Peter Behrens, where he

Le Corbusier-Saugnier,  
*Architecture I*  
*La Leçon de Rome*,  
in *L'Esprit Nouveau*,  
no 14, 1922.

Fountain with Roman sarcophagus and the Sistine Chapel seen from the Via delle Fondamenta, pencil on paper, *Carnet du Voyage d'Orient*, no. 4, 1911.

learned to compose according to a logic rigorously based on numbers, “sur l’art des moulures et de leurs rapports”.<sup>9</sup> This is the final important element in what Le Corbusier called his “heureuse évolution esthétique” towards the Mediterranean.

Together with his friend August Klipstein, Le Corbusier spent months planning the journey he would make after his studies:

“... I’m leaving Behrens on 1 April,” he wrote to Klipstein on 13 February 1911, “and have decided to finish my studies ... in dreams. I had been thinking of Rome. I’m still set on Rome but would be happy to get there via Constantinople. So if you want me as your companion, think seriously about this great venture.”<sup>10</sup>

#### Rome and the architect Michelangelo

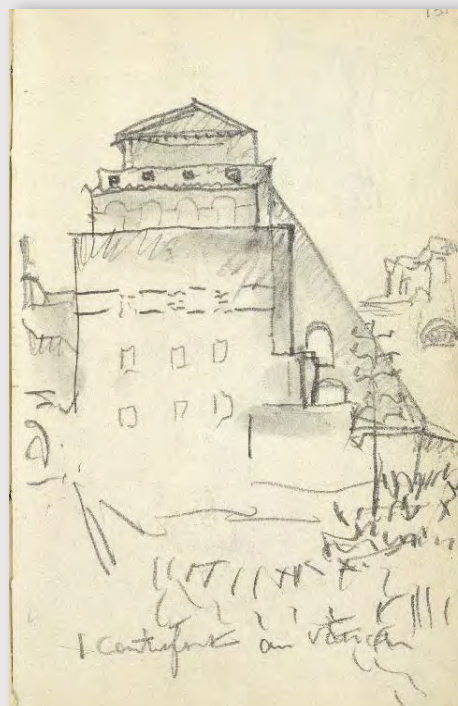
After crossing the Balkans, Turkey and Greece, Le Corbusier arrived in Rome on 14 October 1911 straight from Pompeii, where he had spent the previous four days. He stayed in the Italian capital until 25 October, with a two-day excursion to Tivoli (most likely on 22 and 23 October) spent among the ruins of Villa Adriana and Villa d’Este. He went equipped with a Baedeker Guide, *L’Italie des Alpes à Naples*, in which he pencilled in the places to visit, as well as his Cupido 80 camera with glass plates and his small Kodak Brownie, purchased a week prior upon arriving in Naples.

Le Corbusier’s first visit was to the Vatican, to the gardens and Bramante’s Belvedere complex. He was unimpressed by Carlo Maderno’s basilica. “St Peter’s is an abject failure,”<sup>11</sup> he wrote to Ritter, an opinion that remained unchanged for the rest of his life. His first drawing at the Vatican was

of the Sistine Chapel seen from Via delle Fondamenta, the road running around the complex. Back in 1911, it was part of the Kingdom of Italy and was the only way to access the museums, which were entered from above the Viale del Belvedere. Le Corbusier sketched the overlapping shapes of the chapel and the high buttress on one side, highlighting it with a light pencil background to enhance its triangular shape, which had aroused his interest. On the opposite page, he traced the outline of the fountain with the Roman sarcophagus, to this day located to the bottom left on the chapel wall.<sup>12</sup> Finally, he drew the great niche of the Belvedere Courtyard, with a note in the margin on the vaulted roof of the semi-dome.<sup>13</sup>

His visit to the basilica was an unforgettable experience, the definitive consecration of Michelangelo’s greatness, of which he first became aware in Florence in 1907 when he wrote to his parents: “Sunday, when I went back to the Medici Chapel, Michelangelo made one of the biggest impressions on me that I’ve ever felt” and made me “almost cry.”<sup>14</sup>

In Florence, the young Le Corbusier was struck by the visual quality of Michelangelo’s sculptures in the New Sacristy, but he was unable to see his architecture. In Rome, after having studied for four years, he was almost brought to tears by











Michelangelo – the architect of the dome and the apses of St Peter’s, fashioned with immense Corinthian pilasters – such was his admiration of their monumentality, on a par with those of the great buildings of antiquity.

His second meeting with the master came at the National Roman Museum, located in the Charterhouse of Santa Maria degli Angeli. Together with its attached basilica, it was built in part on the remains of the Baths of Diocletian. Le Corbusier’s encounter is documented in a number of drawings that depict internal and external views of the Roman complex. The first are of the cloister, known as the “one hundred columns”, for which Michelangelo made the preparatory drawings. In his internal views, Le Corbusier drew the accentuated embrasures of the windows and the elliptical shape of the openings on the top floor. In a marginal note, he commented on the hollow in the thick wall and the rhythmical alternation of quadrilateral and elliptical windows.

Finally, there was the Piazza del Campidoglio, of which he took a wonderful photograph with his Cupido 80 that indicated his desire for precise framing. Unlike better-known images of the square, which almost always face the Palazzo Senatorio, Le Corbusier turned his back to Michelangelo’s palace and placed in the foreground the tall pedestal and the equestrian statue of

Marcus Aurelius, the foreshortened piazza, the balustrade and the colossal statues of Castor and Pollux to the sides of the ramp. In his notebook, he drew a very similar view to that depicted in the photograph. However, he eliminated the profile of the city in the background, inserting a high wall or rather a dense green barrier as if to isolate the hill and the monuments. He would go on to execute this idea masterfully in the Capitol Complex in Chandigarh.



Left:  
The southern  
apse of St Peter’s  
Basilica with the  
covered passage  
to the Sacristy in  
a photograph by  
Le Corbusier,  
Rome, 1911.

This page:  
Piazza del  
Campidoglio  
photographed by  
Le Corbusier,  
Rome, 1911.

Plan and perspective  
view of the Piazza  
del Campidoglio,  
pencil on paper,  
*Carnet du Voyage  
d’Orient*, no 4, 1911.

## The monuments of ancient Rome

Wrote Le Corbusier to Klipstein on returning to La Chaux-de-Fonds:

“Rome has no shadows, no soul. O Stamboul! O Athens! But Rome has got the ancient Romans with their clay bricks, and the Good Lord has allowed all the marble coverings to be pilfered. So it's magnificent, unique, captivating. It's a museum for the architect.”<sup>15</sup>



The Rome of 1911, crammed within the city walls with its crowded tenements and illegible topography, lacked the thrilling silhouette of Istanbul, the rectitude of Pompeii or the grandiose orderliness of Villa Adriana. Rather, the lesson of Rome lay in ancient Rome, with its isolated monuments spread throughout the city.

From atop the Palatine Hill, he sketched the monuments of the Roman Forum and wrote: Basilica of Maxentius “horizontal/cube”, Temple of Antonius and Faustina “vertical/cube on top/circular columns”. A drawing in his notebook, which Le Corbusier entitled *Un paysage urbain à composer*, is significant for the reasoning behind it: it depicts the horizontal line of the Belvedere complex approaching the vertical parallelepiped of

the Torre delle Milizie located above on the wall of the exedra of Trajan's market, the volume of a colonnade, the cube of the Temple of Antoninus and Faustina, the Pyramid of Cestius and the square-based cylinder of the Castel Sant'Angelo. The free combination of geometric solid forms renders that landscape varied and monumental.

His research into ancient monuments also took in other buildings, in particular the Arch of Constantine, the Colosseum and the Pantheon. He started by recording the internal area, noting down the proportions of the elevations and drawing the details of the coffering of the dome and the moulding. Then he sketched a corner view of the outside in which he notes that “the marble cube of the portico penetrates the cylinder of the nave in an arbitrary fashion.”<sup>16</sup> Finally, he took a photograph of the interior illuminated by the light from above, which he later published in *Urbanisme* under the title *Le sentiment déborde*.<sup>17</sup> On 21 October, Jeanneret drew the imposing vaulted structures of the Baths of Caracalla, which he considered the epitome of the Romans' skill as builders. The next day, in Tivoli, came the great discovery of the architecture of Villa Adriana.

The dome of the Pantheon photographed by Le Corbusier, Rome, 1911.

*Un paysage urbain à composer*, pencil on paper, *Carnet du Voyage d'Orient*, no 4, 1911.



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## Notes

<sup>1</sup> Le Corbusier-Saugnier, *Architecture I, La Leçon de Rome*, in *L'Esprit nouveau*, no 14, [January 1922], pp. 1591-1607.

<sup>2</sup> Le Corbusier, *Vers une architecture*, Editions G. Crès et C<sup>ie</sup>, Paris, 1923.

<sup>3</sup> Charles-Édouard Jeanneret and his travelling companion Léon Perrin left Vienna on 15 March 1908 and, after stopping in Munich and Nuremberg, they arrived in Paris on 25 March. On 27 June 1908, Jeanneret began his apprenticeship in the office of the Perret brothers, where he stayed until 9 November 1909. He worked every afternoon and spent his mornings studying.

<sup>4</sup> Jeanneret bought the *Dictionnaire raisonné de l'architecture française du XI<sup>e</sup> au XVI<sup>e</sup> siècle* by Eugene Emmanuel Viollet-le-Duc on 1 August 1908 with his first wage packet from Perret.

<sup>5</sup> Charles-Édouard Jeanneret, *Letter to Charles L'Éplattenier*, Paris, 22 November 1908, in Marie-Jeanne Dumont (ed.), *Le Corbusier. Lettres à Charles L'Éplattenier*, Éditions du Lintau, Paris, 2006, pp. 184-185. The book mentioned by Jeanneret is *L'architecture romane* by Édouard Corroyer, from which he drew up an orderly book of notes and sketches that is held by the Fondation Le Corbusier. Further on in the letter, Jeanneret writes that he had also taken the course on the architecture of the Italian Renaissance, once again under Lucien Magne.

<sup>6</sup> Camillo Sitte, *Der Staedte-Bau nach seinen künstlerischen Grundsätzen*, Carl Graeser, Vienna, 1889; English translation: Camillo Sitte, *The Art of Building Cities*, Reinhold Publishing Corporation, New York, 1945.

<sup>7</sup> Erich Albert Brinckmann, *Platz und Monument*, Wasmuth, Berlin, 1908.

<sup>8</sup> Marie-Jeanne Dumont (ed.), *Le Corbusier-William Ritter. Correspondance croisée 1910-1955*, Éditions du Lintau, Paris, 2015; *ibid.*, *William Ritter, inspirateur caché du Voyage d'Orient*, in *L'invention d'un architecte. Le Voyage en Orient de Le Corbusier*, Éditions de la Villette, Paris, 2013, pp. 48-65.

<sup>9</sup> Charles-Édouard Jeanneret, Letter to Charles L'Éplattenier, 11 November 1911 in Marie-Jeanne Dumont (ed.), *Le Corbusier. Lettres à Charles L'Éplattenier*, quotation, p. 259.

<sup>10</sup> Charles-Édouard Jeanneret, Letter to August Klipstein, 13 February 1911, Bibliothèque de la Ville – La Chaux-de-Fonds, LC/102/1367. The two friends set off from Berlin on 21 May 1911. After crossing the Balkans, Turkey and Greece,

Klipstein returned to Germany and Le Corbusier continued on to Italy, disembarking in Brindisi at dawn on 6 October.

<sup>11</sup> Charles-Édouard Jeanneret, postcard to William Ritter, 21 October 1911, FLC R3(18) 122.

<sup>12</sup> Le Corbusier, *Voyage d'Orient. Carnets, Carnet no 4*, Electa, Milan, 1987, pp. 130-131.

<sup>13</sup> Jeanneret mistakenly attributed the design of the great niche to Bramante. The Bramantesque design inspired by the great buildings of antiquity featured two long corridors with overlapping orders enclosing a large courtyard, with three different terraces, closed in on the north elevation by an exedra. In 1550, Michelangelo replaced the Bramantesque semi-circular staircase with a double staircase. In 1561-62, Pirro Ligorio added the great niche and raised the lateral wings.

<sup>14</sup> Charles-Édouard Jeanneret, letter to his parents, 8 October 1911, FLC R1(4) 18-25.

<sup>15</sup> Charles-Édouard Jeanneret, letter to Auguste Klipstein, 28 October 1911, Bibliothèque de la Ville – La Chaux-de-Fonds, LC/102/1367.

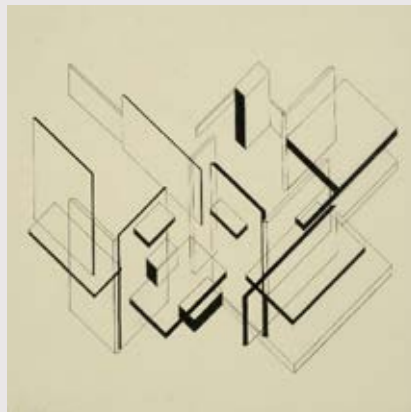
<sup>16</sup> Cf. Le Corbusier, *Voyage d'Orient. Carnets*, quotation, *Carnet no 5*, p. 13.

<sup>17</sup> Le Corbusier, *Urbanisme*, Éditions Crès et C<sup>ie</sup>, Paris, 1925, p. 299.



# The villas of the 1920s: the implementation of a programme

by Bruno Reichlin\*



Left:  
Villa Savoye, spiral staircase seen from  
the ground floor, Poissy, 1928-31.

This page:  
Theo van Doesburg,  
*Architectural Analysis*, 1923.



Clock designed  
and engraved by  
Le Corbusier, 1906.

Charles L'Éplattenier,  
c. 1940.

According to a somewhat ingenuous but persistent depiction, Charles-Édouard Jeanneret was a young dilettante autodidact before adopting the pseudonym of Le Corbusier, someone destined to decorate elegant watch faces but who instead became one of the greatest architects of the 20<sup>th</sup> century by virtue of his genius and perseverance. The “letters to his masters”, the intense epistolary exchanges with relatives, the extensive correspondence with different types of people: artists, industrialists, politicians, men of culture and clients always looking for a dedication in a book, give the lie to that barely credible image of “genius”.

In actual fact, as a young man Jeanneret was extremely intellectually gifted, wilful and highly demanding of himself, but was able to surround himself with a range of personalities that were complementary, cultured, interested in the arts or artists themselves, pedagogues open to new ideas who took him under their wing, but without sparing him criticisms or reservations when necessary. L'Éplattenier, the young Charles-Édouard's teacher, introduced him to the reform movements promoted by the German Werkbund and shared with him his commitment to the “urban art” championed by the architect Camillo Sitte. And L'Éplattenier advised him when preparing for his journeys to Italy, Vienna and beyond. L'Éplattenier would go on to offer Jeanneret, who saw himself as a painter, the opportunity of an architect's apprenticeship when he set up a workshop



in the school to instruct students in collective and collaborative endeavour as part of a *Gesamtkunstwerk*, such as the Maison Fallet (1906-08), built with assistance from the architect René Chapallaz.

Auguste Perret (1874-1954), in whose studio he served as an apprentice between 1908 and 1909, fascinated Jeanneret because of his culture, his social relationships, his willingness to help a young man and, above all, because he considered him a pioneer in the use of reinforced concrete.

At the architecture firm of Peter Behrens, where he worked for eight months in 1911, he encountered the imposing figure of Behrens the painter, who went on to create the propaganda for and image of the AEG Turbine Factory. He would also become the company's designer, designing anything from its kettles to its imposing industrial and administrative buildings.

William Ritter (1867-1955), writer, painter, critic and seasoned traveller, at once demanding and paternal, rounded off Jeanneret's education. He encouraged him to write, corrected his exuberant texts, advised him on his future “voyage d'Orient” and gave him tips on what and how to draw and photograph. Le Corbusier's correspondence with Ritter would continue into the 1940s.

In 1918, through Perret, Jeanneret met the painter Amédée Ozenfant (1886-1966), who encouraged him to paint and taught him the techniques of oil painting. Both were highly intrigued by the Cubist movement, albeit not every single element thereof, as shown by their joint manifesto of 1918 entitled *Après le cubisme*. The first paintings to



emerge from this collaboration, as the pair worked side by side, would be exhibited as “Purist” works. From 1921 to 1926, Le Corbusier and Ozenfant edited the review *L'Esprit nouveau*, in which they wrote jointly, separately or under pseudonyms.

Although Le Corbusier's architecture was not ignored by architects and critics in the 1920s, his notoriety and influence arose mainly from his theoretical and polemical writing. Le Corbusier himself said nothing about virtually any of his work as architect and decorator in La Chaux-de-Fonds. The first critical appraisal of his architectural output concerned Villa Schwob, also known as Villa Turque, and was written by his friend Ozenfant. This was Le Corbusier's last project in La Chaux-de-Fonds, completed in 1916. In 1917, when he left Switzerland for Paris – for good, as it would turn out, although unbeknown to him – Le Corbusier was 30, and had already made a name for himself as the architect of six remarkable houses, little-known projects that are of great interest because they reveal considerable historical knowledge and familiarity with the contemporary scene. Here is just one example: in spring 1912, he designed and built a mansion at Le Locle for Georges Favre-Jacot, the founder of the renowned Zénith watch factory. The main façade, located almost at the centre of the bend in the road, appears to “fold” and follow its shape, evoking the concave space of some of the “cour-cochères” (“entry

courtyards”) of Parisian mansion houses. Drawings made by the architect confirm the formal relationship between the diagonal view of the opposite façade seen from a distance, the only possible angle, and the ruins of the Erechtheion, which Jeanneret had liked so much during his stay in Athens. The main body of the temple, the caryatid porch and the remains of the north porch show visual and volumetric similarities with, respectively, the main body of the Favre-Jacot house, the protruding master bedroom with five pillars and the first-floor room with a loggia over the dining room. Observing at length, drawing, describing, revisiting his own achievements and, at times with fierce self-mockery, his own mistakes, questioning his own cognitive processes, hunting out preconceived ideas and clichéd thought and refuting them with paradoxes, oxymorons and antitheses, looking, in the particular case of a commission, for the element that can be used as demonstration and therefore arguing with an architectural semiotics that foregoes written explanations – these are the problems that played on Le Corbusier's mind when theorising or designing during the 1920s. Appreciating architectural works, at least those of Le Corbusier, requires a veritable effort of interpretation.

This text will look at five of his most significant buildings from the 1920s and seek to undertake some of the decryption work that Le Corbusier's creations demand.



The Erechtheion on the Acropolis of Athens, with the famous Porch of the Caryatids (now replaced by a copy).

### Villa La Roche in Square du Docteur Blanche in Paris, 1923-1925



Of the Jeanneret-La Roche double house, we shall consider only the second, built for his friend Raoul La Roche, a banker and modern art collector. The genesis of the project, executed between autumn 1923 and spring 1924, suggests a turbulent development. This is believed to have been caused principally (although not exclusively) by the shock that Le Corbusier experienced upon visiting the exhibition “Les Architectes du groupe De Stijl”, which had been organised by the Léonce Rosenberg Gallery in Paris and which opened on 15 October 1923. After attending the opening, and having already exhibited a late-stage plaster model of the double house at the Salon d'Automne, Le Corbusier entirely remodelled the design with a series of redrafts as soon as he returned to his studio: the walls were broken down into a composition of orthogonal planes, both inside and out. Although the image was different, he retained the same compositional principle: the floors were separated by an opening (window) at the corners. The solids (walls) played the same role as the voids (windows). A powerful example of this method of composition is the separation of the roof of the art gallery from the side walls, obtained by placing ribbon windows on the two sides. These shapes also feature in the vast space of the entrance hall, where the gallery wall passes directly from the outside to the inside.

This subdivision is repeated in the internal colour scheme, with different colours used on different walls, a recurrent element in De Stijl designs but new for Le Corbusier.

However, he did not divide up individual walls in different colours, avoiding the external polychromy that he felt “destroys, disrupts, divides, and therefore opposes unity”.

An additional spatial device is found in Villa La Roche: the “promenade architecturale”, a continuous pathway that runs from the grand entrance hall to the stairway leading to the first floor, overlooking the hall, and then crosses the art gallery. From there, it continues along a ramp to reach the library-cum-balcony, which also looks out onto the hall. A continuous pathway suggested by a series of target views through the openings and what they reveal beyond: the neighbour's acacia which Le Corbusier wanted to retain, creating a recess in the body of the building itself: the Square du Docteur Blanche seen from the small balcony and then from the gallery ramp, and finally the view from the library of the acacia and the grand space of the hall. According to Le Corbusier, these repeated views of the same elements seen from different points ensured “the perception of the ‘unité architecturale’”.

### The “Petite Maison” built for his parents in Corseaux on Lake Geneva, 1923-1924

This modest house of just 57 square metres was built for his parents at the same time as the double Jeanneret-La Roche house in 1923-24. The First World War and a crisis in the watchmaking industry had forced his parents to sell the beautiful villa that their son had built for them in La Chaux-de-Fonds in 1912. One initial innovation of this tiny house, which was unprecedented at the time, was the way it was designed. While



Villa La Roche,  
Paris, 1923-25.

Petite maison,  
Corseaux, 1923-24.



*Petite maison*,  
period photograph of  
the garden showing  
the lakeside wall with  
a "window" onto  
Lake Geneva,  
Corseaux, 1923-24.

still in the design phase and before he had even found a plot for sale, Le Corbusier chose a number of general requirements as reference points: it would be a long, narrow space, without a corridor, with connected living spaces arranged in a row, looking out from a single "ribbon window" facing the magnificent landscape of Lake Geneva, taking in the small marina of Vevey, with the Valais Alps capped in snow (at that time) in the background, the Dents du Midi ("jagged and covered in snow", according to the late 19<sup>th</sup>-century Baedeker) at Grammont overlooking Saint-Gingolph and then the Alps of the Haute Savoie.

serve as a "chambre d'été" (summer room) closed off to the lake by a rustic screen-wall, whitewashed with milk of lime, and with an opening in the centre the size of a painting. A small table, two chairs and a few vases would complete the image of the open-air "summer room", where meals are taken with a view through the window but behind the protecting wall. The juxtaposition of a garden that becomes a "room" and the internal space of the house where, thanks to the ribbon window, "the place 'is there', as if we were in the garden", is a wonderful rhetorical device to draw attention to the effects on perception and mean-



The other reason for the long, narrow design was because the chosen area offered views of long, narrow terraces shaped by centuries of winegrowing. Le Corbusier had decided to give his parents, particularly his father, panoramic views of a landscape similar to the one that they had enjoyed from the humble house they rented in Blonay, overlooking Corseaux. Fate saw to it that, after countless inspections and having forced the seller's hand, Le Corbusier succeeded in buying that lakeside strip of land. Having secured the plot, he had an ingenious idea: if the ribbon window was to be "the sole protagonist on the façade" and offer the chance to extol its virtues, then, this time in conflict with Auguste Perret, the remaining land would allow him to design a small walled-in garden which would

ing of two types of openings and spaces that echo two different domestic cultures: one, that of the inside, the bourgeois microcosm, and the other, the modern sphere of reinforced concrete and panoramic windows, of which some may lament a loss of intimacy.

On the subject of reinforced concrete: while completing the project, Le Corbusier raised the edge of the roof garden to obtain a great beam with a span of over eleven metres. Whether out of fear or incompetence, however, the local builder insisted on "at least two [intermediary] supports", which the architect, with a sense of resignation, placed behind the window frames. Never mind, he must have thought, provided that the image or, rather, the icon of what was and could be possible is maintained.



### Villa Stein de Monzie in Garches, 1926-1928

Le Corbusier set himself a challenge while designing Villa Stein de Monzie in Garches: contain a design as complex as that proposed by the committee within a “pure prism”. Indeed, from that project on, and until the end of the decade, Le Corbusier seems to have internalised the aesthetic conviction that geometry is the manifestation and instrument of the human intellect. Therefore the elementary stereometric forms must stand out in sharp contrast and “in the midst of the confused spectacle of apparent nature”.

The “pure prism” of the external envelope brings another opposition or antithesis into play, this time relating to the interface between the external elementary stereometry and the distribution of internal accessibility. While the “cubic shape” predominates outside, inside is shown “rather the compression ... of organs within a rigid

envelope”. They are “organs” because Le Corbusier introduced the distinction between the shapes close to our body, subject to the “biology of living”, and more distant shapes, arranged for contemplation by “our sensitivity and our reason”. “I wrote that when the spirit can contemplate before itself, from a distance, free from bodily or animal obstacles, it leans towards the purest geometry: the optimal creation of the spirit.” In conclusion, Le Corbusier contrasted two languages to ensure autonomy between the ground plan and the “free façade”, between “biological phenomenon” and “prisme pur”. To express such a brilliantly resolved coexistence, Le Corbusier invented a drastic formal device that was not without sacrilegious irony. Where once there had been noble insignia high up crowning the main façade of villas, he placed a deep, partially overhanging balcony; at that point, internally, he positioned a doubly significant element: the bath, of which can be seen the wall partially wrapped around it, on a slant, and meticulously enhanced by the polychromy and light that filters through the openings left in the balcony ceiling.

In a different context, Le Corbusier had advanced the following theory:

“The biological affects our common sense. The aesthetic affects our sensitivity and our reason. The two united in simultaneous perceptions produce the architectural *emotion* – good or bad.”

Villa Stein de Monzie, period photograph of the principal elevation, Garches (France), 1926-28.

Villa Stein de Monzie, interior.





### **Villa Savoye in Poissy, 1928-1931**

Villa Savoye in Poissy, conceived as a second home for weekends and holidays in the countryside, is often considered the crowning achievement and culmination of Le Corbusier's research during the intense period of Purism. It owes this reputation to a number of factors that are in part intrinsic to the work, in part arising from the way the work has been received over time and, no less importantly, by the fact that it is the first modern building on French soil to be listed – after a serious threat of demolition and a long period of abandonment.

The intrinsic elements demonstrate the concepts transmitted by the building with particular clarity. Like no residential project before it, the simple, almost square and almost white volume, raised above the soil by the nearly regular rhythm of the pilotis, embodies the concept of the “prisme pur” which, separated from the ground, at least partially restores the soil to the lawn that seems to flow below the building; this corresponds to the first of the five points of his “new architecture”. Appearing to contradict this image, in Poissy Le Corbusier set beneath the building the imposing volume of the garages, the entrance and the minuscule apartment for the driver. But this one transgression led to another, to which he must have attributed greater importance: showing that thanks to the piloti level (the ground floor in Corbusian jargon), the “cour-cochère”, where gigs and carriages would traditionally have circulated in front of the entrance to the mansion house, is actually beneath the building, becoming as one with it: guests

enter the villa under cover and access the main floor from below and from the centre. The entrance no longer designates a main façade because, in principle, “all of the façades are equal”.

Seen from outside, the building clearly delineates the three levels with their different functions: the ground floor contains the entrance hall, the garages and the facilities; the first floor houses the dwelling with the garden terrace; and the second includes the solarium shielded by a screen wall, which is accessed via the ramp and staircase. The roof garden and the solarium correspond to his second point.

The four equal openings of the house, some with windows and some without, bear no relation to the interior distribution, and therefore illustrate the free façade, the open layout and the ribbon window, points 3, 4 and 5. Commenting on the design of Villa Savoye, Le Corbusier said it was:

“a pure and very generous type. The exterior affirms an architectural purpose, while the interior satisfies all functional needs (insulation, proximity, circulation).”

But that was not all: regarding the exemplarily stratified organisation of the different functions, Le Corbusier established a contrast between the two types of vertical connection: ramp and staircase, which he saw as representing two diametrically opposed ways of crossing space vertically. In Le Corbusier's words:



Villa Savoye,  
“promenade” ramp  
to the roof garden,  
Poissy, 1928-31.

Right:  
Villa Savoye,  
detail of a “window”  
cut-out.



Villa de Mandrot,  
view of the northern  
elevation with the  
steps leading down  
to the garden,  
Le Pradet, 1929-32.

“From the *pilotis* level, one ascends without realising it via a ramp, with a completely different sensation from that provided by a staircase with steps. A staircase separates one floor from another, whereas a ramp connects them.”

This stratification maintains a “parallel” relationship with the site: the villa is located at the slightly convex centre of a clearing that was once entirely covered with trees. Aside from the driveway, when standing on the ground floor you have your feet on the grass of the lawn that completely surrounds the villa with a view at eye level. On the first floor, regardless of where you are, the visual horizon is dominated by the curtain of trees all around, seen from the four great ribbon windows. Instead, the surprise is provided by the ramp, which from the first-floor terrace leads outside all the way to the solarium on the second floor, and whose final section faces directly towards the opening in the screen wall exposed to the north. Ascending towards the solarium, this opening gradually reveals a magnificent view of the distant landscape of the Seine, since you can see over the tops of the trees at that height and in that direction. With this architectural device, Le Corbusier has also captured the deep connection that can be established between a real movement that is checked by the physical threshold of the opening and the perceptive movement of the gaze that looks out towards distant horizons.

#### **Villa de Mandrot in Le Pradet, 1929-1932** **How to break your own rules**



The villa built for Madame de Mandrot in Le Pradet in Var followed closely after the construction of Villa Savoye and indeed partly coincided with it. Yet it seems to break almost all of the rules that Le Corbusier had set himself during the 1920s and which had been realised to such striking effect in Villa Savoye. Indeed, this house has not been highly regarded by critics, being seen as a minor work, or even proof of the artistic genius’s unpredictable character, as so many aesthetes love to believe. Another more pragmatic reading attributes the project to the architect’s cousin, Pierre Jeanneret, who was obliged to fill in for Le Corbusier’s many absences during that period.

But there are excellent reasons to believe that Villa de Mandrot is a work of great interest, which embodied and brought to maturity a whole spectrum of reflection, attention and curiosity that Le Corbusier had been developing in his publications in the second half of the 1920s and in his pictorial “patient research”, which was freer and more intimate. And the fevered cultural and artistic atmosphere of those years may have convinced him to strike out in new directions. Let us now consider which ones. Villa de Mandrot is also located on a slight promontory, but it sits flush with the plot and therefore with the terrain; it has living space on two levels, the main level on the first floor, on the north side, and a large raised terrace built on the land on the south face.

So there are no *pilotis* and not even smooth plastered surfaces and sharp corners. The structural elements of the villa are made from large square stones, cut from a handsome “Provence stone, orange coloured and strewn with crystals”. He had forgotten his phobia, dating from his years of Purism, of “la belle matière”, namely:

“this new neurosis of opulence that wants human beings to remain rapt in the presence of certain natural miracles that inspire admiration in them is undoubtedly an inconvenience. In other words, a bluff. This allows us to martyrise our sensitivity, to go beyond invention and proportion.”



Here in Le Pradet, by contrast, “this project will take over the landscape, from the inside out”, making use of a rustic building tradition and using a material that has a telluric relationship with the site.

Villa Stein in Monzie and Villa Savoye embodied the idea of the “prisme pur”, and the designer’s skill lay in filling this prism by ensuring that rooms were distributed in the best possible way spatially and functionally, employing a “subdivisive” compositional strategy of “trial and error”, making small adjustments to the position of the dividing walls, accepting some alterations to rooms and using facilities and circulating spaces to make connections. In Le Pradet, meanwhile, the ground plan was designed by adding and subtracting square units. Purely for the beauty of putting it on display, one of these square units was set apart at the end of the terrace in the completed design and used as a guest room.

Finally, in Villa de Mandrot Le Corbusier launched the topic of the “synthesis of the arts”, including two important sculptures that incorporate the shape and the sense of the spatial relationship that the villa enjoys with the site. These sculptures were by his friend Jacques Lipchitz. The *Nu couché avec guitare* was created specially for the terrace to the south of the villa, based on a smaller version in black basalt from 1928. This eminently static figure helped define the compact and centripetal character of the terrace. The large piece *Le chant des voyelles* was commissioned specifically for the villa, which Lipchitz visited when construction was still under way in 1931. This sculpture functions as a visual target and as a “repoussoir”: “On descending the small staircase that leads down to the ground,

you see a large stele by Lipschitz rising up, its terminal palmette outlined against the sky above the mountains.”

With Villa de Mandrot, Le Corbusier inaugurated a new creative period, replete with allusions and references to tradition, which could already be seen in his painting during his so-called “post-Purist” phase and a return to figuration with the topic of “femmes”. Given the relatively small number of elements and rules that Le Corbusier had set himself during his Purist period, one might believe or infer that he had exhausted the potential of the “system” as far as he was concerned. With great clarity, therefore, he set himself new objectives for his “patient research”.



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View of the southern elevation of the Villa de Mandrot.

Right:  
View of the living room, south side.







## The subtle mysticism of architecture

by Philippe Daverio\*



Left:  
Interior of the chapel of  
Notre-Dame-du-Haut in Ronchamp,  
featuring dozens of openings  
with an incredible variety of shapes,  
creating evocative lighting effects.

This page:  
Chapel of Notre-Dame-du-Haut,  
Ronchamp, 1950-55.

Le Corbusier's friend, the Dominican friar Marie-Alain Couturier, claimed with extreme lucidity that "it would be much safer ... to commission geniuses with no faith ... rather than believers with no talent". Indeed, there is no doubt that, after centuries during which the Church was able to involve the greatest artistic talents in producing buildings and works of art linked to religious worship, the modern Church seemed to have downgraded the importance of aesthetic considerations. It is sometimes claimed that the change occurred after the encyclical of Leo XIII, *Rerum Novarum*, which sought a return of faith in the service of social commitment and distanced it from the aesthetic pomp that had seen the Church at the centre of the arts in centuries past. The adaptability of the Pope's Jesuit culture during that period of history had played an undeniable role. Nowadays it could be claimed without offending the sensibilities of men of faith that, in the first half of the 20<sup>th</sup> century, the political rigour of the Jesuit pope contrasted with the ethical rigour of the Dominican friar. Having trained as a painter in monasteries in Rome and Paris, Couturier began working with his confrère Pie-Raymond Régamey, son of a renowned Belle Époque painter. In 1936, the pair relaunched the review *L'Art sacré* and commissioned pieces from some of the brightest minds in literature, theatre and the visual arts. The review folded when the Germans marched into Paris; Couturier left for North America, where he encountered both Jacques Maritain, the philosopher friend of Gino Severini who had already dedicated himself to religious painting, and the historian Henri Focillon, who was at Yale teaching that form of mediaeval art in which faith and construction combined in the sublime creation of cathedrals. The friar claimed that:

"the great trends of living art have become entirely separate from the life of the Church, which clearly implies this inescapable corollary that the art of the Church is no longer a living art."

And this is how he came to strike up a friendship with Le Corbusier and become his mentor.

Although born a Protestant, Le Corbusier was a self-professed atheist. Yet he built no fewer than three remarkable religious buildings that became symbols of the architectural redemption of the Catholic Church. He was a seemingly contradictory man who laid down the most important parameters of much of contemporary architecture. But perhaps because of its intimately Pythagorean nature, he could not escape the thought of a higher being that, like for the ancient thinkers of Croton, derived all existence from the "hen", the unique whole number that represented a first philosophical hypothesis of monotheism. The entire cosmos generated its own laws, thus including those of architecture too.

His sense of precision came from his watchmaker father, while his sense of graphic style came from the school he had attended to design watch faces at a time when Art Nouveau taste was dominated by the idea that everything should be designed with the utmost care. And it is understandable that the first educational journey undertaken by the young Charles-Édouard Jeanneret took in the Italy of the Renaissance and the Austria of the Wiener Werkstätte, those decorative arts that went so naturally together with architectural design. In Vienna, he discovered the rationalist building designed by Joseph Maria Olbrich at the end of the previous century but also Otto Wagner's much more expressive Church of St Leopold, which was built at the Steinhof Psychiatric Hospital and opened in 1907.



Otto Wagner,  
Church of  
St Leopold,  
Steinhof, Vienna,  
1904-07.



He was already combining an interest in buildings of worship with the cult of simplicity. While in Vienna, the young Jeanneret could well have heard about Adolf Loos's recently published, provocatively titled *Ornament und Verbrechen* of 1908, which claimed that all decoration in the modern era was as criminal as the tattoos of indigenous peoples displayed in Europe and taken up by convicts. Loos must have been known to him, for no other reason than he had been involved in the construction of the well-known Villa Karma in Montreux, which immediately became famous as a prototype of rationalist architecture.

His entry into the spirit of the avant-garde was undeniably born in Paris, initially when he visited the city before the First World War and then when he worked in the office of the Perret brothers. He became particularly close to Auguste Perret, who in 1923 would build Notre Dame du Raincy, a church with a central bell tower over the entrance that resembled an Art Deco New York skyscraper. He returned to Paris in 1917 while the war was raging and began to work closely with Amedée Ozenfant, the painter who rejected Cubism and established the foundations of a rationalist art, so much so that he defined it as "purist". He spent more time developing theories during these years than on construction. He left for the United States and, upon his return, having been impressed by the architectural energy of the skyscrapers in which he had encountered the same ambition that had set Europe apart in the Middle Ages, published a book in Paris in 1937 that would become fundamental for the

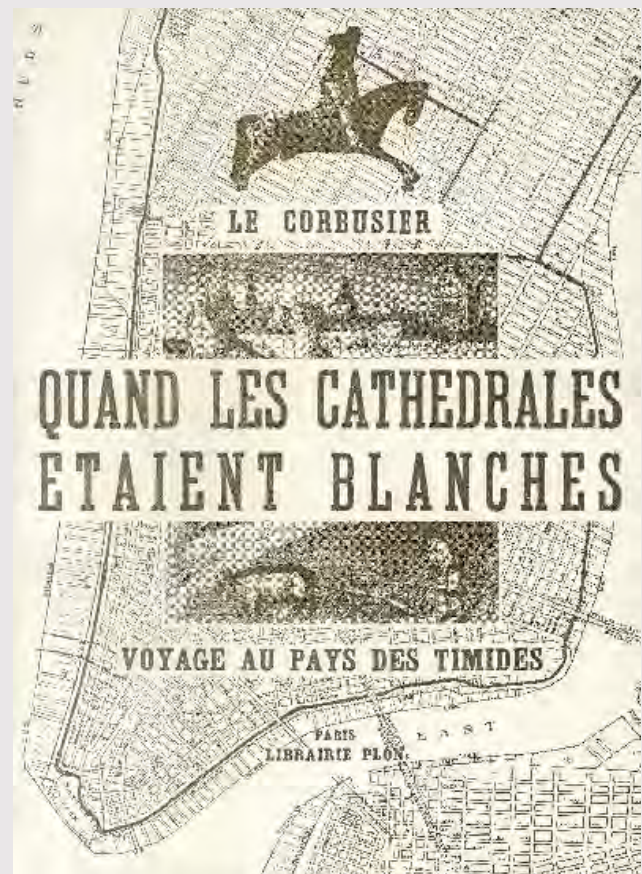
elevation of a lyrical rationalism, *Quand les cathédrales étaient blanches*, an evocation of the creative strength of that time: "When the cathedrals were white, the whole universe was raised up by an immense faith in the energy, the future and the harmonious creation of a civilisation."

For Le Corbusier,

"Architectural emotion is the masterly, correct and magnificent play of masses brought together in light. The purpose of construction is to make things hold together; of architecture to move us; architectural emotion exists when the work rings within us in tune with a universe whose laws we obey, recognise and respect."

Thus the rationalist view of space sits alongside the same contradiction of minimalist rationality that reveals, in him, the way to the sublime.

A tangible response to this complex theoretical elaboration would come with the construction of the Ronchamp chapel, on



Adolf Loos,  
Villa Karma,  
Montreux,  
1903-06.

Right:  
Cover of *Quand les cathédrales étaient blanches*, published in 1937.



Chapel of Notre-Dame-du-Haut, northern facade, Ronchamp, 1950-55.

Below:  
Priory of  
Sainte-Marie de  
La Tourette,  
Éveux, 1953-60.



the site of a pilgrimage chapel destroyed by fire in 1913 and another razed by German bombing in 1944. The building's internal space is anything but rational, fully restoring faith in harmonious creation and making the volumes soar. The very concept of the construction perhaps borders on the plasticity of sculpture, with a wall to the south that swells in thickness above and beyond any engineering requirements; a careful calibration of external light through stained glass windows that he himself designed transforms that fortress wall into a vast luminous painting. The building was completed in 1955. A few years earlier, Matisse had completed his windows for the chapel of Saint-Paul-de-Vence.

During the same period, through Father Couturier, he received an even more demanding proposal, one that would combine the residential with the religious. The sublime can be found in dialogue with the

rational, the spiritual nature of the ceremony with the spiritual side of monastic life. This is how the Dominican priory of Sainte-Marie de la Tourette came to be built, with its façade of square openings at regular intervals that is redolent of his building in Marseille but with a mystical feeling in the corridors, bathed in the external light that falls upon the cells. Here we see an almost didactic application of the five points of modern architecture that he had formulated for the 1927 construction of Villa Savoye on the outskirts of Paris. The entire building rests on pilotis that raise it above the ground, leaving the surface beneath free and in a relationship with nature. The roof becomes a usable terrace, like that in Marseille and the one he built at the beginning of his career for his family home. Once again, pillars are used as the supporting structure for the upper floors in order to eliminate load-bearing walls and allow the free enclosure of spaces, cells and halls. The windows appear in a single strip. The façade is therefore free and consists only of a kind of external skin, with the effect that rationality, light and efficiency are combined. These parameters exist in counterpoint to the priory's chapel, which takes on a mystical dimension in which the human scale of the Modulor expands in the infinite scale of a huge parallelepiped with high walls in Brutalist concrete. Through this filter thin horizontal rays of light, and the white friar sitting on the high-backed chair once again becomes tiny like in the Gothic cathedral.



Church of  
Saint-Pierre,  
Firminy,  
1970-2006.

Work on Le Corbusier's final project began in 1970, five years after his death, and it opened its doors in 2006. This was the church of Saint-Pierre in Firminy, close to the coal mines of Auvergne. The shape of the church evolved further, as if Le Corbusier had returned to his original experiences in Germany when he had briefly worked in the office of Peter Behrens. It recalls the pavilion that Bruno Taut, another pioneer of lyrical rationalism, had built in glass in Cologne in 1914. This, however, uses the powerful solidity of moulded concrete along the lines of the Einstein Tower that Erich Mendelsohn had built in Berlin in 1917, combining it with the telluric solemnity of the Swiss building also constructed during the First World War near Basel for the Goetheanum and designed by Rudolf Steiner himself for his educational centre. Pure, rigorous rationalism had not been considered satisfactory even by Le Corbusier.



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## Houses for the people

by Fulvio Irace\*



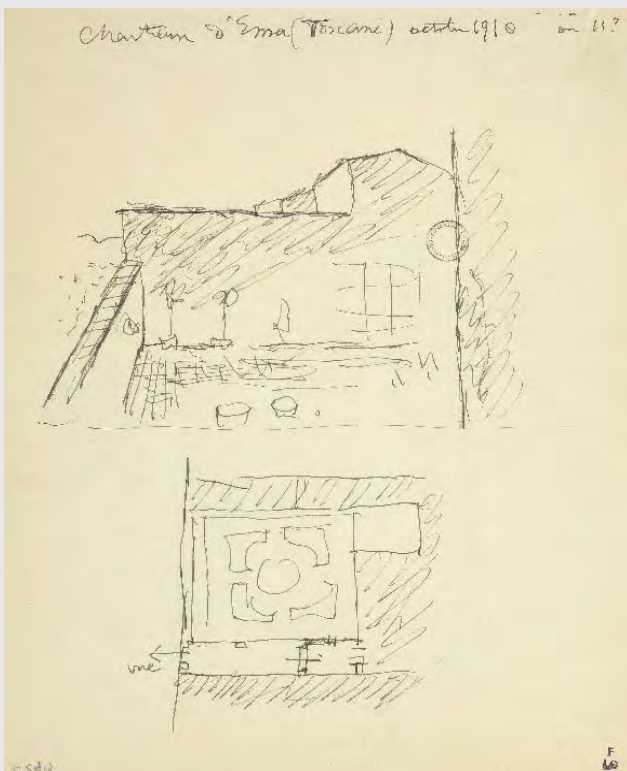
Left:  
Detached house in the  
Weissenhof quarter,  
Stuttgart, 1927.

This page:  
Le Corbusier on the construction  
site of the "Unité d'habitation"  
in Marseille, c. 1945.

Sketch of  
the Florence  
Charterhouse in  
the Val d'Ema,  
c. 1910.

In 1907, a young Swiss student at the École d'Art in La Chaux-de-Fonds was off exploring Tuscany in search of that mediaeval culture that John Ruskin praised so highly in his writings. This person's name was Charles-Édouard Jeanneret. He was 20 years old and had an extraordinary ability to get to the very heart of things, to read the anthropised structure of the landscape and to analyse its architecture and its art spread wide both within and outside its buildings steeped in history.

It may have been his first trip outside Switzerland, but, following the teachings of his mentor Charles L'Éplattenier, he had very clear ideas about what he had to look at – and how – in order to become an architect. Thus, on the morning of 13 September, he left Florence and headed for the Val d'Ema, where the imposing 14<sup>th</sup>-century Florence Charterhouse stands on Monte Acuto. His interest in the perfect marriage between the collective way of life of this monastery and the architecture of its component parts is plain to see in the drawings that he sketched in his notebook – drawings that, as was his wont, were succinct and precise, accompanied by short sentences and observations made out loud, such as the one that said: “Here I've found the blueprint for the standard workers' house.”



Reading the Middle Ages through the lens of his time, the future Le Corbusier had understood that this ideal harmony between the individual and their community, epitomised by the typology of the individual monks' cells and the communal cloister, held the key to answering the looming question of housing: that of the “house for all”, which would dominate not only all his research in the decades that followed but also the whole of the architectural debate in the first half of the 20<sup>th</sup> century.

### From one type of cell to another

From that point on, the Florence Charterhouse formed the basis for much of his work studying modern housing. And, if it is easy to think that it evolved into the priory of Sainte Marie de la Tourette after the Second World War – which was directly inspired by it, not least in its daring expressions of exposed concrete – it is more surprising to find its imprint in 1922 in the large scale of the designs for his “immeubles-villas” (which translated ten years later into the construction of the “Immeuble Clarté” in Geneva) and the small scale of the striking “L'Esprit nouveau” pavilion at the 1925 International Exhibition of Modern Decorative and Industrial Arts in Paris.

In the summary for his *Oeuvre Complète*, the master gave this explanation in the third person:

“Le Corbusier was struck by this idea when recalling a Carthusian monastery in Italy ... the ‘immeubles-villas’ offer a new way of living in the big cities. Each housing unit is actually a small house with a garden, placed at any desired height above street level. The density of the urban neighbourhoods remains the same, but the houses rise higher and their horizons are broadened.”

In the sketches for his proposal for a city of three million inhabitants that he exhibited at the 1922 Salon d'Automne, this idea is clearly expressed in his design for the housing, where the comfort of daily life meets the boundless expanse of the metropolis, which presents itself to the eyes of its inhabitants as a fascinating panorama on modern living. But 1922 was also a

Inauguration of the modern Frugès districts in Pessac, 1926.

Below:  
Citrohan house,  
plaster model,  
1922.



crucial year in the development of a type of housing, the “Citrohan” house, which was showcased at the same time with a plaster model. This marked the debut appearance of pilotis, isolating the house from direct contact with the ground.

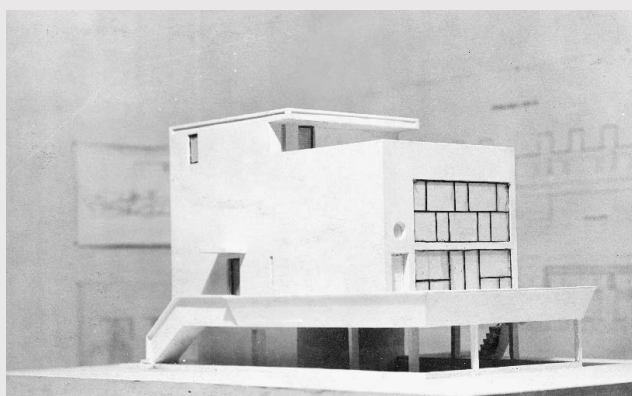
The Citrohan house is the culmination and expression of all the studies that Le Corbusier had doggedly pursued into the technique of reinforced concrete, prefabrication and industrial building production and that he had brought together in his 1914 design for the “Dom-Ino” house. As he wrote in *Oeuvre Complète*, “this first small house with its roof garden and mass-produced structure will be the key to the research that will be done over the coming years.”

From the core of this work, therefore, the guiding theme of his “patient research” clearly emerges: the mass-produced house (to be built from pre-assembled pieces like a car, hence the name), an expression of what living means in the age of mechanisation. It is a “model house” – a parallelepiped

with a load-bearing wall on either side – that unfolds in depth, as in the groundwork for the “L’Esprit nouveau” pavilion: the centrepiece of the house is a double-height hall measuring 9 m by 5 m, overlooked by the two levels with the bedrooms and illuminated by the large “glass wall” that replaces the traditional masonry façade.

This model can either be applied in isolation – a villa based on that built in 1927 in Stuttgart’s Weissenhof quarter – or extended horizontally (the terraced houses of Pessac) or vertically in the form of the “immeubles-villas”. With its standardised, precisely defined measurements, the Citrohan house perfectly embodied Le Corbusier’s new ideals and stood in opposition to the “old house that made poor use of space”.

Practical houses at the interface between architecture and industry include those that Le Corbusier would build for the industrialist Henri Frugès in Pessac between 1924 and 1926: a small estate of workers’ houses that took the study of housing typologies and their urban aggregation and combined them in a kind of garden city. For the great master, the Cité Frugès was a laboratory where he could expand his theoretical studies in real-life situations, having to measure himself against the expectations and usage considerations of future inhabitants and against the trialling of completely new construction and building techniques. Pessac was where mass-produced architecture was put to the test: “I expect,” Frugès recommended to Le Corbusier, “that you







will clearly identify the problem facing the ground plan and then find its standardised solution.” Applying the Taylorist method to the production of housing, he found himself testing his formula of the house as a “living machine” for the first time: a 5 m by 5 m module, only three types of windows and a single reinforced concrete beam 5 m long were the ingredients for a composition designed to ensure variety and unity at the same time. The studied juxtaposition of single accommodation units so as to alternate full and empty spaces gave the whole ensemble a strong sculptural character, accentuated by the use of terraces, transparent gratings, and, in particular, colour to restore the tone of a “purist” painting to the village skyline, in the style of the famous still lifes of that period.

Pessac was at once an experiment and an exception, more like a garden city than the vertical city for which Le Corbusier was striving, although this dream was partly realised in the Clarté building in Geneva, a monolithic eight-storey structure containing 45 accommodation units of various sizes (including 16 duplexes) that followed the “immeubles-villas” model. Commissioned by industrialist Edmond Wanner, the steel-structure complex (by Swiss engineer Robert Maillard) experimented with extensive use of glass both outside and inside communal areas such as stairwells and introduced a number of elements (commercial and service areas) that would later find

expression on an even larger scale and in more precisely defined forms in the first “Unité d’habitation” in Marseille in 1946. Constructed against the tragic backdrop of post-war France, when the housing question had taken on dramatic proportions due to the Herculean task of reconstruction, the “Unité” was at once a beginning and an end point. Its proportions were genuinely epic (a full-blown town for over 1,500 people contained in a parallelepiped 150 m long, 24 m wide and 56 m tall (spread across eight floors).

Influenced by the design of ocean liners, the Unité was conceived by Le Corbusier as a solution that could be repeated in different contexts. And indeed he would go on to create several versions of it in Nantes-Rezé in 1952, in Briey-en-Forêt in 1957, in Meaux and West Berlin in 1957 and in Firminy in 1962. Such was the interest in his building in Marseille that it sparked a heated debate between supporters and opponents of this brand-new way of living and, undoubtedly, inspired further projects too.



Clarté building,  
Geneva, 1930.

Right:  
Cross-section and  
interior fittings  
of the ocean liner  
“Ile de France”, 1936.

Unité d'habitation,  
Marseille, 1945.

These included other European projects during the decades of reconstruction, from Luigi Daneri's "Biscione" ("Serpent") district in Genoa to Alison and Peter Smithson's Robin Hood Gardens in London.

Inspired by the mobile architecture of the ocean liner – at the time the main form of mass transit – the "Unité" is a huge container where the communal services (shops, a laundrette, a post office, restaurants, etc.)



are sprinkled amongst the floors of apartments to restore the complex nature of a compact, vertical city. However, its most radical innovation was the idea of the "living cell": an inverted L-shape made up of two floors of different sizes that Le Corbusier conceived as prefabricated elements to be inserted into the reinforced concrete frame like bottles in a wine rack. The high point of each accommodation unit was the duplex (the same type as used in the Citrohan house), which was overlooked by the private rooms on the upper floor. The cells were also combined with one another in a mirrored and inverted fashion, meaning that, not only did each enjoy a "double view" along the entire length of the building, but it was also possible to create a corridor where they met, giving access to the floor and acting like a kind of internal thoroughfare.

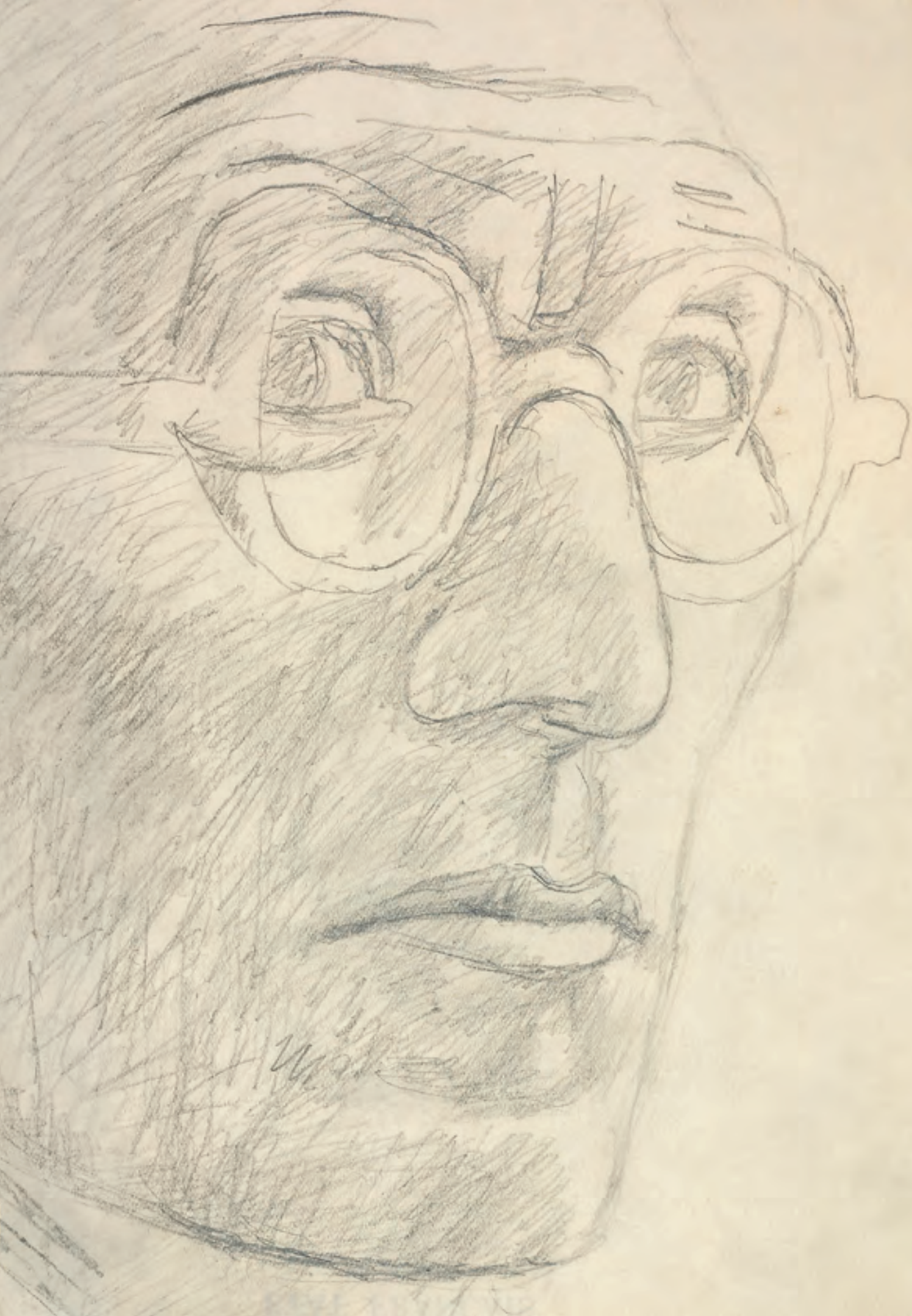
In this particular arrangement, the two L-shapes overlapped in the façade along three floors, protected from excessive sunlight from the spacious terraces by colourful brise-soleil that gave the imposing façade a rhythm that was both powerful and varied by the marked contrasts in the shades of colour. The outward opening reflected Le Corbusier's obsession with the sun: a symbolic and health-giving dimension that added the never-ending myth of

the Mediterranean to the advantage of generous exposure. This in turn is reflected in impressive style in the approach taken to the roof garden: the deck of a ship anchored in concrete a stone's throw from Marseille's port, which Le Corbusier had fitted out with a day nursery, a solarium, an auditorium and an outdoor fitness trail that would fire the collective imagination with its vision of a "Cité radieuse" ("radiant city") available to all.

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## Le Corbusier's gaze

by Giampiero Bosoni\*



Left:  
*Self-portrait*,  
graphite pencil on paper,  
1950s.

This page:  
Swimming goggles  
with varifocal lenses,  
custom-made for  
Le Corbusier.

In 1930, Le Corbusier wrote in *Précisions*:<sup>1</sup> “I only live as long as I see”, also observing that “the dominant sign [of the modern man of value] is no longer ostrich feathers in the hat, it is in the gaze.”

Le Corbusier’s was an inquisitive gaze and one that his ultra-watchful grey eyes had projected onto the world since his early youth through his spectacles, that instrument-prosthesis, that object-for-seeing. An object-prosthesis that this truly unique man of letters saw straight away not only as a necessary “tool of the intellectual artist” but also as something to further amplify that gaze of his that was aimed squarely at communicating his truth to the world. A gaze that, precisely because of that natural visual weakness, likewise subjected to tough investigation, found further support in the heightened strength, simple and austere, of the large black frames that characterised his robust presence and great intensity from the 1930s right up until his death.

In 1963, just two years before he died, Le Corbusier wrote a note to himself containing a simple thought that became a kind of synthetic representation of his “patient research”: “The key is this: ... look, observe, see, imagine, invent, create.” At the heart of this message lies the secret of someone who does not want to keep on being surprised by the phenomena of real life, which, studied and analysed, becomes the heritage of our knowledge.



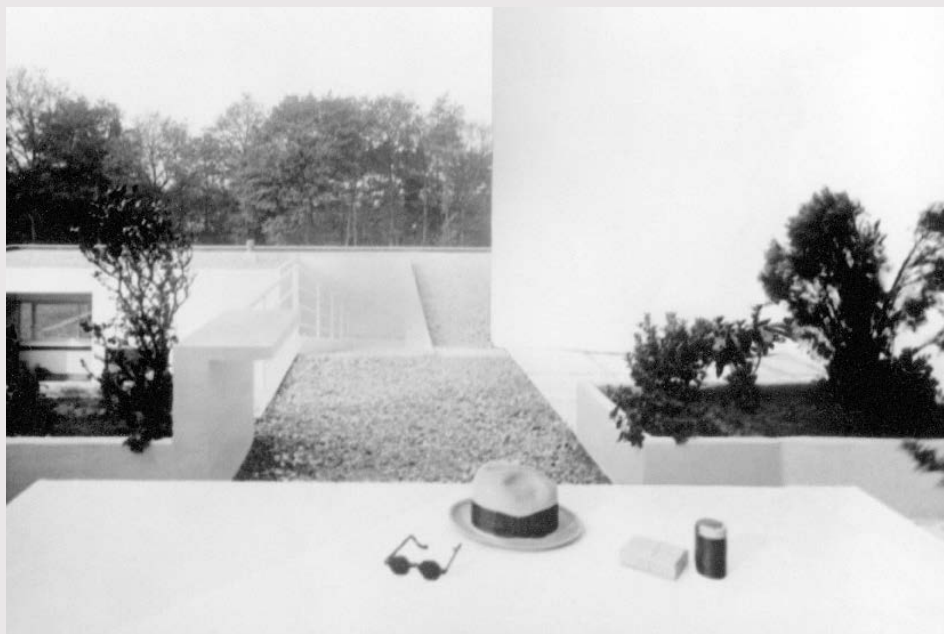
Thus the eyes (to which the glasses add greater strength, including figuratively) are a “tool” to see but also a “means” of communicating.

Besides the many photographs in which Le Corbusier is always immortalised wearing his characteristic glasses, there are also those in which he plays with them, such as when he puts them on a large, polished stone that looks like a face with bizarre, deformed features. But his spectacles also appear occasionally in his drawings, abandoned here or there like a signature object in some internal perspective, as well as cropping up now and again in a few interior photos of his famous works from the 1920s and 30s.

Traces of his glasses can also be found in a number of letters, with the most touching testimony coming in a 1959 missive written from India to his friend Germaine Ducret,<sup>2</sup> which contains the following thought or

Le Corbusier playing around with his glasses, balancing them on a rock to look like a face, Chandigarh, c. 1950.

An evocative photograph of Villa Savoye, with Le Corbusier’s sunglasses and hat in the foreground, 1928.



Le Corbusier's glasses, resting on the preliminary sketches for his paintings in the apartment at 24 rue Nungesser-et-Coli, Paris, 1960. Photo by René Burri.

poem dedicated to his beloved wife Yvonne, who had passed away two years earlier:

“This night:

Corbu

his glasses  
glasses  
the Indian moon looks like Yvonne. –  
asleep under the stars. adorably under  
vast swathes of lawn. Alone.”

Thus seeing all these “famous” pairs of glasses that he lovingly preserved (now kept at the Fondation Le Corbusier), which mark almost every stage in his life (from the youthful ones with their light metal frame to the ones he had specially made for swimming, his great passion, with which he would die at sea), one wants to pay a little tribute to these anonymous yet indispensable tools of life and work. But it is also a way to remember once again the dominant sign of Corbu's gaze and, above all else, what he wanted to communicate to us.

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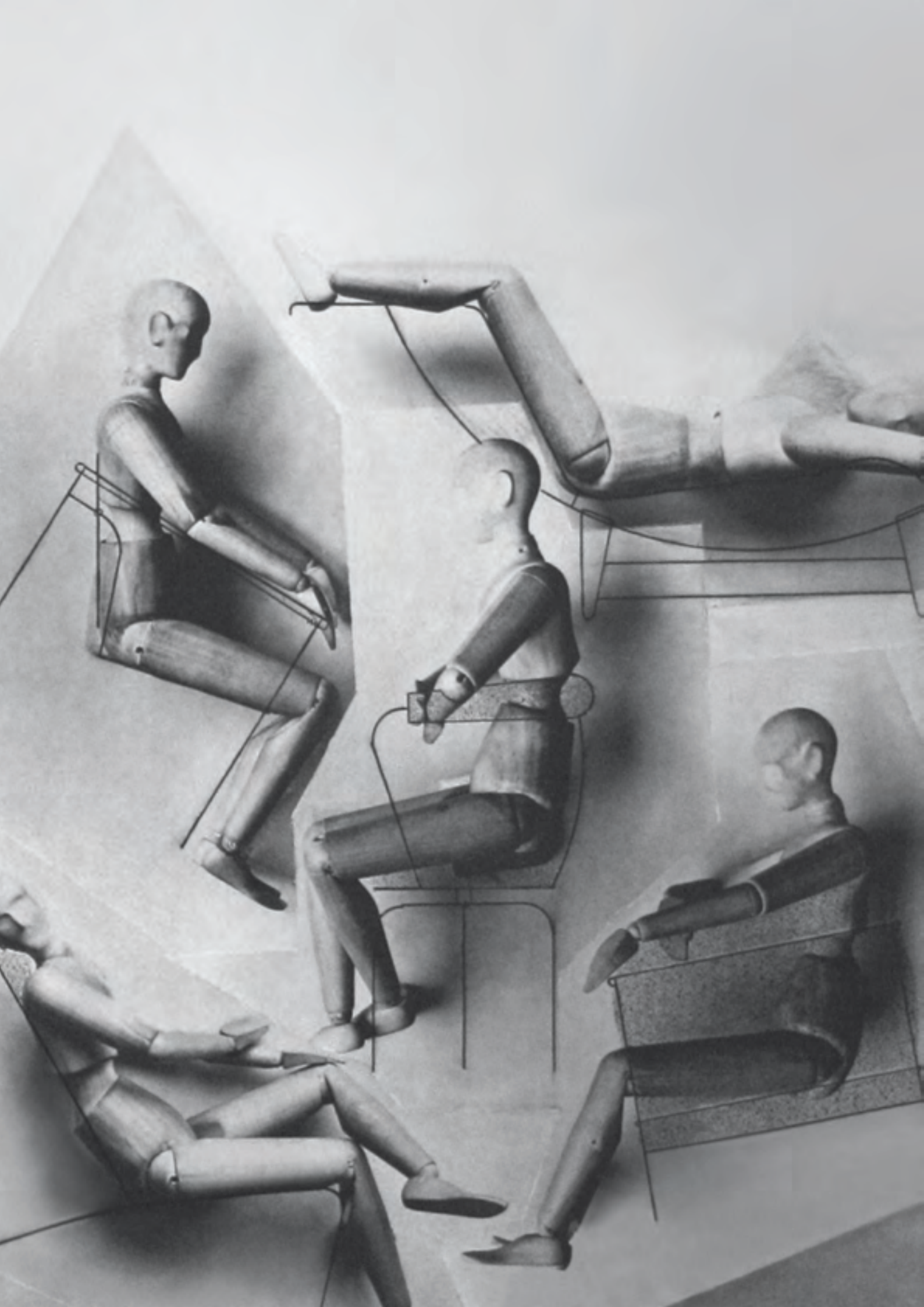


### Notes

<sup>1</sup> Le Corbusier, *Précisions sur un état présent de l'architecture et de l'urbanisme*, Éditions Crès, *L'Esprit Nouveau* collection, Paris, 1930.

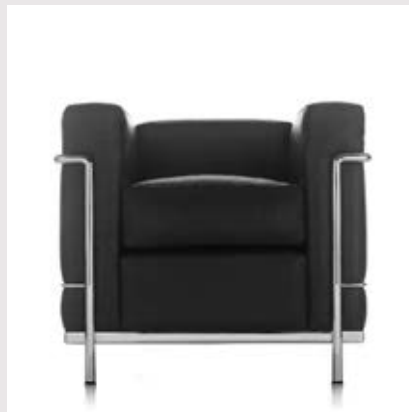
<sup>2</sup> Letter of 25 April 1959 written from New Delhi to Germaine Ducret, in Jean Jenger (ed.), *Le Corbusier – Choix de lettres*, Birkhäuser, Zurich, 2015.





# Le Corbusier and furniture design

by Giampiero Bosoni



Left:

Le Corbusier, Pierre Jeanneret,  
Charlotte Perriand, ergonomic  
studies with dummies for  
various types of chair, 1928.  
Photomontage by  
Charlotte Perriand.

This page:

Le Corbusier, Pierre Jeanneret,  
Charlotte Perriand,  
*LC2 – Fauteuil grand confort,  
petit modèle*, 1928.  
New edition of Cassina's  
1965 production.

In January 1917, the young Charles-Édouard Jeanneret-Gris moved permanently to Paris, which he had already picked as his city of choice on his previous trip in 1908. This marked the end of his phase of development and training in Switzerland. Here, under the influence of his mentor L'Éplattenier and with some initial assistance from local architect René Chapallaz, he had created several pieces of furniture, including some custom designs. His clients were wealthy customers from the Jura for whom, as well as designing bespoke pieces, he also served as a consultant for the purchase of new furniture.

As regards this latter role (which he would keep up, including in his first few years in Paris, in order to make ends meet), there is clear documentary evidence that he tried to persuade his friends and clients to buy chairs with Louis XIII-style woven rush seats and backs as well as Directoire- and Louis XVI-style sofas, armchairs and tables that were understated and unadorned by carvings.



In terms of his projects for individual rooms (such as Raphael Schwob's library, the furniture for Moise Schwob's veranda, the furnishing of a study for his friend Marcel Levaillant, Anatole Schwob's son-in-law, and the bureau for his mother Marie Charlotte Amélie Jeanneret-Perret), his work is extremely significant for studying the essence of the emergence of his interior and furniture design philosophy. His first steps on some of these projects were usually to install electric lights and remove all stucco and fake and redundant elements, which were to be replaced with simple elements in order to create bright, tidy rooms. To create the furniture, which was still constrained by the style of the

past, he used the cabinet-maker Schreiner Egger, with whom he maintained extensive correspondence, including in his first few years in Paris, in order to bring a number of projects to completion. This attention to detail in his choice of furniture would remain a constant feature of his work, as illustrated in the many documents now held by the Fondation Le Corbusier.

Within the overall context of the various cultural battles that Le Corbusier fought, furniture design held particular value as an ideological manifesto of his from 1925 onwards, when he devised a number of container elements for the "L'Esprit nouveau" pavilion. Christened "casiers standard", these were a kind of tangible demonstration of the concept of the "objet-standard" that he promulgated in his book *L'Art Décoratif d'aujourd'hui*<sup>1</sup> in the same year.

These containers, flexible in their use and performing various functions, were to be made by the Spojené U.P. Závody factories in Brno in the former Czechoslovakia, which Le Corbusier had been able to visit twice in order to specify the details of their industrial-scale production. He met Adolf Loos in Paris on 28 March, who told him that U.P. was on the brink of bankruptcy. This was confirmed in a letter dated 31 March, which stated that his furniture would not be able to be made due to a number of changes in company management. This left Le Corbusier hugely disappointed, because, as he would go on to write, this furniture represented for him "the moral armour of the pavilion's right wing". However, he did not give up: at extremely short notice, he managed to find a carpentry



The bureau at Villa Jeanneret-Perret, 1915-16.

Le Corbusier, Pierre Jeanneret, Charlotte Perriand, "casiers standard" container system, 1925-29, in a version reissued by Cassina, mod. LC 20, from 1978.



Le Corbusier,  
Pierre Jeanneret,  
Charlotte Perriand,  
home furnishings,  
Salon d'Automne,  
1929.

Le Corbusier, Pierre  
Jeanneret, Charlotte  
Perriand, *Fauteuil  
grand confort,  
grand modèle,*  
property of Raoul  
La Roche, prototype,  
1928.



workshop outside Paris to create the prototypes. At least in their external aspect, therefore, he was able to produce convincing examples of these fundamental pieces that succeeded in defining the ground-floor environment through their distribution. It is worthwhile bearing in mind that this system of storage furniture paved the way for the concept of “cupboards” that were no longer designed just to be attached to walls but rather to be arranged freely in an open space, with great flexibility of use, in order to serve as mobile architectural parts that were thus more properly to be regarded as a peninsular or free installation style. The other furniture used in the pavilion, including the famous Thonet No. B9 armchairs (which would remain Le Corbusier’s benchmark model), were chosen with great care from amongst the current production models (such as the typical austere leather armchairs in the style of an English gentlemen’s club), all characterised by an exemplary functional design and some also representative of his concept of the “objet-standard” in mass production.

The project that most openly demonstrated his new concept of home furnishings and in which he introduced the principles of the “machine à repos” was undoubtedly *L’équipement de l’habitation: des casiers, des sièges, des tables*, which he exhibited at the 1929 Salon d’Automne and which was signed by him, his cousin and partner

Pierre Jeanneret and a young woman called Charlotte Perriand. The latter had worked at the studio at 35 rue de Sèvres since October 1927<sup>3</sup> as an associate for the furnishing sector, for which she would go on to assume responsibility.

The work on these new furnishing elements was initially planned for a luxury residence, the Villa Church in Ville d’Avray (1927-29), for which these pieces were intended as prototypes.

Like the creation of the models, the exhibition at the Salon was financed by Thonet-France, who would also go on to catalogue all the chairs and tables throughout the 1930s. The design of these seats has often been compared to the structure of a bicycle. This hypothesis can be partly confirmed by the fact that, as Perriand reveals, the furniture had first been offered to Peugeot



(which refused) before being made by Thonet: the thought was that, since the company produced bicycles for everyone, it could produce armchairs for everyone too.<sup>4</sup> The design for this furniture mainly evolved in two- to three-hour rounds of discussions held every evening and based on the observations of the prototypes that Perriand produced in her own studio.<sup>5</sup>

With these creations, undoubtedly more interesting for their exemplary manifesto value than for the results they achieved in terms of low-cost, industrial-scale design, Le Corbusier concluded his fight for modern furniture by including it in the architectural and urban design revolution that he deemed complete in his 1930 pamphlet *Précisions sur un état présent de l'architecture et de l'urbanisme*. On the other hand, it is no coincidence that the design of these pieces of furniture began to take shape in the overarching vision that Le Corbusier first proposed in 1925 in his "L'Esprit nouveau" pavilion. In fact, its architecture gave him the opportunity to showcase the life-size realisation of the model of a duplex "maison-villa", copies of which were to be superimposed one on top of the other to create large building complexes he called "immeubles-villas". His designs for a city of three million inhabitants and the "Plan Voisin" were presented next to this villa-cum-pavilion. In this context, where the "radiant" city was born to meet the needs of a new society shaped by the recent social advancements

that allowed people to enjoy a good eight hours of rest (his beloved concept of "leisure") compared with the eight hours dedicated to sleep and the other eight to work, it is only natural that the furniture should become emblematic of this upgraded domestic dimension. In particular, the chaise longue perfectly encapsulates this concept of a machine designed purely for the purpose of resting and reading, as if it were a pendulum, a highly precise watchmaking instrument, in which the New Man enjoys his newly conquered freedom in a balanced relationship with the rhythms of urban life and with an ethical conscience (rest for the body and regeneration for the soul).

Production of Thonet's metal tube furniture declined with the outbreak of war, and it was virtually forgotten about in the post-war period. In 1959, the Zurich-based gallery owner Heidi Weber revived the *Chaise longue basculante*, *Fauteuil à dossier basculant* and *Fauteuil grand confort, grand et petit modèle*, which were produced in a very limited edition by local craftspeople. The collection was christened "Le Corbusier sitzmöbel/sièges/chairs". Each model bears the initials "LC". In 1964, at the same time as construction was getting under way on the "Maison de l'Homme" in Zurich and with Le Corbusier still alive, Heidi Weber entrusted production of these four models to Meda-based Cassina S.p.A. on the urging of various envoys from the Italian furniture-maker Cesare Cassina, who already



Charlotte Perriand lying on the *chaise longue basculant* that she created together with Le Corbusier and Pierre Jeanneret, design 1928-29. Photograph for the Thonet Frères catalogue, Paris, 1930.

Le Corbusier,  
Pierre Jeanneret,  
Charlotte Perriand,  
LC1 - Fauteuil à  
dossier basculant,  
1928. Reissue by  
Cassina, 1965.



enjoyed great renown. Spending much of his time with architects, designer-intellectuals like Dino Gavina and high-end publishers like Bruno Alfieri had led Cassina to reflect on the opportunity being presented to develop production of the historic furniture of one of the most revered masters of the modern movement. He was to seize this opportunity after Gavina himself had voiced disinterest (in fact, an explicit refusal) in doing with this furniture what he had done with Marcel Breuer's, in his clear vision of bringing about an aesthetic renewal of the industrial product using the example of creative minds accepted as masters of modern furniture design. Gavina put his lack of interest in the furniture from Le Corbusier's stable down to its unsuitability for industrial-scale production, feeling that it needed too much manual working and welding.<sup>6</sup> In a contract dated 23 October 1964, Italy's Cassina company acquired the publishing<sup>7</sup> and sales rights for these models, which Le Corbusier, Pierre Jeanneret and Charlotte Perriand had designed in 1928 and which would now be known as LC1, LC2, LC3 and LC4. The collection was officially unveiled, a few months after Le Corbusier's death, in the Sala Espressioni ("Expression Room") of the Ideal Standard company, a pioneering space for cultural activities in Milan designed by Gio Ponti. Ever since that point, the design of the furniture created by Le Corbusier and his associates has been a prominent benchmark on the international furniture production scene.

## Notes

<sup>1</sup> Le Corbusier, *L'Art Décoratif d'aujourd'hui*, Éditions Crès, Collection de "L'Esprit Nouveau", Paris, 1925.

<sup>2</sup> Arthur Rüegg, *Le Corbusier, Meubles et Intérieurs 1905-1965*, Fondation Le Corbusier – Scheidegger & Spiess, Zurich, 2012.

<sup>3</sup> Her collaboration with Le Corbusier and Jeanneret would last ten years (from 1927 to 1937). She would go on to make around a dozen pieces of furniture with them and would also be involved in all their projects during this time as an architecture student.

<sup>4</sup> From *Intervista a Charlotte Perriand*, edited by Maurizio Di Paolo, Paris, 22 December 1975, in Maurizio Di Paolo – Marcello Fagiolo – Maria Luisa Madonna (ed.), *Le Corbusier, Charlotte Perriand, Pierre Jeanneret, "La machine à s'asseoir"*, De Luca Editore, Rome, 1976.

<sup>5</sup> *Ibid.*

<sup>6</sup> Even Charlotte Perriand revealed some doubts about the industrial characteristics of these pieces of furniture in a 1975 interview: "... Only God knows if our armchairs have been armchairs for everyone. We really got it wrong there. Because, at the beginning, it was only a handful of refined intellectuals who could afford them, and even now there's only a lucky few who can buy them. It's precisely the opposite of what we set out to do. It's niche, luxury furniture ...". From *Intervista a Charlotte Perriand*, op. cit.

<sup>7</sup> Exclusive rights to the manufacture and sale of these models were first extended from Italy to the rest of Europe, followed by the Americas in 1967 and the rest of the world in 1971.







## Le Corbusier and the exhibition pavilions

by Simon Zehnder\*



Left:  
Internal staircase,  
Pavillon Le Corbusier,  
Zurich, 1964-67,  
opened following  
restoration in 2019.

This page:  
The Philips Pavilion,  
World's Fair,  
Brussels, 1958.

The external structure and interior of the "L'Esprit nouveau" pavilion, International Exhibition of Modern Decorative and Industrial Arts, Paris, 1925.

Le Corbusier's works draw inspiration from his early fascination for the interplay between art and mass production.

Experimenting with modular building systems would form the basis of his later pavilion buildings. In 1914, this gave rise to the design for the "Dom-Ino House", produced in collaboration with the structural engineer Max Du Bois. The design was based on a structure formed of columns and concrete-slab floors and enabled maximum freedom in terms of façade design and dividing up the space inside the building shell. The principle behind this free construction method can be applied in a modular fashion, and buildings placed in rows can be treated as modules and arranged into L- or U-shapes.

The "L'Esprit nouveau" exhibition pavilion was constructed in 1925 in a matter of weeks. This embodied, in a single building, all the architectural ideas previously promulgated in the eponymous magazine published by Le Corbusier, Amédée Ozenfant and Paul Dermée. A suitable stage was provided by the International Exhibition of Modern Decorative and Industrial Arts in Paris. This exhibition pavilion thus bore witness to the latest findings in physics, medicine, experimental psychology and psychoanalysis. The design for the pavilion was based on Le Corbusier's prototype "Citrohan" house, an elongated cuboid open along its narrow sides, which contained a two-storey space inspired by a Paris artists' studio. Le Corbusier saw this unit as a cell, modelled after the structure of the Florence Charterhouse in the Val d'Ema. The cluster of maisonette-style apartments with gardens used by the monks was repurposed



as one of the ideas behind the "L'Esprit nouveau" exhibition pavilion. The L-shaped housing unit was placed in a garden and fitted around an existing tree. The basis was provided by a metal structure filled with straw, on which cement render had been applied using spray guns. The pavilion was furnished with leather chairs and bentwood furniture made by Thonet, while the interior design followed the principles of the articles published in *L'Esprit nouveau*, meaning that everything was streamlined and modular. It gave a platform to Le Corbusier's radical- and futuristic-looking designs for urban planning alongside works by Fernand Léger, Jacques Lipchitz, Juan Gris, Amédée Ozenfant and his own creations. The exhibition pavilion was torn down in 1926. Just over 50 years later, in 1977, it was rebuilt in Bologna's trade fair district.

The Philips Pavilion was constructed in 1958 for the World's Fair in Brussels as an exhibition space for the Dutch electrical appliance manufacturer. So impressed had Philips's chief designer L.C. Kalf been with the chapel that Le Corbusier had built in Ronchamp that he commissioned the architect to design his pavilion. Working together with the composer Edgar Varèse, Le Corbusier created an extremely fleeting *Gesamtkunstwerk*. Le Corbusier, who by now was conveying in his work a synthesis of puristic approaches with shapes taken from nature, depicted an organic structure in his initial sketches for the Philips Pavilion. Iannis Xenakis, who made working models from piano wire, yarn and cigarette paper, gave the pavilion a new face. The surfaces, based on hyper- and parabolic





shapes, represented both a graphical and an architectural interpretation of Xenakis's orchestral work "Metastasis" (1954). A steel/concrete composite system was used for the construction, with pretensioned wire ropes being fixed to large concrete columns before being encased in prefabricated panels. The pavilion was dismantled after the end of the World's Fair due to concerns about the risk of damage to its electronic equipment during the cold winter months.

Unfortunately, Le Corbusier did not live to see the inauguration of his final building: his exhibition pavilion in Zurich's Seefeld district was opened on 15 July 1967, the result of many years of groundwork and development. Despite coming right at the end of his career, this pavilion building is nevertheless one of the most important – if not the most important – work in Le Corbusier's oeuvre. This "ideal" exhibition pavilion, constructed on the initiative of the gallery owner Heidi Weber, had a complex and pragmatic planning history. The recently renovated pavilion on the lake shore in the city may seem fragile, but it has aged well. It represents yet another prototype of Le Corbusier's ambitious prefabrication system and a key work in this ongoing process of research. From the outside, it appears as a pavilion building constructed out of cubes and spanned by a huge roof. Divided into two canopies, one concave and one convex, the roof

provides protection from the elements. Le Corbusier christened this double/reverse use of roof canopies "Parapluie-Parasol", or "umbrella-parasol". Between the two, of course, he built a roof that people can walk on.

The pavilion's modular units are sealed off towards the outside using glass elements or sheet metal enamelled in different colours, a demonstration of geometry completely at odds with the buildings generally considered representative of Le Corbusier's late oeuvre. Building for exhibitions, a driving force in modern architecture, was a favoured theme in Le Corbusier's work. They gave him a space to both experiment with and convey his ideas: a walk-in laboratory that embodied the synthesis between industrial strictures and artistic creation. As with its forbear, "L'Esprit nouveau", back in 1925, the Zurich pavilion also incorporates themes such as the two-storey studio space, prefabrication and streamlining while retaining a sense of individuality in expression and design, thus revisiting an already-developed concept and a way of working that Le Corbusier knew well. The concept can be tailored to both the location and the context.

The building functions as an autonomous entity underneath the huge roof. An earlier version of the room layout had a living space in the east and a studio in the west



The Pavillon  
Le Corbusier,  
Zurich, 1964-67,  
opened following  
restoration in 2019.

The Pavillon  
Le Corbusier,  
Zurich, 1964-67,  
opened following  
restoration in 2019.

The roof terrace  
of the Pavillon  
Le Corbusier,  
Zurich.



wing, supplemented by the rooms required for an exhibition pavilion. The sketches show a solid construction building but also a note by Le Corbusier indicating that this was a first draft and there might still be some changes. And changes there were, specifically from another Le Corbusier project that was running at the same time: the building to house the collection of Theodor Ahrenberg, the prominent Swedish collector of modern art, on the quayside opposite Stockholm City Hall. There were to be four rooms in Stockholm: one for Matisse, one for Picasso, one for Le Corbusier and one for temporary exhibitions. The design for the façades called for panes measuring 113 by 226 centimetres, pairs of which came together to form a square of panels enamelled in different colours. These alternated with glass elements, likewise square in shape, that let daylight into the exhibition rooms. This parallel developing and combining of

projects, both those already built and those still in his head, is a hallmark of Le Corbusier's work. The preliminary project for the "Palais Ahrenberg" went on to become a step in the development of the project on the Zürichhorn. Le Corbusier patented his modular construction system, which uses folded sheet metal elements for both beams and columns, in 1953 under the name "System 226 x 226 x 226". This placing of cubes next to and on top of one another is supplemented with cross and sway braces to reinforce the overall structure. Based on Le Corbusier's own scale of proportions, the Modulor, the pavilion on the Zürichhorn is based on a combination of metal angle sections each 226 centimetres long. This measurement corresponds to the height of a person 183 centimetres tall with their arm raised and was Le Corbusier's way of giving architecture a mathematical order based on human dimensions.



All of Le Corbusier's theories come together in the pavilion on the Zürichhorn, his last work to see the light of day. He himself called it the boldest project he had built. There is astonishment to be found in simply lingering in the pavilion, confronting the ideas of space, light, reflection, material and colour. Pondering the structural calculations and the construction process used at the time is a source of fascination. How much Le Corbusier was ahead of his time, how contemporary his pavilion feels.



Le Corbusier,  
*Collection particulière*,  
Pavillon Le Corbusier,  
Zurich.

Below:  
"Mon univers"  
exhibition, 1<sup>st</sup> floor,  
Pavillon Le Corbusier,  
Zurich.

The building itself was constructed on public land, leased by the city of Zurich to the developer Heidi Weber for 50 years. When the lease expired in 2014, both the land itself and the building now on it passed into the city's ownership. Following a two-year renovation, the pavilion celebrated its re-opening in May 2019. Now a public museum, the building is managed by the Museum für Gestaltung Zürich as well as being its principal exhibit. The museum also entices visitors to come back again and again in various ways. An extensive educational programme is designed to suit visitors of all ages, while long opening hours and the option of both public and private guided tours ensure accessibility. Events such as the "Late Night at Zurich's Museums", evening talks on the exhibits and musical performances open the building up to a wide audience, extending its appeal far beyond a few groups of specialists. The attractiveness of the pavilion is enhanced by its prominent location along Zurich's lakeside promenade. This has helped to create a small, well-tended museum quarter together with the neighbouring buildings, which are also given over to culture. As the upper floors of the pavilion cannot be heated, it is open from May to November and closed in the cold months of the year. Rather than being wasted, however, this time is used to take down and reinvent the annual exhibitions. In its first year, the museum showcased Le Corbusier's great passion for collecting in an exhibition entitled "Mon univers" ("My universe"). The places where Le Corbusier lived and worked held a treasure trove of objects that showcased Le Corbusier's unique interpretation of the world through objects and images.



**\* Simon Marius Zehnder**

*Head of the Pavillon Le Corbusier, Zurich.*

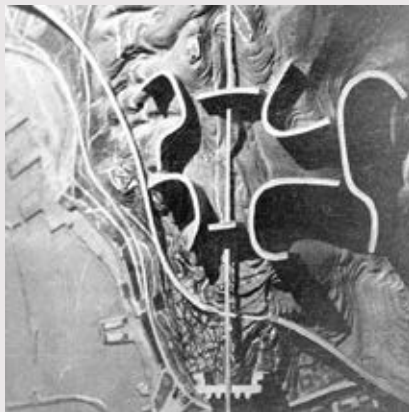






# Le Corbusier's cities

by Fulvio Irace



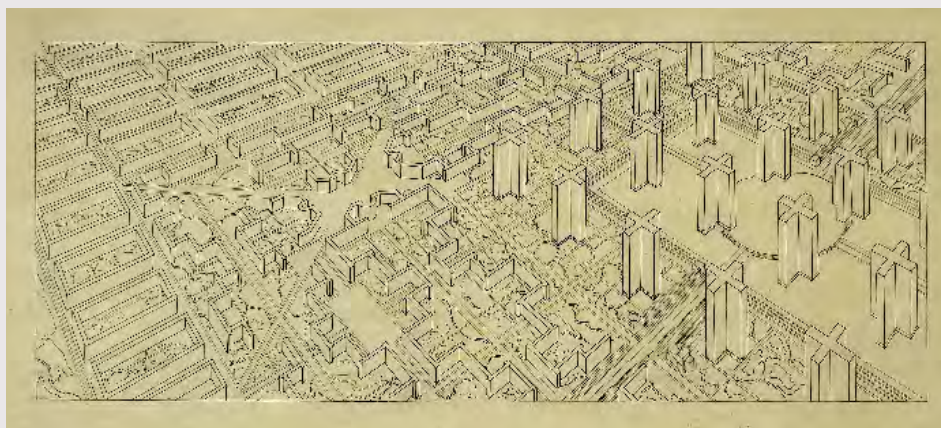
Left:  
Le Corbusier with the model  
for the "Ville Radieuse", 1930.

This page:  
Scale model for the design of  
the "Plan Obus", Algiers, 1930.

Design for the  
Ville contemporaine  
de trois millions  
d'habitants, 1922.

In the early 1940s, as the end of the Second World War approached, Le Corbusier published two books in anticipation of the inevitable debate on reconstruction – *Les Trois établissements humains* (1945) and *Manière de penser l'urbanisme* (1946) – in which he raised the urban question that had dominated his thoughts since his formative years. This was an interest that was inextricably linked to studies on the “living cell” of the future in his firm belief that the problem of mass housing had to be framed in a more overarching vision of the structure of the modern city. For him, urban planning was “the expression of the life of a society, represented in the works of its built environment. Thus urban planning holds a mirror up to civilisation.”

a city of three million inhabitants” that he presented to the 1922 Salon d'Automne. Dismissing the notion of a garden city or district unit, Le Corbusier proposed working on the idea of the city as a compact organism that rejects dispersion so that, by acting on the separation of spaces and infrastructures, it defines itself as a perfect machine in which every single human activity finds its own unique and precise place. At the centre of an orthogonal mesh enlivened by a system of large, flowing axes lies the downtown of cross-shaped skyscrapers (each capable of accommodating between 10,000 and 50,000 people); at its feet, a vast green space (spanning a colossal 3,600,000 square metres) with gardens and parks housing restaurants, cafés, shops, theatres,



His vision of the modern city was based on identifying the three overarching functions that characterise a society: feeding, producing and exchanging. Each of these functions has to be matched by a settlement that meets their specific needs, taking a holistic approach. Above and beyond its technical aspect, urban planning calls for a humanistic, intellectual vision – a “wisdom”, even – that starts with the scientific analysis of the reality of things, identifies the objectives to be pursued and devises the resultant programmes.

Countering the threat of chaos posed by “machinist civilisation”, urban planning is first and foremost a project geared towards order that restores a peaceful co-existence and smooths contrasts and imbalances following a principle of reason. This is a belief that Le Corbusier arrived at over more than two decades spent devising theoretical models and sketches, whose origins can be traced back to the “Plan for

etc. All of this is surrounded by a fabric of condominium complexes arranged in a sawtooth pattern (a continuous ribbon of terraced houses with six or more floors each, which bends at right angles to form a connecting system of spacious open courtyards) with terraces looking out over the greenery. This takes the congestion out of city centres, adds new means of transport and increases green spaces.

The design is that for an ideal city – almost an unexpected product of the tradition of the Renaissance treatise – independent of any precise territorial reality. However, at the International Exhibition of Modern Decorative and Industrial Arts three years later, Le Corbusier built his “L’Esprit nouveau” pavilion, where, in the adjoining diorama, he showcased the boards from the “Plan Voisin”, the application of his method to the specific case of central Paris. The project involved demolishing a vast area on the right bank of the Seine and replacing



the existing urban fabric (of which only isolated monuments such as the Palais Royal and La Madeleine were to be spared) with a network of straight roads and 18 “Cartesian” skyscrapers (with a cross-shaped floor plan) under which would run the ribbons of the sawtooth-pattern housing units.



### The “Ville Radieuse”

For Le Corbusier, the years from 1925 to 1930 were an intense period of study, research and proposals supported by the publication of his ideas on urban planning – *Urbanisme* (1924); *Précisions sur un état présent de l’architecture et de l’urbanisme* (1930) – and given new life by the travels that opened his eyes to the problems facing big cities in different parts of the world. In 1928, he was in Moscow, where he received an invitation to enter the competition to design the Tsentrosoyuz Building, the Soviet headquarters; in 1929, he was in Latin America, where he was invited to lecture in Buenos Aires, Montevideo, Rio de Janeiro and São Paulo, where he came up with some surprising restructuring and redevelopment plans that would provide new materials and perspectives for applying his theories.

Of these theories, that of the “Ville Radieuse” – widely disseminated in the 1935 book of the same name – was at the time the most didactic and exemplary. The “Ville Radieuse” – the “new city of the sun” – was officially unveiled at the 1930 International Congress of Modern Architecture (CIAM). It is the fine-tuned model of a city of 1.5 million people, whose sense of geometric order was acclaimed as a revolution that would enable the closed-off, disorderly nature of the pre-industrial city to be overcome. Reorganising the traffic

system into a straight-lined grid and grouping housing units into huge buildings in a sawtooth pattern freed up new spaces that would let the city breathe. Congestion would be removed from the city centre: just 12 per cent of the land would be built on, while putting the building shells on pilotis would leave the whole area to the pedestrians, restoring the balance between humans and nature.

This clear demarcation between functions was the forerunner of the zoning principle, which Le Corbusier announced at the CIAM of 1933. Published in 1943 as the Athens Charter, it became the manifesto for modern urban planning in the post-war period. Set out as a series of observations, the Charter is a set of rules and principles for building a city rather than a model per se and was largely based on his previous ideas and proposals. Projects that more or less mirror the Athens Charter include the plans (never implemented) for Saint-Dié (1945), Bogotá (1950), Meaux (1956) and Berlin (1958), with the proposed reconstruction of the city centre destroyed in the war. However, Le Corbusier’s dream of being able to create the ideal city did not come true until 1950, when Indian Prime Minister Jawaharlal Nehru invited him to design the capital for the new State of Punjab following the Partition of India in 1947. Chandigarh (the “silver city”) was the opportunity that Le Corbusier had always been waiting for following the failure of many of his proposals: here, for example, he would be able to actually create his innovative road system, with streets for pedestrians separated from those reserved for cars (the

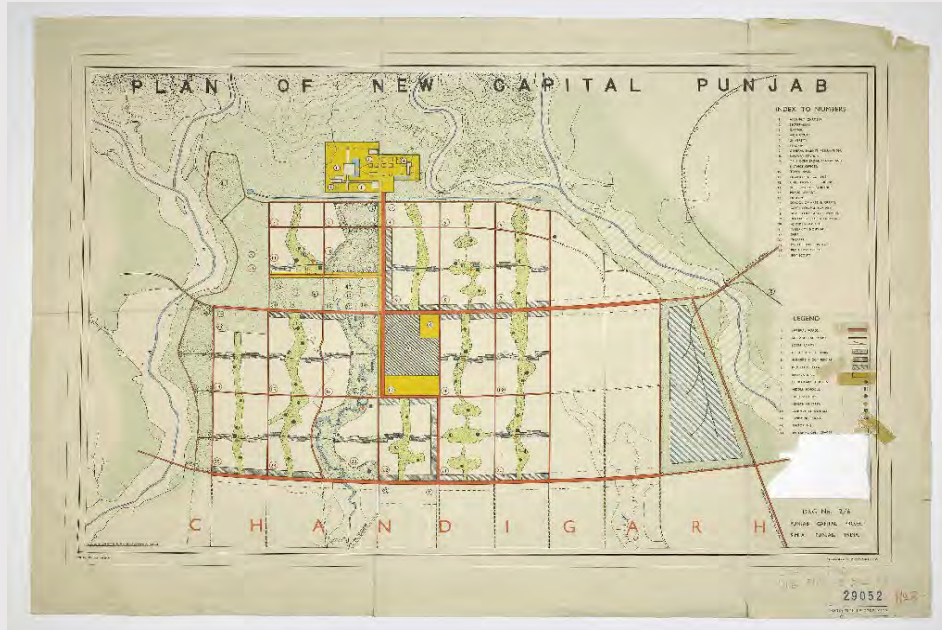


Scale model for the “Plan Voisin”, Paris, 1925.

Below:  
Studio sketches  
for the new urban  
plan for the city  
of Rio de Janeiro,  
1929.

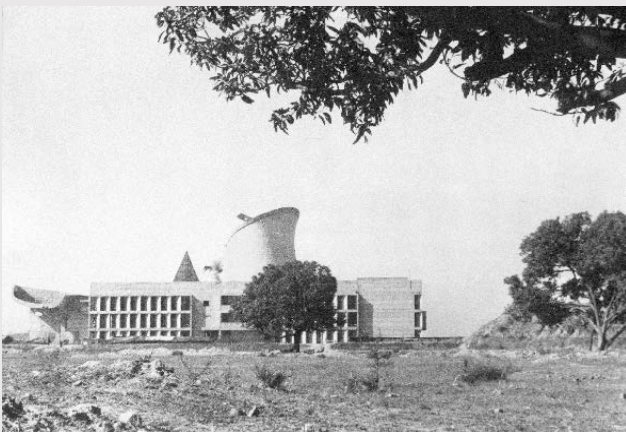
Design for the new capital of Punjab, Chandigarh, 1950-1965.

Below:  
Palace of Assembly, Chandigarh, 1955.



“7 Vs” theory, i.e. seven types of roads for different speeds of traffic), reconfiguring the grid used in the plan prepared by the British architects Maxwell Fry and Jane Drew. Under this system, each block is surrounded by a high-speed road that ends at dedicated car parks, while a majestic arterial road serves as the backbone of the city’s body, rising up to the “head” housing the square that is home to the Capitol Complex. This is where the state institutions are concentrated in epic and monumental fashion, specifically Parliament, the High Court, the ministries and the Governor’s Palace. Conceived as the future historical centre of the new capital, however, the Capitol Complex transcends the sense of mechanism implicit in the “Ville Radieuse” and its rejection of the ancient city: its mighty buildings and the imprint of those that have remained on paper – such as the Governor’s Palace – echo a mythical-poetic rather than

a functionalist act. It is an act in which, far from being discarded for the sake of the new, the presence of the powerful Indian landscape and the evocative force of its traditional architecture actually emerge with explosive expressiveness in the sculptural solutions of the masses dripping with immensity, light and, above all, shadow. The elevation of modern technology that had been at the heart of all his elaborations on the machinist civilisation gives way to the needs of the environment and of symbolic expression. Athens is now a long way from Chandigarh: the clarity of the city-machine is clouded and enriched with the shades of Indian sunrises and sunsets. This is a conviction that, as intuition, had already made its way into the mind of the ideologist of modernity a very long time ago and in a place perhaps as mythical to him as the slopes of the Himalayas: Algiers. Between 1931 and 1942, Le Corbusier and Pierre Jeanneret had drawn up proposals for the urban regeneration of the capital city in North Africa that responded to the authorities’ requests to redevelop the dilapidated Marina district and the entire coastal zone. During his first visit, in February 1931, he studied the city closely and gave public lectures on his urban planning ideas. He was struck by the beauty and uniqueness of the mountains and the landscape in Algiers, as he would later be in India. This gave rise to the “Plan Obus” (“Shrapnel Plan”), so-called for its capability to “smash administrative





Le Corbusier and  
André Malraux,  
Chandigarh, 1958.

Scale model for  
the design of the  
"Plan Obus",  
Algiers, 1930.



routines once and for all and inject into urban planning the new dimensional scales that contemporary realities require". The plan primarily involved intervening in the existing city fabric, proposing to demolish the Marina district and replace it with a city that was suitable for the role of capital, creating a residential neighbourhood on the hills around Fort l'Empereur. This was to be structured along the lines of a continuous, serpentine building that adapted to the terrain like a kind of suspension bridge. The large inhabited viaducts were also designed as a concrete mega-structure to support the motorway that would run on its roof and inside which the individual accommodation units could be inserted in all manner of different styles, including those of the now-destroyed Marina houses. It was a powerful and unique vision, where architecture and urban planning came together as one. It was to find new life in Le Corbusier's plans for

Rio de Janeiro, where the large inhabited viaducts snaked their way through the undulating landscape, compressing yet also enhancing the specific nature of the places. In Chandigarh, in Algiers, in Rio, abstraction is halted by the irreducible diversity of the terrain: Le Corbusier would remain at its mercy, and out of this fascination was born an interpretation of the tasks facing the urban planner that we still find vital and crucial to this day.

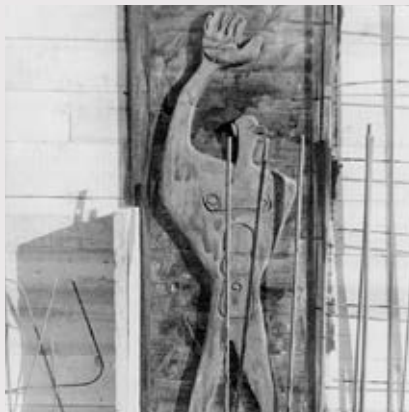






## Le Corbusier and the synthesis of the arts 1940-1952

by Marida Talamona



Left:  
"Unité d'habitation":  
the roof terrace with vent stack,  
Marseille, 1952.

This page:  
The Modulor's *Bonhomme* model  
on the construction site before being  
installed in the formwork, 1948.

Le Corbusier had begun to reflect on painting and the concept of the synthesis of the arts from the early 1920s onwards, during which his research into the polychromy of surfaces and the study of colours and their harmonic relationships had taken shape. Over the following decade, he experimented with “mur en photo-montage”, mural painting and graffiti as well as with the tapestries that he would term “nomad’s murals”, those frescoes of modern nomads living in rented flats. When the nomadic tenant moves house, the “nomad’s murals” are taken off the walls, rolled up and brought along with them.

The 1935 exhibition “Les arts dits primitifs dans la maison d’aujourd’hui”, organised by the gallery owner and art dealer Louis Carré in Le Corbusier’s studio-cum-apartment, presented an opportunity to validate subtle resonances between different kinds of works, archaic and contemporary, compared with one another and with their architectural environment (the exposed stone wall of the studio, the polychrome walls, the vault, the light).<sup>1</sup> In 1938, Le Corbusier organised his first exhibition dedicated to the plastic arts – painting and architecture – in Zurich’s Kunsthaus. However, it was primarily from 1940 onwards that the *Synthèse des arts majeurs* took centre stage in Le Corbusier research, becoming – in the words of the US historian Joan Ockman – “essentially an auto-synthesis of the multiple talents of Le Corbusier himself”<sup>2</sup> in the decades that followed.

### Towards a plastic epic

In December 1944, Le Corbusier published a short unsigned piece in the daily newspaper *Volontés*, in which he announced the birth of a new architectural aesthetic, the dawn of a plastic age built on a collaboration between the arts that, he told artists and designers, “must be considered a real duty to be performed for one’s country at this time, which is seeing such liberation of the major arts: architecture, sculpture and painting”.<sup>3</sup> A few months later, in September 1945, Le Corbusier wrote an essay called *L’Espace indicible*, which would be published in April 1946 in *Art*, a special

issue of the periodical *L’Architecture d’aujourd’hui*.<sup>4</sup> The cover features a watercolour from Le Corbusier’s “Ozon” series, consisting of drawings and sculptural studies done in 1940 in Ozon, the Pyrenean village where Le Corbusier had sought refuge after the German occupation of Paris.<sup>5</sup>

“Architecture, sculpture and painting,” said Le Corbusier, “are specifically dependent on space, tied to the need to manage space, each using appropriate means. The main thing that will be said here is that the key to aesthetic emotion is a spatial function.”<sup>6</sup>

For Le Corbusier, the process is born out of a moment of perceptive evasion – subjective and indefinable – that opens up a space of immeasurable size, conjured up by the exceptional harmony between the work of art’s impact on its surroundings (waves, cries, shouts) and the reaction of the environment that welcomes it (the wall of a room, its dimensions, the location, the elements of the landscape).



Manifesto  
for Le Corbusier's  
exhibition at the  
Kunsthaus  
in Zurich, 1938.



Art, special issue  
of *L'Architecture  
d'aujourd'hui*,  
1946.

"A phenomenon of concordance takes place," Le Corbusier wrote, "as exact as mathematics, a true manifestation of plastic acoustics; ... Then a boundless depth opens up, effaces the walls, drives away contingent presences, *accomplishes the miracle of ineffable space*. I have not experienced the miracle of faith, but I have often known the miracle of ineffable space, the apotheosis of plastic emotion."<sup>7</sup>

With his mysticism-imbued essay *L'Espace indicible*, Le Corbusier shifts the crux of his theory away from individual architectural elements and towards the "magnification" of space (acknowledging his debt to Cubism in this passage) and brings it together with a process of artistic creation capable of combining all the forms of expression in contemporary art. Amongst the major arts he clearly counts music, the performing arts and the effect of light and darkness; to these he adds acoustics, which would become increasingly key to his interests after the Second World War, and finally electronics. He will experiment with both in his *Poème électronique*, created in collaboration with Edgar Varèse and Iannis Xenakis and exhibited in the Philips pavilion that he designed for the 1958 World's Fair in Brussels. The building shell and *Les Jeux électroniques* form an undivided whole and define a space that Le Corbusier saw as the first-ever manifestation of a new art form, a "boundless synthesis of colour, image, music, words and rhythm".<sup>8</sup>

### Acoustic plastics

In July 1951, Le Corbusier was invited by BBC Radio to speak on the synthesis of the arts. His speech followed an outline that he had scribbled in his notebook. After his first item about current affairs, he discussed the following topics:

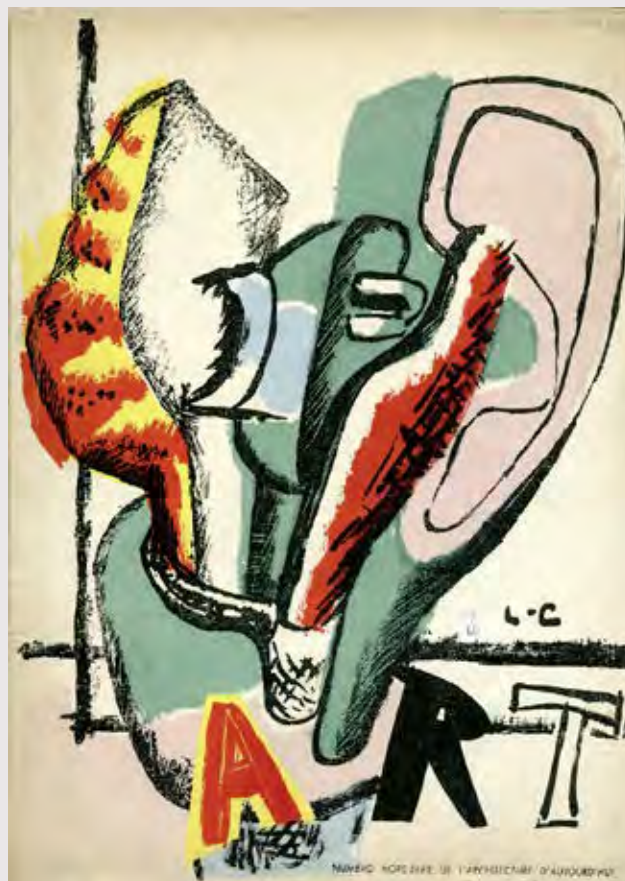
The topic of painting / spontaneous art / relationships with architecture

polychrome sculpture

Tapestry / the mural of the renting nomad

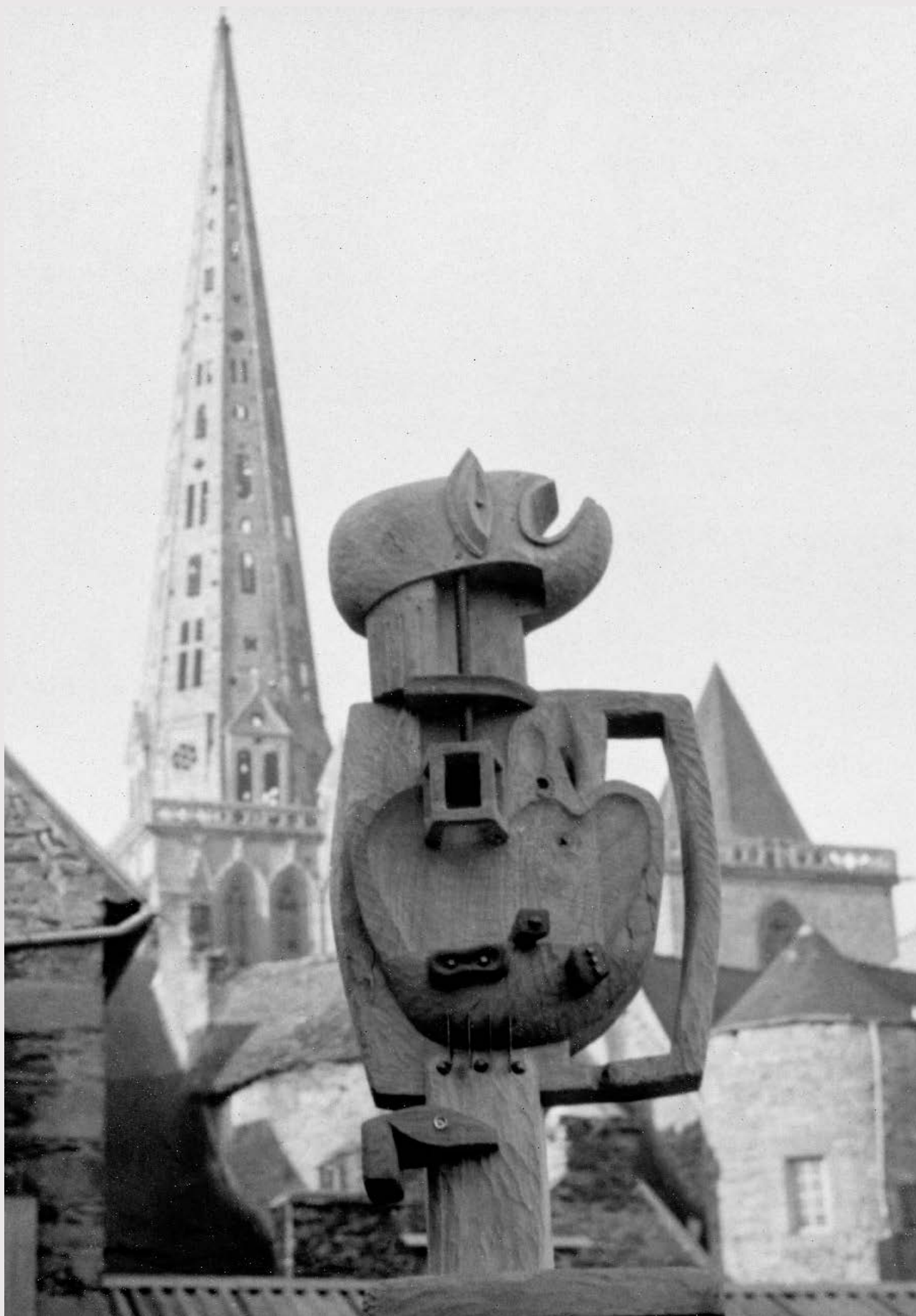
Collaborations between L-C / Savina / Nivola / Maisonnier / Justin + the gods and wise men<sup>9</sup>

These notes highlight how intensely he was working on the synthesis of the arts during



the 1940s and talk about the associates who contributed to his experiments in the plastic arts, often significantly.

The cooperation between Le Corbusier and the Breton cabinet-maker Joseph Savina dates back to late 1944, when Savina sculpted a wooden statuette called *Petit homme*. This was based on a central figure in Le Corbusier's 1931 painting *Harmonique périlleuse*. This initial contact was followed two years later by the start of an extraordinary and fruitful long-distance collaboration that lasted until Le Corbusier's death. Based on scale models, drawings and photographs of paintings that Le Corbusier sent him from Paris, Savina laboured away in his workshop in Tréguier, Brittany, sculpting and assembling the wooden pieces of the sculptures created by his architect friend. The correspondence between the two artists reveals a relationship built on subtle yet effective collaboration, with each making precise observations, justifying proportions, requesting changes in size or the assembly of the pieces. The first sculpture, entitled *Ozon, Opus I*, was produced in December 1946. Le Corbusier discovered it in Paris on his return from a trip to the US



and wasted no time in adding colour to the statue in his studio in rue Nungesser-et-Coli. Dissatisfied with this first attempt, he would go on to change it a few months later. Between 1946 and 1951, Savina created six sculptures in the *Ozon*, *Ubu* and *Totem* series, all based on drawings from the early 1940s. These were a combination of organic forms, taken from the collection of “objets à réaction poétique”, and anthropomorphic forms. These drawings, Le Corbusier stated in 1946,

“pave the way for plastic facts in direct contact with space and perhaps capable of leading to ineffable space. [...] It is the appearance of a polychrome statue with the capacity to manifest its power in the modest form of an object to be held in one’s hand as well as in that of a monument built in the sky or acting on the elements of a combined architecture in order to reap its benefits.”<sup>10</sup>

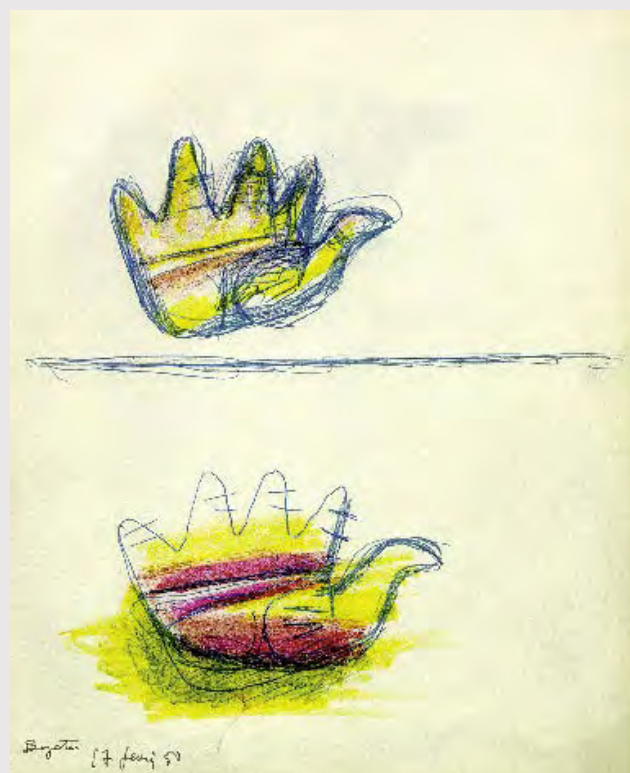
In August 1947, Le Corbusier explained the relationship between artwork and acoustics in a letter to Savina, making reference to the first two completed sculptures. “This kind of sculpture,” he wrote, “enters into what I call plastic acoustics, by which I mean forms that generate and that listen.”<sup>11</sup> In the early 1950s, his creation of larger sculptures such as *Totem* (1951) and *Femme* (1953) expanded his research to take in monuments that rise up to the sky, “architectural sculptures” in harmony with the natural or artificial landscape. The images of *Totem* outdoors, positioned in relation to the massive size and tall spire of the Gothic cathedral in Tréguier, are symbolic of this discourse on a territorial scale. Yet the first studies for his *Main ouverte*<sup>12</sup> also date from these same years. This piece, which Le Corbusier called “a complex work of architecture, sculpture, mechanics, acoustics and ethics”,<sup>13</sup> would become the concrete and sheet-metal monument that would come to symbolise the Capitol Complex of Chandigarh.

#### “Sculptures moulées” for architecture

Le Corbusier’s collaboration with French architect André Maisonnier and his Uruguayan colleague Justino Serralta dates

back to 1947-48, when they joined his studio at 35 rue de Sèvres. Between 1948 and 1950, the two men were tasked with studying the geometric representation of the Modulor with a view to setting up a room dedicated to the system at the Centre Sperimental des Arts Majeures at Porte Maillot in Paris. Intended to be inaugurated in 1950, it never came to fruition. Their research led to the final version of the Modulor, which was unveiled in 1:1 scale on the panel displayed at the “Studi sulle proporzioni” exhibition at the 9<sup>th</sup> Milan Triennale in 1951.

At the same time, Maisonnier and Serralta were part of the team of architects working on the site of the “Unité d’habitation” in Marseille, the most influential and controversial project of the post-war period, which Le Corbusier designed and built between 1945 and 1952. The “Unité d’habitation” undoubtedly marked the architectural expression of Le Corbusier’s 40 years of studies on the issue of housing. However, it was also – as per his intentions – the implementation of a vast artistic project: the life-size laboratory for validating the measurements in the Modulor; the test site for the plastic qualities of “béton brut”; the space given over to the synthesis of the arts. The artificial floor of the roof terrace, designed as a symphony of voluminous and



Joseph Savina, photograph of the *Totem* sculpture, Tréguier, 1951.

Initial sketch for the *Main ouverte*, Bogotá, 17 February 1950.



Picasso visiting the construction site of the "Unité d'habitation", Marseille, 1949. Justino Serralta is on the left.



curved shapes in harmony with the landscape and capable of hosting performances of music, entertainment and the visual arts, is the greatest expression of this project. Both Maisonnier and Serralta played an important role in the artistic experimentation that went on at the Marseille site: the former worked on the design of the monumental folded surfaces of the two sculpted vent stacks on the roof terrace (see p. LXVI), while the latter collaborated on the project to decorate the blank wall of the lift tower, intended to "glorify" the Modulor. He outlined the life-size figure of the *Bonhomme* on a chalkboard wall installed in the studio on rue de Sèvres. Based on his drawing, six templates were cut out of wooden boards glued together. With the help of Maisonnier and the Greek Constantine Andreou, Le Corbusier then carved out the recesses of the Modulor (see p. LXVII).

"Concrete, more faithful perhaps than bronze, can take its place in architectural art and express the intentions of the sculptor,"<sup>15</sup> wrote Le Corbusier about the Modulor wall. Architecture was increasingly becoming an issue of plastic forms, elements and events: a synthesis of the arts.

"In the formwork of the 8 m x 13 m reinforced concrete panel," he wrote, "were installed six wooden men, carved in very shallow relief in the 'en méplat' style. When the mould is removed, they will look like hollow figures who invite light to play and whose purpose is to reiterate that everything that has been imagined and built here has been on a human scale".<sup>14</sup>

Marseille's "Sculptures moulées" paved the way for research into sculpture destined for architecture and modelled in concrete.



### Notes

<sup>1</sup> The exhibition was staged in Le Corbusier's studio-cum-apartment at 24 Rue Nungesser-et-Coli, and in the apartment downstairs, home to Carré himself. Cf. Le Corbusier, *Les Arts Primitifs dans la maison d'aujourd'hui*, in *L'Architecture d'aujourd'hui*, no. 7, July 1935, pp. 83-85.

<sup>2</sup> Joan Ockman, *Polar Attractions: Color, Painting, Architecture* in R. Baumeister (ed.), *What moves us? Le Corbusier and Asger Jorn in Art and Architecture*, Scheidegger & Spiess, Zurich, 2015, p. 70.

<sup>3</sup> [Le Corbusier], *Vers l'Unité. Synthèse des Arts Majeures: Architecture Peinture Sculpture*, in *Volontés*, 13 December 1944. Le Corbusier published his article entitled *A' la recherche de l'usager* (FLC, X1.14.46.001) in the same issue.

<sup>4</sup> Le Corbusier, *L'Espace indicible*, in *Art*, special issue of *L'Architecture d'aujourd'hui*, April 1946.

<sup>5</sup> Le Corbusier and Yvonne and Pierre Jean-neret stayed in Ozon from mid-June to the end of December 1940. Cf. Rémi Baudouï, Arnaud Dercelles (ed.), *Le Corbusier Correspondance. Lettres à la famille 1947-1965*, vol. III, Infolio éditions, Gollion, 2016.

<sup>6</sup> Le Corbusier, *L'Espace indicible*, quotation, p. 9.

<sup>7</sup> Le Corbusier, *L'Espace indicible*, quotation, pp. 9-10.

<sup>8</sup> Le Corbusier, *Oeuvre Complète 1952-1957*, Éditions Girsberger, Zurich, 1957, p. 200; also cf. Jean Petit (ed.), *Le Poème électronique*, Éditions de Minuit, Paris, 1958.

<sup>9</sup> Notebook E21 bis, pp. 18-19.

<sup>10</sup> Le Corbusier, *L'Espace indicible*, quotation, p. 16.

<sup>11</sup> Letter from Le Corbusier to Joseph Savina, 28 August 1947, FLC, F3.18.20.

<sup>12</sup> The first study for the *Main ouverte* is dated 17 February 1950, FLC, Album Nivola 1, p. 5.

<sup>13</sup> Le Corbusier, *Il Modulor 2 1955 (La parola agli utenti)*. Seguito di «Il Modulor» «1948», Mazzotta, Milan, 1974, p. 258.

<sup>14</sup> Le Corbusier, *Il Modulor. Saggio su una misura armonica su scala umana universalmente applicabile all'architettura e alla meccanica*, Mazzotta, Milan, 1974, p. 144.

<sup>15</sup> Le Corbusier, *Oeuvre Complète 1946-1952*, 2nd ed., Éditions Girsberger, Zurich, 1955, p. 188.

"Unité d'habitation",  
wall of the lift  
tower,  
Marseille.





## The Fondation Le Corbusier



It was very early on in his career that Charles-Édouard Jeanneret, then still a novice architect and aspiring artist, expressed his determination to achieve some ambitious goals and his desire to leave behind a tangible legacy of his endeavours. In 1910, aged 23, he wrote to his parents: “Let life be something with a goal and not merely an arrow speeding toward death.”

Once he had become Le Corbusier, having no direct heirs of his own and driven by the fear that the archives and works he had carefully preserved would be scattered after his death, he devoted the last fifteen years of his life to planning and implementing – right down to the tiniest details – a project to set up a foundation that would bear his name. In a note dated 13 January 1960, he wrote:

“I here declare, for every eventuality, that I leave everything that I possess to an administrative entity, the ‘Fondation Le Corbusier’, or any other meaningful form, which shall become a spiritual entity, that is, a continuation of the endeavour pursued throughout a lifetime.”

The foundation’s headquarters were set up on 23 October 1970 at Maison Jeanneret, the former home of Le Corbusier’s brother Albert that had been purchased earlier that year from the proceeds of selling some paintings by Picasso and Braque from Le Corbusier’s personal collection.

In accordance with its statutes and its missions as set out by Le Corbusier, the foundation devotes most of its resources to conserving, raising awareness of and spreading the word about Le Corbusier’s work by:



Left:  
*Still life*, polychrome  
wood, 1957.

Villa La Roche,  
office of the  
Fondation  
Le Corbusier, view  
of the exterior and  
part of the interior,  
Paris.

On 11 June 1965, not long before his death, Le Corbusier signed off the foundation’s draft statutes, which still govern its operations to this day.

Villa  
La Roche-Jeanneret,  
interior.

### *Opening his buildings to the public*

Maison La Roche and Le Corbusier's apartment at 24 Rue Nungesser-et-Coli welcome 20,000 visitors each year, 70 per cent of whom come from abroad. Villa Le Lac, built by Le Corbusier for his parents in the Swiss town of Corseaux, can also be visited.

### *Conserving Le Corbusier's architectural work*

Le Corbusier's architectural achievements span eleven countries across four continents. The foundation seeks to uphold its moral rights to these works and contributes to their conservation. It advises the owners and occupants of Le Corbusier's buildings. All restoration projects are appraised by the foundation's committee of experts. Since 2016, when 17 of Le Corbusier's buildings or sites were included on UNESCO's World Heritage List in recognition of their Outstanding Contribution to the Modern Movement, the foundation has been serving as the Secretariat for the Standing Conference established to manage the properties. Every year, representatives from the seven countries hosting one of the listed works by Le Corbusier meet to discuss the buildings' protection and development.

### *Exhibitions*

Each year, the foundation holds two exhibitions at Maison La Roche designed to help raise awareness of Le Corbusier's work and show how it still inspires artists to this day. Its activities also largely involve responding to requests from museums and cultural institutions organising exhibitions all over the world on Le Corbusier himself or on the artistic trends of his time. In 2019, three major exhibitions were held in Japan on the Purist period and in China on the theme of colours.

### *Supporting research*

The Foundation assists researchers into Le Corbusier's work by opening its resource centre every day to both specialists and the interested public, where they can find all the publications edited by Le Corbusier, literature devoted to him and his own personal library. More than 400,000 digitised documents are available to consult at the centre.

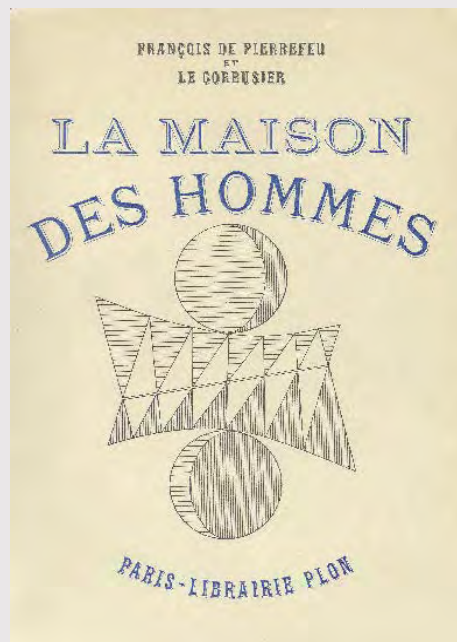
The foundation also organises conferences and seminars and edits and supports scientific publications.





### Le Corbusier's writings

- *Étude sur le mouvement d'art décoratif en Allemagne*, volume published with Charles-Édouard Jeanneret, Haefeli et Cie, La Chaux-de-Fonds, 1912.
- *Après le cubisme*, written with Amédée Ozenfant, Éditions des Commentaires, Paris, 1918.
- *Vers une architecture*, Crès, Paris, 1923.
- *Urbanisme*, Crès, Paris, 1924.
- *La Peinture moderne*, written with Amédée Ozenfant and published under the name Charles-Édouard Jeanneret, Crès, Paris, 1925.
- *L'Art Décoratif d'aujourd'hui*, Crès, Paris, 1925.
- *Almanach d'architecture moderne*, Crès, Paris, 1925.
- *Requête adressée par MM. Le Corbusier et P. Jeanneret à M. le Président et à MM. les membres du Conseil de la Société des Nations*, written with Pierre Jeanneret, Imprimerie Union, Paris, 1928.
- *Une Maison - Un Palais*, Crès, Paris, 1928.
- *Précisions sur un état présent de l'architecture et de l'urbanisme*, Crès, Paris, 1930.
- *Requête de MM. Le Corbusier et P. Jeanneret à M. le Président du Conseil de la Société des Nations*, written with Pierre Jeanneret, Imprimerie Union, Paris, 1931.
- *Salubra, claviers de couleur*, Salubra, Basel, 1931.
- *Croisade ou le crépuscule des académies*, Crès, Paris, 1933.
- *Aircraft*, The Studio, London, 1935.
- *La Ville Radieuse*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1935.
- *Les Tendances de l'architecture rationaliste en rapport avec la collaboration de la peinture et de la sculpture*, Reale Accademia d'Italia, Rome, 1937.
- *Quand les cathédrales étaient blanches. Voyages au pays des timides*, Plon, Paris, 1937.
- *Des Canons, des munitions? Merci! Des logis... s.v.p.*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1938.
- *L'Ilot insalubre n. 6*, written with Pierre Jeanneret, Imprimerie Tournon, Paris, 1938.
- *Destin de Paris*, F. Sorlot, Paris, Clermont-Ferrand, 1941.
- *Sur les 4 routes*, Gallimard, N.R.F., Paris, 1941.
- *La Maison des hommes*, written with François de Pierrefeu, Plon, Paris, 1942.
- *Les Constructions "Murondins"*, Étienne Chiron, Paris, Clermont-Ferrand, 1942.
- *Entretien avec les étudiants des écoles d'architecture*, Denoël, Paris, 1943.







- *La Charte d'Athènes*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1943.
- *Les Trois établissements humains*, Denoël, Paris, 1945.
- *Manière de penser l'urbanisme*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1946.
- *Propos d'urbanisme*, Bourrellier, Paris, 1946.
- *UN Headquarters*, Reinhold Publishing Corporation, New York, 1947.
- *Grille CIAM d'urbanisme*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1948.
- *New World of Space*, Raynal & Hitchcock, New York, 1948; The Institute of Contemporary Art, Boston, 1948.
- *Le Modulor*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1950.
- *L'Unité d'habitation de Marseille*, Le Point n. 38, Mulhouse, 1950.
- *Poésie sur Alger*, Falaize, Paris, 1950.
- *Une Petite maison*, Girsberger, Les Carnets de la recherche patiente 1, Zurich, 1954.
- *Architecture du bonheur. L'urbanisme est une clef*, Les Presses d'Ile-de-France, Cahiers 5-6-7, Paris, 1955.

- *Le Modulor 2*, Éditions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1955.
- *Le Poème de l'angle droit*, Tériade, Paris, 1955.
- *Les Plans de Paris: 1956-1922*, Éditions de Minuit, Paris, 1956.
- *Ronchamp*, Girsberger, Les Carnets de la recherche patiente 2, Zurich, 1957.
- *Von der Poesie des Bauens*, Im Verlag der Arche, Sammlung Horizont, Zürich, 1957.
- *Le Poème électronique*, Jean Petit (ed.), Éditions de Minuit, Paris, 1958.
- *Salubra, claviers de couleur* (2<sup>nd</sup> series), Salubra, Zurich, 1959.
- *L'Atelier de la recherche patiente*, Vincent, Fréal et Cie, Paris, 1960.
- *Textes et dessins pour Ronchamp*, Forces Vives, Paris, 1965.
- *Le Voyage d'Orient*, Forces Vives, Paris, 1966.
- *Mise au point*, Forces Vives, Paris, 1966.
- *Les Maternelles vous parlent*, Denoël-Gonthier, Les Carnets de la recherche patiente 3, Paris, 1968.



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