

131 Van Doesburg, Café L'Aubette, Strasbourg, 1928–29.

reworking of his 1923 project for a university hall, in which a diagonal Elementarist composition had been deliberately imposed on all the surfaces of a partially orthogonal space. Van Doesburg's interior in L'Aubette was similarly dominated and distorted by the lines of a huge diagonal relief or counter-composition, passing obliquely over all the internal surfaces. This fragmentation through relief – an extension of Lissitzky's Proun room approach of 1923 – was complemented by the fact that the furnishing was free of any Elementarist pieces. In their place Van Doesburg designed 'standard' bentwood chairs and elsewhere employed extremely objective detailing. The tubular railing throughout was simply welded, while the main lighting consisted of bare light bulbs bracketed off two metal tubes suspended from the ceiling. Of this design he wrote:

The track of man in space (from left to right, from front to back, from above to below) has become of fundamental importance for painting in architecture. . . . In this painting the idea is not to lead man along a painted surface of a wall, in order to let him observe the pictorial development of the space from one wall to the other; the problem is to evoke the simultaneous effect of painting and architecture.

L'Aubette, finished in 1929, is the last Neo-Plastic architectural work of any significance.

Thereafter those artists who were still affiliated with De Stijl, including Van Doesburg and Rietveld, came increasingly under the influence of the *Neue Sachlichkeit* and thereby subject to the cultural values of international socialism. Van Doesburg's own house, built in Meudon around 1929, barely fulfils any of the sixteen points of his 1924 manifesto. It is simply a utilitarian studio, of rendered reinforced-concrete frame and block construction, superficially resembling the type of artisan dwelling that had already been projected by Le Corbusier in the early 1920s. For fenestration Van Doesburg chose to use the standard French industrial sash, and for furniture he designed his own version of a *sachlich* chair in tubular steel. By 1930 the Neo-Plastic ideal of uniting the arts and transcending the division of art and life had been relinquished and returned to its origins in abstract painting, to the *art concret* of Van Doesburg's counter-compositions hung on the walls of his studio in Meudon. Yet Van Doesburg's conscious concern for a universal order remained alive, for in his last polemic, *Manifeste sur l'art concret* (1930), he wrote: 'If the means of expression are liberated from all particularity, they are in harmony with the ultimate end of art, which is to realize a universal language.' How these means were to become liberated in the case of applied art, such as furniture and equipment, was not made clear. A year later, at the age of forty-eight, Van Doesburg died in a sanatorium in Davos, Switzerland, and with him died the moving force of Neo-Plasticism. Of the original De Stijl artists only Mondrian seems to have remained committed to the strict principles of the movement, to the orthogonal and the primary colours which were the constituent elements of his mature work. With these he continued to represent the harmony of an unrealizable utopia. As he wrote in his *Plastic and Pure Plastic Art* (1937): 'Art is only a substitute while the beauty of life is still deficient. It will disappear in proportion, as life gains in equilibrium.'

Chapter 17 Le Corbusier and the Esprit Nouveau 1907–31

You employ stone, wood and concrete, and with these materials you build houses and palaces; that is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy and I say: 'This is beautiful.' That is Architecture. Art enters in. My house is practical. I thank you, as I might thank railway engineers or the telephone service. You have not touched my heart. But suppose that walls rise towards heaven in such a way that I am moved. I perceive your intentions. Your mood has been gentle, brutal, charming or noble. The stones you have erected tell me so. You fix me to the place and my eyes regard it. They behold something which expresses a thought. A thought which reveals itself without word or sound, but solely by means of shapes which stand in a certain relationship to one another. These shapes are such that they are clearly revealed in light. The relationships between them have not necessarily any reference to what is practical or descriptive. They are a mathematical creation of your mind. They are the language of Architecture. By the use of inert materials and starting from conditions more or less utilitarian, you have established certain relationships which have aroused my emotions. This is Architecture.

Le Corbusier
Vers une architecture, 1923

The absolutely central and seminal role played by Le Corbusier in the development of 20th-century architecture is sufficient cause for us to examine his early development in detail; and the fundamental significance of his achievement only becomes apparent when it is seen against the extremely varied and intense in-

fluences to which he was subject in the decade between his first house, built in La Chaux-de-Fonds in 1905, when he was eighteen, and his last works realized there in 1916, one year before moving to Paris. Above all it seems necessary to remark on the distant Albigensian background of his otherwise Calvinist family, on that half forgotten but latent Manichean view of the world which may well have been the origin of his 'dialectical' habit of mind. I am referring to that ever-present play with opposites – with the contrast between solid and void, between light and dark, between Apollo and Medusa – that permeates his architecture and is evident as a habit of mind in most of his theoretical texts.

Le Corbusier was born in 1887 in the Swiss watch-making town of La Chaux-de-Fonds, which is situated in the Jura, close to the French frontier. One of the prime images of his adolescence must have been this highly rational gridded industrial town that had been rebuilt after its destruction by fire some twenty years before his birth. During his training as a designer-engraver at the local school of arts and crafts, Charles Edouard Jeanneret (as he then was) became involved in his late teens in the last phases of the Arts and Crafts movement. The Jugendstil manner of his first house, the Villa Fallet of 1905, was a crystallization of all that he had been taught by his master, Charles L'Eplattenier, director of the *cours supérieur* at the applied art school in La Chaux-de-Fonds. L'Eplattenier's own point of departure had been Owen Jones, whose book *The Grammar of Ornament* (1856) was a definitive compendium of decorative art. L'Eplattenier aimed to create a native school of applied art and building for the Jura region and, after Jones, he taught his

students to derive all ornament from their immediate natural environment. The vernacular type and décor of the Villa Fallet were exemplary in this respect: its overall form was essentially a variation on the wood and stone farmhouses of the Jura, while its decorative elements were derived from the flora and fauna of the region.

Despite his admiration for Owen Jones, for the Budapest-trained L'Eplattenier the cultural centre of Europe remained Vienna, and his one ambition was that his prime pupil should be apprenticed there to Josef Hoffmann. Accordingly, in the autumn of 1907 Le Corbusier was dispatched to Vienna. He was cordially received, but he seems to have rejected Hoffmann's offer of work and with it the sophistries of the now classicized Jugendstil. Certainly the designs that he made in Vienna for further houses, to be completed in La Chaux-de-Fonds in 1909, show little trace of Hoffmann's influence. This apparent disaffection with the Jugendstil in its decline was encouraged by a meeting with Tony Garnier in Lyons, in the winter of 1907, just as Garnier was beginning to amplify his 1904 project for a Cité Industrielle. Le Corbusier's utopian socialist sympathies and his susceptibility to a typological – not to say Classical – approach to architecture certainly date from this meeting, about which he wrote: 'This man knew that the imminent birth of a new architecture depended on social phenomena. His plans displayed a great facility. They were the consequence of one hundred years of architectural evolution in France.'

The year 1907 may be regarded as the turning point of Le Corbusier's life, for in that year he not only met Garnier, but he also made a crucial visit to the Charterhouse of Ema, in Tuscany. There he experienced for the first time the living 'commune' which was to become the socio-physical model for his own reinterpretation of the utopian socialist ideas that he had inherited in part from L'Eplattenier and in part from Garnier. Later he was to describe the Charterhouse as an institution in which 'an authentic human aspiration was fulfilled: silence, solitude, but also daily contact with men.'

In 1908, Le Corbusier obtained part-time employment with Auguste Perret in Paris,

whose reputation had already been made through his 'domestication' of the reinforced-concrete frame in his apartment block built in the Rue Franklin in 1904. The fourteen months that Le Corbusier spent in Paris afforded him a totally new outlook on both life and work. Aside from receiving a basic training in reinforced-concrete technique the capital gave him the chance to broaden his knowledge of French Classical culture, by visiting the museums, libraries and lecture halls of the city. At the same time, much to the disapproval of L'Eplattenier, he became convinced through his contact with Perret, that *béton armé* was the material of the future. Aside from its malleable monolithic nature, its durability and inherent economy, Perret valued the concrete frame as an agent for resolving the age-old conflict between the structural authenticity of the Gothic and the Humanist values of Classical form.

The impact of all these diverse experiences may be gauged from the project that he made for his alma mater, on his return to La Chaux-de-Fonds in 1909. This building, evidently conceived in reinforced concrete, consisted of three stepped tiers of artists' studios, each with its own enclosed garden, arranged around a central communal space covered by a pyramidal glass roof. This free adaptation of the Carthusian cell form, with its connotations of communality, was the first instance on which Le Corbusier reinterpreted a received type in order to accommodate the programme of an entirely new type. Such typological transformations, with their spatial and ideological references, were to become an intrinsic part of his working method. Since this synthetic procedure was impure by definition, it was inevitable that his works should become charged with references to a number of different antecedents at once. For all that this process may at times have been partly unconscious, the art school must be seen as being as much an heir to Godin's Familistère of 1856 as it was a reinterpretation of Ema. Nevertheless Ema was to remain embedded in Le Corbusier's imagination as an image of harmony to be reinterpreted innumerable times, first on a large scale in his 'Immeuble-Villa' project of 1922 and then, less directly, in the residential block types that he

designed, throughout the next decade, for his hypothetical city plans.

Le Corbusier went to Germany in 1910 ostensibly to further his knowledge of reinforced-concrete technique, but while he was there he was commissioned by the art school of La Chaux-de-Fonds to study the state of decorative art. This undertaking, which resulted in a book, brought him into contact with all the major figures of the Deutsche Werkbund, above all with Peter Behrens and Heinrich Tessenow, the two artists who were to exercise a strong influence on two of his later works in La Chaux-de-Fonds – the Villa Jeanneret Père of 1912 and the Scala Cinema of 1916. Aside from this, the Werkbund contact made him conscious of the achievements of modern production engineering, the ships, automobiles and aircraft that were to form the substance of his polemical essay 'Des Yeux qui ne voient pas.' At the end of the year, after five months in the office of Behrens, where he would certainly have met Mies van der Rohe, he left Germany to take up a teaching post at La Chaux-de-Fonds, offered him by L'Eplattenier. Before returning to Switzerland, however, he made an extensive tour of the Balkans and Asia Minor, and henceforth Ottoman architecture was to be a muted but decided influence on his work. This much is evident from his lyrical record of the trip, his *Voyage d'Orient* of 1913.

The five years prior to 1916 shaped the orientation of his future career in Paris. His final break with L'Eplattenier and his simultaneous rejection of Frank Lloyd Wright, whose work he would have known from the Wasmuth volumes of 1910-11, enabled him to remain open to the possibilities for rationalized production in reinforced concrete. In 1913 he established his own office in La Chaux-de-Fonds, ostensibly to specialize in *béton armé*.

In 1915, in conjunction with his boyhood friend, the Swiss engineer Max du Bois, he evolved two ideas that were to inform his development throughout the 1920s – his reinterpretation of the Hennebique frame as the Maison Dom-ino, which was to be the structural basis of most of his houses up to 1935, and the 'Villes Pilotis', a city projected as being

built on piles; the concept of the elevated street evidently deriving from Eugène Hénard's 'Rue Future' of 1910.

The year 1916 saw the culmination of his early career in La Chaux-de-Fonds with the building of the Villa Schwob, which was an extraordinary synthesis of all that he had experienced so far. It was, above all else, an elaborate assimilation of the spatial potential of the Hennebique system, permitting its author to impose on a skeleton structure stylistic elements drawn from Hoffmann, Perret and Tessenow. There was even an erotic evocation of a seraglio, from which the building took its nickname of 'Villa Turque'. At the same time, it was the first occasion on which Le Corbusier conceived a house in honorific terms, that is, as a palace. The alternately wide and narrow bay system and the symmetrical organization of the plan bestowed on the Villa Schwob a structure that was undeniably Palladian. Similar Classical connotations were indicated in the text that accompanied its publication in *L'Esprit Nouveau* in 1921, wherein Julien Caron wrote:

Le Corbusier had to resolve a delicate problem which was contingent upon making a pure work of architecture, as postulated by a design in which the masses were of a primary geometry, the square and the circle. Such speculation in building a house has rarely been attempted except during the Renaissance.

For the first time Le Corbusier employed 'regulating lines', that Classical device used to maintain proportional control over the façade, manifest for instance in the disposition of the fenestration in accordance with the golden section. In the years that followed, this 'house-palace' theme saw its fulfilment in Le Corbusier's work on two different scales, with related but separate socio-cultural connotations. The first was the free-standing individual bourgeois villa of Palladian precedent, as exemplified in the masterly houses of the late 1920s; the second was the collective dwelling, conceived as a Baroque palace that could evoke through its 'set-back' plan the ideological connotations of a phalanstery.

Soon after he moved to Paris in October 1916 to establish a practice, Le Corbusier had the good fortune to be introduced by Auguste Perret to the painter Amédée Ozenfant, with whom he was to evolve the all-embracing machine aesthetic of Purism. Grounded in Neo-Platonic philosophy, Purism extended its discourse to cover all forms of plastic expression from salon painting to product design and architecture. It was nothing less than a comprehensive theory of civilization which strenuously advocated the conscious refinement of all existing types. Hence it was as much against what Le Corbusier and Ozenfant regarded as the unwarranted distortions of Cubism in painting (see their first joint polemic entitled *Après le Cubisme* of 1918) as it was in favour of the 'evolutionary' perfection of, say, Thonet bentwood furniture or standard café tableware. Their first full formulation of this aesthetic came with their essay entitled 'Le Purisme', which appeared in 1920, in the fourth number of the magazine *L'Esprit Nouveau*, a literary and artistic journal which they were to continue to edit with the poet Paul Dermée until 1925. Without doubt the most fertile period of their collaboration came with the gestation of *Vers une architecture* which, prior to its publication as a book in 1923, was published in part in *L'Esprit Nouveau* under the double pseudonym of Le Corbusier-Saugnier.

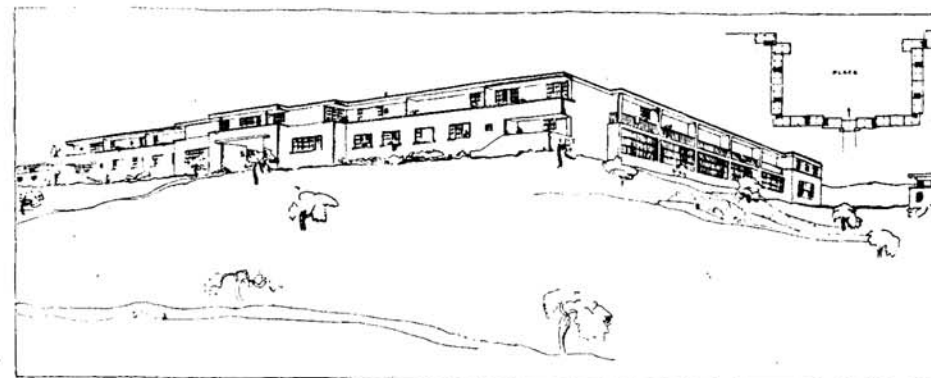
This text – the credit for which in book form was appropriated by Le Corbusier – articulated the conceptual duality around which the rest of his work was to revolve: on the one hand the imperative need to satisfy functional requirements through empirical form, and on the other the impulse to use abstract elements to affect the senses and nourish the intellect. This dialectical view of form, introduced under the heading 'Esthétique et architecture de l'ingénieur', was exemplified by the most advanced engineering structures of the epoch, by Eiffel's Garabit Viaduct of 1884 and by Giacomo Matté Trucco's Fiat Works of 1915 to 1921.

The other aspect of the Engineer's Aesthetic – product design – was represented by the ships, automobiles and aircraft which were

featured as separate sub-sections under the general heading 'Des Yeux qui ne voient pas'. The third section returned the reader to the antithesis of Classical architecture, to the lucid poetry of the Athenian Acropolis, which was appraised in the penultimate chapter under the title 'Architecture, pure creation de l'esprit'. Such was Le Corbusier's admiration of engineering exactitude that the profiles of the Parthenon were presented as being analogous to those now wrought by machine tools. He wrote: 'All this plastic machinery is realized in marble with the rigour that we have learnt to apply in the machine. The impression is of naked, polished steel.'

Over the first five years of his intense activity in Paris, during which he painted and wrote in all his spare time, Le Corbusier earned his living during the day as the manager of a brick-works and building materials plant at Alfortville. In 1922 he relinquished this position to enter into practice with his cousin Pierre Jeanneret, a contract which lasted until the outbreak of the Second World War. One of the earliest undertakings of the office was to advance the 'constructional' idea first touched on with du Bois during the early years of the First World War, namely the Maison Dom-Ino and the Villes Pilotis.

The Dom-Ino prototype was evidently open to different levels of interpretation. While on the one hand it was simply a technical device for production, on the other it was a play on the word 'Dom-Ino' as a patent industrial name, denoting a house as standardized as a domino. This play acquired the force of a literal pun where the free-standing columns could be regarded in plan as domino dots and where the zigzag pattern of an aggregation of these houses resembled the formations of dominoes in play. With their symmetrical arrangement, however, such patterns could also acquire specific connotations by either resembling the typical Baroque palace plan of Fourier's phalanstery or alternatively by recalling Eugène Hénard's 'boulevard à redents' of 1903. With his own 'rue à redans' of 1920, Le Corbusier managed to combine the image of the phalanstery with his own 'anti-corridor street' polemic. At the same time he wished to

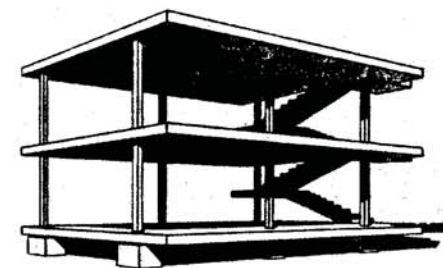


132, 133 Le Corbusier, Maison Dom-Ino, 1915. Below, structure of 'Dom-Ino' unit; above, perspective and plan showing possible grouping.

see the Dom-Ino as a piece of equipment, analogous in its form and mode of assembly to a typical piece of product design. Such elements were seen by Le Corbusier as *objets-types*, whose forms had already become refined in response to typical needs. In *Vers une architecture* he wrote:

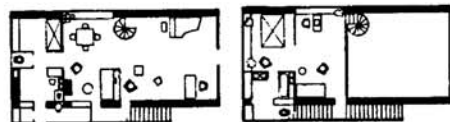
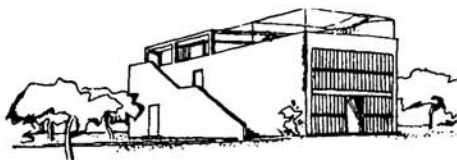
If we eliminate from our hearts and minds all dead concepts in regard to houses and look at the question from a critical and objective point of view, we shall arrive at the 'House Machine', the mass production house, healthy (and morally so too) and beautiful in the same way that the working tools and instruments which accompany our existence are beautiful.

The post-war attempt by the Voisin aeroplane company to break into the French housing market with an assembly-line production of timber houses was enthusiastically acclaimed by Le Corbusier in the second issue of *L'Esprit Nouveau*. Yet at the same time he realized that such production could only be obtained through the exercise of high-grade skills under factory conditions, a combination of circumstances rare in the building industry. He acknowledged these limitations in his Maison Dom-Ino proposal which aside from the formwork and the steel reinforcement was designed to be built by unskilled labour. As early as 1919 he had adopted a comparable



'collagist' approach to construction, when he proposed to use corrugated asbestos sheets as permanent shuttering for the concrete vaulted roof of his Maison Monol.

In 1922 both the Maison Dom-Ino and the Villes Pilotis were further developed as the 'Maison Citrohan' and the 'Ville Contemporaine', both projects being exhibited in the Salon d'Automne of that year. Where the latter was directly evolved, at least in section, out of Hénard's Rue Future of 1910, the former utilized the Hennebique frame to project a long rectilinear volume, open at one end, which approximated to the traditional megaron form of the Mediterranean. Within this basic type – designed in two successive versions – Le Corbusier projected for the first time his characteristic double-height living space, complete with a sleeping mezzanine and children's bedrooms on the roof. Aside from its roots in the Greek vernacular, this type, which he first produced in 1920, seems to have been derived from a workers' café in Paris, in the Rue de



134 Le Corbusier, Maison Citrohan, 1920. Perspective, ground and floor plans.



135 Le Corbusier, Pessac housing estate, near Bordeaux, 1926, on opening day.

136 Gropius (left), Frau Gropius and Le Corbusier in a Paris café.



Babylone where he lunched each day with his cousin. From this small restaurant they took the section and the basic arrangement of the Maison Citrohan: 'Simplification of the light source; one single bay at each end; two lateral bearing walls; a flat roof over; a veritable box which could be used as a house.'

While the Maison Citrohan, elevated on *pilotis*, came close to anticipating *Les 5 Points d'une architecture nouvelle*, which Le Corbusier finally formulated in 1926, it was hardly applicable to anything other than 'suburban' development. He was soon to use a version of it to this end in the garden city estates he built at Liège and Pessac in 1926. Among the 130 reinforced-concrete frame houses built at Pessac for the industrialist Henri Frugès, there was one prevalent type known as the 'skyscraper' unit which was in effect a combination of the Maison Citrohan and the back-to-back units that he had designed for the 'city' of Audincourt in the same year. A true version of the Citrohan type was not realized, however, until his work at the Stuttgart Weissenhofsiedlung of 1927. Pessac, as its mixture of unit types would indicate, was a culmination of his incessant attempts in the early 1920s to put his various designs for the standardized dwelling into production. The name 'Citrohan' was a play on the patent name of the famous automobile company, indicating that a house should be as standardized as a car. Pessac showed the first conscious integration of Purist colour displacements into architecture. The architect observed at the time:

The site at Pessac is very dry. The grey concrete houses produce an insupportable compressed mass, lacking in air. Colour is able to bring us space. Here's how we have established certain invariable points. Some façades are painted in burnt sienna. We have made the lines of other houses recede, through clear ultramarine blue. Again we have confused certain sections with the foliage of gardens and trees, through pale green façades.

Unlike his European contemporaries, Gropius and Mies van der Rohe, Le Corbusier was anxious to develop the urban connotations of his architecture. The Ville Contemporaine for

three million was the ultimate demonstration of this aspect in his work up to 1922. Influenced equally by the gridded skyscraper cities of the United States and the image of the 'city-crown' as put forward by Bruno Taut in his book *Die Stadtkrone* (1919), Le Corbusier projected the Ville Contemporaine as an élite capitalist city of administration and control, with garden cities for the workers being sited, along with industry, beyond the security zone' of the green belt encompassing the city.

The city itself, textured like an oriental carpet and some four times the surface area of Manhattan, consisted of residential blocks some ten to twelve storeys in height plus twenty-four 60-storey office towers in the centre, the whole surrounded by a Picturesque park which, like the traditional *glacis*, maintained the class separation of the urban élite from the suburban proletariat. The cruciform office towers themselves – the so-called Cartesian skyscrapers – were reminiscent in their serrated plan profile of stepped Khmer or Indian temple forms and as such they were evidently intended to replace as secular centres of power the religious structures of the traditional city. That such an authority was attributed to these forms is suggested by their proportional relation to the grid of the city, where they take up a golden section of the surface area in plan, within the double square occupied by the city as a whole.

None of this was lost on the Communist newspaper *L'Humanité*, which regarded the entire project as reactionary. Their sense of Le Corbusier's commitment to Saint-Simonian methods of management and control was entirely confirmed by the publication of his book *Urbanisme (The City of Tomorrow)* in 1925, its last plate depicting Louis XIV supervising the building of the Invalides. Even Le Corbusier was sufficiently embarrassed by this image to place underneath its caption the rider that it was not to be understood as support for the French Fascist party Action Française.

The Ville Contemporaine was no less ideological in the detailed organization of its residential districts, which were made up of two different block prototypes – the perimeter block and

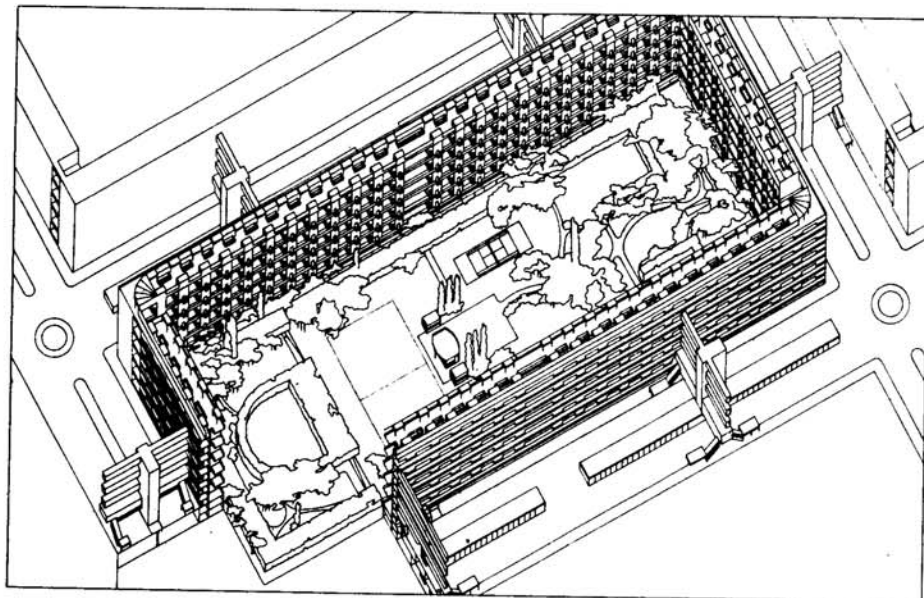


137 Le Corbusier and Jeanneret, Plan Voisin proposal for Paris, 1925. The hand points towards the new business centre of the city.

the 'set-back' or *redent* formation – each postulating a different conception of the city. The former was still committed to the idea of a 'walled' city made up of streets, while the latter presupposed a wall-less 'open city', that vision finally to be achieved in the Ville Radieuse, of a dense city elevated above the surface of a continuous park. The implicit anti-street polemic of this vision was finally made explicit in an essay on the street that Le Corbusier wrote in 1929 for the Syndicalist newspaper *L'Intransigeant*.

Apart from providing the 'essential joys' of sunlight and green, the open city was supposed to facilitate locomotion, in accordance with Le Corbusier's entrepreneurial aphorism that 'A city made for speed is a city made for success.' This was part of the rhetoric that accompanied his 'Plan Voisin' proposal for Paris of 1925 – the paradoxical notion that the automobile having effectively destroyed the great city could now be exploited as an instrument for its salvation. Notwithstanding their financial support, the car/aircraft cartel, Voisin was no doubt only too aware of the economic and political impossibility of raising vast cruciform towers next to the Ile de la Cité.

The most important and enduring contribution of the Ville Contemporaine was its Immeuble-Villa unit, an adaptation of the Maison Citrohan as a general type for high-rise high-density living. These units, stacked up on six double floors, included garden terraces, one for each duplex, an arrangement



138 Le Corbusier and Jeanneret, Ville Contemporaine, 1922. Cellular perimeter block composed of Immeuble-Villa units.

139 Le Corbusier, Pavillon de l'Esprit Nouveau, Exposition des Arts Décoratifs, Paris, 1925, furnished with *objets-types* and Purist canvases by Léger and Le Corbusier.

where between the bourgeois apartment block and the socialist collective dwelling (cf. the phalanstery and Borie's Aérodomes). The Immeuble-Villa living unit was finally worked out in detail and exhibited as a prototype in the form of the Pavillon de l'Esprit Nouveau, built for the Exposition des Arts Décoratifs held in Paris in 1925. Unfortunately, subsequent attempts to market this unit, both as a freehold maisonette in the city and as a free-standing villa in the suburbs, did not meet with success. The Pavillon de l'Esprit Nouveau was a condensation of the Purist sensibility: while machinist in promise and urban by implication, since it was designed ostensibly for mass production and aggregation at high density, it was furnished in accordance with the Purist canon of *objets-types*, that is with English club armchairs, Thonet bentwood furniture and

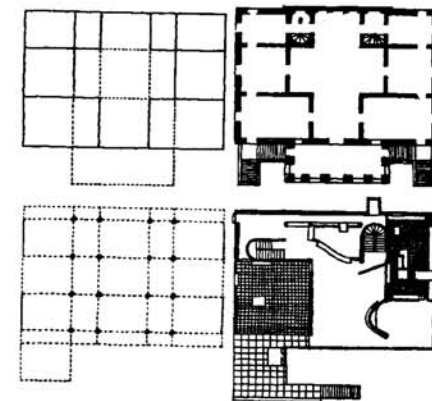
which today seems to be one of the few acceptable solutions for high-rise *family* living. In the so-called 'cellular' perimeter blocks of the Ville Contemporaine, these terraced duplexes opened at ground level to bounded rectangular green space, equipped with recreational facilities for communal use. The marginal provision of additional communal space within the block and around the periphery of this area and the intended provision of hotel service throughout situates this proposal some-

standard Parisian cast-iron park pieces, with *objets-tableaux* of Purist origin, with oriental rugs and South American pottery. This finely balanced assembly of folk, craft and machine-made objects, borrowed in spirit from Adolf Loos, was posited here under the patronage of the Minister for the Arts as a polemical gesture against the Art Deco movement.

In 1925 Le Corbusier also returned to the theme of the bourgeois villa, first in his Maison Cook, completed in the following year as a demonstration of *Les 5 points d'une architecture nouvelle*, which were published in 1926, and then in the project for the Villa Meyer, which anticipated the villa at Garches and the Villa Savoie at Poissy, completed in 1927 and 1929 respectively.

All these houses depended for their expression on the syntax of the 'five points': (1) the *pilotis* elevating the mass off the ground, (2) the free plan, achieved through the separation of the load-bearing columns from the walls subdividing the space, (3) the free façade, the corollary of the free plan in the vertical plane, (4) the long horizontal sliding window or *fenêtre en longueur*, and finally (5) the roof garden, restoring, supposedly, the area of ground covered by the house.

The latent potential of the Hennebique frame in the Maison Dom-Ino and the solid lateral walls of the Maison Citrohan determined to an equal degree the basic *parti* of all these houses, with the liberal use of free-standing columns, strip-windowed façades and cantilevered floor slabs. The structural subdivision of the Maison Dom-Ino (the rhythmic formula AAB comprising two wide bays plus a narrow one containing a stair) links the overt Palladianism of the Villa Schwob to the suppressed Palladianism of the villa at Garches, both houses seemingly organized about the classic Palladian ABABA rhythm remarked on by Colin Rowe. Palladio's Villa Malcontenta of 1560 and Le Corbusier's villa at Garches of some 350 years later are equally predicated in the longitudinal direction on alternating double and single bays producing a rhythm of 2:1:2:1:2. As Rowe has pointed out, a similar syncopation obtains in the other dimension:



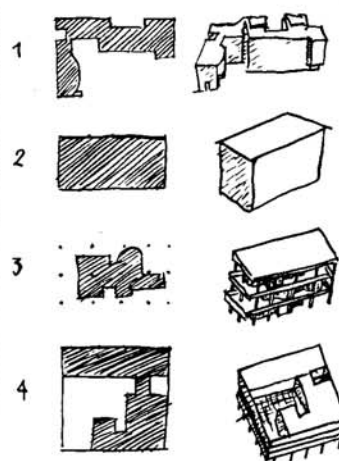
140 Le Corbusier and Jeanneret, Villa de Monzie, Garches, 1927.

141 Palladio's Villa Malcontenta, 1560 (top), and Le Corbusier's Villa de Monzie, Garches, 1927, with analyses of their proportional rhythm.

In both cases, six 'transverse' lines of support, rhythmically alternating single and double bays, are established; but the rhythm of the parallel lines of support, as a result of Le Corbusier's use of the cantilever, differs slightly. At the villa at Garches, it is $\frac{1}{2}:1\frac{1}{2}:1\frac{1}{2}:1\frac{1}{2}:1\frac{1}{2}$ and at the Malcontenta $1\frac{1}{2}:2:2:1\frac{1}{2}$. In plan, Corbusier thus obtains a sort of compression for his central bay and interest seems transferred to his outer bays, which are augmented by the extra half unit of the cantilever; while Palladio secures a dominance for his central division, and a progression towards his portico, which



142 Le Corbusier and Jeanneret, Villa Savoie, Poissy, 1929–31. The first-floor 'jardin suspendu'.



143 Le Corbusier, the Four Compositions of 1929: (1) Maison La Roche, (2) villa at Garches, (3) Weissenhofsiedlung in Stuttgart, (4) Villa Savoie.

focuses interest there. In both cases the projecting element, terrace or portico, occupies $1\frac{1}{2}$ units in depth.

Rowe goes on to contrast the centralization of the Villa Malcontenta with the centrifugality of the villa at Garches:

At Garches the central focus has been consistently broken up, concentration at one point is disintegrated, and replaced by a peripheral dispersion of incident. The dismembered fragments of the central focus become, in fact, a sort of serial installation of interest round the extremities of the plan.

Aside from its Purist layering of frontalized planes in space and its play with literal and phenomenal transparency, remarked on by Rowe and Robert Slutzky, Garches was significant for its resolution of a problem that had first been posed by Loos: how to combine the comfort and informality of the Arts and Crafts plan with the asperities of geometrical, if not Neo-Classical, form – how to reconcile the private realm of modern convenience with the public façade of architectural order. As Le Corbusier's Four Compositions of 1929 would indicate, Garches was able to achieve this, with an

elegance denied to Loos, through the displacements afforded by the invention of the free plan. The disjunction, so to speak, of the complex interior was held away from the public front, by the elision of the free façade.

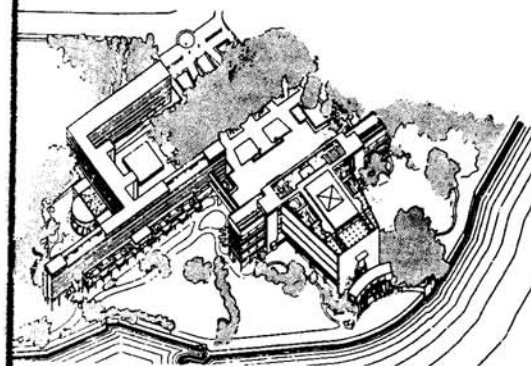
If Garches is to be associated with the Villa Malcontenta, the Villa Savoie, as Rowe again points out, may be compared to Palladio's Villa Rotonda. The almost square plan of the Villa Savoie, with its elliptical ground floor and centralized ramp, may be read as a complex metaphor for the centralized and biaxial plan of the Rotonda. There, however, all similarity ends, Palladio insisting on centrality and Le Corbusier asserting, within his self-imposed square, the spiralling qualities of asymmetry, rotation and peripheral dispersal. Nevertheless, in his book *Précisions sur un état présent de l'architecture et de l'urbanisme* (1930) Le Corbusier made the imminent Classicism of the Villa Savoie abundantly clear:

The inhabitants come here because this rustic landscape goes well with country life. They survey their whole domain from the height of their *jardin suspendu* or from the four aspects of their *fenêtres en longueur*. Their domestic life is inserted into a Virgilian dream.

With the Villa Savoie, one arrives at the last of Le Corbusier's Four Compositions of 1929. The first was his Maison La Roche of 1923, which he presented in 1929 as a Purist version of the Gothic Revival L-plan – a 'genre plutôt facile, pittoresque, mouvementé'; the second was shown as an ideal prism, and the third and fourth (the villa at Garches and the Villa Savoie) as alternative strategies for reconciling the first two, the former depending on a subtle integration of the first and second and the latter on the encompassing of the first by a prism.

With their 1927 entry to the international competition for the League of Nations (Société des Nations or SdN) headquarters in Geneva, Le Corbusier and Pierre Jeanneret produced their first design for a large public structure. Their attention had hitherto been focused on the house and on the concomitant simplicity of a basic prism. Now they addressed themselves to the necessary complexity of the 'palace' as a type. The competition's conditions stipulated two buildings, one for the secretariat and one for the assembly, and this programmatic duality led the architects to take an Elementarist approach to the design: the constituent 'elements' being first established and then manipulated in order to generate a number of alternative arrangements. This extension of the Elementarism professed at the turn of the century by the Beaux-Arts master Julien Guadet, would have come to Le Corbusier via Guadet's pupils, Garnier and Perret. That he was to adopt this approach generally when dealing with large complexes is shown by his preliminary

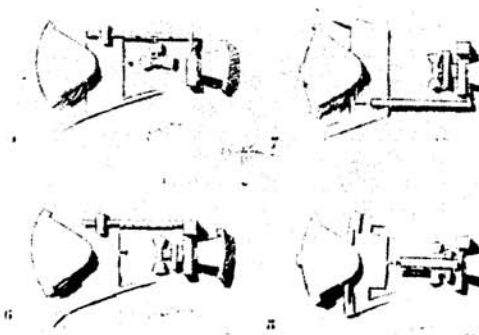
144 Le Corbusier and Jeanneret, project for the League of Nations Building, Geneva, 1927. (Compare H. Meyer and Wittwer's entry, ill. 114.)



studies for the Palace of the Soviets project, 1931. There under eight alternative arrangements we read the caption: 'the various stages of the project, wherein one sees the organs, already independently established, the one from the other, take up little by little their reciprocal places to culminate in a synthetic solution.' We find a comparable remark appended to an alternative scheme for the SdN project published in Le Corbusier's *Une Maison, Un Palais* (1928). Under a symmetrical layout (evidently more rational, from an operational point of view), we read: 'alternative proposition employing the same elements of composition'. The asymmetrical organization finally adopted suggests a conflict between the circulatory logic of the symmetrical layout and a Classical preference for an axial approach to the representative façade of the principal building.

The SdN project is both the climax and the crisis point of Le Corbusier's early career: a moment of acclaim, denied (if we are to believe him) by his disqualification on the grounds that he had not submitted his entry in the appropriate graphic medium. It represents the culmination of his Purist period, since it virtually coincides with the introduction into his painting of figurative elements and of what he later called *objets à réaction poétique*, loosely translatable as 'objects evocative of poetic emotion'. From now on, while his painting became organic and figurative, his architecture, at a public level at least, became increasingly symmetrical. In retrospect the League of

145 Le Corbusier and Jeanneret, project for the Palace of the Soviets, Moscow, 1931. Four alternative layouts using the same elements.



Mies van der Rohe and the significance of fact 1921–33

Nations entry must be considered as a watershed; as a point of division, not only within his own work, but also between himself and his following within the international Modern Movement, particularly where this concerned the support of those whose political convictions lay to the left. In 1927 the Constructivist affinities of the League of Nations entry, its commitment to free-floating asymmetry and technical innovation, its secretariat à pilotis (reminiscent, in plan, of Lissitzky's *Wolkenbügel*), its mechanized cleaning system, its air-conditioned assembly hall (acoustically profiled, tuned and flooded with light), could do nothing but command the enthusiastic support of the young, irrespective of their political allegiance. But the undeniable monumentality – expressed in its stone facing and in the hierarchical, seven-door, entry system proposed to conduct the various classes of user to their appointed place within the auditorium – seems to have had the effect of eventually arousing a certain ideological mistrust.

Le Corbusier's drive to resolve the dichotomy between the Engineer's Aesthetic and Architecture, to inform utility with the hierarchy of myth, was bound to bring him into conflict with the functionalist-socialist designers of the late 1920s. His 'Mundaneum' or 'Cité Mondiale', designed in 1929 for Geneva as a centre of world thought, provoked a sharp reaction from his Czech admirer, the left-wing artist and critic Karel Teige. It was not the content but the form of the Cité that provoked Teige's objections, particularly the helicoidal ziggurat of the 'Musée Mondial'. In 1927 Teige had publicly supported Le Corbusier in the international dispute over his League of Nations entry and had called on all other Czech artists to do the same. Now, barely two years later, he attacked him with such vehemence that Le Corbusier was prompted to reply, in the essay entitled 'The Defence of Architecture,' written for Teige's journal, *Stavba*. In his attack Teige had quoted from Hannes Meyer's essay of 1928, *Bauen* ('Building').

All things in the world are a product of the formula, function times economics, so none of these things are works of art; all art is

composition and hence unsuited to a particular end. All life is function and therefore not artistic, the idea of the composition of a dock is enough to make a cat laugh. But how is a town plan designed or the plan of a dwelling? Competition or Function? Art or Life?

Le Corbusier placed this quotation at the head of his essay, making it clear that his riposte was directed as much to Meyer as to Teige. He then argued:

Today amongst the avant garde of the Neue Sachlichkeit, one has killed two words: *Baukunst* (Architecture) and *Kunst* (Art). One has replaced them by *Bauen* (To Build) and *Leben* (To Live). . . . Today where mechanization brings us a gigantic production, architecture is above all in the battleship, Monsieur Hannes Meyer; as in the conduct of war or in the shape of a pen, or in a telephone. Architecture is a phenomenon of creation, according to an arrangement. Whoever determines the arrangement, determines the composition.

In the same year as the Teige attack he acknowledged in his book *Précisions* that the Mundaneum had been badly received by the German architectural Left, but he saw no reason to modify his ultimate position and hence maintained that

The buildings projected are strictly utilitarian – particularly this helicoidal Musée Mondial so violently incriminated. . . . The plans of the Cité Mondiale bring to buildings which are true machines a certain magnificence wherein some wish to discover at any cost an archaeological inspiration. But from my point of view, this harmonious quality arises from another thing, from a simple response to a problem well stated.

Nonetheless he could not, and indeed did not, deny that the site layout of the Cité Mondiale had been determined by a network of *tracés régulateurs*, comparable to those used to control the façade of the villa at Garches – a façade which, however much it subscribed to the canons of the Purist machine aesthetic, remained as Classical in its affinities as the Palladian plan type from which its structure had been derived.

It then became clear to me that it was not the task of architecture to invent form. I tried to understand what that task was. I asked Peter Behrens, but he could not give me an answer. He did not ask that question. The others said, 'What we build is architecture', but we weren't satisfied with this answer . . . since we knew that it was a question of truth, we tried to find out what truth really was. We were very delighted to find a definition of truth by St Thomas Aquinas: 'Adequatio intellectus et rei', or as a modern philosopher expresses it in the language of today: 'Truth is the significance of fact'.

Berlage was a man of great seriousness who would not accept anything that was fake and it was he who had said that nothing should be built that is not clearly constructed. And Berlage did exactly that. And he did it to such an extent that his famous building in Amsterdam, The Beurs, has a medieval character without being medieval. He used brick in the way the medieval people did. The idea of a clear construction came to me there, as one of the fundamentals we should accept. We can talk about that easily but to do it is not easy. It is very difficult to stick to this fundamental construction, and then to elevate it to a structure. I must make it clear that in the English language you call everything structure. In Europe we don't. We call a shack a shack and not a structure. By structure we have a philosophical idea. The structure is the whole from top to bottom, to the last detail – with the same ideas. That is what we call structure.

Mies van der Rohe
(quoted by Peter Carter in *Architectural Design*, March 1961)

As the above quotation makes clear, Ludwig Mies – he later added his mother's name, Van der Rohe – was as much inspired by the work of the Dutch architect Berlage as by that Prussian school of Neo-Classicism to which he became the direct heir. Unlike his contemporary, Le Corbusier, he was not educated within the Arts and Crafts ethos of the Jugendstil. At the age of fourteen he entered his father's stone-mason's business and after two years at a trade school and a subsequent period as a stucco designer for a local builder, in 1905 he left his native town of Aachen for Berlin where he worked for a minor architect specializing in timber construction. There followed a further period of apprenticeship with the furniture designer Bruno Paul before he ventured briefly on his own in 1907, to build his first house in a restrained *englische* manner, reminiscent of the work of the Werkbund architect Hermann Muthesius. In the following year he joined Peter Behrens, whose newly established Berlin office was beginning to develop an overall house style for the electrical combine AEG.

During his three years in Behrens's office, Mies became aware of the *Schinkelschüler* tradition, which, apart from its Neo-Classical affiliation, was committed to the idea of *Baukunst*, not only as an ideal of technical elegance but also as a philosophical concept. Schinkel's brick-faced Bauakademie in Berlin, with its warehouse-like detailing, was later compared by Mies to the articulate construction of Berlage's Amsterdam Beurs or Exchange, which he had first seen when he visited Holland in 1912. On leaving Behrens's employ in 1911, after a brief stint as site architect on Behrens's German Embassy in St Petersburg, Mies opened his own office with the Perls