Raumplan versus Plan Libre

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Adolf Loos and Le Corbusier, 1919-1930

edited by

Max Risselada

with contributions by

Beatriz Colomina

Stanislaus von Moos

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Introduction

"When we find a hill in the woods, six feet long and three feet wide, shovelled up into the form of a pyramid, we become serious, and something inside us says: Somebody is burried here. That is architecture".
Adolf Loos, "Architecture", Vienna 1910

"Architecture is the masterly, correct and magnificent play of masses brought together in light".
Le Corbusier, *Towards a New Architecture*, Paris 1923.

A number of factors have contributed to the exhibition *Raumplan versus Plan Libre*.

Firstly, the fact that both the exhibition and the accompanying publication were developed within an educational institute: the Faculty of Architecture of the Delft University of Technology, Holland.

The comparison is one of the means through which design can be discussed, of vital importance in a situation in which an educational program can no longer be built up around one, all-encompassing architectural theory. This not only as the result of the size of the institution, but also due to the lack of such a theory within the discipline itself.

Consequently, the architectural student finds himself faced with a multitude of views concerning design, and just as many products of those views, both within and without the educational situation. This is neither good nor bad, for it is the result of the increased division of labour and specialization, within the building process itself. For a long time now, the architect has not been in charge of the entire process; his specific knowledge and skills are employed in the preparation of the "project". It is within this context that the other aspects of the process confront one another: brief, site and budget on the one side; material, construction and production on the other hand. This provides an indication of the poles between which the designing process takes place. These poles are not linear, but critical. There is continual interaction between them, the designer considers the ways in which they influence one another, takes particular stands, makes choices. The boundaries of design are thus continually redefined consequent on the views which architects develop concerning their role as intermediary; views, that is to say, as to which aspect of the building process they choose to commit themselves. One may consider, for example, the architect who conceives of the project as an autonomous piece of work, as opposed to the architect who deliberately "turns himself over to" the building process. The comparison between Loos and Le Corbusier is fascinating in that, in the work of both architects, there exists a creative tension between these two attitudes.

On the one hand the work of both is concerned with the autonomy of architectural means; on the other hand both try, each in his own way, to place his work in a social context, something which each makes particulary clear in his writing.

For Loos, the point of departure is the practice of traditional methods, the task being socially determined. The correct formulation for this is geared to a reconsideration of the discipline of craftmanship.

In Le Corbusier's case the division between the design and its actual realization becomes a fact. In the design itself the new task and the ways and means of realizing it are formulated in terms of new technologies.

The work of Adolf Loos (1870-1933) was retrieved from obscurity, at the beginning of the sixties, by Michiel Polak and Pjotr Gonggrijp, both students at that time. They gave to Loos, and his work, a central position in their exhibition *Autonomous Architecture* (Delft, 1962), beside Boullée, Ledoux, Schinkel and Van Doesburg: all architects who did not appear in the canon of the New Architecture, unlike those who, at that time, had been introduced to Delft by its exponents.

But it was not only that Loos was rediscovered in Delft within the framework of a critical revaluation of the avant-garde of the twenties. That same period also saw the appearance of the study of Loos by Münz and Kunstler (Vienna, 1964), and an issue of Casa Bella devoted to Loos (1959, Vol. 30, no. 233) with an introduction by Aldo Rossi; some thirty years after the first and only monograph on Loos' work by his assistent Heinrich Kulka. (H. Kulka, *Adolf Loos: Das Werk des Architekten*, Vienna 1931).

The pioneering work of Gonggrijp and Polak was further developed in the following years, when emphasis was laid especially on the development of the Raumplan concept and its tectonic realisation in houses and housing-schemes. The essay by Johan van de Beek, included in this catalogue, was written in the spirit of these studies, which do not not regard the pronounced difference between the interior and the exterior of Loos' houses as a split between the individual and the social, but rather as two complementary, architectural statements.

For many generations already access to the work of Le Corbusier (1887-1965) has been furthered by the publication of his projects in the eight volumes of the Collected Work, published during his lifetime, selected and provided with commentary by Le Corbusier himself.

A new impulse for the study and interpretation of this work occurred when the archives of the Fondation Le Corbusier in Paris were opened to the public. The archives contain most of the material which Le Corbusier and his colleagues had produced over the years.

This makes it feasible to try to reconstruct the design process, so that the conceptual level in Le Corbusier's work - so very much in evidence in his publications - may be related to the laborious practice of actual design.

Within this framework another study was conducted, in Delft, concerning the designing process of the experimental villas of the twenties, which resulted in the exhibition *Le Corbusier - Pierre Jeanneret, Designs for the Dwelling, 1919-1930* (Delft, 1980).

As with the work of such researchers as Tim Benton and Bruno Reichlin, this study can also be seen as an implicit commentary on the ways in which the analysis of Colin Rowe and Robert Slutzki, which was conducted in the fifties ("Transparency: Liberal and Phenomenal", published in *Perspecta* no. 8, 19), was later used at the beginning of the seventies, to legitimize further development of Le Corbusier's formal experiments of the twenties. The essays by Arjan Hebly and Max Risselada here elaborate upon the themes of this study.

Although a confrontation between the work of Loos and Le Corbusier is an obvious one in retrospect, it is remarkable how little, until now, has been published on the subject. Worth mentioning are the observations made by Julius Posener, in the thirties, and an article by Henry R. Hitchcock ("Houses by Two Moderns" in *The Arts*, Brooklyn, vol. 16, no. 1, 1929/30). The relations between Loos and Le Corbusier are also discussed in the critical studies by P. Reyner Banham (*Theory and Design in the First Machine Age*, London, 1960, "Adolf Loos and the Problem of Ornament"), and Kenneth Frampton (*Modern Architecture: a Critical History*, London 1980, "Adolf Loos and the Crisis of Culture, 1896-1931").

The essay by Stanislaus van Moos is the first study which discusses, in detail, the possible influence of Loos' written works upon the young entrepreneur Le Corbusier; this study was conducted within the framework of research into the significance of the magazine "L'Esprit Nouveau" to Le Corbusier's work.

The subject is not only topical, because of renewed interest in Vienna circa 1900, and the celebration of Le Corbusier's hundredth birthday in 1987, the point made by Loos in his essay "The Principle of Cladding" (1898) is still with us: "There are architects who work in a different way. Their imagination doesn't form spaces, but mass. Whatever the mass of wall leaves over, are the spaces".

Removed from its context, this fragment makes a fundamental difference, which is also a subject of our comparison. On the one hand the notion that architecture is primarily the designing of space, spaces evoking moods to which material and the various forms of its treatment can contribute. On the other hand, that of an architecture which designs constructional entities which demarcate space.

This difference is closely concerned with the way in which space is experienced.

On the one hand spaces in which the entire body can dwell - all the senses being involved; on the other hand spaces where there is perhaps only room for the roaming eye. Spaces for use as opposed to spaces for looking at.

Whether Loos really regarded Le Corbusier as belonging to the latter group of architects is not known; after all, Loos wrote his text 25 years before he could have met Le Corbusier in Paris. It has since become clear that Le Corbusier, in the experiments he conducted in the twenties, distanced himself from the anthropocentrism that can be observed in Loos' work. Space and mass are no longer in a hierarchical relationship in his work, but in a reciprocal determination in which the disappearance of a perspectival idea of space caused man too to disappear from the centre, thus calling for a new treatment of objects and space.

A question which follows from the above is the manner in which the experience of architecture is conceivable, or transmittable, via the media of drawings and photographs. As is already known, Loos refused, until shortly before his death, for his designs to be published; convinced that the essence of Raumplan was not transmittable through drawings and photographs. "I say, however: a good construction, when rendered as an image on a flat surface, makes no impression. I am most proud of the fact that the interiors which I have created are entirely without effect when photographed, and that the inhabitants of my dwelling cannot recognize their own homes in a photographic image".

From the beginning of his career, Le Corbusier was aware of the potentially useful function of publications, in which besides the written word, the photographic images also played an important part. The reception of his work is, therefore, largely determined by the material selected and revised by him for the issues of the Oeuvre Complète.

The essay by Beatriz Colomina concerns the difference between the two standpoints mentioned above; the confrontation, in her case, is between Loos and his contemporary Josef Hoffmann.

The fact that we have chosen to present both of these spatial concepts in the three-dimensional form as an exhibition has much to do with the issues mentioned above.

Exhibitions are just as important as descriptions, for the presentation of the built environment as well as for an insight into how these have come about. By the nature of their spatial possibilities, exhibitions are even more closely related to the objects which they depict.

Furthermore, architectural exhibitions are unique in that the objects concerned, the buildings or projects themselves, are not present. They are visualised with the help of the means available to architects to represent the absent object: floor plans, cross-sections, elevations, sketches, projections, models, etc., the same means used in the designing process itself.

In order to broach the multiple, complex character of architecture, our exhibition presents the relevant designs in more than one context:

- In a chronological arrangement of pictures of the houses, publications and associates of Loos and Le Corbusier.
- In a documentation which presents the houses in chronological order, by means of photographs, plans and sections drawn to the same scale, and models which will provide the missing, three-dimensional component. The Loos models are built to a scale of 1:50 with one transparent wall affording a view of the section; the Le Corbusier models, built to a scale of 1:100, have removable floors.
- In three themes:
  1. Programme versus type - the position of the type - concept in both architects' work. Loos' "Dice House" (1928/1929) and Le Corbusier's Maison Citrohan (1919/1927) illustrate the comparison.
  2. Construction versus cladding; the development of material, texture and colour in the interiors of both architects, seen in relation to the Raumplan and Plan Libre concepts respectively.
  3. Design versus execution - the relationship of the two process-functions and their consequences for the design process, illustrated by a comparison of Loos' Moller House (1928) and Le Corbusier's Villa Stein-de Monzie (1928).

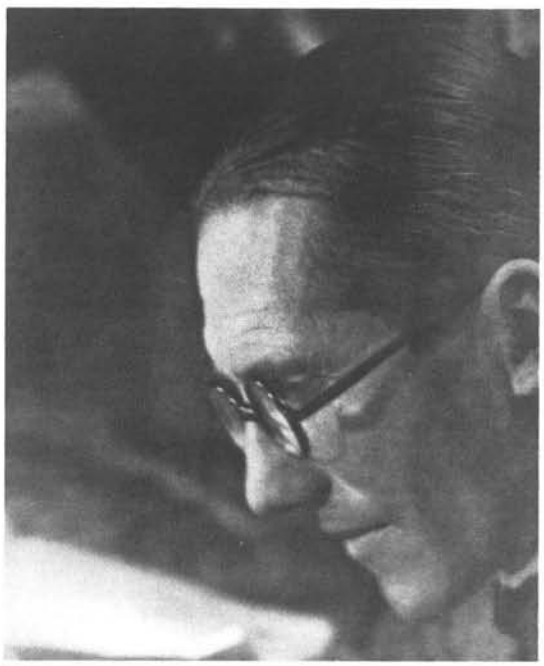
The models occupy an important place in the exhibition. They provide the only means of rounding out the two-dimensionality of drawings and photographs.

The models are designed in such a way that the characteristics typical of the design can be experienced. This is achieved, on the one hand, by the use of different scales; the small, abstract models provide insight into the articulation of mass and the organisation of plan and section. The large models - those with interiors executed in colour - make visible the spatial coherence of the components.

Because these models can be taken to pieces, or folded out, it is possible for one to explore every corner of the houses.

The models form, therefore, the true works of art in the exhibition, and are documented as such in this catalogue.

Chronology



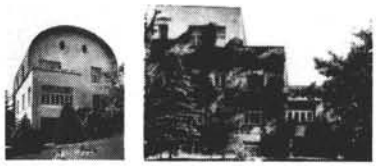
A survey of the most important designs for houses, publications and associates of Adolf Loos and Le Corbusier between 1919 and 1930.

Haus Steiner

Haus Stoessl

Haus Horner

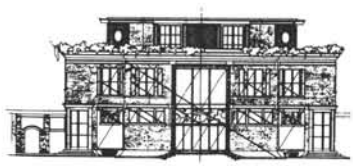
Haus Scheu



ADOLF LOOS 1870-1933

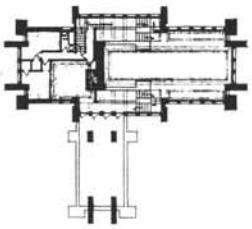
LE CORBUSIER 1887-1965

Villa Fallet



Villa Schwob

1919
Treaty of Versailles.
Establishment Weimar republic.
El Lissitzky: Proun ID.
Gropius founds Bauhaus.
Asplund: Villa Snellman.



1920
League of Nations in Geneva.
Harding president U.S.A.
Stravinsky: Pulcinella.
Frank Lloyd Wright: design for a house.

HAUS STRASSER

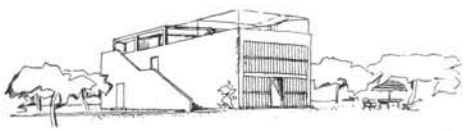
Villa Konstandt.

Loos and students on roof of Schwarzwaldschule.

1919

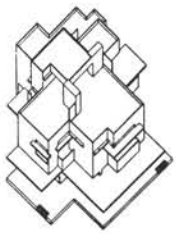
1920

DOMINO



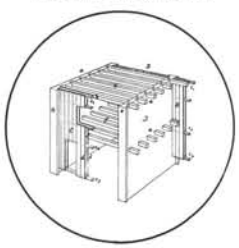
CITROHAN I

1921
Beginning NEP in Sovjet Union.
Satyagraha: Gandhi's peaceful resistance.
Mondriaan: Composition in Red, Yellow and Blue.
J.J.P. Oud: House Kallenbach.

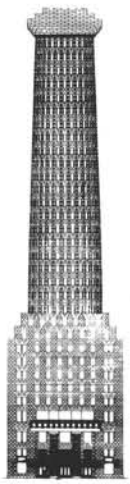


1922
Mussolini's march to Rome.
Discovery of Tutankhamen's grave.
James Joyce: Ulysses.
Van Doesburg and Van Eesteren: hôtel particulier.

HAUS MIT EINEM MAUER



HAUS RUFER



VILLA STROSS

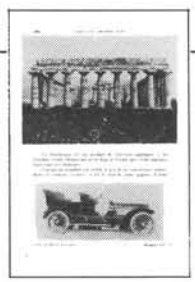
Chicago Tribune Tower.

1921

Le Corbusier and
Amadée Ozenfant.

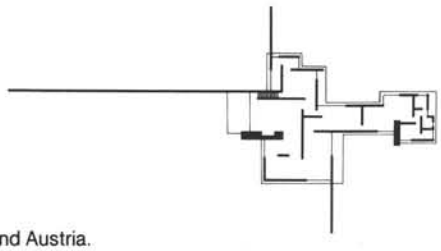
Nature morte
au Siphon.

1922



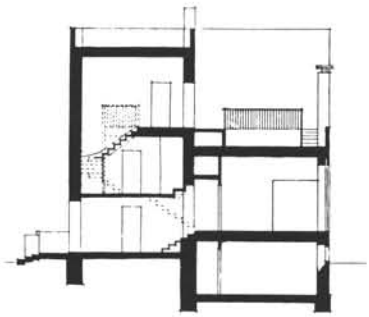
Association with Pierre Jeanneret.

CITROHAN II



1923
Inflation in Germany and Austria.
Schönberg's first twelve-tone composition.
De Stijl exhibition in Paris.
Mies van der Rohe: project for a brick country house.

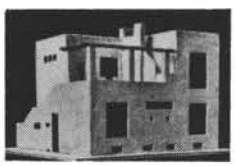
1924
Dawes plan to counteract German crisis.
Adolf Hitler: Mein Kampf.
Stalin succeeds Lenin.
Rietveld: Schröder House.



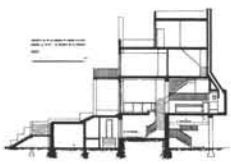
VILLA MOISSI

Adolf Loos:
Expresstrain London-Paris-Vienna-Brno-Prague.

Model of Villa Moissi
at Salon d'Automne.



Villa Plesch.

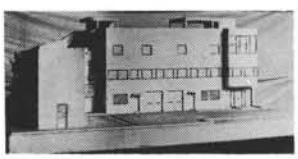


Editor of "Wohnungskultur"

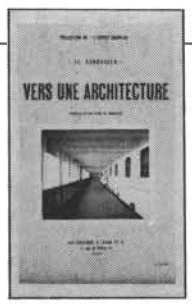
1923

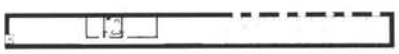
1924

Loos in Paris.



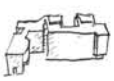
Model of La Roche-Jeanneret
at Salon d'Automne.

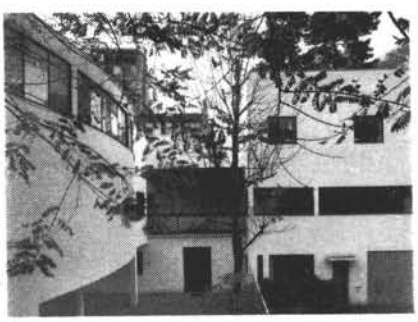




Establishment of Atelier Rue de Sèvres.

VILLA LA ROCHE-JEANNERET

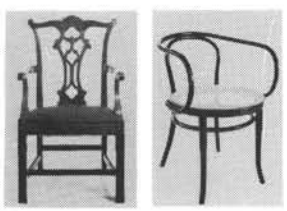




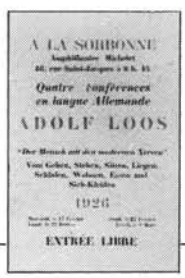
1925
Chiang Kai-shek seizes power in China.
Revue Nègre with Josephine Baker in Paris.
Hitler re-establishes NSDAP.
Schindler: Beach House Dr. Lovell.

1926
First television broadcasts.
Alban Berg: Lyrical Suite.
P. Schmitthenner: Haus Roser.

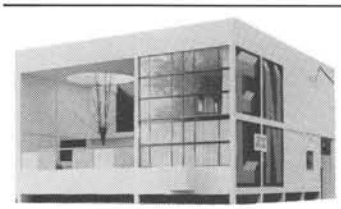
Lecture in Brno.



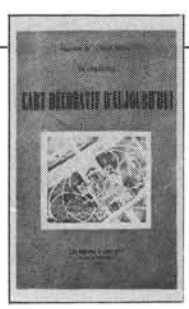
Loos and Neumann in Paris.



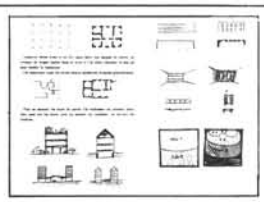
1925



Pavillon de l'Esprit Nouveau.



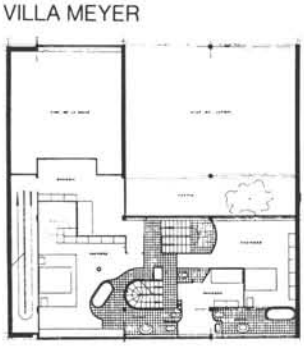
1926



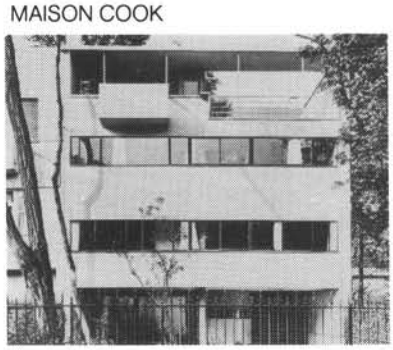
The Five Points for a New Architecture.

Lecture by Le Corbusier
and Ozenfant in Brno.

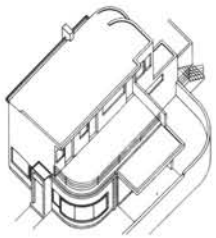
VILLA MEYER



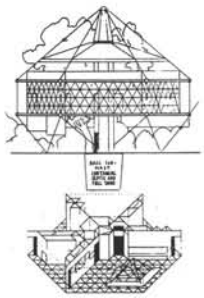
MAISON COOK

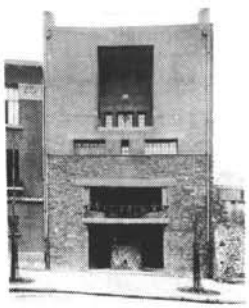


1927
First Mickey Mouse cartoon.
Weissenhofsiedlung in Stuttgart.
Van Doesburg: Aubette in Strasbourg.
Scharoun: House Weissenhofsiedlung.

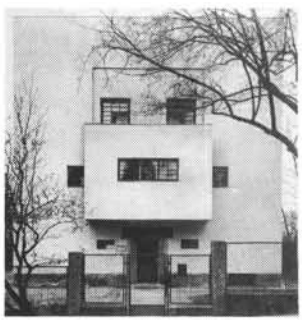


1928
Hoover president U.S.A.
Trotsky exiled.
CIAM founded in La Sarraz.
Buckminster Fuller: Dymaxion House.



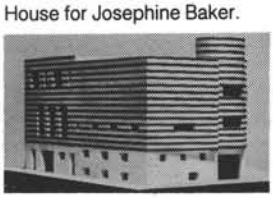


HAUS TZARA



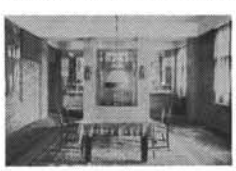
HAUS MOLLER

House for Josephine Baker.



Loos and Kulka on terrace of Moller House.

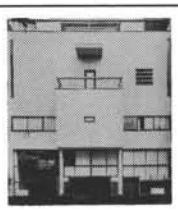
Apartment for Hans Brummel.



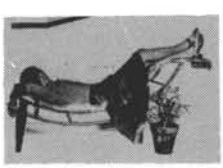
1927

1928

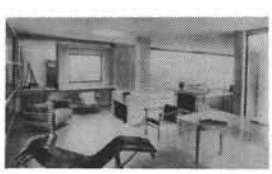
Le Corbusier, Pierre Jeanneret and Alfred Roth at the atelier Rue de Sèvres.



Maison Planeix.

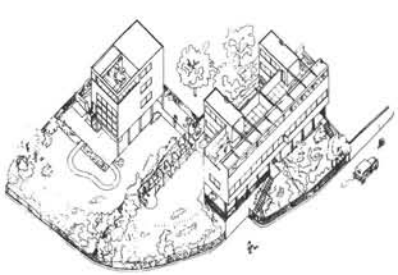


Charlotte Perriand.



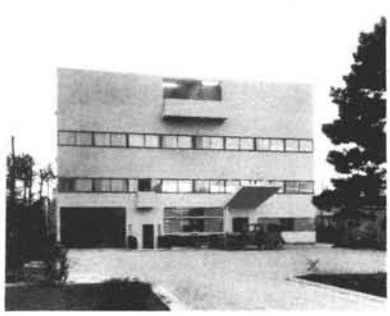
Villa Church.

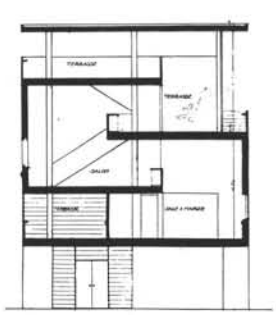
CITROHAN III



Weissenhof.

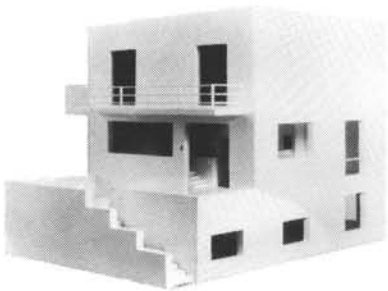
VILLA STEIN-DE MONZIE



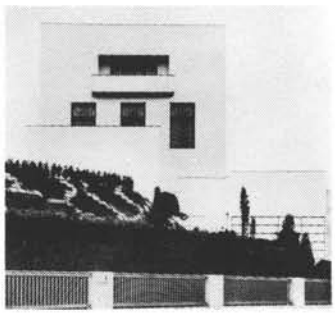


1929
Wall Street Crash.
Melnikov: Tranvieri Club.
Frank: House in the Wenzgasse.

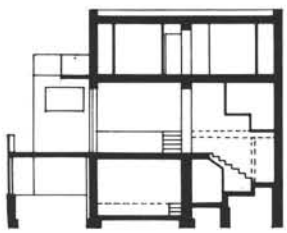
1930
Occupation of Manchuria by Japan.
Marlène Dietrich in "Die blaue Engel".
Schönberg: Mozes und Aron.
Stam: Villa in Prague.



WÜRFELHAUS



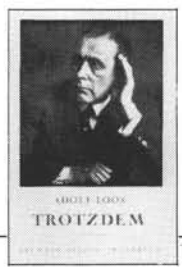
HAUS MÜLLER



HAUS BOJKO

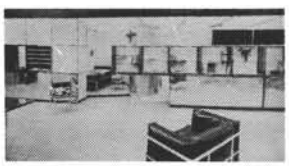
Apartment for Leo Brummel.

Country House Khuner.



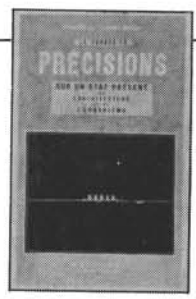
Loos and associates.

1929

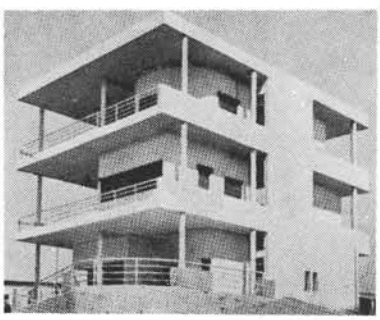


Salon d'Automne.

1930

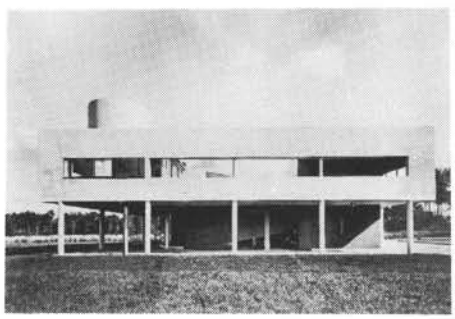


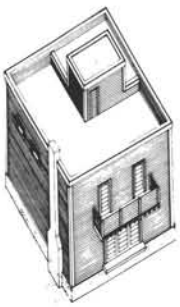
VILLA BAIZEAU II



MAISON LOUCHEUR

VILLA SAVOYE





DAS LETZTE HAUS

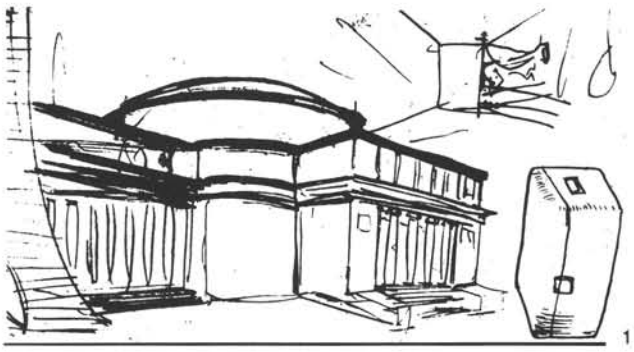
Adolf Loos

Le Corbusier

Villa Mandrot.

Maison aux Mathes.

Stanislaus von Moos



1

Le Corbusier and Loos

In 1925, the year of the International Exhibition of Modern Decorative and Industrial Arts in Paris, Le Corbusier published *L'Art décoratif d'aujourd'hui*. It was a book that Reyner Banham still dismissed in 1960 as "a polemical work of only local interest",[1] and which, symptomatically, had to wait until 1987 before appearing in English translation.

The basic argument of the book (which was to be illustrated by the Pavillon de l'Esprit Nouveau at the 1925 Paris exhibition) will seem familiar to anyone with the slightest knowledge of Loos' writings, namely that applied art - the artistic design of utilitarian objects - was an anachronism. Furthermore, anonymous goods intended for daily use, produced either by hand or by industrial methods, were in the process of making the traditional "arts décoratifs" redundant.

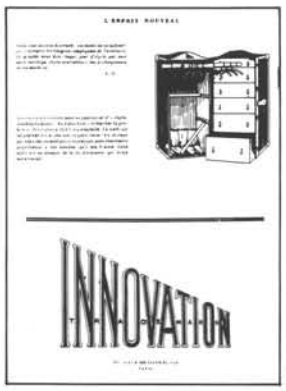
Le Corbusier himself presented the book as a selection of objects that are "free of all decoration", as an "apology for what is simply banal, indifferent, or void of *artistic intention*." The whole book is an invitation to the eye and spirit "to take pleasure in the company of such things and perhaps rebel against the flourish, the stain, the distracting din of colours and ornaments." It was also an invitation "to dismiss a whole mass of artefacts (consumer goods - S.v.M.), some of which are not without merit, to pass over an activity (product design - S.v.M.) that has sometimes been disinterested, sometimes idealistic".

This is clearly a reference to those designers who had influenced the young Corbusier, such as Ruskin, Gallé, Prouvé, Riemerschmid, Guimard, Behrens and many others. The book goes on to ask if the public does not have the right "to disdain the work of so many schools, so many masters, so many pupils, and to think thus of them: 'they are as disagreeable as mosquitoes. (Ils sont aussi gênants que des moustiques.)' "[2]

As alternatives to "Applied Art", the illustrations to the chapter from which the quotations above are taken offer a cross-section of the products of a modern, materialist culture, developed on economic precepts. The emblematic American skyscraper that opens the chapter is followed by car bodies, turbines, the ceiling lights of an office identified as the "First National Company" in Detroit, assorted bags, cases, wallets and cigarette cases, a dental laboratory, office rooms in the City National Bank in Tuscaloosa, USA, men's shoes and spats, briar pipes, straw hats, letter-racks and other office equipment, carafes and glasses (such as one finds in the post-1921 still lifes of Le Corbusier and Ozenfant), and finally the cabin of a luxury liner, a bird-cage, and a wardrobe-trunk made by the firm Innovation in Paris.

The individual chapters of *L'Art décoratif d'aujourd'hui* appeared in a loose sequence after 1920 as essays in the magazine *L'Esprit Nouveau*, the celebrated "revue internationale d'esthetique contemporaine" that Le Corbusier established in 1920, together with Amédée Ozenfant and Paul Dermée. Interestingly, many of the exemplary objects selected by Le Corbusier appeared not only as illustrations to his text, but also in the advertisement section, and were made by manufacturers who had advertising contracts with the journal. In order to co-ordinate even more precisely these journalistic and marketing exhortations to adopt a new style of life, Le Corbusier - the editor responsible for advertising[3] - designed some of the displays in question. An example of this collaboration was a whole series of adverts for the wardrobe-trunks manufactured by Innovation, each carrying a sentence, signed by the architect, on the role of "Types" and "Standards" in modern industry. (fig. 2) Following their appearance in *L'Esprit Nouveau*, the Innovation adverts were then published as a sales brochure, in an edition of 3000 copies.[4]

Reduced to the simplest terms, *L'Esprit Nouveau* might be understood as an attempt to initiate the industrial élite in France into the logic of their own activity, and to make them realize that there was no need to commission "artistic designs" for their products. The implications in terms of design theory (and disregarding the political implications of this avant-garde response to industry) were explained by Le Corbusier in the article "Pédagogie", published in *L'Esprit Nouveau* no. 19, in the winter of 1923. As the Bauhaus Week had just come to an end in Weimar, the article can be regarded as a critique of the Bauhaus. In the article Le Corbusier proposed a Darwinian law of commercial and industrial standardization, according to which the development of standard types for manufactured goods is a process based on competing private initiatives within the system of manufacture, in which the strongest prosper in the struggle for survival according to the dictates of natural selection, just as in nature itself. The "natural" context of commerce and industry is described by Le Corbusier as follows: "The art of making something good (. . .), the good product is developed within the industry by the workers in successive stages, through continuous, instructive experience with the design processes. The good product comes from a base that throws up elements of quality. It is an illusion to assume that this base can receive and absorb



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notions of quality from above. The good product is the 'standard type'. The 'standard type' is the perfectly made product. (. . .) the 'standard type' is resultant."[5]

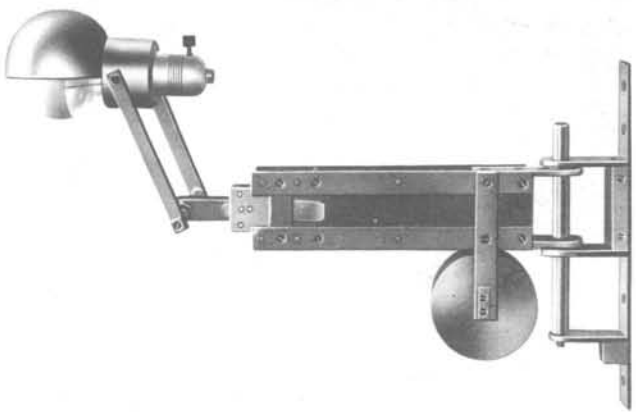
In other words - to insert a sentence from Adolf Loos, which is concerned with the same problem, namely the questionability of the artistic design of utilitarian goods - "Revolutions always come from below. And 'below' is the workshop".[6]

But back to Le Corbusier. The thrust of his argument is clear. 'Form courses', as taught at the Bauhaus, or, more generally, the construction of an ideal grammar of form to be applied to all utilitarian objects, is misconceived. The logic, the form of a product is not something that can be applied externally, but rather something that - according to Le Corbusier - derives from the nature of the task and of the product, as the necessary result of an evolutionary process. An example is the corner reinforcement of a trunk in an advertisement designed by Le Corbusier for Innovation. (fig. 3) Compare this with an example of "industrial design", the "pull-out electric wall-lamp" designed at the Bauhaus by K.J. Jucker in 1923, in which the form is not the result of a process of industrial evolution, but of an a priori aesthetic decision. (fig. 4) It was just this type of decision that Le Corbusier questioned in his critique of the Bauhaus teaching methods.

In the terminology of the contemporaneous Dada movement, the corner reinforcement can be described as a "ready-made", and Le Corbusier's objectivist culture in this period was, in fact, based on "ready mades" like this. One only has to think of the interior of the Pavillon de l'Esprit Nouveau. (fig. 5) The furnishings were mainly of anonymous manufacture, some chosen by the architect from the ranges of firms like Innovation or Ronéo: firms that would have been well known to the readers of *L'Esprit Nouveau* from the advertising pages.[7] The bentwood chairs from the traditional Thonet range are renowned as anonymous classics. Loos himself, who had been a great admirer of bentwood chairs since the time of the Café Museum (1899) and had expressed his preference in print, could not resist noting, however, that Le Corbusier had chosen the wrong Thonet models for his interiors.[8] (He was probably right, for the armchair that can just be seen in the right foreground is probably the most uncomfortable product in the whole Thonet range.)

Whatever the pavilion was like, there can be no question of an attempt to subject architecture, wall decorations and fittings to any unified formal concept - in contrast, for example, to Rietveld's contemporaneous Schröder House in Utrecht. With his model apartment, Corbusier must have had a basic concept in mind very similar to that of Loos, when he enthused about the "bürgerliche" house around 1800 (the adverts of Goldmann and Salatsch in *Das Andere* could serve as illustrations) (fig. 6): "In those days one furnished one's home in the same way as we dress ourselves today. We buy shoes from the cobbler, jacket, trousers and waistcoat from the tailor, collars and cuffs from the shirtmaker, a hat from the hat-maker, and a stick from the wood-turner. None knows the others, but all the things go together."[9]

The arguments advanced in *L'Art décoratif d'aujourd'hui* can be traced back almost point for point to Loos. It would be a Sisyphean task, and one with little sense, to identify every similarity. Taking points at random, however, one might look at Le Corbusier's admiration of English tailoring and of the functional aesthetic of American cities and industry.[10] Loos' call of 1898: "The English, the engineers are our Hellenes,"[11] could have served as the motto for *Vers une architecture*. Le Corbusier was also interested in leather goods, cases, sports bags, and undecorated but expensive cigarette cases - products belonging to that category of elevated consumption that Loos had admired in the Austrian Pavilion at the 1893 World's Columbian Exposition in Chicago.[12] The role played for Le Corbusier by the Bauhaus, was taken for Loos by the Wiener Werkstätte: an example of a well-intentioned but useless attempt to drag "art" into industry.[13]


4


L'ESTHÉTIQUE
DU
LANGAGE

7


TAFELBILD,
ARCHITEKTUR UND
„GESAMTKUNSTWERK"

8

1. Adolf Loos, sketchbook page with the Kaiserjubiläums-Gedächtniskirche (Kaiser Jubilee Memorial Church) and a trunk (1899).
2. Le Corbusier, Innovation advertisement in *L'Esprit Nouveau* (1920-25).
3. Le Corbusier, Innovation advertisement in *L'Esprit Nouveau*.
4. K.J. Jucker, pull-out electric wall-lamp (apprentice piece at the Bauhaus, 1923).
5. Le Corbusier and Pierre Jeanneret, "Pavillon de L'Esprit Nouveau" at the International Exhibition of Modern Decorative and Industrial Arts, Paris, 1925.
6. Adolf Loos, advertisement for Goldmann and Salatsch in *Das Andere* (1903).
7. Page from *L'Esprit Nouveau*.
8. Page from a "Bauhausbuch".

Or one could compare the typography of *Das Andere* (1903) with that of *L'Esprit Nouveau*. (fig. 7) In both cases the layout is markedly conventional, the type area symmetrical and "Times" the chosen typeface. In both cases the printed image is presented as the summation of centuries of the printer's art - in contrast to the artistic composition of *Ver Sacrum* on one hand, or the "Bauhausbücher" (fig. 8) on the other.[14]

Finally, there is the entrepreneurial pragmatism - probably unique in the history of the classic modern movement - with which idealist cultural reform and commercial advertising were combined in *L'Esprit Nouveau*. The editors of the Parisian avant-garde journal enlisted Voisin and Delage automobiles, and fitted furniture by Innovation and Ronéo as the cultural infantry of the "new spirit" in the battle of daily life, while Loos, in his journal *Das Andere* had turned to gentlemen's suits by Goldmann and Salatsch, or golf clubs from the "Sport- und Spielwarenhaus Wilhelm Pohl" in Vienna. Loos' note at the end of the first number of *Das Andere* may well be true: "The firms that have been mentioned with approval in the editorial section of this paper have neither paid anything nor are they due to pay." One would search *L'Esprit Nouveau* in vain, however, for the self-irony that inspired Loos to pen the following note: "To avoid abuses, it is requested that persons with demands for money or favours should stop immediately and give themselves up to the authorities."[15] Nevertheless, no reader can have failed to notice how closely the advertisements in *Das Andere* correspondend to the magazine's campaign to improve taste.

5

II.

In view of this chain of far-reaching correspondences between the interests of Loos on one side, and Le Corbusier on the other, between *Das Andere* and *L'Esprit Nouveau*, the obvious conclusion would be that Loos supplied the slightly younger emigré Swiss with the ammunition for his socio-cultural campaign. Loos implied this himself, when he once commented that the few good things in Le Corbusier's work had been stolen from Loos.[16] This judgement was not without some basis. Indeed, Loos' essay "Ornament und Verbrechen" (Ornament and Crime) was published in French translation in *L'Esprit Nouveau*, no. 2 (1921), together with an editorial foreword in which Loos was praised as a forerunner.

"M. Loos is a one of the pioneers of the new spirit. Around 1900, when the enthusiasm for Jugendstil was unstoppable, in the era of lavish decor, with art bursting into every sphere of life, M. Loos began (. . .) his campaign against the excesses of these tendencies.

As one of the first to foresee the magnitude of industry and its importance for aesthetics, he began to proclaim certain truths, which today seem neither revolutionary nor paradoxical."

Just ten years after this editorial "chapeau" (probably written by Ozenfant), Corbusier himself summed up the case of Loos even more concisely: "Loos swept under our feet, it was a Homeric cleansing - exact, philosophical and logical. With it, Loos influenced our architectural destiny."[17]

How can one explain Le Corbusier's enthusiastic interest in the ideas of the Viennese architect? He clearly recognized Loos as a like-minded spirit. But one should not be misled by the preamble in *L'Esprit Nouveau*. To look for the origins of Le Corbusier's personal feud with the reformist, arts and crafts impulses of Jugendstil and the Wiener Werkstätte merely in the Loosian "influence" would be to disre-

9

gard Le Corbusier's own development. For this conflict would have taken on its own contours even without the intervention of Loos.

In November 1908 - twelve years before the founding of *L'Esprit Nouveau* and nine years before his definitive move to Paris - Charles Edouard Jeanneret (who was later to adopt the name Le Corbusier) wrote a letter from Paris to his teacher in La Chaux-de-Fonds, Charles L'Eplattenier. In it, Jeanneret admitted: "Today the childish dreams have been abandoned, these dreams of rapid success, such as one or two German schools have enjoyed: Vienna, Darmstadt."

To understand the significance of this declamatory gesture of independence, one has to know the role that Darmstadt in particular, and that means Olbrich, had played in the tuition at the Ecole d'Art in La Chaux-de-Fonds. (One should also know that Olbrich was the embodiment of precisely the reformist tendency that Loos denounced so vigorously.) Jeanneret's first works as an architect - such as the Villa Fallet in La Chaux-de-Fonds (1906-07, fig. 9) - were entirely in the Ruskin tradition, and Jeanneret's friends in the "Cours supérieur de décoration" at the Ecole d'Art were still decorating the civic crematorium at La Chaux-de-Fonds under L'Eplattenier's supervision in direct imitation of Olbrich's Ernst Ludwig-Haus on the Mathildenhöhe in Darmstadt. Jeanneret, now with a Parisian perspective, found this intolerable. "This is too simple, I want to struggle with reality itself. (. . .) As far as I'm concerned, I say that all this small-calibre success has come too soon; ruin is imminent. You can't build on sand."[18]

It is true that Jeanneret had spent the previous winter (1907/08) in Vienna with his friend Léon Perrin. Surprising as it may seem, however, there is absolutely no evidence that he knew the name Loos at that time, even by hearsay.[19] It would seem that Jeanneret (alias Le Corbusier) first became aware of the author of "Ornament und Verbrechen" in 1913.

The first traces of Loos are to be found in an article on "Le renouveau dans l'architecture" in the *Revue mensuelle de l'oeuvre*, the journal of the Westschweizer section of the Swiss Werkbund, published in Lausanne. The following passage speaks for itself: "Have we thus become savages once again after twenty centuries of civilization? Have we re-adopted the mania for tattooing?"[20]
In conclusion, Jeanneret also quoted the following passage without, however, giving the source: "May I take you to the shore of a mountain lake? The sky is blue and a deep sense of peace lies over everything. The mountains and clouds are reflected in the lake, as are the houses, farms and chapels. Standing there, they do not seem to be built by human hand. They seem to have come from God's workshop, like the mountains and trees, the clouds and the blue sky. Everything breathes beauty and calm. . ."

Why this long, unidentified quotation from Loos? (It comes, of course, from Loos' essay "Architektur", 1910, which Jeanneret knew in the French translation that appeared in Paris in 1913.)[21] In this passage Loos appears to develop a theme that Jeanneret would have already known from Alexandre Cingria's *Les Entretiens de la Villa du Rouet* (1908). Summarized briefly, Cingria's belletristic book employs a series of dialogues to make a plea for the cultural autonomy of French-speaking Western Switzerland. Arguing that the "Romandie" has a mediterranean character, Cingria proposed that it should be "De-Germanized": "Notre âme classique, en effet, ne peut qu'évoluer dans une formule gréco-latine."[22]

It by no means a minor detail, that Jeanneret was in foreign parts at the time when he was immersed in this West Swiss devotional tract: he was in Neu-Babelsberg near Berlin, working in the office of Peter Behrens. It was Behrens's example - paradoxically - that proved a decisive factor in Jeanneret's subsequent attempts to "de-Germanize" the architecture of his Jurassic homeland and to lead it back to the "formule gréco-latine".[23]

But to return to Cingria's book, which contains the following passage: ". . .la montagne appelle à ses flancs des architectures régulières et calmes qui la reposent du désordre inférieur des ses bases. Et c'est pourquoi les vallées alpestres devraient être décorées de longues colonnades, d'hypogées tranquilles et puissants, de bas-reliefs taillés dans le roc, avec une facture géométrique et grandiose."[24]

Le Corbusier's villas for factory-owners in the Jura - I illustrate the Villa Favre-Jacot in Le Locle (1913-14, fig. 10) - reflect this programme right down to the details. In this context it would seem almost inevitable, that Le Corbusier would have been interested in Loos' picture of Alpine architectural culture. Perhaps he failed to notice that Loos had something quite different in mind than the Behrens-inspired Classicism that the young Swiss was producing at the time.

Indeed, closer inspection shows that Loos was opposed to the sort of reform initiatives proposed by the Werkbund, for which Jeanneret was so keen to enlist his support. The

9. Charles E. Jeanneret (Le Corbusier), Villa Fallet, La Chaux-de-Fonds (1905-06).
10. Charles E. Jeanneret (Le Corbusier), Villa Fave-Jacot, Le Locle, sketch (1912).

passage from Loos' "Architektur" quoted above, continues: "What's that there? A dissonance in this peace. Like an unnecessary shriek. Down among the houses of the peasants, which are built not by them but by God, stands a villa. The creation of a good or bad architect? I don't know. I only know that the peace, calm and beauty are destroyed."[25]

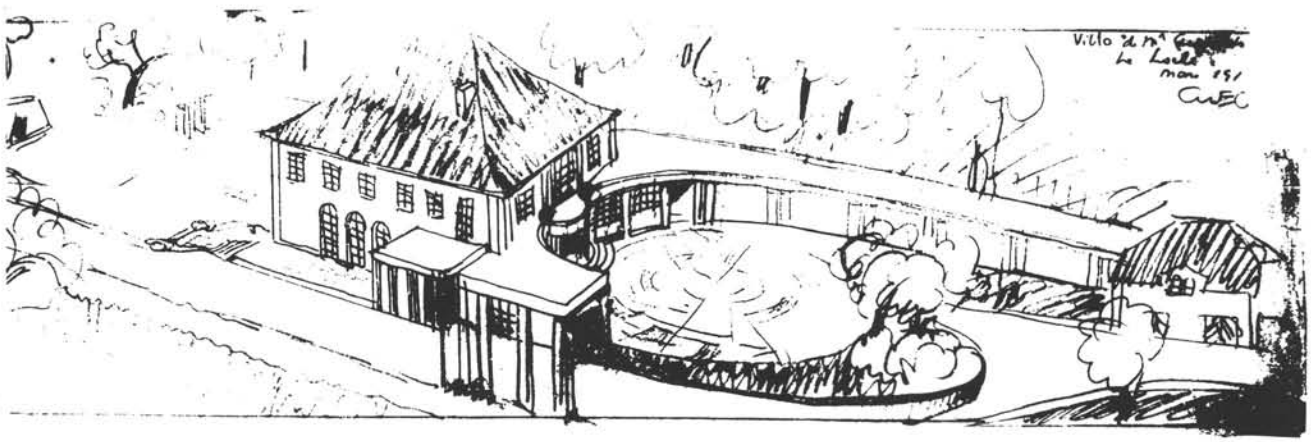
At this point we should also look at the furniture and interiors designed by Jeanneret around 1912-14. They document particularly clearly his rejection of Jugendstil and Secessionism, a rejection which was certainly influenced by contemporary German developments. The key figure here was not Loos, however, but Paul Mebes, whose book *Um 1800* led a whole generation of designers out of the dead-end of Jugendstil. Jeanneret, for example, in his many designs for furniture and interiors, referred directly to Louis XVI and the Directoire. While there are many instances of Jeanneret making direct copies of old pieces, he also tried sometimes to stylize his Classicist models in a spirit of the highest "sobriété". Arthur Rüegg does right to compare the collaboration of the Jurassic architect and the cabinet-maker Egger, with that of Adolf Loos and the celebrated cabinet-maker Veillich.[26]

One example that can stand for many: a sketch of the bedroom of the Villa Schwob in La Chaux-de-Fonds (1916), which I compare with the dining-room in Loos' Strasser apartment (1918-19, fig. 11, 12). I do not want to suggest that Jeanneret advocated the same ideas on interiors as Loos did at that time; his current models - derived from the Biedermeier and Directoire - would probably have been condemned by Loos as a "relapse into the old style-mongering".[27] The only point I would wish to make with the comparison is that both Jeanneret and Loos had already distanced themselves before the First World War from the Jugendstil interior, and had thereby created one of the preconditions for the remarkable convergence of their ideas - ideas which were to be made public in *L'Esprit Nouveau*.

III.

Only a few comments by Loos on Le Corbusier have been recorded. This makes the following anecdote by Alfred Roth even more illuminating. Roth was a young assistant to Le Corbusier when he met Loos in Paris in 1928 at the instigation of Kulka. "Tell me, young man," asked Loos, "what Le Corbusier makes his doors out of these days?" "Out of plywood, of course" answered Roth. "But that's an enormous advance (. . .)! Only a few years ago he was proposing in his books and articles that doors should, in future, be mass-produced in the factory out of steel and sheet metal."[28] Loos was clearly referring to the Ronéo doors, which, like the trunks mentioned above, had been advertised in *L'Esprit Nouveau*.[29] (fig. 13)

This anecdote touches exactly the point at which Le Corbusier went beyond Loos. In the eyes of Loos - "the stonemason who had learned Latin" - Le Corbusier's attempts to introduce industrial methods into building and his "Appel aux industriels" were a self-evident function of the architect. Yet the notion of subdividing living-rooms and bedrooms according to the practice of the Pullman Company, and of fitting them out with the sort of furniture that had



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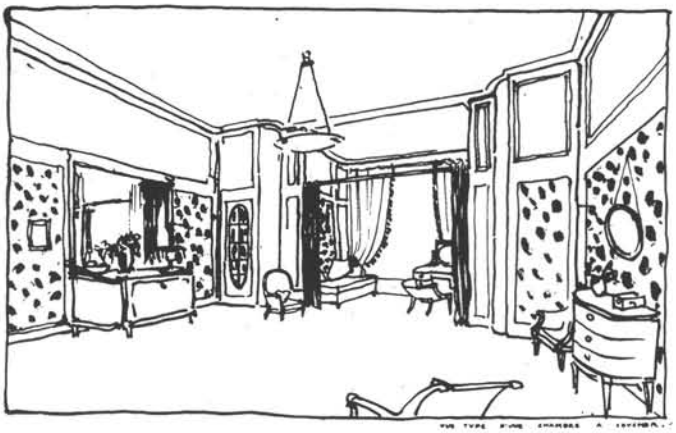

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been successful in the office context (see the Le Corbusier designed advert for Innovation fitted furniture - fig. 14), must have seemed as absurd to Loos as the idea of making doors out of metal. Yet Le Corbusier did exactly this at the Villa La Roche (1922), in spite of Roth's contradictory recollections. (Loos had apparently forgotten that his former office in Vienna also had a vermillion-painted steel door; a detail that was striking enough to inspire the architect Gustave Schleicher, who had visited Loos in 1912, to recall: "That, for me, was the new spirit!"[30]

Back to Le Corbusier: "Et n'est-ce pas le fondement même de l'architecture contemporaine!" - he asked in connection with the proposed transference of industrial methods and materials to the building sector: "Transférer dans le domaine infiniment plus vaste de l'architecture, les acquis d'Innovation et d'autres producteurs poursuivant le même but."[31]

Finally to architecture. The differences between, say, the Moller House in Vienna by Loos (1928) and the Planeix House in Paris by Le Corbusier and Pierre Jeanneret (1927) are immediately evident, and clearly have something to do with the industrial methods that Le Corbusier, in contrast to Loos, introduced into the building process. (fig. 15,16) More exactly, it has to do with the architectural images of industrial fabrication. These images - the factory-style glazing on the ground floor of the Planeix House, the matchstick-thin supports and the ribbon windows would be unthinkable in a Loos design. Only one aspect of modern ferro-concrete construction was admitted to Loos' vocabulary, and that as early as 1910 (in the Scheu House): the flat roof.

Since they share a similar composition, the facades of the two houses are particularly useful examples with which to delineate the mutual limits of the two architects. Both have a central axis (which only in Loos' case corresponds with the entrance door); in both cases a projecting volume is set on the middle axis at the first floor level, topped by some form of loggia. In the Moller House this loggia is only hinted at - in contrast to the Tristan Tzara House (1926-27, fig. 17) - the grandest of all the Loos houses. Another obvious comparison would be with the Villa Stein in Garches, with its odd "benediction loggia".[32] (fig. 18)

If it was a question of summarizing in a simple formula those elements that united the two architects in the international modernist movement around 1925, the link would be their "Classicism", or perhaps less superficially, a shared rationalist discipline in the manipulation of architectural form. Rationality in architecture, of course, is a concept that suggests two fundamentally different conceptual realms. Both architects would seem to have been fixated on the idea of comprehending the various fundamental postulates of a "rational" architecture in a detached, creative synthesis that was, at the same time, both audacious and Classicist. For both Loos and Le Corbusier the question could not be framed in terms of "either - or". It was not a choice between *either* an empirical, positivistic rationalism that concentrates on the practical alliance of purpose and material, and on the necessity of function - expressed in Loos' case by the primacy of the fittings, utensils und the spatial plan; in Le Corbusier's by standardized objects and the "plan libre" - *or* an idealist and formalist rationalism that orientates itself around the Euclidean bodies of cube, cone and sphere, and takes axes and "tracés régulateurs" as its compositional basis. Nor was it a choice between Darwin and Schinkel (for Loos), or Viollet-le-Duc and Ledoux (for Le Corbusier). Both saw their task as the formulation of architectonic images of these two diverging traditions of architectural rationalism (the "paradox of reason" in Alan Colquhoun's phrase[33]) - images invested, almost, with the status of eternal verities.

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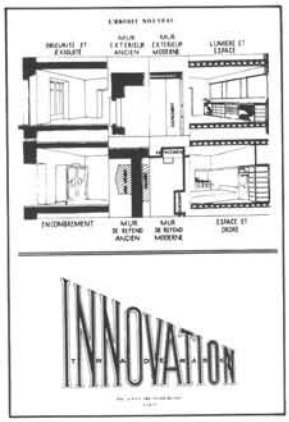

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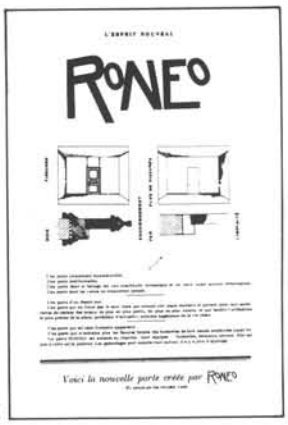

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11. Charles E. Jeanneret (Le Corbusier), Villa Schwob, La Chaux-de-Fonds, study for a bedroom (1916).
12. Adolf Loos, Strasser Apartment, Vienna, dining-room (1918-19).
13. Le Corbusier, Ronéo advertisement in *L'Esprit Nouveau*.
14. Le Corbusier, Innovation advertisement in *L'Esprit Nouveau*.
15. Adolf Loos, Moller House, Vienna (1928).
16. Le Corbusier and Pierre Jeanneret, Planeix House, Paris (1927).

To find out how much Le Corbusier knew of the Loosian "Raumplan" (spatial plan), as realized in exemplary fashion in the Rufer House in Vienna (1922), would be worthy of study in its own right. More exactly, it would be worth investigating the degree to which Le Corbusier drew on the example of Loos in his villa designs of 1922-27, with their open planning and mainly lateral connections between rooms.[34]

The decisive factor, however, is the formative influence on both Loos' "Raumplan" and Le Corbusier's "plan libre" of the English country house - an influence that probably reached the two architects quite independently. In the examples cited above this influence is not to be seen in picturesque groupings - the "promenades architecturales" (Le Corbusier's term) dictated by domestic function are developed within the context of strongly defined cubic cores. The coordination of internal space and external form has a dialectical quality in both designs; architecture is understood as the enclosure of a freely developed interior within an architectural composition conceived in terms of Classical monumentalism.

The differences separating the two architects can also be summed up briefly in two points: firstly Le Corbusier's (utopian) faith in industry, secondly his opinion that architecture - in contrast to the production of utilitarian household goods - belongs to the realm of "art". This conviction may have played some part in Le Corbusier's decision to print only "Ornement et crime" in *L'Esprit Nouveau*, and not "Architecture et le style moderne", even though it was announced in an editorial as a forthcoming article.[35] Le Corbusier rejected decoration in the applied arts and, like Loos, placed utilitarian objects outside the sphere of art, in a realm governed by the laws of technical and commercial evolution. But, in contrast to Loos, he never lost his conviction that architecture was primarily an art form: "But we are told that decoration is necessary to our existence. Let us correct that: art is necessary to us; that is to say, a disinterested passion that exalts us."[36] And further: ". . .to see things clearly, it is sufficient to separate the satisfaction of disinterested emotions from that of utilitarian need." And finally: "To provoke elevated sensations is the prerogative of proportion, which is a sensed mathematic; it is afforded most particularly by architecture."[37]

For Le Corbusier, therefore, architecture is and remains a

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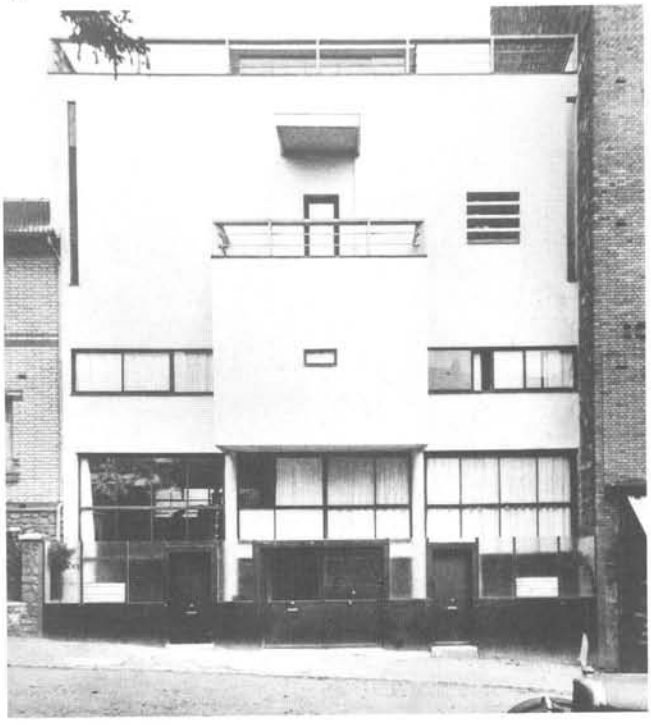

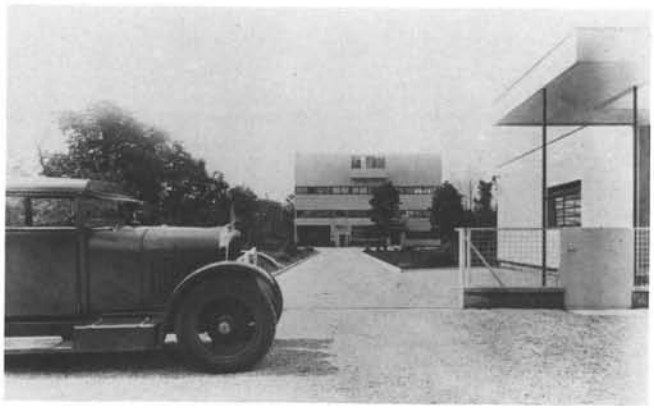

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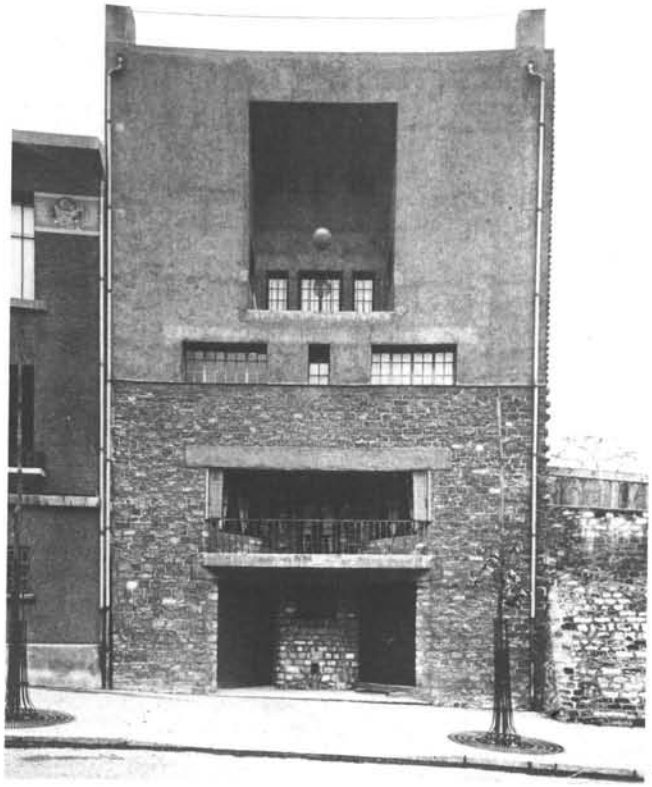
17. Adolf Loos, Tzara House, Paris (1926-27).
18. Le Corbusier and Pierre Jeanneret, Villa Stein-De Monzie, Garches (1927).

domain of art. Here, in contrast, are Loos' thoughts: "Only a very small part of architecture belongs to art: the grave and the monument. Everything else, everything that serves a purpose is to be excluded from the realm of art."[38]

It is a matter of contention, whether Le Corbusier's emotional defence of architecture's status as an art was the weakness or the strength of his theoretical system. It was a system that entangled him in contradictions in its attempts to find architectural and technical solutions to the problems of industrialization, aesthetics and mass-culture. These contradictions are beyond the scope of this essay: they are the contradictions of the modern movement. The theoretical system, however, made it possible for him to express these problems in architectonic metaphors of industrial reality.

Zürich, October 1983

translated by Iain Boyd Whyte



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Notes

1. Reyner Banham, *Theory and Design in the First Machine Age*, London, 1960, p. 248. I originally outlined the relationship between Le Corbusier and Loos in my monograph *Le Corbusier. Elemente einer Synthese*, Frauenfeld and Stuttgart, 1968 (see pp. 81, 99ff., 110ff. and passim). I am grateful to Prof. Tilman Buddensieg for giving me the opportunity to develop and, where necessary, correct these first observations.
2. Le Corbusier, *L'Art décoratif d'aujourd'hui*, Paris, 1925, p. 84. Translations from *The Decorative Art of Today*, translated by James Dunnett, London, 1987, pp. 84-85.
3. For details of Le Corbusier's role as the journal's advertising manager, see: Stanislaus von Moos, "Standard und Elite. Le Corbusier, die Industrie und der Esprit Nouveau", in Tilman Buddensieg and Henning Rogge, *Die nützliche Künste*, Berlin, 1981, pp. 306-323.
4. Innovation advertisements appeared in the following numbers of *L'Esprit Nouveau*: 11, 12, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 28. Explicit references to Innovation products in the texts are to be found in numbers 21 and 24. The contract between *L'Esprit Nouveau* and Innovation, signed on 21 September 1923, committed the editors to publish an article on the firms products in consideration of the adverts that were to appear in 12 issues, and also to produce the whole series of adverts as a separate publication, "de manière à constituer un catalogue complet des agencements 'INNOVATION'." (Archiv Fondation Le Corbusier.) Innovation was also involved in the furnishing of the Pavillon de L'Esprit Nouveau in 1925, as were other firms that advertised in the journal (for example the firm Ronéo). On the collaboration of *L'Esprit Nouveau* and Innovation, see: Luisa Martina Colli, *Arte, artegianato e tecnica nella poetica di Le Corbusier*, Bari, 1982, pp. 47f.; Gladys C. Fabre, "L'Esprit moderne dans la peinture figurative. De l'iconographie moderniste au modernisme de conception", in *Léger et l'esprit moderne*, exhibition catalogue, Paris and Houston, 1982, pp. 81-143.
5. *L'Esprit Nouveau*, no. 19 (no pagination). Compare *L'Art décoratif d'aujourd'hui*, above, note 2, pp. 85f.
6. Adolf Loos, "Schulausstellung der Kunstgewerbeschule", in *Die Zeit*, 30 november 1897, reprinted in Loos, *Ins Leere gesprochen*, Vienna, 1981, pp. 23-26.
7. On the interior of the Pavillon de L'Esprit Nouveau, see: Arthur Rüegg, "Anmerkungen zum 'Equipment de l'habitation' und zur 'Polychromie intérieure' bei Le Corbusier", in *Le Corbusier. La ricerca paziente*, exhibition catalogue, Lugano, 1980, pp. 151-162; and Rüegg, "Vom Intérieur zum Equipement. Ausstellungsbeiträge von Le Corbusier 1925-1935", *Archithese* 1, 1983, pp. 9-15. Loos, it should be noted, was well informed about Le Corbusier's difficulties in furnishing the Pavillon de L'Esprit Nouveau, in his capacity as Paris agent of the Vereinigte UP-Werke in Brünn, who at that time were carrying out commissions for Le Corbusier; see: Bernhard Rukschcio and Roland Schachel, *Adolf Loos. Leben und Werk*, Salzburg 1982, p. 308; note 954.
8. Adolf Loos in his obituary for the cabinet-maker Veillich: "Joseph Veillich", *Frankfurter Allgemeine Zeitung*, 21 March 1929.
9. Adolf Loos, "Intérieurs", *Neue Freie Presse*, 5 June 1898, reprinted in *Ins Leere gesprochen*, above, note 6, 68-74.
10. Le Corbusier first visited the USA in 1935, whereas Loos could draw on his own, extensive experience of the country. In spite of this - or perhaps because of this! - American architecture and American industrial forms provided, right from the outset, the models for Le Corbusier's reforms. On the "Americanism" of *L'Esprit Nouveau*, see: Thilo Hilpert, *Die funk-*

tionelle Stadt. Le Corbusiers Stadtvision - Bedingungen, Motive, Hintergründe, Braunschweig, 1978; and Stanislaus von Moos, "Urbanism and Transcultural Exchanges 1910-1935", in H. Allen Brooks (ed.), *Le Corbusier Archive*, volume 10, 1983.

11. Adolf Loos, "Glas und Ton", *Neue Freie Presse*, 26 June 1898, reprinted in *Ins Leere gesprochen*, above, note 6, pp. 88-93.
12. See: Adolf Loos, *Sämtliche Schriften*, volume 1, Vienna and Munich 1962, pp. 15ff.
13. See also above, note 5. Criticisms of design education, of the Wiener Werkstätte and the Werkbund are constantly recurring theme in Loos' writings. The first full major confrontation with the Secession was "Die geschichte eines armen reichen Mannes" (1900), the best known and most influential was, of course, "Ornament und Verbrechen" (1906).
14. For Loos' views on typography, see his essay "Buchdrucker", *Neue Freie Presse*, 23 October 1898, reprinted in *Ins Leere gesprochen*, above, note 6, pp. 168ff., and the postscript of 1931: "Von der konstruktivisten bis zur Wiener Werkstätte eine front", *Ibid.*, pp. 206ff. On Le Corbusier's passionate rejection of Josef Albers' Bauhaus typographie, see: Gladys C. Fabre, "L'Esprit moderne dans la peinture figurative", above, note 4, p. 113; illus. 113.
15. *Das Andere*, no. 1, 1903, p. 11.
16. Alfred Roth, *Begegnung mit Pionieren*, Basel and Stuttgart, 1973, pp. 197ff.
17. *L'Esprit Nouveau*, no. 2, p. 159. The last-quoted passage is taken from Le Corbusier's essay on "Ornament und Verbrechen", published in 1930 in the *Frankfurter Allgemeine Zeitung*, quoted here from Rukschcio and Schachel, *Adolf Loos*, above, note 7, p. 278. For further direct references to Loos, see: Le Corbusier, *L'Art décoratif d'aujourd'hui*, pp. 85, 137 and passim. The version of "Ornement et crime" published in *L'Esprit Nouveau* was a reprint of the translation commissioned by Georges Besson, which appeared in *Les Cahiers d'aujourd'hui* in June 1913; see: Rukschcio and Schachel, *Adolf Loos*, above, note 7, p. 182. It was not by chance that Le Corbusier later dated Loos' famous article "autour de 1912" in *L'art décoratif d'aujourd'hui*, above, note 2, p. 137. The exact details of the personal contacts between Le Corbusier (or Ch. E. Jeanneret), Ozenfant and Loos are not the prime concern of this article. On this subject, see in particular: Rukschcio and Schachel, above, note 7, pp. 239 and passim; and Elsie Altmann-Loos, *Adolf Loos. Der Mensch*, Vienna and Munich, 1968, p. 123. As early as May 1920, when Loos was staying in Paris, Ozenfant and Jeanneret recorded their "communion d'idées" with Loos, and their "fervent respect" for Loos in a dedication written in their book Après le cubisme, Paris, 1918 (information from Arthur Rüegg, who owns the copy in question). This dedication is illustrated in Hans Bolliger, *Katalog 7. Dokumentation Kunst und Literatur des 20. Jahrhunderts*, Zürich, 1980, p. 25. See also below, note 35.
18. Letter of 22 November 1908, in Jean Petit, *Le Corbusier lui-même*, Geneva, 1970, pp. 34-36. The influence of Olbrich on the Ecole d'Art at La Chaux-de-Fonds has hardly been studied. Some notes are to be found in Stanislaus von Moos, "Kloster, Atelier und Tempel. Anmerkungen zu Charles Eduard Jeanneret", *Archithese*, 2, 1983, pp. 44-48.
19. Alfred Roth, see above, note 16, p. 207, suggests a possible, but unfounded meeting between Jeanneret and Loos in the winter of 1907-08, and more recently Prof. René Jullian, speaking at a conference in Vienna, has suggested that Jeanneret's encounter with Loos' Viennese buildings was one of the great moments in his architectural life. But Loos is known to have been moving at that time in circles of which Jeanneret had no knowledge. It is also striking that Jeanneret does not mention Loos once in the *Etude sur le mouvement d'art en allemagne*, La Chaux-de-Fonds, 1912, even though Jeanneret had revisited Vienna in 1911.
20. *L'Oeuvre. Organe officiel de la Fédération des Architectes Suisses et de l'Association Suisse Romande de l'Art et de l'Industrie*, no. 2, 1914, pp. 36ff.
21. "L'architecture et le style moderne", in *Cahiers d'aujourd'hui*, no. 2, December 1912, pp. 829ff.; the original text is to be found in Adolf Loos, *Sämtliche Schriften*, volume 1, above, note 12, pp. 302-318 (under the title "Architektur"). The same article was subsequently published in October 1920 under the title "Art et architecture", in *Action. Cahiers de philosophie et d'art*, which explains why this text was not published in *L'Esprit Nouveau* (see also below, note 35.) On this question, see also Colli, *Arte, artegianato e tecnica nella poetica di Le Corbusier*, above, note 4, p. 123, who discusses Jeanneret's essay "Le renouveau dans l'architecture" without identifying the quotation from Loos.
22. On the influence of Cingria's book on Le Corbusier, who annotated his own copy extensively, see: Paul V. Turner, *The Education of Le Corbusier*, New York, 1977, pp. 83-91.
23. On the villas for factory owners built by Jeanneret in La Chaux-de-Fonds and Le Locle in the years 1912-14, see: Stanislaus von Moos, *Le Corbusier. Elements of a Synthesis*, Cambridge, Mass., 1979, pp. 12-20; and Jacques Gubler, "Die Kunden von Jeanneret", *Archithese*, 2, 1982, pp. 33-38.
24. Alexandre Cingria, *Les Entretiens de la Villa du Rouet*, 1908, p. 262. Jeanneret noted in his marginal comments that he had already had similar thoughts during a trip to the Zugspitze - probably in the spring of 1910. See: Turner, *The Education of Le Corbusier*, above, note 22, p. 86.
25. Adolf Loos, "Architektur", above, note 21.
26. See: Arthur Rüegg, "Charles Edouard Jeanneret, architecte conseil pour toutes les questions de décoration intérieure", *Archithese*, 2, 1983, pp. 39-43.
27. See: Adolf Loos, "Wohnungsmoden", in *Frankfurter Allgemeine Zeitung*, 8 December 1907, quoted in Rukschcio and Schachel, *Adolf Loos*, above, note 7, p. 110.
28. Alfred Roth, *Begegnungen mit Pionieren*, above, note 16, pp. 197ff. On Loos' Paris sojourn, see above, note 17. Loos was actually invited to take part in the 1914 Salon d'automne, but the exhibition was abandoned at the outbreak of war. The invitation was finally taken up in 1920.
29. Ronéo advertisements appeared in the following issues of *L'Esprit Nouveau*: 24, 25, 26 and 27. Editorial comments on Ronéo products are to be found in issues 18,19, 22, 23 and 24.
30. Rukschcio and Schachel, *Adolf Loos*, above, note 7, pp. 171f.
31. Le Corbusier, *Almanach d'architecture moderne*, Paris, 1925, p. 196.
32. See the detailed commentary in Stanislaus von Moos, *Le Corbusier. Elemente einer Synthese*, above, note 1, pp. 81, 109f, further developed in the American edition of the same book, above, note 23, pp. 77-82; and also Rukschcio and Schachel, *Adolf Loos*, above, note 7, p. 332.
33. Alan Colquhoun, "Le Corbusier and the Paradox of Reason", unpublished lecture delivered at the TH Delft, 1981.
34. On Loos' importance for the architecture of Purism, see: Kenneth Frampton, *Modern Architecture. A Critical History*, London and New York, 1981, pp. 95 and passim.
35. Rukschcio and Schachel, in *Adolf Loos*, above, note 7, p. 250, ascribe this omission to a cooling down in the relationship with Loos. In fact Loos' the journal *Action. Cahiers de philosophie et d'art* had, in the meantime, obtained the rights to some original Loos' texts, perhaps including those intended for *L'Esprit Nouveau*. This provoked Ozenfant to send the following angry note to Jeanneret (Le Corbusier): "Nous sommes dan une vilaine situation avec ce Loos, car, tandis que nous reproduisons des articles déjà publiés en français et connus de tous (namely 'Ornement et crime', S.v.M.), l'autre revue publiera de l'inédit!

Puisque vous êtes en relation avec M. Loos et qu'il vous fait des promesses, je crois qu'il serait bon que vous lui demandiez de nous faire parvenir d'urgence un article inédit. Cela sauverait notre situation." Letter of 6 July 1920, FLC boite A2 (15).

36. Le Corbusier, *L'art décoratif d'aujourd'hui*, above, note 1, p.86, translation from Dunnett, p. 85.
37. *Ibid*, p. 87, translation from Dunnett, pp. 85-86.
38. Adolf Loos, *Sämtliche Schriften*, vol. 1, above, note 12, pp. 302-318, quotation taken from p. 315.

Original text "Le Corbusier und Loos" in: Wien und die Architektur des 20 Jahrhunderts, *Akten des XXV Internationalen Kongress für Kunstgeschichte, Wien*, Bd.8, Wien, 1986, pp.137-150, 207-216.

Johan van de Beek

Adolf Loos - patterns of town houses

Adolf Loos, born in 1870, worked as an architect from 1898 until his death in 1933. His professional life thus covers the periods from the turn of the century up to the Great War, and from the Great War up to the Depression. He lived in Vienna until 1924, after which he operated mainly from Paris.

Adolf Loos believed in the evolution of architecture, a selective development. Design, he thought, is a selective continuation of tradition, changing circumstances determine the feasibility of innovations, and with these opinions he distanced himself first from the Vienna Secession, Jugendstil architects who stressed personal originality, and later from avant-garde architects who regarded a complete break with tradition as inevitable.

The spatial complexity of his late large villas, however, conveys an impression of a unique, non-reproducible personal inventiveness.

How does that fit in with his views? That is the question we hope to answer in this article.

Adolf Loos had little faith in the drawing as an indicator of architectural quality. No travel sketches of his exist, nor was he enthusiastic about photography as a means of conveying architecture. He did, however, suggest that good architecture can be described.[1]

The method of description used in this article is based on "mental reproducibility": what steps have to be taken, and in what order, in order to arrive at a design for the house in question. In my view this method is of value to those who believe in the evolution of architecture and in architectural training. The method applied here is inspired by the *"Pattern Language"* of C. Alexander. A design is built up of steps which he calls "patterns". A pattern is a solution for a spatial problem which has proved its quality in practice (= tradition). Every pattern represents a value. The pattern is an experiential rule, not a law. Patterns should be tested in the actual situation (selection!).

The emphasis in this article is on coherent description, such description does not however claim to be a record or reconstruction of the actual design process.

Raumplan

Adolf Loos' particular contribution to architecture is usually summarized under the heading of "Raumplan", a term introduced by Kulka, one of Loos' pupils.[2] Raumplan was not precisely defined, as more aspects of Loos' work were described, the concept of Raumplan grew accordingly, it is a container concept. Since "Raumplan" is only used in connection with Loos' work, it has played no part in developing a theory, the word has a chiefly polemical function.

Translating "Raumplan" as "space plan", I supplement it with what I regard as necessary, complimentary plans the "living plan" and the "material plan". I group the "patterns" round these three plans (space, living and material).

1. "Raumplan" - "spaceplan" - the manner in which a sort of 3 dimensional or vertical space is ordered.
   In which is compounded:
2. "Living plan" - the way the ground plan, a sort of 2 dimensional or horizontal space is ordered.
3. "Material plan" - the way the various building and surfacing materials are employed, to give texture and thus sensation and atmosphere.

N.B. the qualification "a sort of 2 dimensional space" recognises that any groundplan has a 3 dimensional constituent.

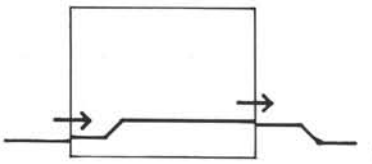
I start by describing a group of "patterns" pertinent to the work Loos produced around the period of the Great War, but without tracing their evolution. At that time Loos had already converted about forty apartments and had built several private houses. I go on to show how new solutions in Loos' work were influenced by a re-orientation towards the "classics". Finally I describe the fruits of this re-orientation as exemplified by his last three villas: the Villas Tzara, Moller and Müller. It is important that these designs were actually built, because only under the pressure of actual circumstances can architectural mutations prove their worth.

A survey of patterns developed before the Great War

Living Plan

Compact living

The most general statement which can be made about habitation concerns the degree and the nature of the distribution of various living activities. Adolf Loos' dwellings are marked by a maximum of three-dimensional compactness and a concentration of length, width and height. The opposite is demonstrated by, say, Frank Lloyd Wright's prairie houses, or the traditional Japanese dwellings which attracted architects' attention in Loos' day. In European stone-built villas, compactness is the rule rather than the exception, Loos avoids wings, annexes and separate outhouses.



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Movement: A consequence of compact living is that internal contacts are maximized and external contacts minimized, another consequence is the approach to the house as an object. There is no gradual external preparation (e.g. lodge, forecourt, gate, courtyard, passage, front door). Loos shifts this gradual introduction to the inside, compact living places maximum emphasis on entering and leaving.

The difference between up and down (gradient of vertical privacy)

The vertical structure of Adolf Loos' town houses consists of four functional levels. The top and bottom levels - attic and basement respectively - accommodate the secundary functions amply represented in the villa's programme. These are mainly service areas (storage, heating, garage, washing, ironing, staff quarters, etc.). The living programma is implemented on the two middle levels. The lower of the two contains the common living rooms, the upper one the various bedrooms and related facilities such as bathrooms and dressing-rooms.

The living layer leads directly outside (entrance, veranda), and is hence the most public of the four levels. The sleeping level is only accessible from the living level, privacy is thus ensured.

Movements: Vertical differentiation of the living programme generates vertical movement in the house. This movement takes place via staircases, occasionally a small service elevator and in a later house (Müller) via a passenger elevator.

The difference between front and back (gradient of axial privacy)

The town houses relate directly to the street, the street-front is the most public and contains the entrance. The principal living rooms are at the back, facing away from the street towards the private outside-area, the side with the greatest privacy.

This pattern distinguishes these houses from the traditional town house, which is orientated towards the street, although working-class and middle-class dwellings by Loos are street-oriented.

The difference between front and back is only significant on the living level. The bedroom level, being higher, shows less difference in this respect.

Movement: The front-back difference introduced movement from the front towards the rear (fig. 1). The difference between street level and living level is bridged just beyond the front door, movement towards the main living space is always upward. The difference between the living level and the garden is bridged just outside the back door.

The difference between left and right (gradient of lateral privacy)

A distinctive feature of Loos' houses is the pronounced difference between left and right. Movement from front to back is no longer, as in classical architecture, via the central axis. Loos re-routes the movement along one of the sides, where he places a cloakroom with an outside view. Whether the cloakroom is on the left or right depends on the situation and hence on whether the movement has a left or right bias (from front to side and rear). Combined with stair-climbing, this generates a spiral movement.

The side with the cloakroom is the living side of the house. The opposite side contains the service area, often including the kitchen. This provides kitchen staff with a short cut to the front door.

The centrifugal use of space

Adolf Loos furnishes his rooms in a way conducive to a centrifugal use of the space. Activities shift to the sides of the rooms, leaving the middle free.[3] This means that couches and dining-room furniture are no longer in their traditional position in the middle of the room, but along the walls,[4] activity areas are now oriented towards the empty space in the middle.

In Loos' work this seating pattern nearly always works out. He used it for the dining area in his own house, though not always in his other projects, where the dining table often still occupies the middle of the room.

Space Plan

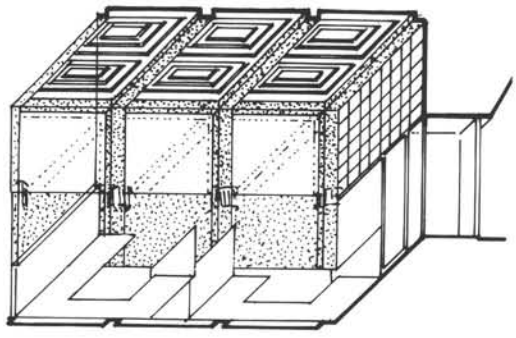
The simple exterior

In Loos' houses, compact living is packed into a simple, basic cubic shape, seen from outside, the centripetal character dominates.[5]

Loos' white-plastered, unadorned cubic exteriors (notably the Steiner house) label him as a forerunner of Functionalism, but more recently it has been pointed out that he was inspired by the simple bourgeois architecture of around 1800.

The difference between top and bottom

Where required by local regulations, the roof is pitched, but the chosen form - a cradle or mansard roof - emphasizes



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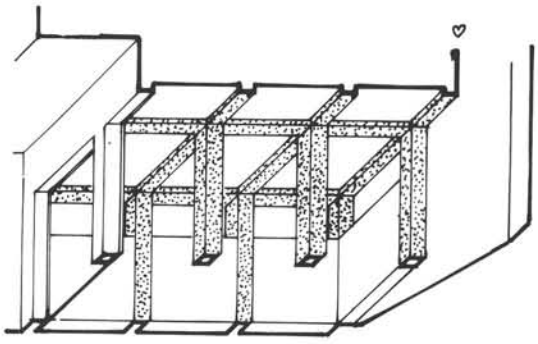


the space-enclosing aspect and the terrace in front of the living space provides a link with the ground.

The difference between front and back

Seen from the front, the house has an object-like character and from the back more of a space-shaping character. This space-creating character was later expressed increasingly by a terraced construction.

The difference between left and right

On the outside the difference between left and right is played down as much as possible.

The compound interior

The interior is composed of cubic spaces, some early works display the odd exception of a round space. Space on the sleeping level is defined by bedrooms which are individually accessible from the circulation area. The living rooms are related in a variety of ways; we shall therefore concentrate on the living level.

Sleeping and living levels are separate. Even when Loos did design double-height rooms, they do not exceed the living layer and never form a link between the living and sleeping levels, unlike the traditional "hall" in English country houses and the double-height rooms in Le Corbusier's houses.

Recesses

The centrifugal pattern often generates alcove-like appendages to rooms.[6] The commonest of these is the fireplace, and also the window recess, often fitted with a built-in seat commanding a view of the room; the window recess is also often used as a flower window. Various types of storage unit can be built into these recesses, such as sideboards and bookshelves, and these recesses have lower ceilings than the main area of a room.

Open staircases

Stairs on the living level have open access to the living rooms[7] and the space under staircases is sometimes used for a fireplace. These recesses and open stairs have a theatrical effect, highlighting the difference between "audience" and "actor".

Eccentric circulation (asymmetrical experience of symmetry)

Doors to rooms are positioned off-centre, which gives an improved view of the room. Circulation through the room avoids the centre and the route leaves the room by another door which is also eccentrically placed. In this way circulation routes are kept to the perimeter of the room and away from the centre which can then become a "place". This "place" on the symmetrical axis may then be given extra focus when a recessed space, an alcove, is added to the main space.

This "spiral" circulation pattern, in "horizontal plan" (Living Plan) is matched by a spiral circulation pattern in section, the "vertical plan" (Space Plan). By contrast, symmetrical movement can occur at the front door and the doors to the terrace.

Material Plan

Supporting construction

External walls are invariably load-bearing and of brick, with brick, load-bearing partition walls or a single column, accommodating the flue (Rufer, Moller). Floors are of timber with larger floor areas and supporting joists of concrete. Partition walls are of timber or thin brick, or are formed by cupboards.

The supporting construction is a necessity which does not play an architectonic role in Loos' work. In that sense a greater difference between him and the Functionalist architects is barely conceivable, so-called "constructional honesty" meant nothing to him.

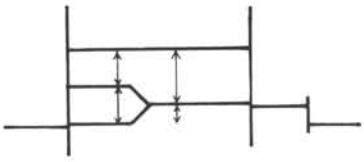
Exterior cladding

On the town houses around 1920 this is always plain plaster, frequently with a stone plinth and topped by a cornice: (this combination is used hardly at all in the preceding period and is abandoned again in later projects).

This plaster is in the tradition of undecorated plaster, its lack of ornament contrasting with the nineteenth-century predilection for eclectic decoration. Plaster like this has the value of maximum neutrality, like that of a man's gray three-piece suit on the social plane.

Interior cladding

The inside surfaces always differ from one room to the next, the choice of material, determining a room's mood or character, was important to Loos.[8] Material was chosen mainly for its affective value. Natural stone and hardwood were treated so as to show off the natural qualities of the material to their best advantage, but simpler material was also used, and softwood was painted. Traditional patterns such as dado panelling, parquet and beamed ceilings



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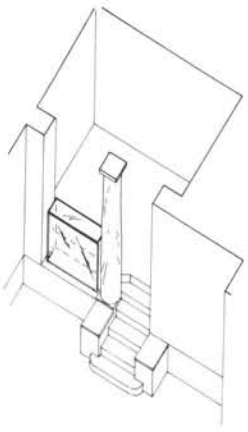

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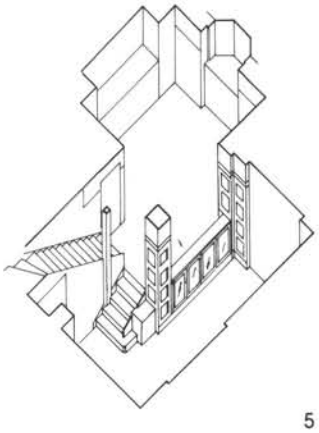

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were adhered to. Both the choice of distinctively marked materials and their plastic treatment tend to play down their object-like character and create a suggestion of spaciousness.

Framing elements such as columns, pilasters and beams delineate space by standing out from the wall as separate elements. The infill panels (panelling and coffered ceilings) act as space modulators. A composition may exploit the interaction of both aspects but variation is liable to occur in the details, for example the regular S-shaped moulding of pilasters, or between the square panels and framing of the wallpanellling construction.

Interior surfaces in early designs do not treat frames and panels systematically, meaning that they are interchangeable on both walls and ceilings. In his apartments Loos made frequent use of stone frames in the dining-room and timber panels in the drawing-room.

In public spaces surfaces are often totally systematized. A complete frame system is created: piers, beams and joists, filled with panels. The frame is dominant, enclosing the space like a cage (Kärtnerbar, Goldman & Salatsch, fig. 2).

Reorientation

In the previous section the patterns used by Adolf Loos were described as static. Between about 1905 and 1923, however, his work underwent a development which can only be comprehended fully by examining a number of projects in their proper order. We are chiefly interested here in the residences and since this period of Loos' work is distinguished by a marked increase in classical elements, it is also necessary to look briefly at projects with a public, urban, orientation.

Increase in spatial contrasts

In Loos' many apartment conversions, all the rooms are on one level and one of the means by which spatial differentiation was achieved was to lower the ceiling in recessed areas. In new villas, too (Steiner 1910, Stoessl 1911, Horner 1912, Scheu 1912), Loos worked with uninterrupted floor levels, as was also the case with the Duschnitz house of 1915. Movement from one room to the next was still a progress through rooms but from 1916 on, movement in a house was dramatized by intensified spatial contrasts. The device of the split-level provided a good introduction: the front door and a low cloakroom at street level, and an extra-high reception hall on the living level. Above the cloakroom there might be a second, low room belonging to the living level (fig. 3).

Movement from the cloakroom to the reception hall proceeds by way of a short, closed flight of stairs with a turn and without a door, achieving the maximum element of surprise. Movement from the hall to the second room, on the other hand, is by way of open stair in the hall, which heightens the contrast in the movement pattern.

The problem which Loos now had to solve was how to give form to the open connection, including the split level, between the hall and the second room. The first design to exploit the pattern of spatial contrasts is the Mandl conversion (1916). It features a relatively high reception hall from which a staircase winds its way up to the sleeping quarters. The stairs also serve a separate extra room above the entrance, leading to another small room overlooking the hall, rather like a stage-box. The idea seems to be inspired jointly by an English country-house hall and the Theatre.

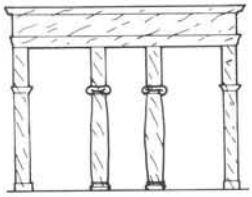
The Strasser house (1918/19), too, has a closed room (the library) above the cloakroom, but on the same level is another room which opens up like a kind of concert stage onto a sitting-room (fig. 4). The connection is still additive here, as if a wall had been omitted.

The Rufer house (1922) was the first completely new building to display this spatial pattern (fig. 5). Here, it is no longer a case of two rooms added together, but of interpenetrating dining and living rooms.

The designing of split levels

The gallery in the Mandl house has the effect of a theatre box overlooking the large reception hall, Loos subsequently sought a more direct and open form for connecting the smaller room with the large one. The split is diminished, there is a direct staircase connection and balustrades and banisters are avoided.

In the case of the dais in the Strasser house, Loos solved the transition problem by placing a stone pillar and a glass case, almost as independent objects on the periphery, near the short flight of stairs (fig. 4). The same three elements - stairs, pillar, glass case - occur in the Rufer house, where they are, however, an integral part of the architecture and interior decoration of the house (fig. 5). In both houses the three transitional elements are designed in a manner intended to accentuate the transition in different, but equivalent ways. At the place where the level actually changes, the material is given a more active plastic effect because it is no longer flush with the wall.



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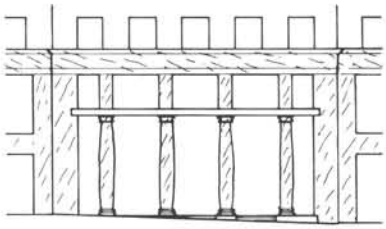

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Increased visual quality

The facades of the prewar houses are characterized by the struggle against superfluous decoration. Old schemes had been abandoned, but no new organization was yet apparent. The various elements of the living programme could be expressed more liberally. Restrictions imposed by municipal authorities with regard to gutter-height had a strong influence on the idea of mass, leading to highly original residences which however failed to indicate an architectural programme (in contrast to the programmatic use later made of the illustration of the Steiner residence).

The process of reorientation is also expressed in the architecture of the facade. An enhanced visual quality is first perceived in the horizontal-vertical contrast in the Duschnitz house (1915), besides the strongly horizontal extension with its large hall, there is the vertical addition of a square tower. A similar tower was added to the Mandl house (1916), with its horizontal loggia and balcony. The designs of these towers derive from neo-classical examples from Germany, and perhaps even from Schinkel (Schloss Tegel in Berlin). It is easy to see why Loos did not feature this type of tower in his other work, there being no grounds for it in the living programme.

A horizontal-vertical contrast can already be observed in Loos' early sketches. It is also confirmed in such projects as the Gartenbaugründe (1917) and others in which Loos integrated high with more horizontal, low buildings.

The horizontal-vertical contrast recurs later in a flatter form in the facade of the Bronner villa (1921).

Loos also experimented with another kind of visual contrast: the plastic contrast between part and whole, effected by small extensions. In the Strasser conversion it looks like a strange pimple on the front of the house while the design form the Konstandt villa (1919) has an extension on each of the four walls. Plastic accents are a feature of each of the three villas to be discussed later on in this article.

The Greek Revival

In the Strasser conversion (1918/19) Loos used a classical column in the living area for the first time. Up to then he had only used such columns in the Karma villa (1903/06), in a "Serlio-passage" leading to the "Roman bathroom". Classical elements had never been entirely absent from his previous buildings, public buildings in particular.

After Strasser, Loos' residential designs featured more and more columns, both as a transition from one room to another and in loggias giving onto the garden. The columns act as a classicistic framework for the spatial picture.

The cornice, too, as in the Duschnitz and Mandl towers, was given a more pronounced function. In the Reitler conversion (1922) and the new Rufer house (1922), a cornice finishes off the whole house at the top and there is even a copy of a fragment of a frieze from the Parthenon on the facade of the Rufer house.

The use of classical elements to enhance the visual effect appears too in unexecuted projects: the Konstandt villa (1919), the Bronner villa (1921), a palace in Vienna (1921), the Stross house (1922) and the villa for Dr. von Simon (1924?).

The Greek revival culminated in the design for the Tribune Tower competition, which also marked its end. Henceforth, apart from the odd sketch, Loos made no further use of classical elements.

While Aldo Rossi regards the tower as the highlight of Loos' oeuvre, and his subsequent work as part of the architect's daily grind, we are concerned here with the question of what architectonic approach replaced the Greek revival.

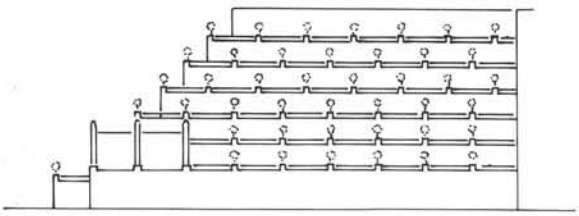
The surface-column relationship

The single column in the Strasser house has the effect of an objet trouvé. It should however be seen in context with the profuse use of marble panelling of the adjacent dining room. The relationship between the column and the wall, here still far apart, is the pre-eminent problem of neo-classicism. In the un-executed designs mentioned above, this relationship is conceived in a traditional manner. The Tribune Tower is of course a fairly unorthodox solution of the problem.

Examples of untraditional column integration in Loos' earlier work are the H & A Spitz facade (1918, fig. 6) and the entrance to the Loos House on the Michaelerplatz (1909-11, fig. 7). In neither case does the desired size of the column correspond with the height of the stone base. Loos extends the column at the top by a square section of column in the same material, topped by a cornice with a simple molding. This breaks down the traditional tectonic relationship between carrier and carried, introducing a visual structure which emphasizes still further the reciprocity of part (column) and whole (wall-surface).

Differentiation of wall and column

Another neo-classical problem is how to provide an architectural conclusion at the top. This problem occurs frequently in some projects designed by Loos in the winter of 1922/23, which he spent on the Côte d'Azur: the Babylon



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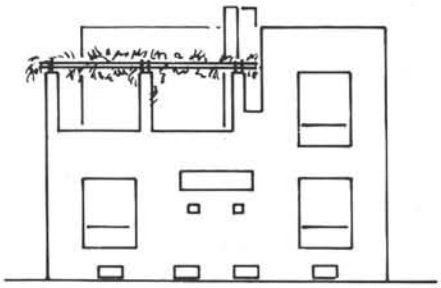

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Hotel (fig. 8), a group of twenty villas and the Moissi house in Venice (fig. 9). These are all terraced projects overlooking the sea.

Two aspects are important in the design for these terraces: the flower-boxes in Babylon and the columns in the other projects, which are not treated separately but "grow" from the walls. I call this "wall-column differentiation".

The columns are not topped by heavy cornices, but by light lattice-work, another break with the traditional tectonic pattern. Any vegetation, like the orange trees, enhances the ethereal transition to the sky. The material has a serial structure from bottom to top: columns-lattice-twigs-sky...

Loos probably borrowed the idea of square columns ending in lattice-work from Schinkel (the casino at Schloss Klein Glienicke, near Berlin). Schinkel, however, used such columns as independent elements.

The blank wall

In Loos' early work the wall is a passive actor in the architectural image. It forms a background for the pattern of window apertures and is upstaged by the columns and cornices. This all changed in 1922. In the design for the Moissi villa (1923) a large section of wall at the top of the facade is left undivided for the first time: a blank surface. In a scale model made for the Salon d'Automne, the wall-surface had a pronounced texture which stood out in the light and there is a lovely watercolour of the Verdier villa (1923), an expressive rendering of the play of light and colours on the building mass. The treatment of the outside wall of the Spanner house (built in 1923/24) produces a distinctive pattern, as was later the case, but with different results, in Josephine Baker's house (1927). Perspectives of projects for Prince Sangusko's stables (1924) and an exhibition palace in Tientsin (1925) show the variegated light on the facade surfaces and in the sky in an almost expressionistic manner. In the blank wall Loos discovered a canvas for changing daylight and the texture of the material, and used it as an architectonic tool, a quality presaged in the facade of the Karma villa of 1904.

The surface-column relationship

The single column in the Strasser house has the effect of an objet trouvé. It should however be seen in context with the profuse use of marble panelling of the adjacent dining room. The relationship between the column and the wall, here still far apart, is the pre-eminent problem of neo-classicism. In the un-executed designs mentioned above, this relationship is conceived in a traditional manner. The Tribune Tower is of course a fairly unorthodox solution of the problem.

qualifies, in my opinion, as the first example of a facade organized in analogy to the spatial organization of the living level: plastic extension = large hall, the extrusion below, with two windows = the raised level with library and music dais, the two large openings one above the other at the right = the dining and music rooms.

This attempt to invest the facade with the expression of what lies beyond it is linked with the house's urban setting on the street. The rear aspect is quite a different matter, this is where the architectural contrast between front and back is developed.

Subsequent projects have fewer parallels. This might be due to the freer situation, to greater focusing on the development of other visual aspects, or dissatisfaction with this first result.

However, in the three villas to be discussed, this pattern returns explicitly, but now in combination with the plain wall.

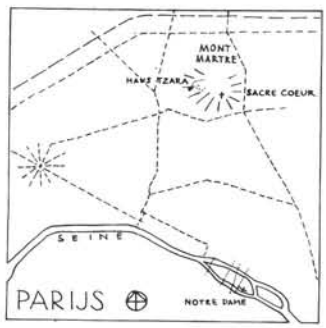
The material-space relation

Loos' seaside sojourn apparently provided new impulses. In the terraced projects, living moves outside, to be confronted with the sky, sun and vegetation. A year later, Loos bade farewell to Vienna and moved to Paris. His stay in France engendered a new sense of space in his interiors, he started to design a new kind of room which I refer to as "the salon".

The quality of the outside terrace is brought into the salon, as much light as possible enters through windows on the long wall, a new design for the white plaster ceiling creates a sense of openness at the top, the contiguous surround invests the ceiling area with a more active architectonic meaning because field and frame are united. Ceiling and salon space enter into a material-space relationship.

The design of the wall-covering often echoes the wall-column differentiation pattern. Stone or wood forge a link with the earthly sphere.

The older influence of the English living pattern was now joined by a French one, manifest in the form of the salon. As well as spatial contrasts, the space-material contrasts now become important. Once this relationship had acquired a form of its own, Loos abandoned classical elements. Having performed its function as a catalyst, the Greek revival was played out.



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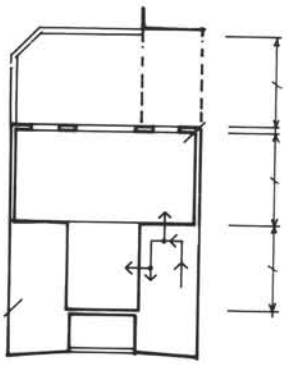

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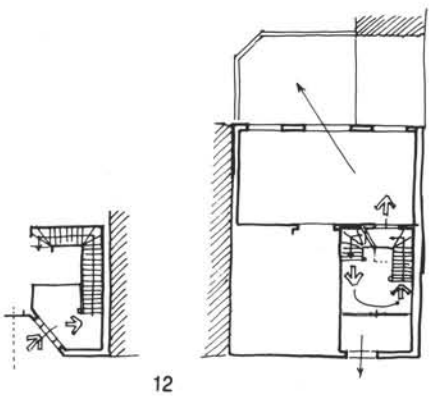

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Three large, realized, town houses: Tzara, Moller and Müller

These houses are mature examples of Loos' work, expressing to the full his new awareness of the space-material relationship. Each house has its own individuality, generated by the general living patterns and the specific characteristics of the site. The living patterns are not described here, since they remain unchanged. Greater focus is, however, brought to bear on the site. An important aspect of these houses is how the individuality of each one develops internally and externally in different yet, analogous ways.

The Tzara house (1925-1926)

This house was built for the Rumanian-born Dada poet Tristan Tzara. His collaboration with Loos was not without its problems, and the design was modified: plans for the attic were not realized, the bedroom floor was altered and a small studio was erected on the terrace.

The site

The house was built on the Avenue Junot in Paris, a road with a hairpin bend on the west slope of Montmartre (fig. 10). It is situated at the beginning of the bend on a site rising fairly steeply away from the road. The site backs diagonally onto a semi-public square reached by a flight of steps from the Avenue Junot. The back of the house has a south-south-west aspect and, like Loos' Côte d'Azur projects, it is terraced. There is maximum contrast between the very high facade at the front, and the back, where the terracing articulates each storey separately.

The living level

To ensure adequate privacy, the living level is situated one floor above the square at the back. The principal element on the living level is the salon, realized here for the first time, occupying the entire width of the house at the rear and with French windows opening out onto the adjacent terrace (fig. 11).

This leaves no space for a dining room at the back, although the brief stipulated that living activities be oriented towards the private area outside. The dining room is given a position behind the salon, to which it is connected by means of the widest possible opening so as to give as much connection as possible to the world outside the salon. The floor level is raised approximately 70 centimetres, but Loos provides no balustrade nor any other kind of separation, introducing a break in the living space which flouted all tradition - there's Dada for you.

Because of this, the dining room, despite its rear prospect, does not receive enough daylight, light has to come from the front and in order to ensure privacy from the street, the dining room has a loggia, two storeys high to admit daylight. Loggia, dining room and salon lie on a common axis.

Beside dining room and loggia there are secondary areas, staircase, the mistress' drawing room, the master's study. Wedged between the boundary walls and the principal rooms, they are poorly integrated and rather cramped.

The "introduction"

As usual, the salon is entered off axis, which provides the best view of the room. Access is by a door diagonally opposite the open corner of the terrace. Within the symmetrical plan of the house, this determines the side at which the introduction occurs (fig. 12).

At the recessed entrance two storeys below, the lateral situation of the introduction is already implied by the position of the front door. Access to the (too small) garage is symmetrical with regard to the front door. The cloakroom level is such that the salon is displaced by only half a storey. This means, however, that in order to reach the cloakroom from the front door, a perambulation involving one large turn through two whole storeys is necessary.

The entrance to the dining room is placed symmetrically in the side wall for once, underlining the dining room's ambivalent position between the front and back walls.

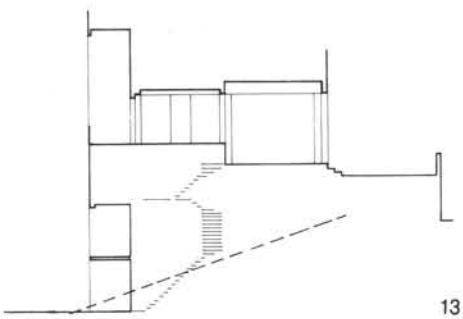
The relationship between the living level and ground level

The difference in level between the dining room and the salon is contrary to that of the terrain (fig. 13). This is due to the back orientation, and results in a dramatically large distance from the street. Indeed, there is room for an entire service flat between the entrance and the living storey.

The spatial characteristics

Loggia, dining room, salon and terrace are on a common spatial axis which is also the symmetrical axis of the house. Because of the orientation of these rooms, there is maximum variation along this axis, vertical, axial, transverse and diagonal.

Taking only the dining room and salon into consideration, the centre of the series is the point where they merge; if we count the half-open loggia, the focal point shifts to the dining room (fig. 14).



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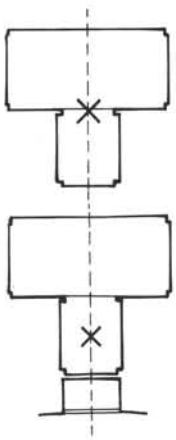

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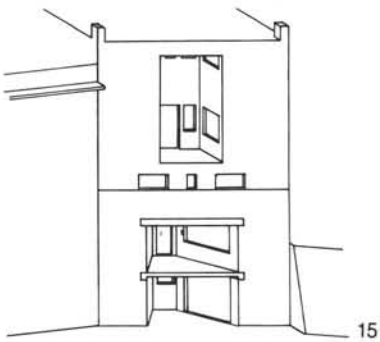

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The fact that the loggia is a half-open space is accentuated by the spherical lamp outside, which hangs, not in the centre of the loggia, but on the same plane as the facade.

The spatial characteristics and the situation

Because of the closed form of the buildings, there is maximum separation between the street area of the Avenue Junot and the semi-public space behind the house. The open front-back axis on the living level should be seen as complementing the division of the area outside.

Difference between front and back

As already stated, the Tzara house is characterized by a marked difference between the high front and the terraced construction at the back. The front of the house is its social face, the one it presents to the public, this is the side that should show its character, this, however, cannot be achieved by a direct display of the living areas. The back of the house is orientated towards a semi-public area. The terraces are connected more directly with the interior, no particular face has to be on show, quite literally, the successive terraces are progressively further away from the ground and closer to the sky. The unrealized attic with its projecting terrace was to have been the culmination of the series.

The plasticity of the facade

The Tzara facade is slightly concave, echoing the curve of the frontage (fig. 15). The wall is pierced by two openings, one above the other. The lower opening has inward-slanting reveals which makes a more direct link with the street, encouraging movement towards the inside. The upper opening is rectangular, and more akin to the rectangular rooms behind. Because of these openings, the plasticity of the facade echoes the concave course of the street in a more exaggerated manner.

The articulation of the facade

The material used in the facade displays an obvious two-part division: plaster at the top, on a plinth of random-rubble masonry two-and-a-half storeys high (fig. 16). This plinth follows the adjacent retaining wall, and matches it in height. The junction between plaster and plinth is at the same height as the terrace at the rear.

In the unbuilt version the plastered area is a square. The form of the plinth is determined by the width of the house and the height of the terrace, but within this area the opening is also a square.

The articulation of the facade and its spatial characteristics

The Tzara interior is characterized by two rectangular spaces on a common axis. The facade, too, is bipartite, each section having its own opening on the same axis. The position of the spherical lamp (in the original plan) may be interpreted as the intersection of the spatial axis and the axis of the facade.

The symmetry of the facade

The facade is pierced by five sets, one above the other, of three symmetrical apertures (fig. 17), alternately, the central, or the side elements dominate; the symmetry is alternately centrifugal or centripetal. This creates a dynamic, pulsating effect.

The articulation of the rear aspect

In the realized version, the increasing openness of the ascending terraces is emphasized by the form of the parapets, the higher you get, the less closed-in the wall and the more open the balustrades. Walls and columns are visually expressed, a pattern which recurs in the openings of the facade.

The salon facade demonstrates well the change from hole-in-wall to column-in-aperture, a pattern also encountered at the corner of the terrace.

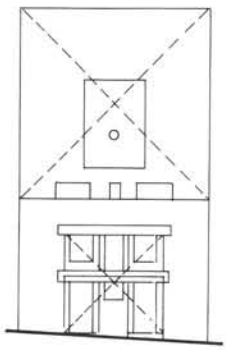
The relationship between rear wall and salon

The visual separation of wall and column in the window wall of the salon is of course echoed inside (fig. 18). It is picked up by the oak panelling, led on and varied on the rear wall of the salon next to the dining room. A series composed of terrace wall, rear outside wall and inside wall unfolds. There is dynamic symmetry, not pulsating this time, but developing from the inside towards the outside.

Interior surfaces: salon

The ceiling is a large white field with a surround, accentuated by two matt white spherical lamps suspened at the secondary axes.

The oak panelling of the walls is plainly identifiable as such because of the use of standard panels with visible screw attachments. The panel module is determined by the thickness of the columns in the rear outside wall. The long walls are treated with the same wall-column pattern, so that



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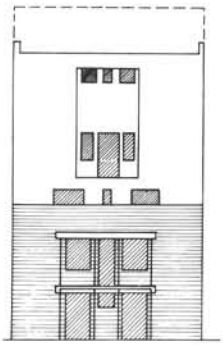

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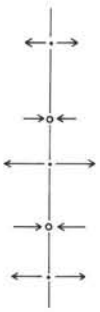

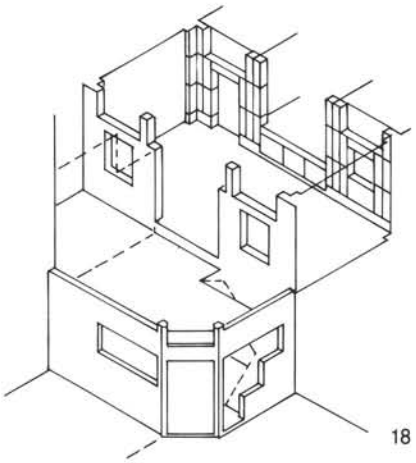

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the white ceiling seems to rest on fingertips. The short walls are bare apart from column-wide piers in the corners, the salon is thus defined by four recessed corners.

Interior surfaces: dining room

As we have seen, the positions of the salon and dining room are anything but equivalent. The discrepancy is compensated for by the similar treatment of the surfaces, the dining room, too, having a white ceiling and oak-anelled walls. There is however a contrast: the corners project into the dining room, so that the placing of the columns suggests an open pavilion. The walls between the corner columns are as open as possible, the wall to the salon is already opened up to a maximum, the wall opposite the access door contains a mirrored recess flanked on either side by a door, with a painted border, reminiscent of an arch.

The proportioning of the salon and dining room

The proportioning described here is based not on measurements but on an interpretation of published designs and photographs (fig. 19).

Loos began by dividing the depth into two; the internal depth of the salon is equal to that of the dining room, including the column margin, we shall indicate column size by c. (in plan)

The salon is divided lengthwise into three, the opening to the dining room is one-third of the internal length, which is also the width of the dining room between the columns. Inside the columns the dining room proportions are three by four: a fine, classical room. The dining-room module is 3c, so that the length and width of the salon can then be calculated as 27c and 14c. The ratio of length to width in the salon is therefore two squares minus the width of one column.

"Material size" and "space size" interlocks here. The plan cannot be reduced to a neutral grid. This proportioning is the concrete manifestation of the "material" to "space" ratio.

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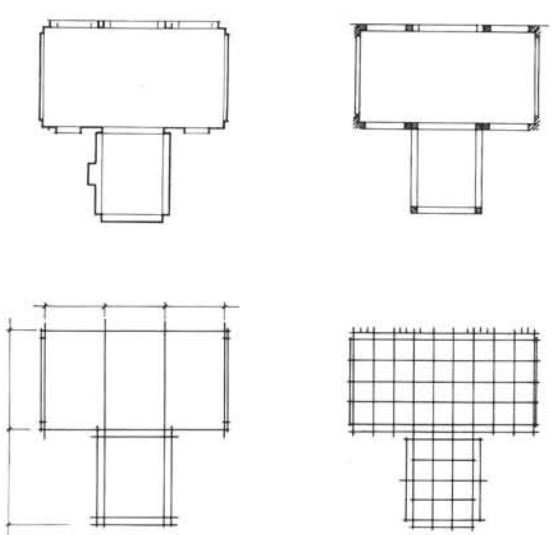

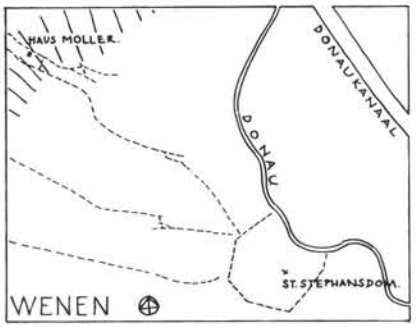

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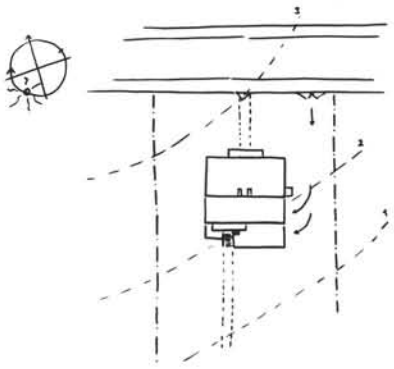

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The Moller house (1927-28)

This house was built in Vienna when Loos was living in Paris. The interior is the setting for a confrontation between the new salon-type space and the earlier beamed hall. The spacious site did not call for any dramatic interventions in the living plan.

The situation

The site lies at the foot of the Vienna Woods, on the northwest outskirts of Vienna (fig. 20). The long, straight, quiet road rises gently in a westerly direction. The site slopes down gradually from the road towards the south. The land is parcelled into spacious, deep lots suitable for villas (fig. 21). The building-line of the detached houses is about ten metres back from the road. The back garden could not be improved on: private, south-facing, falling away from the house.

The living level

Unlike the Tzara site, the terrain is spacious enough for the two principal reception rooms to be accommodated at the back of the house (fig. 22). Together, they occupy half its depth. As the situations of the two rooms are equivalent, utmost contrast is feasible.

The dining room is light and open to the outside, by contrast, the music room is dark and introverted. Light reflected into the dining room from the adjoining terrace makes the room brighter and the balcony above the music room windows casts a shadow which enhances its seclusion.

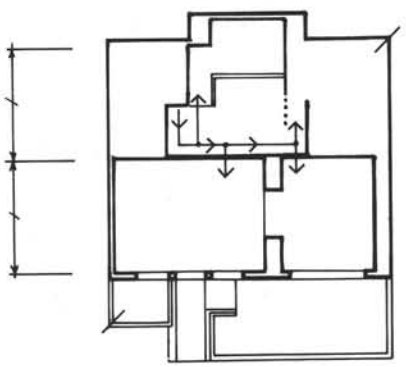
The music room is larger than the dining room. The music room and the dining room are connected on their common axis by a square opening with sliding doors. The dining room floor is approximately sixty centimetres higher than that of the music room and as in the Tzara house, there is no balustrade or other separation. There is, however, a short flight of steps which can be let down, rather like the steps of a carriage, to bridge the gap. The two rooms lead directly outside, each along its own axis. Access to both, however, is on the secondary axis. This renders the traffic pattern from the hall behind them V-shaped (fig. 23).

The hall

Unlike the Tzara house, there is enough room here to integrate the circulation area in a hall/living room. This hall is on the same level as the music room. On one side are the stairs from below, with a staircase on the other side leading up to the bedrooms. The different levels of the music and dining rooms form part of the lateral movement.

The hall gets its light from the front of the house. Privacy is not provided as in the Tzara house, by a loggia, a device which would not be very effective here, but by a bay window above street level (fig. 24), which is reached from the hall by a short flight of steps. This recess has a U-shaped built-in seat, and is the private domain of the lady of the house. Adjacent, and reached by the same stairs, is a small, closed library, the master's den.

Sitting on the U-shaped seat with one's back to the front of the house, one can look out across the music room (when the sliding doors are open) and down into the garden. The stepped stringer of the garden steps follows this sight-line, there is an expanding movement towards the rear.



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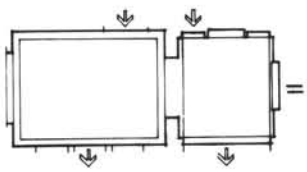

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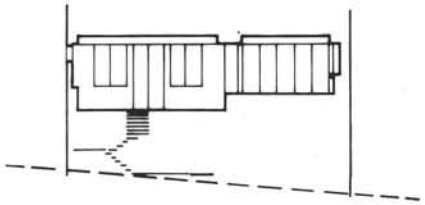

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The "introduction"

It was feasible here to use the system of spatial contrasts introduced in 1916 (fig. 25). The cloakroom is situated on the side wall, from there a short turn leads to the hall, with no door, but a recess, entered from one side.

The front door is placed symmetrically in the facade. From the vestibule a fairly short turn sideways leads to the cloakroom. This part of the introduction is the most cramped, elsewhere the plan for the living area is allowed to develop freely.

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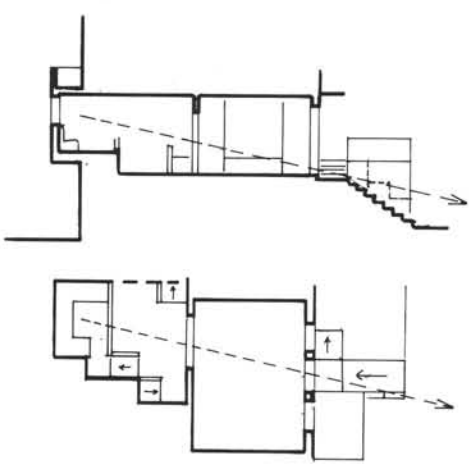

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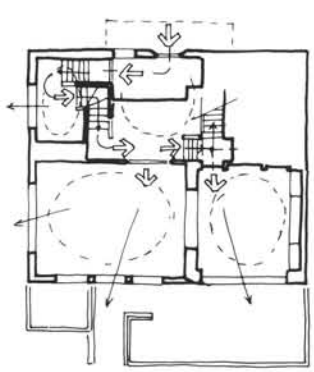

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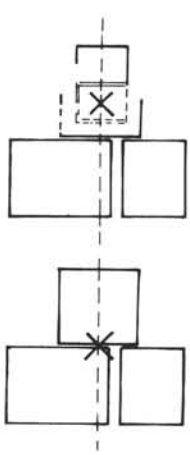


The relationship between the living level and ground level

The difference in level between the dining room and musicroom is contrary to that of the terrain (fig. 26). The resulting difference is strongly lateral: the dining room and terrace are almost a storey higher than the garden and command a panoramic view, whereas the music room is as close as possible to the garden, encouraging the experience of the garden. This displacement facilitates access to the garages on one side of the basement.

The spatial characteristics

The "living layer" can be seen as two connecting rooms and a hall. The centre of the house is marked by the partition wall, where the central column is also positioned. The "living level" can also be seen as a central hall encircled by various activity areas: bay window, library, music room, dining room, kitchen (fig. 27).

The spatial characteristics and the situation

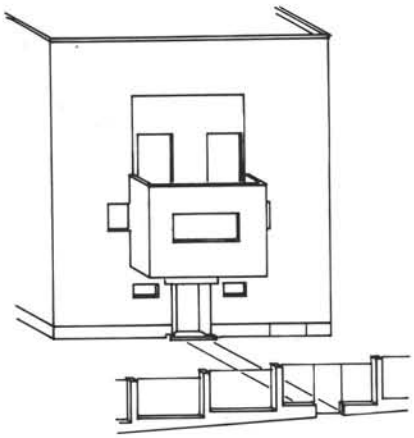
Because the villas are placed inside the building line, a space in front of the house is separated from the garden behind, but, due to the distance between the villas these two spaces interlock. This interlocking is complemented by the clear distinction in plan between the front and back zones which, however, are informally linked by lines of sight.

The difference between front and back

The road facade faces social space, the back is oriented towards an undefined space. The area behind the house is large and private, the privacy is reinforced by the fall of the land. A terrace is not necessary here, because the rooms command an open view. The terrace and bedroom balconies consequently have railings but the roof-terrace has a completely closed parapet which, together with the overhanging roof, forms a basin-shaped outside area completely separate from the living areas, to which not even the attic rooms have access. The orientation towards the sky, which develops in stages in the Tzara house, contrasts in this house with the "living programme".

The plasticity of the facade

The house has a central, block-like bay window, topped by a closed parapet (fig. 28). This plastic articulation alludes to the considerable distance of the house from the road. The house stands out like a block in space, the spatial form of which is repeated in the bay window.



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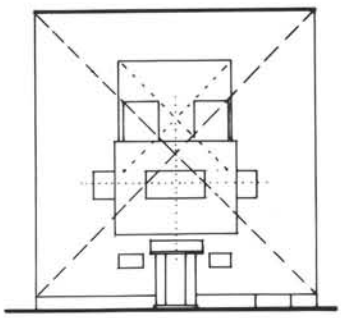

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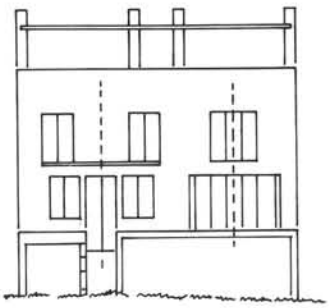

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The articulation of the facade

The facade consists of a plastered section on a low plinth of undressed stone (fig. 29). The plastered section forms a square, the articulation of the facade results in focal points below and above the middle of the large square: a vertical fluctuation. The basement window, situated in the plinth, is the only element that refers to the asymmetrical arrangement of the dwelling.

The darkened, low relief surround of the two balcony doors on the bedroom level of the facade, is the only example in the projects discussed here of a purely graphic compositional device for a facade.

The articulation of the facade and the spatial characteristics

The bay window is a central element, surrounded by a wreath of window apertures, comparable with the positioning of the hall and its encircling rooms. The graphic unity of the two balcony openings described above is comparable with the special position of the two living rooms at the back.

The symmetry of the facade

There is here no development along a central axis, as there is in the Tzara house, but a symmetrical cluster of one, two or three axis. The relation of the front door to the central element in the facade is problematic, as is the relation between entrance, cloakroom and hall in the plan.

The articulation of the rear aspect

The back aspect has two axes (fig. 30): one of them may be said to widen towards the top, the other tapers. A chimney further back forms a "material axis" between these two spatial axes and a pseudo-column on the roof is placed symmetrically to this chimney. This volume corresponds with the axis of the left-hand window of the music room, which is also that room's "axis of entrance".

Below the terrace are two symmetrically placed small windows (fig. 31): one on the "spatial axis" of the dining room, the other on the "material axis" of the chimney. The effect of these additions is that the spatial and material axes are both brought into play, so drawing attention to their equality.

Interior surfaces: dining room

The dining room is light and open. The ceiling has the white surround familiar to us from the salon pattern. The ceiling is "supported" by four projecting piers, again recalling a pavilion. The columns and plinths are of travertine, as is the tripartite division of the entrance wall. Cupboards and walls are in Okumé-faced plywood, forming a tense colour scheme in combination with the Travertine stone. A dresser opposite the outside wall is fitted with clear mirror, and the dresser and cupboard doors opposite the music room have mirrors of obscured glass.

Interior surfaces: music room

Despite its form and situation which are very similar to those of the dining room, the music room is highly introverted (fig. 32). This introversion is accentuated by built-in seats with their backs to the wall, and by the narrowing of the three windows; the box-like construction of the Okumé plywood panelling enhances this character and the centripetal character of the room is reinforced by the use of the same material for the casing that runs round the top of the wall, just below the white ceiling, and which contains the lighting.

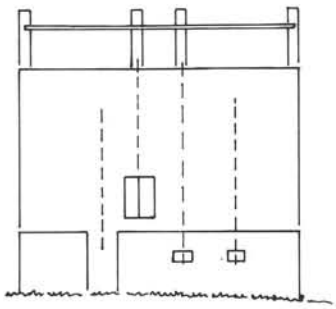
The contrast between the dining room and music room

The music room is box-shaped, with indented corners, whereas the dining room has columns which project (fig. 33). There is a square opening between the two rooms. On the side of the music room this opening is framed by two very slightly protruding columns, on the dining room side the edge of the ceiling acts as a horizontal frame for the gap. The opposite wall of the dining room is articulated vertically by two cupboards flank the dresser, while the opposite, short wall of the music room is articulated horizontally by a ledge at window-sill height and a horizontal window higher up. The four short walls are thus articulated as follows: vertical, horizontal, vertical, horizontal.

Interior surfaces: hall

In view of the different fittings in the music and dining rooms, what possibilities remain for the hall? Here, the difference between these two characters is "internalized". The side adjacent to the music room and entrance recess has a plywood cladding, the other side, which is adjacent to the diningroom, the stairs leading to the bedrooms and the window recess, is treated by framed panelling.

The ceiling is articulated by two areas enclosed by beams: one above the recessed window and one in the



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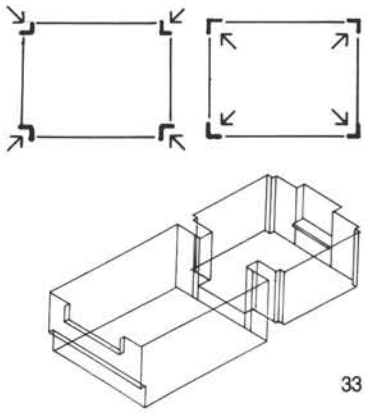

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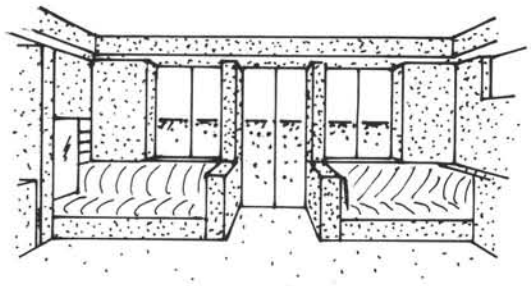

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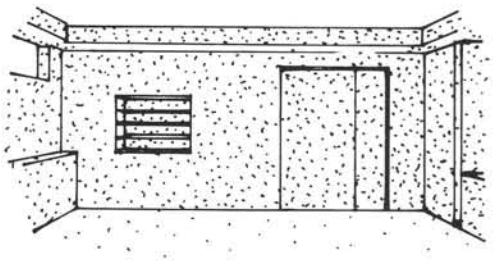

middle of the hall (fig. 34). These accentuate the domestic character of the hall and the surrounding area may be regarded as a traffic zone. It contains the staircase leading up to the bedrooms, partitioned off by a kind of trelliswork for greater privacy. On the other side a short flight of stairs leads to the bay window and library. The access stairs and the entrance are additions to the whole. The entire space thus develops asymmetrically, a development which continues into the entrance and music room (fig. 35). This continues the previously mentioned oblique line of sight from the bay window. In the panelled entrance, small panels lining the stairs form a plastic pattern resulting in one of the most sophisticated "material-space" complexes in Loos' oeuvre.

Proportions

In terms of design technique there was no overall proportioning: dining room, music room and hall are fairly independent (fig. 36).

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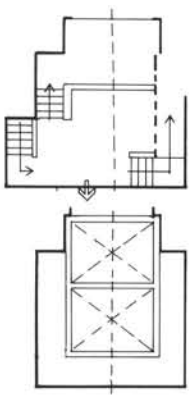

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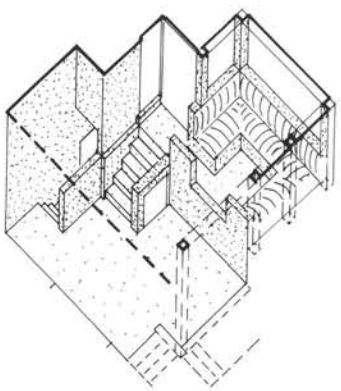

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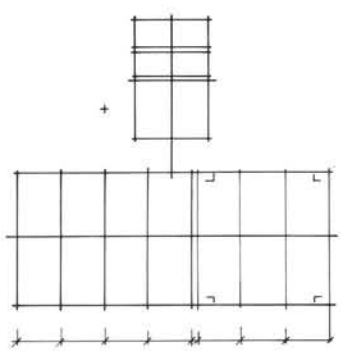

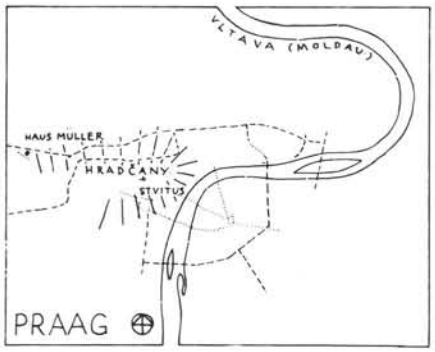

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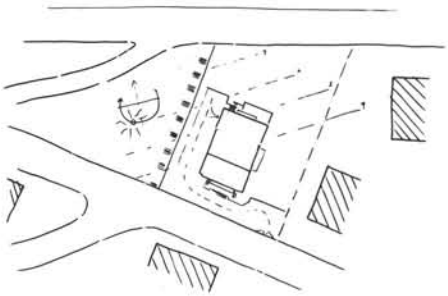

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The Müller house (1928-30)

This house was built in Prague for Dr. Frantisek Müller, a building contractor. Because of the success of the collaboration between client and architect, the very differentiated brief resulted in Adolf Loos' most sophisticated "Raumplan". The particular site had a crucial influence on the plan.

The situation

The site lies on the northern slope of the hills above Prague (fig. 37). The northern aspect commands a panoramic view, but faces away from the sun. The site is steep (fig. 38), and is bordered at the top by a quiet road serving an older residential area. The house stands free on one side, where public steps skirt the site. One of Prague's major approach roads runs past the lower end of the terrain.

The site is thus surrounded on three sides by public space, only the east side bordering on private terrain. The house is developed depthwise and as far west as possible, yielding a closed garden on the east side. For maximum privacy the garden area was levelled and a retaining wall built on the side bordered by the road.

The living level

A large salon occupies the entire width of the back of the house (fig. 39). Due to the sloping site it has a high situation, which gives adequate privacy. A terrace is not feasible here, and would in any case face north. The salon therefore leads out onto a small balcony with a closed parapet and no relationship to the garden. Compensation for this is achieved on the top floor (reached by an elevator) in the form of a large roof-garden leading off the breakfast room.

As in the Tzara house, there is no room for the dining room at the back of the house, but there is room at the side. The east side, overlooking the closed garden and hence the most private side, is the obvious place for it. The dining-room window, however, is plainly visible from the access road, a problem which was solved by adding a bay window.

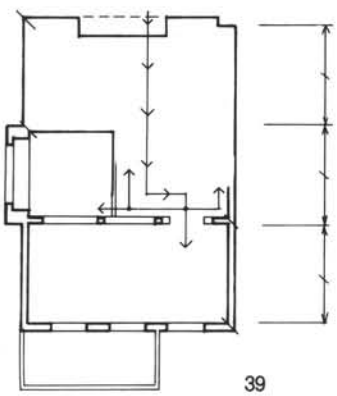
Due to the situation of the dining room and the adjacent pantry and kitchen at the side of the house, there is plenty of room on the other side for the introduction. The cloakroom at the side looks out onto an open space. Above the lobby and cloakroom there is room for a library and a room reserved for the lady of the house. This room faces sideways while the library is oriented towards the access road.

The position of the living area offers little scope for a living hall served by the route past the stairs. Nor is a completely separate staircase, as in the Tzara house, here a feasible option for the Raumplan. For the first time, Loos combines a French salon-like room with an open staircase, so doing by opening up the salon wall and placing the stairs along the periphery.

The stairs to the bedrooms are behind the dining room, in the centre of the house, and receive daylight from a skylight in the roof. The stairs command outside views in three directions, through the salon, dining room and roof skylight. This development makes for a more gradual separation between living and sleeping than in previous projects.

The dining room opens off the salon and has a higher floor, as in earlier projects, a displacement of more than a metre this time (fig. 40). The gap is bridged by the through-route upstairs, behind the salon wall. Two axes, at right angles to one another, determine the orientation of the dining room: via the bay window on the side and via the salon at the back, the square plan of the dining room is a reaction to this situation.

Surprising effects result from relationship between the dining room and salon due to the open walls of the salon. As usual, the salon is divided longwise into three, the dining room lying on the secondary axis. The dining room is wider than one bay of the salon, so that the corner of the dining room does not coincide with a salon post. This produces an open corner in the dining room - Loos' first open corner. It relates the dining room diagonally to the salon; moreover,



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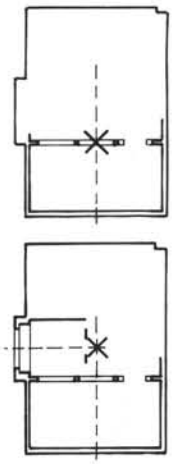

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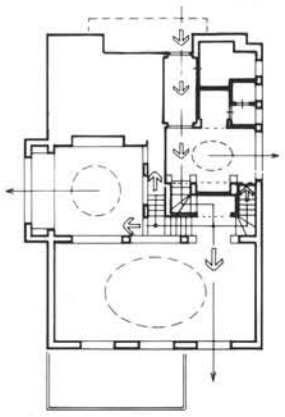
this oblique line of slight is echoed further down by a stepped stringer, reminiscent of the outside steps of the Moller house.

The relationship between living level and ground level

The oblique line of sight from the dining room to the salon continues outside, having passed through the salon window (fig. 41). This downward-slanting line is possible because there is no balcony in front of this window. The line of sight appears to run parallel to the sloping site, this is because the difference in level between the dining room and salon is parallel to the difference in ground level both longitudinally and laterally.



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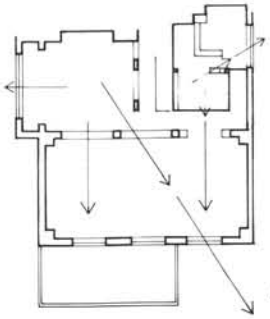

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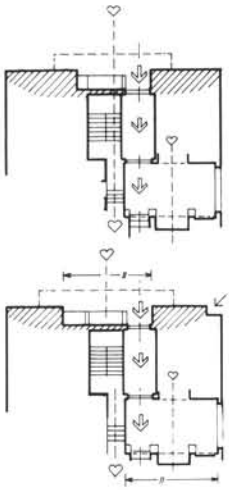

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The ensueing parallel course of nature and culture replaces an actual outward extension of the living level.

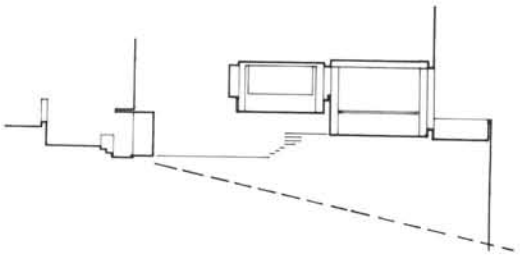
The introduction

As in the Moller house, access to the living area is via an alcove approached by a short flight of stairs and a turn - a theatrical entrance (fig. 42). The alcove lies on the secondary axis of the salon. On entering the room one's first sight is the panorama that is visible through the same window that frames the diagonal view from the dining room. A number of routes intersect directly in front of this alcove and immediately behind, the open wall of the salon acts as a monumental gateway.

The cloakroom, that precedes the large salon, is classically divided into three along its length, and again is approached along a secondary axis. The cloakroom is on the same level as the front door, to which it is linked by a short, passage-like vestibule.

The front door is set in a shallow recess topped by a flat, open porch. The front door is at one side of the recess, a built-in bench in the middle (this is the south side) and a hatch to the coal-cellar chute on the other side. This is the most effective example of Loos' front-door treatment, which always relates subtly to its surrounding spaces and functions. The almost straight line of approach from the front door to the salon maintains a secondary axis, but the primary axis moves to and fro. Never before was symmetry so dynamic.

Closer inspection, however, shows that the axis of the facade does not coincide with that of the salon (fig. 43) but is staggered by half the width of the stairs. The main practical advantage of this staggered axis is that the entrance recess is than able to develop fully, thus having the same width and arrangement as the cloakroom. On the outside the staggered axis is compensated for by a recessed corner of the building. I do not consider it too far-fetched to associate this recessed corner with the open corner in the dining room; the recessed corner faces a side-road nearly opposite the house.



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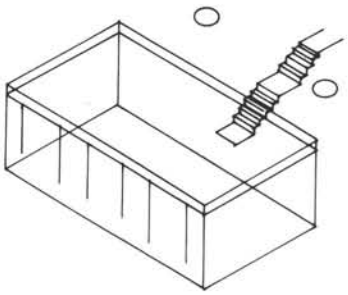

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The floor levels

Determining the floor levels with regard to the street is problematical, because of the steeply sloping terrain. Loos keeps to the pattern of ascending to the salon. The displacement of the salon floor is reduced by having the front door lower than street level (fig. 44) so the salon ends up at almost the same level as the street. Consequently, in order to reach the garage under the salon, a car must descend a whole storey, passing along a long driveway in front of the house and along the side. This lower entrance makes it easier to fit in the library and a room for the mistress of the house, nonetheless, the plan results for the first time in different levels on the bedroom storey; a difference which contributes to a less abrupt transition between the living and sleeping levels. Both the library and mistress's room take up the theme of different levels, each in its own manner. The mistress's room adopts the diagonal line of sight down the stairs almost literally. In the library the theatrical entrance predominates.

Characterization of the space plan

The salon is the dominant space. The central axis does not connect up with any other room, but with the staircase leading to the bedrooms (fig. 45). The main axis accommodates the extremes of mobile and stationary activity.

The other rooms on the living level are oriented towards the salon to a diminishing degree: dining room, the mistress's room, the library; there is no break, no constriction.

The spatial characteristics and the site

The site is characterized by being open practically the whole way round, the only interruption being on the garden side. Inside there are no continuous axes or lines of sight except for the line between the dining-room window overlooking the garden and the salon window nearly opposite. The staircase in the middle of the house has a centrifugal effect on the various living rooms.

The difference between front and back

Both the front and back walls face roads. Each duly displays a mainly closed surface with the almost graphic rendering of the window openings that determine the house's appearance. Due to the fall in the ground and the flat roof-garden, the back wall is one storey lower than the facade. A lateral shift is particularly in evidence at the rear, where the driveway turns into a terraced extension for the automobile. The garage entrance is set in a low recess. Recess and terrace give the basement a strong sideways orientation, towards open space. This orientation is reinforced by means of the closed parapet of the terrace at the back and open railings at the side. This is the first time that Loos gives spatial meaning to the basement.

The relation with the city centre

The roof-garden is partly-enclosed by two sidewalls that link the chimneys with the roof construction (fig. 46). A large window pierces the east end wall. One's first sight, on arriving at the roof-garden, is of Prague Castle and St. Vitus' Cathedral, framed in this window and this is the first time that Loos makes an explicit relationship with the city. Because of the view and because of the breakfast room giving onto the roof-garden, the roof-garden acquires a social meaning, as well as a relationship with the sky: social aspect and the spatial aspect merge.

The plasticity of the facade

The house is close to the road and this proximity is matched by a subdued plasticity (fig. 47): a semi-recessed porch and a subtly-projecting porch. Because of the sunken area in front of the house a semi-open area is generated between the facade and the road. The peripheral character of this area is echoed by the shallow plasticity of the recessed entrance, which has a detailed fill-in and a travertine lining. For a brief moment, the living area is extended outside.

The articulation of the facade

In this house the plastered facade is without plinth (fig. 48). To the cursory glance, there is not a square in sight, until one notices the yellow brick retaining wall between drive and entrance, which is now seen to assume the character of a separate plinth. The dividing line corresponds with the level of the salon floor.

Above the entrance is an arrangement of small and large windows. The middle windows overlooking the service stairs, are displaced by a half-storey. This makes the blank space above the windows appear to spread out fan-wise downwards, between the windows - an effect which the added surround to the Moller house windows deliberately avoids.

An asymmetrically placed window is added above. This of course corresponds with the asymmetrical disposition of the house behind the facade, the centre point of the top windows, corresponds however, with the central axis of the salon and rear wall.

The facade and spatial characteristics

The entrance recess is the spatially dominant element of the facade, separated from a cluster of windows by an overhang. An analogy is provided by the separation of the salon from a cluster of rooms by the autonomous rear wall. The centre of the facade is marked by the windows which are shifted because of the staircase, analogous to the central position of the stairs inside the house.

Articulation of the rear aspect

The rear facade has no evident base. (fig. 49). The projecting balcony and garage terrace follow the gradient of the terrain, thus enhancing lateral orientation towards open space. The garage terrace is formally involved in the whole.

The articulation of the rear facade is arranged inside a square, the image is reinforced in order to compensate for the missing base.

Only if one is familiar with the plan inside can the special position of one particular window in the salon be appreciated: this window now marks the centre of the rear facade together with the open space of the garage terrace.

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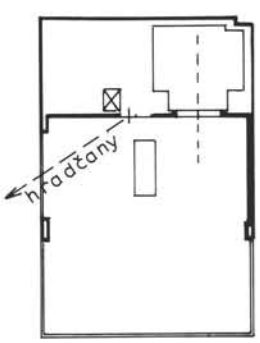

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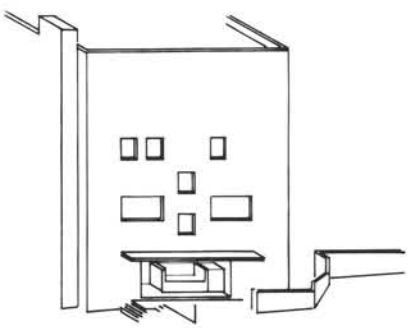

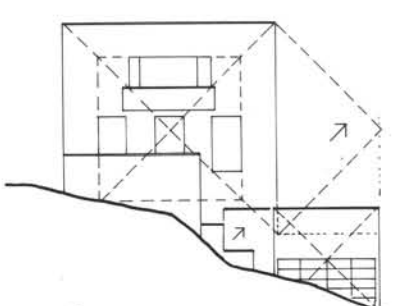

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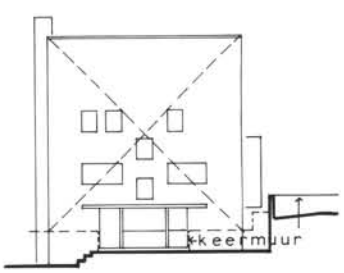

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The interior surfaces: the salon

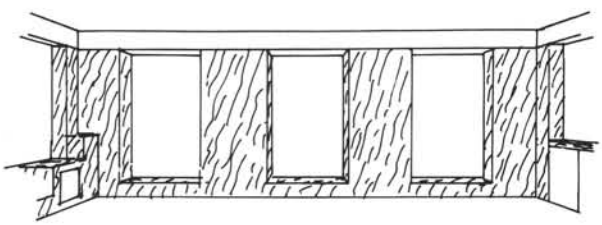
This is the most opulently decorated salon of all the houses described here (fig. 50). The ceiling and its surround are white, this is enhanced by four matt-white spherical lamps on secondary axes. Columns are expressed as separate from walls with free-standing columns in the rear wall, the corners are indented. By contrast, the seating area opposite is incorporated into the mass of the wall, the indented corners are transformed into projecting ones. This doubles the column zone between which the seating is fitted.

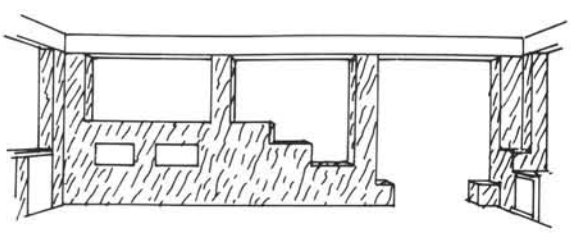
The open rear wall makes it undesirable to limit the marble cladding to the interior of the salon and it duly continues to the back of this wall, in the dining room and traffic zone. The other side of the periferal traffic zone, round the entrance recess below the mistress's room, is clad with the same Cipollino marble, thus reinforcing the character of the periferal circulation zone.

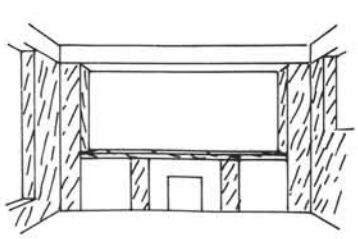
Interior surfaces: dining room

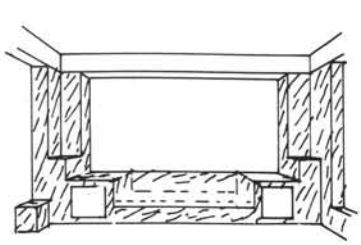
The open corner in the dining room makes it impossible for the space to be defined either by projecting corner columns or by indented panelling. The room is therefore primarily determined by the fixed table in the middle, its granite surface supported by an octagonal pillar (fig. 51). A round lamp of matt plate-glass is suspended above the table and the room is further defined by a coffered mahogany ceiling. The horizontal planes of the room are primary, and enclose the space like ice-cream wafers.

In none of the rooms so far described does Loos open up the walls to such an extent as in this dining room (fig. 52). The treatment of the wall adjoining the salon has already been indicated: the green-veined Cipollino marble of the autonomous rear wall. However, the dining room needed a character of its own, independent of the salon. The salon is light, so the dining room for contrast, is dark. This means that the marble has to stop and each wall is consequently different, the differences meeting abruptly at the corners. White plaster; mahogany cupboards. Due to the variation in the wall finishes we observe for the first time a centrifugal force emanating from the centre, unchecked by the centripetal force of the wall-order.









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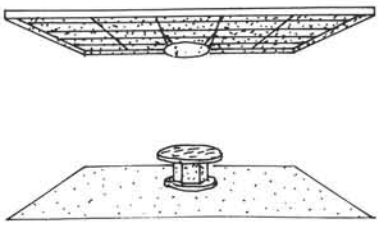

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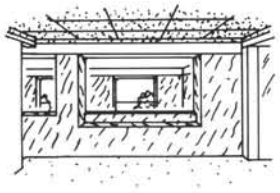

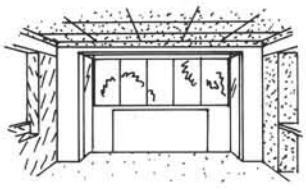

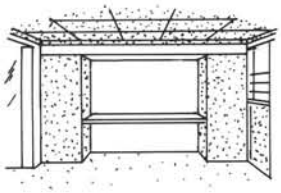

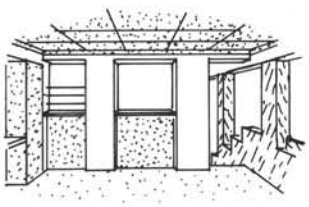

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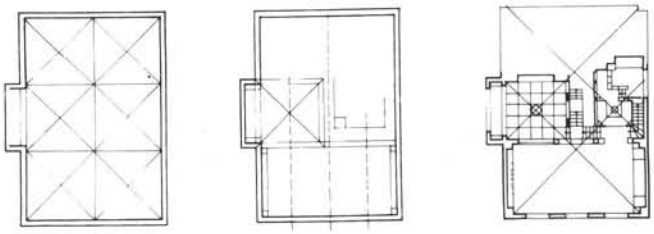
The mistress's room

The seating area in the room reserved for the lady of the house is panelled in lemon-wood, including its ceiling, which gives the room a box-like character. The texture of the wood contrasts with the openness of the dining room, in view of the symmetrical position of the two rooms (fig. 53c).

Proportions

As in the Tzara house, the salon is nearly twice as long as it is wide (fig. 53). Like Tzara again, the depth of the dining room, including the column zone, equals the depth in the salon of the space between the columns. The entire house is based on these proportions, within the walls, the whole house is in a ratio of 2:3. The dining room, including the column zone, is one-sixth of this arrangement, but turns out to have been moved the thickness of one column, in order to connect it with the secondary axis of the salon and to create the space needed in the centre of the house for the stairs. This one-column shift also occurs elsewhere.

The column thickness is the same as ceiling panel in the dining room, the salon is 22k x 12k, and the total inside is 24k x 36k. The dining-room lamp and the lamp in the mistress's room appear to form together the double centre of the house.



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Summary and conclusion

This article describes the "Raumplan" of private urban residences designed by Adolf Loos. In describing the "Raumplan" the author subdivides the term to distinguish between living plan, space plan and material plan.

In turn, each of these is formed by a complex of patterns.

The article starts with a survey of the patterns characterizing Loos' houses up to World War One. This was followed by a process of reorientation towards classical architecture in Loos' work of the first postwar years. This reorientation eventually led to the emergence of classical elements (column, cornice), and to the development of a method focussing on relationships (between material and space, interior and exterior). This new method evolved into its definitive form in the last three town houses to be built by Loos. These three houses, Tzara, Moller and Müller, are described in detail.

The living plan of these houses plan displays no innovations. As far as the living plan is concerned, Loos was conservative. Each living plan was realized in a different, concrete situation. The author shows how each situation generated a specific space plan.

Given the plan and situation, this space plan emerges as a (functional) necessity.

The material plan confirms the specific structure of the space plan. This confirmation is caused by the kind, place and size of the surface materials. The relationships between material and space are seen to develop increasingly into a serial organization.

This deprives the space plan of its character of necessity, its uniqueness emerging as a differentiated whole.

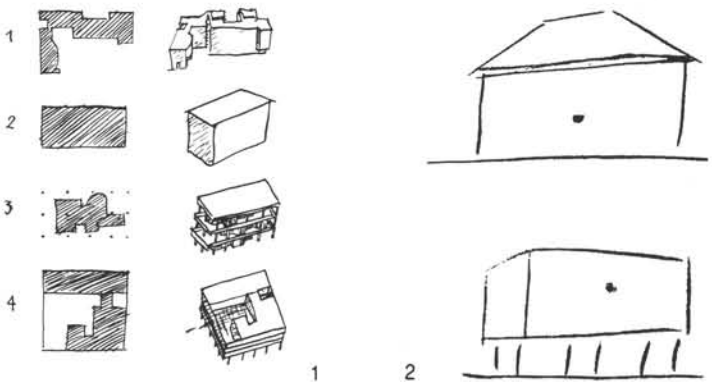
In this differentiation of space and material, Adolf Loos was revolutionary.

1. Good architecture can be described; it need not be drawn. The Pantheon can be described. Secession buildings can not.
   Heinrich Kulka: *Adolf Loos*, Vienna 1931, p. 18.
2. Where we spoke of the floor plan hitherto, since Loos we can speak of a space plan.
   Kulka p. 14.
3. The plan of the room under the current Japanese influence is centrifugal. The furniture is in the corners (not at a slant, however, but straight). The centre is free (space for movement). Artificial light belongs where it is needed. The middle is not accentuated.
   Kulpa p. 28.
4. The walls of a house belong to the architect. There he rules at will. As with the walls so with any furniture that is not movable, such as built-in cupboards and so forth. They are part of the wall, and do not lead the independent life of ostentatious unmodern cabinets. The manufacture of mobile furniture (brass bedstead, iron bedstead, table, chair, armchair, desk, etc.) should be left to craftsmen. Everybody should collect these objects according to his own desire, taste and inclination.
   Kulpa p. 24.
5. The house should be withdrawn on the outside, revealing all its riches inside.
   Adolf Loos: *Sämtliche Schriften*, ed. Franz Glück, vol. 1, Vienna, Munich 1962, p. 339.
6. The theatre has tiered, storey-high galleries or annexes (boxes), in open connection with a main space which occupies several floors. Loos realized that the cramped box would be unbearable without a view of the main space, and thus that by connecting a higher main space with a lower annex he could save space; he made use of this discovery in his residential buildings.
   Kulka p. 13.
7. As in all Loos houses, the stairs are in the living room (hall), rendering it more spacious. There is only any point in having a separate staircase in an apartment building shared by several parties. Inside stairs make a one-family house more spacious and comfortable. Rooms on different floors are easily reached from the landings.
   Kulka p. 33 (on Strasser).
8. As Richard Neutra has remarked, in that period Loos had transplanted to Vienna "the characteristics of H.H. Richardson, that is, false beams in light oak placed for their beauty and fireplaces of unplastered bricks".
   Benedetto Gravagnuolo: *Adolf Loos: Theory and Work*, New York 1982 p. 97.

Groningen, December 84 / October 86

translated by Ruth Koenig

Arjan Hebly



The 5 Points and form

The 5 Points of a New Architecture of Le Corbusier and Pierre Jeanneret were the result of many years building experience, and were introduced as "architectural facts indicating an entirely new manner of building."

In their most widely known form, the *5 Points* appeared in the book published to mark the opening of the Weissenhof Siedlung in Stuttgart (1927).[1] In order of their appearance in that book they are:

1. The Column (les pilotis); 2;. The Roof-Garden (les toits-jardins); 3. The Free Plan (le plan libre); 4. The Ribbon Window (la fenêtre en longueur); 5. The Free Facade (la façade libre).

The "Free Plan" is usually taken as the focal point of these *5 Points*, introducing what was an essentially new architecture, one which develops from the inside towards the outside. The column and the uninterrupted floor slab are the constructional premisses for this free plan: it is the function that gives the form to the interior space.

.However, although prompted by the *5 Points*, the external form of Le Corbusier's building are not solely the result of this inside-to-outside treatment. His important sketch[2] of differing modes of composition (fig. 1) permits an examination of the method he employed both for the functional programme and for the total organization of the design. Four designs, for four different villas, show the construction of the mass schematically and chronologically. The first is a composite "picturesque" form (Maison La Roche-Jeanneret, 1923/24), the second a simple box (Villa Meyer, 1925/26 and Villa Stein de Monzie, 1926/27. The third is a basic form defined by free floor slabs, with freely placed interior walls (Villa Baizeau II, 1929).

Finally, the Villa Savoye (1928/29), is shown as the most sophisticated scheme: the basic organization of this villa is formed by regularly disposed pilotis which support a white box with a projection on two sides. Within this basic form the outside walls and the curved lines of the roof garden are freely disposed.

In this deliberate recognition of a relationship between a free programmatic development on the one hand, and the requirements of the external form on the other, Le Corbusier's early work represents an important contribution to architecture.

However, the latent danger in Corbusier's own summary, as expressed in this drawing, is that it tempts us to see the development in too simple, or in too direct terms; sheer speed preventing us from grasping all the impilications of these formal concepts. After all, architectural form is radically transformed here, and it is in demonstrating that transformation that the house designs directly preceding the *5 Points*, Maison Cook and Villa Stein de Monzie, are important.

The *5 Points* themselves also contain references to the design theme of that periode - the theme of abstract form. Notably the last two points, the Ribbon Window and the Free Facade, point clearly in this direction; the Ribbon Window, for instance, gives no clue either to the various functions or to the floor levels behind the facade. The accurate detailing of the Ribbon Windows als conceals the differences between the opening and the fixed parts of the window. Finally, the cantilevered floor frees the facade from constructional elements (point 5). In short, the facade no longer refers to extraneous elements, but has become a canvas for aesthetic treatment. However, one problem still remains, and calls for another look at the *5 Points*.

Examining them again, and focussing on Point 1, the Column, and point 3, the Free Plan, we are particularly struck by the position of the second point, the Roof-Garden. Is this point not subordinate to the its flanking points? Is the Roof-Garden any more than a functional suggestion for the top; a digestion of impressions of the architecture of the Middle East?[3]

And yet the place of the Roof-Garden in the structure of the *5 Points* is understandable if we look at points 1 and 2 together, both have a bearing on the position of a building on its site.

One of the postulations in point 1, the Pilotis, is that they raise the house off the ground, lifting the rooms away from the damp ground surface and allowing light and air to circulate freely. The garden passes under the house, and the same amount of outside space is created on the roof.

Point 2, the Roof-Garden, goes on to state that "in general the roof-garden means that a city can regain its entire built area".

These first two points thus broach the idea that modern buildings are siteless objects in a continuous (urban) landscape. The various designs for the Maison Citrohan (1920/1922/1927) clearly illustrate this idea and its development. The massproduced automobile stood model for this siteless, massproduced house: a concept with far-reaching consequences for town planning. However, it also caused architectural form to undergo a major change.

In the elevated house, the focus of the architectural composition shifts to a higher level. In a sketch in *Précisions*, Le Corbusier illustrates this in a very direct way[4] (fig. 2): the one remaining point of reference of the facade, the door, the entrance, the centre of the classical composition, is no

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longer the starting-point of the whole organization. Here the entrance is in the dark, hidden under the radiant part of the building: what remains is a play of volumes in light.

Besides demonstrating its Free Plan and pilotis structure, Maison Cook (May/June 1926) displays for the first time the potential of the elevated house, with ribbon window and free facade integrated in an abstract form. It is no coincidence that this house was chosen to illustrate the *5 Points* in the *Oeuvre Complète 1910-1929.*

In the preliminary designs for the next villa, Stein de Monzie (July 1926/June 1927), we recognize Maison Cook features: a house lifted for the greater part off the ground. For various reasons Le Corbusier had later to place the villa directly on the ground. The formal means to which he resorted had been partly developed earlier in the villa Meyer (April 1925/ June 1926) and are (almost of necessity) classical: a frontal organization of the facade, an emphasis on a simple basic form and a classical manipulation of the middle.

Maison Cook

The dates of the commissions for the Maison Cook and the Villa Stein de Monzie followed in close succession: Cook on April 28 1928 and Stein de Monzie 9 days later, on May 7.

The Maison Cook site was 10 metres wide, a 10-metre deep strip beside the road was retained unbuilt and as a result the land availbale for building was only 11 metres deep. The house next door, on the left, was a Mallet-Stevens design and the highest point of the Cook house was not permitted to rise above the balustrade of the neighbouring roof-garden. In short, the external dimensions of the house were fixed.

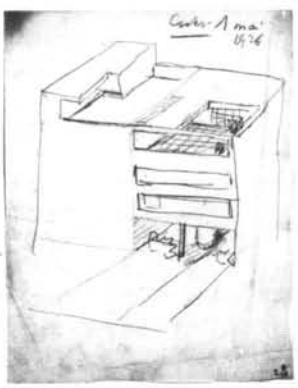
The logic of these restrictions may have helped Le Corbusier to draw the basic design so quickly. In a sketch of May 1st, three days after receiving th e commission, he had established the main features of the house (fig. 3): the area of 10 x 11 metres is divided into four equal rectangles (5 x 5.5 metres), one of which accommodates the service functions, all piled one on top of each other.

The height is divided into four layers: the ground level through which the garden passes from front to back, a garage, a small entrance hall and a staircase; the first floor with the bedrooms; the second floor with kitchen, dining and living rooms, all linked by the device of double-height with the third floor, with its library and large roof-garden.

In this preliminary sketch we can already see how raising the house off the ground affects the organization of the functions. In the elevated house the roof-garden is the most directly accessible outside area. This is why the living functions in Maison Cook are on the top floor, adjoining the roof-garden, and the bedrooms downstairs. In other words, the vertical organization of the traditional residence is reversed. In terms of space, this creates a surprising contrast between the compact, continuous staircase and the top, light, double-height living levels.

During the design process the column grid was changed into four quadrants of 5 x 5 metres each, with a 1-metre overhang at the front. This creates a "Free Facade" (fig. 5). The freedom of the facade is expressed by the two ribbon windows running the whole width of the house, by the sophisticated pattern of recesses and projections on the top floor with the roof-garden, and by the independent rhythm of the stanchions.

The disposition of the rooms on the two top floors is interesting. In the final design the two single-height rooms - the library and dining room - are situated crosswise with regard to the double-height living room: the single-height



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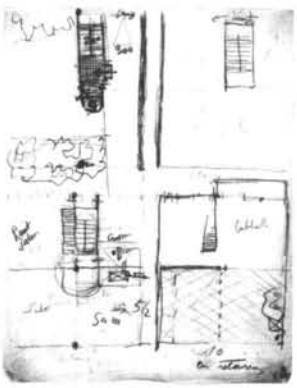
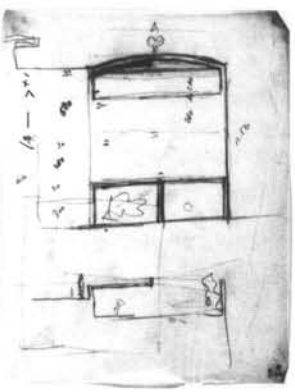
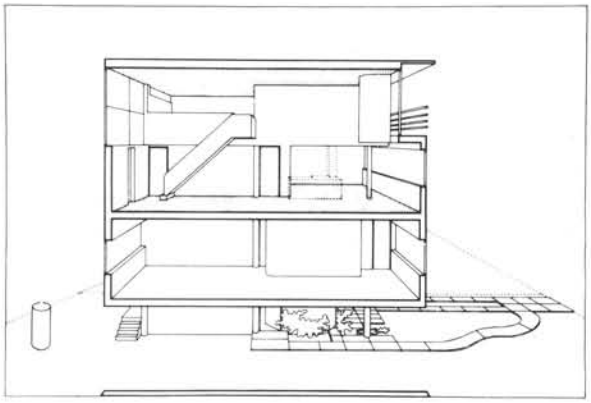




1. Le Corbusier, compositional comparison.
2. Le Corbusier, sketch from *Précisions*.
3. Le Corbusier, Maison Cook, 1st draft.
4. Le Corbusier, Maison Cook, floor plans.
5. Maison Cook, facade.
6. Maison Cook, elevated section.
7. Maison Cook, central perspective, with rotated floor and ceiling of the living storey (drawn by A.H.).
8. Maison Cook, living room.
9. Le Corbusier, Villa Stein de Monzie, *plastic design*, sheet 1.
10. Le Corbusier, Villa Stein de Monzie, *plastic design*, sheet 2.
11. Le Corbusier, Villa Stein de Monzie, *July 20 design*, 1926.



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dining room at the front, the single-height library above, at the back. This "spiral" of rooms is chiefly indicated by the overlapping of the floor (of the second level) and ceiling (of the double-height room and the library)(fig. 7).

This spatial construction is most apparent when the ceiling is not interupted by a beam. In the contract plan no beams are shown. They do however, occur in the construction drawings, with the important exception of the living-room ceiling.

Photographs of the living-room interior, however, show that one beam was used (fig. 8). The omission of the beam might have had two undesirable effects: the roof floor would have become thicker than the other floors (since it would have had to span a space more than twice as wide (10 metres), making the eaves of the flat roof floor (too) thick in the rear facade, and lowering the already restricted height of the floors still further.

Other important expressive elements of this interior are: the colour, the chimney and above all the spherical enlargement of the roof-garden, a huge formal element suspended in the double-height space.

The five points and abstract form

To sum up the *5 Points* als exemplified by Maison Cook, we have here the columns lifting the house off the ground (regardless of the house's internal organization); the roof-garden; the free plan (most in evidence on the bedroom level); the ribbon windows (which do not indicate the different functions behind them); and the free (front) facade, which does not show any supporting elements.

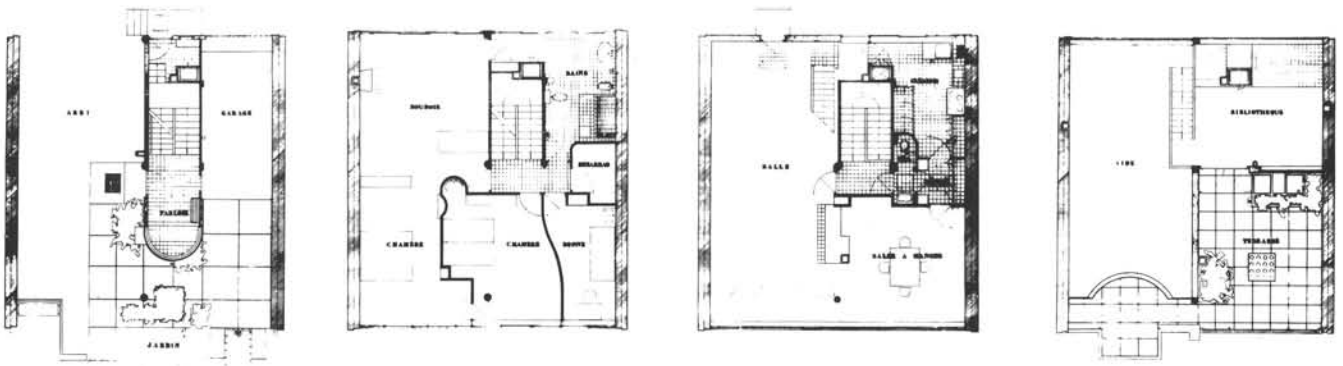
A further illustration of the abstract form is that the spatial organization of the house is not directly reflected in the facades. In the important front facade, for instance, the double-height living room is not emphasized by a large studio window. On the contrary there is a strongly horizontal organization, composition of two ribbon windows and the flat roof, which, together with the ridge beam, extend over the entire width of the house. To encounter the double-height room in the interior is all the more surprising because the facade gives no inkling of it. Finally, the principle of lifting the house off the ground at the entrance-level, gives rise to another possibility: the divisions of the house into an even number of bays; a column occupies the middle. A departure from the classical principle in which an odd number of bays results in an open bay in the centre.

Proceeding from the design of Maison Cook itself, one might also say that in a certain sense the logic of the size of the site may have generated the principle of an elevated building. The 10-metre site is simply divided into two halves of 5 metres each, a unit which Le Corbusier took wherever feasible as his point of departure.

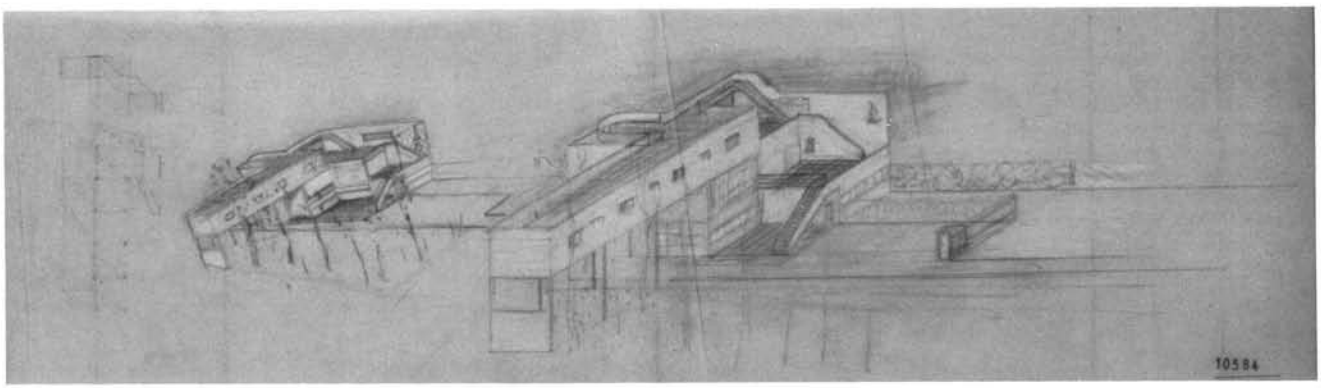
This did result in a central column, and the entrance, always in the middle of a bay (as in Maison La Roche or the Villa Meyer) would affect the equilibrium of the composition of the two part facade of the Maison Cook. There was no way that the entrance could be made part of the organization of the facade. The solution adopted was to lift the house proper and place the entrance below, set back a little.

Whatever the reason, in Maison Cook a number of Le Corbusier's points of departure merge for the first time, seemingly automatically, due to the very limitations of the Maison Cook commission. A characteristic of such "hermetic" works is that these achievements, as in the case of this last point, are almost unnoticed, so logical is the solution.

Three years later, with the more spacious site of the Villa Savoye, Le Corbusier's principles, together with his new



4 PILOTIS REZ DE CHAUSSEE ETAGE TERRASSE



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formal devices, reach a new and more manifest climax. This design accepts the free manipulation of the centre and entrance of the elevated house: central column and central entrance are one behind the another, both on the same central line.

Villa Stein de Monzie

The Villa Stein de Monzie (May 1926/June 1927), the design of which comes between that of Maison Cook and Villa Savoye, is the result of an elaborate design process in the course of which the essential components were modified right up to the actual state of building (e.g. the form of the double-height spaces).

The start of the design process may be divided into two periods, the first ranging from the date of the commission, May 7 1926, to *July 20* (= 44 days), and the second from the *design of July 20* to that of *October 7*, with the ABABA rhythm (= 78 days).

Studies on the history of this house's design concentrate particularly on the issue of whether experiments with this so-called constructional ABABA whythm (5:2.5:5:2.5:5 metres) had taken place prior to the *design of July 20*, and whether this ABABA rhythm derives directly from Palladio's Villa Malcontenta[5], or emerges logically from the program.[6] The extant drawings do not permit unequivocal conclusions to be drawn.

Although an incidental answer to the question is suggested, the main issue here is to trace the formal characteristics of abstract form as implied by the *5 points* and the elevated, siteless house, and as initiated in Maison Cook. This article is therefore confined to the aspect of the design process that is directly concerned with the new achievements stemming from Maison Cook.

I shall therefore examine the connection of the actual design modifications. It is in the design process that we can see how the steps may be interrelated and how one step generates another.[7]

Program and situation

Although Le Corbusier made notes of some of the requirements, one gets the idea that the program gradually crystallized in discussions between the client and the architect about the various designs.

The principal occupants of the house were: Mme de Monzie, her daughter, and M and Mme Stein, each with their own spacious (bed)rooms and bathrooms. The shared living area consisted of the hall, a salon, library and dining room.

Other program items were a kitchen, guest rooms, staff and service rooms, a garage and a caretaker's apartment. A collection of modern sculpture als had to be housed, as well as the owners' antique furniture.

The site is in a residential area with detached houses, and is 186 metres long and 27 metres wide. A few groups of trees and shrubs on it were carefully noted. The north point is parallel to the site from back to front.

Two sketches

As stated above, the preliminary designs for the villa fall into two groups: the *July 20 plan* and the designs with a ABABA rhythm.

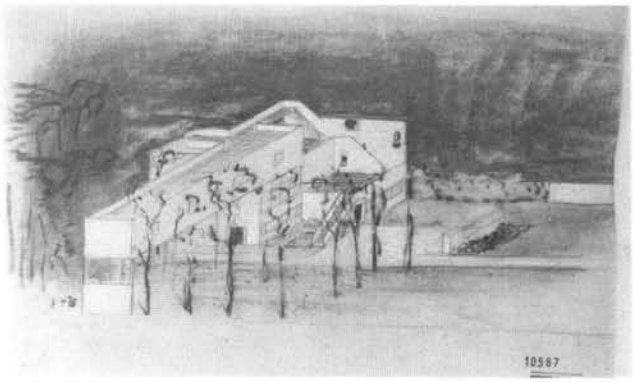
The striking thing about the first group is that the plan as designed occupies the entire width of the site. This is a remarkable departure in a residential district of detached houses. The two "blind" walls at the sides arouse the suggestion of a terraced house. In these designs part of the garden passes under a raised section of the house from front to back. Notably this feature acquires extra significance when the house is placed across the entire width of the site, like a kind of "wall". If the house had been placed some distance away from the boundaries of the site, the need for, and tension of, an elevated section would be less acutely felt. There is some resemblance here to the Maison Cook idea.

Two designs use the entire width of the site: *a plastic design* (figs. 9 & 10), and the more abstract *design of July 20*.

Of this first there exist two coloured sheets of paper on which three roughly identical oblique projections are drawn. On the sheet with two drawings of the house there is also a scribed ground-plan. The other sheet is more detailed. The fact that this design was drawn three times demonstrates that it was more than a passing fancy.

This may be said to develop the potential of the elevated house that Maison Cook had promised.

In the *5 points*, for instance, Le Corbusier had high hopes of the quality of the outside space under the building, where the garden appears to continue uninterrupted. On examining photographs of the Maison Cook garden (fig. 6), we see that gravel and tiles dismissed any idea of an uninterrupted garden. It is dark and rainless: in short, nothing could grow there. Le Corbusier was well aware of this, as is demonstrated by the changing designation for this spot in the Maison Cook drawings: up to the specification stage it was



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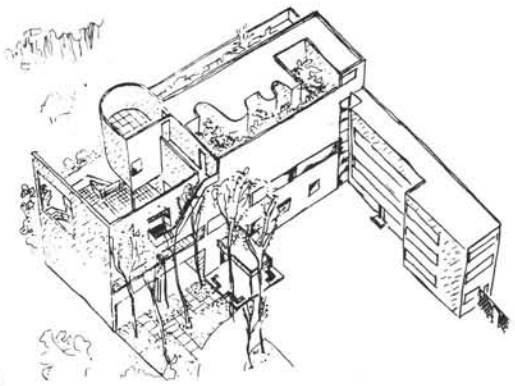

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called a "jardin", followed by a period during which it was nameless, after which it was labelled "abri".

In the *plastic design* for the Villa Stein de Monzie, the problem is avoided by creating a double-height area and narrowing the raised part to a 5-metre strip. The high columns, echoing the nearby tree-trunks, reinforce the impression of a continuous stretch of garden under the house.

The entrance, as in Maison Cook, is under the raised part of the house, thus no longer dominating the composition. This design has no centre point. The sketches display Le Corbusier's most sweeping experiment in terms of abstract sculpture during that period; and three items require special attention.

The dispositioning of the identical constructional bays produces a serial composition, which can be read in the top "bridge" with square windows. The width (of 27 metres) is divided into five 5-metre bays and a 2-metre zone. This serialism carries on from the logic of the "Domino" skeleton (1919), which is marked by one finite and one infinite direction.

A formal problem of serial composition is not the accentuation of the centre, by means of axial symmetry, but how to finish at the extremes. In this design the series ends in the spirally staggered terraces. The so-called "architectural promenade" is almost organically linked with these staggered roofgardens.

Finally, the design is not dominated by a single basic form (the box). It is more a case of several forms added together, of tension between a "raised" section on the left and a "solid" section on the right, and of inversion of these parts in the fourth bay.

This design presents a number of new visual aspects, an important modern feature being serialism in relation to symmetry. The design is presented only in "three-dimensional" drawing, in this case oblique projection. This marks a departure from the usual "elevations", which are more at home in a world of symmetrically designed facades.

The design of 20th July

After this undated sculptural design, matters progressed towards the actual *design of July 20* (fig. 11).

The modified design could have been prompted by the disadvantageous position of the terraces in the sculptural design: on the north-facing front of the villa. The principle of having the entrance at the side, however, made rotation of the design a simple matter. It did pose a problem, though: the view from the drive now ended with an uninteresting volume, lacking the tension of the previous design, with what may have been a rather overabstract image. To counteract this, the *July 20 design* re-emphasizes the frontality of the facade, with the entrance now the most important symmetrical element, in the middle.

The elevated part re-introduces the useless single-height area (see Maison Cook), and covers far too large an area (175 m^2). Because the raised part is no longer related to the entrance, it forfeits any function it may once have had in the composition and organization of the house.

The *July 20 design* retains its serial bays. Notably in the plan of the bedroom storey, the consequences of this are manifest in the arrangement of the functions (fig. 13). Identical program items are ordered in the infinite direction envisaged in the "Domino skeleton" into a so-called "zone ground plan". This search for a feasible system for ordering a programme in a free plan was one of the things that preoccupied Le Corbusier in this design.

The *July 20 design* also presents a splendid architectural promenade along the high walls of the terrace, in particular, the stairs soaring into the sky from the facade create a magnificent, albeit alienating, effect, nevertheless, the terrace and route have a more extraneous character than in the previous design, in which the route passes the staggered terraces.

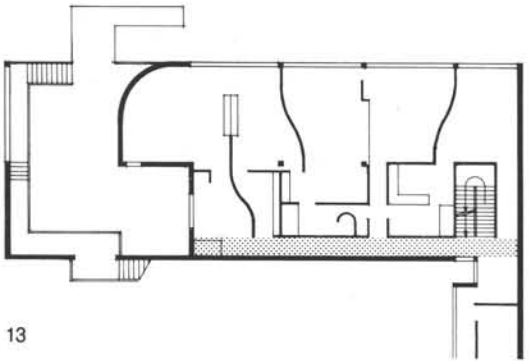
Finally, the mass is again dominated by a single basic form: the box. In the right-hand section the enormous screen of the terrace completes the box.

The *July 20 design* takes a step towards more classical design principles: the entrance in the middle, axial symmetry and the emphasis of a single basic form.

The designs with an ABABA rhythm

The chief reason for changing the *July 20 design*, apart from flaws in the brief, was in my opinion the unfeasibility, from the point of view of the neighbouring houses and the general acceptance of the villa type (by local authorities), of a three-storey house with blind side-walls, that stretched from one boundary of the site to the other.

In one sketch, for instance, a first indication of the functions (fig. 14), the width of the house seems to be what was left after the subtraction of two clearly indicated distances from the boundaries, 4 and 2 metres respectively. All the more so in view of the fact that only these 4 and 2 metres, and absolutely no other measurements, are noted as a requirement, obsessively, on every single ground-plan. In short, the final design had to keep its distance from the boundaries, becoming 21 metres wide instead of 27.



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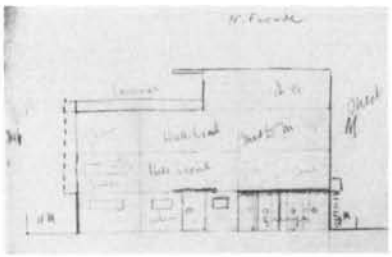

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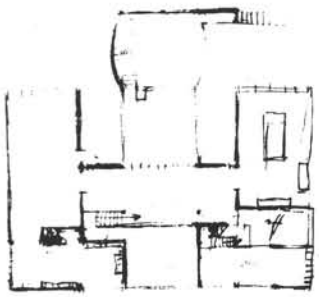
As we saw earlier, such a measure deprives the elevated house of much of its tension, since it is now encircled by the garden. The elevated section in the *July 20 design* no longer a structural component of the composition and organization of the design, it seems an obvious step to place the whole thing on the ground.

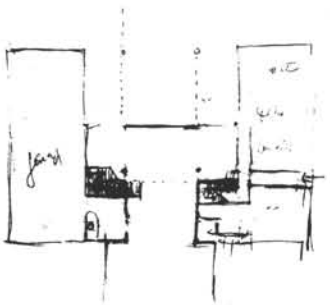
This brings us close to the ABABA rhythm in Le Corbusier's design system.

The possible maximum width of the house, as we have seen, was 21 metres. Le Corbusier's approach suggests a width of 20 metres: 4 times a 5-metre bay. However, the centre is then occupied by a column, inconceivable in the front facade of the classic villa. This is the place for the entrance, certainly not for a column. Indeed, in all the early plans of this last version, the entrance is in the middle (fig. 15). For the proportions of the house this means: one 5-metre bay in the middle, with a remainder of 7.5 metres at either side. These can only be divided into a half-bay of 2.5 metres and one of 5 metres.

The ABABA rhythm is then (again) a fact.

translated by Ruth Koenig





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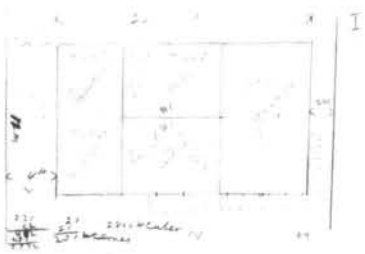
Notes

1. Deutscher Werkbund, *Bau und Wohnung*, Stuttgart 1927, p. 27.
2. Le Corbusier & Pierre Jeanneret, *Oeuvre Complète*, vol. 1 1910-1929, Zürich 1936, p. 189.
3. S. van Moos, *Elements of a Synthesis*, Cambridge, Massachusetts, 1979, p. 72-73.
4. Le Corbusier, *Précisions, sur un état présent de l'architecture et de l'urbanisme*, Paris 1930, p,. 59.
5. Colin Rowe, "The Mathematics of the Ideal Villa", *Architectural Review*, London, vol. 101, March 1947, p. 101-104.
6. Tim Benton, "Villa Les Terrasses", *Les Villas de Le Corbusier 1920-1930*, Paris 1984, p. 165-189.
   Marc Dubois, "Twee woningen worden één", *Archis 1*, Deventer, January 1986, p. 45-52.
7. Compare Rudolf Wittkower's superb analysis: "Michelangelo's Bibliotheca Laurenziana", *The Art Bulletin*, vol. XVI, 1934.
   Reprinted in *Idea and Image*, Over Wallop, Hampshire 1978, p. 11-72.

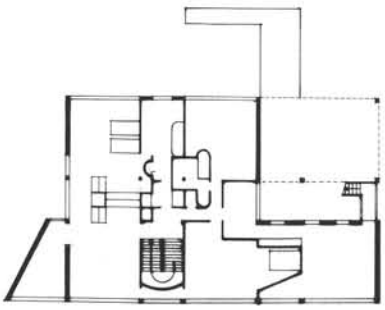


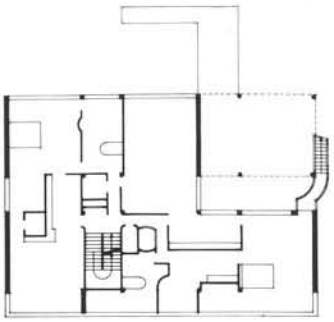
13. Le Corbusier, Villa Stein de Monzie, floor-plan, bedroom storey, *July 20 design* (drawn by K. Overmeire).
14. Le Corbusier, Villa Stein de Monzie, function drafts.
15. Le Corbusier, ABABA rhythm, symmetrical draft with entrance in the middle.

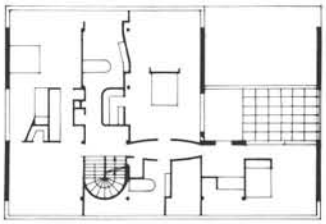
November 1926

January 1927

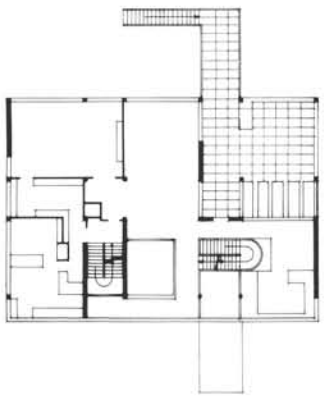
June 1927

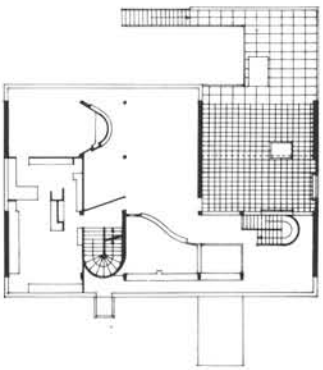






second floor





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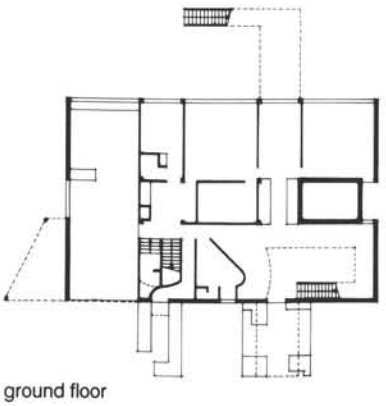
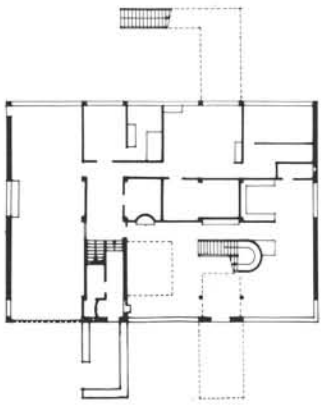
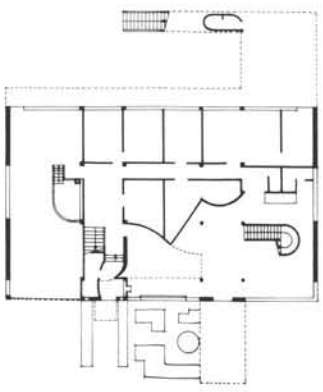
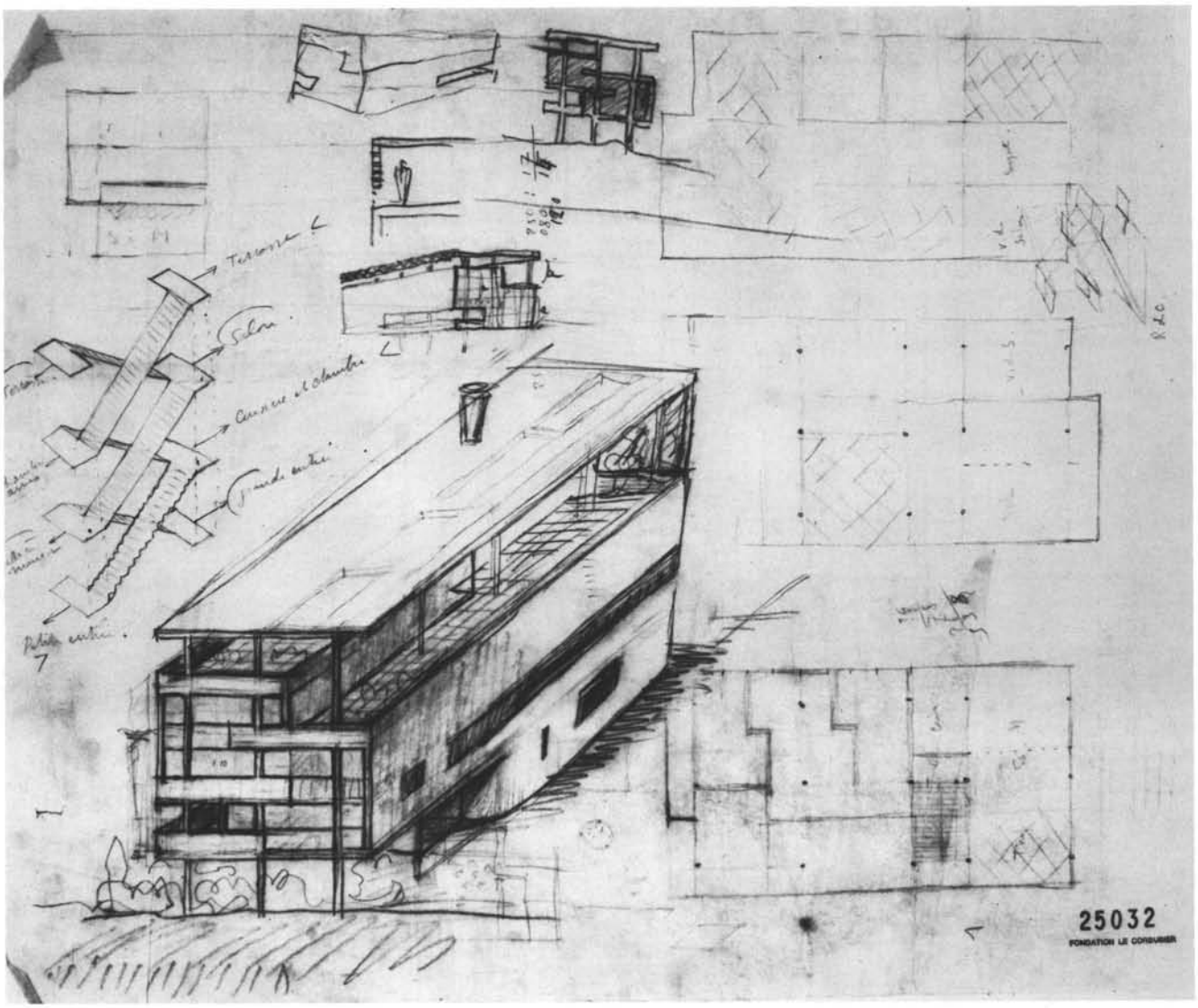






ground floor

1. Villa Baizeau; preparatory sketches for the first project February 1928 (FLC 25032)



Max Risselada

Free Plan versus Free Facade

Villa Savoye and Villa Baizeau revisited

With the design and realisation of the villa Stein-de Monzie during the years 1926-1928 a phase in the work of Le Corbusier was brought to a close, a phase in which the functional, spatial, and formal possibilities of the Domino frame and the Citrohan prototype were investigated.

Like the Maison Cook this house, too, is exemplary in the way it evokes the "five points of the new architecture" and relates them to one another. In the Maison Cook this had far-reaching consequences for the ordering of the programme and for the house-town relationship. Here the traditional vertical arrangement of the town house is reversed - bedrooms downstairs and living rooms above - while the ground floor is left open. This means that the entrance no longer forms part of the facade and thus ceases to determine its composition.

The realised design of the Villa Stein-de Monzie, on the other hand, is "traditional" in its programmatic organisation: servants' rooms on the ground floor, living area on the piano nobile, and bedrooms above. The facade can also be deemed "Classical" in the sense that the entrance governs its composition, in this case by a game of displacements. The central axis, for instance, is not occupied by an entryway, but is defined by two great openings: on the roof the loggia, and on the ground floor the big window of the entrance hall. On either side is a door with a canopy.[1]

In this house the accent falls most heavily on formal experiment: the way in which a traditional and a modern system of organisation relate to one another. Consequently it is this aspect that is focussed on in the many interpretations accorded this villa. One authoritative interpretation is that of Colin Rowe and Robert Slutzki; they were the first to establish a connection between the frontal, layered organisation of the design and the compositional devices of deconstructions, overlapping planes, and the shifting relations of figure and background as developed in the Purist paintings of Le Corbusier in the twenties.[2]

Less attention has been paid till now to the vertical organisation inside the Villa, particularly to the spatial relationship between the ground floor entrance hall and the living quarters on the piano nobile. The many variants drawn during the successive design stages demonstrate the formal problems that arose when incorporating stairs and double-height spaces in the Domino frame. These were spaces that in essence could no longer be defined by walls, but rather obtained simply by puncturing the floor.[3] These versions make explicit what the well-known perspective drawing of the Domino frame only suggests: they confirm the unassailable nature of the floors by placing the stair outside the unit.

The Villa Stein-de Monzie thus appears to illustrate perfectly the ideas which Le Corbusier put forward in 1920, long before he put them into practice in the houses he built later in the decade. Thus in *Towards a New Architecture* he wrote: "Mass and surface are elements by which architecture manifests itself. Mass and surface are determined by the plan. The plan is the generator... The plan carries in itself the very essence of sensation."[4]

From this quotation it should become clear as to what position the plan occupied in the theoretical observations of Le Corbusier before he began investigating the potential of the Domino frame in the design of a house. Thus the plan generates not only the elevations; it ensures the spatial experience itself. And this in spite of the fact that its significance lies outside it: for the plan always comes wrapped in that other element - the volume.

With the introduction of the Domino frame this emphasis on the plan is only strengthened further; the horizontal section dominates all other dimensions, while the vertical section seems to go unnoticed. This is paradoxical if we observe that the chapter devoted to the plan in "Trois rappels à Messieurs les architectes" is illustrated with axonometrics from Choisy's *Histoire de l'architecture*. These demonstrate the very unity of plan, section, and elevation as elements that define one another. These axonometrics are, however, drawn in a definite order: first the plan, after which sections and elevations could be measured out. It is as though the making of these drawings governed in the long run the mental process behind the physical proposal.

In the work of Le Corbusier the distance between floors seems no longer of importance; only by way of stairs and ramps can the vertical dimension be realised. What is striking, then, is the negligible number of sections illustrated in the *Oeuvre Complète*, as if there is little more between the floors than that already deductible from the plans.

Should the internal verticality of the Domino frame consist only of the layering of floors, there then remains the facade as the only continuous vertical element - as the free facade. This cannot, however, be interpreted as a section through the building, not being determined by its internal organisation. Like the free plan the free facade is organised according to its own laws, its grid coordinated by the abstract system of "regulating lines". "Freed" by the frame, and bound by their own laws free plan and free facade are set against one another.

This confrontation takes place in the zone created by the cantilever of the Domino structural unit: the strip between

2. Villa Savoye; floorplans and perspective drawings of an interim phase for the first project September 1928 (FLC 19583)

the columns and the skin of the facade. It is this strip which during the formulation of the "five points", during the design process of Maison Cook and the Villas Meyer and Stein-de Monzie respectively, was allotted an increasingly independent position.

In the front facade of Maison Cook the position of this strip is still ambivalent, partly because here only one continuous column was necessary. On the storey of bedrooms this strip is indistinguishable from the rooms behind; at the living quarters and roof half of it is a component of the spaces behind the facade - the dining room, the roof garden. At the double-height drawing room in the other half its allegiance is to the facade.

In Villa Meyer the independent status of the strip on the facade becomes a reality. This is emphasised further still by the fact that in this case the facade is self supporting, with facade columns placed before those of the Domino frame itself. At the level of the living storey this strip extends unimpeded by any obstacles along the entire facade, flanked on the inside by free-standing elements in which small components of the programme are brought together - the stairs, a servery.

Finally, in the front facade of Villa Stein-de Monzie the independency of the strip is expressed both in the exterior, through the use of floor to ceiling fenestration in the side elevations, and the interior, where this strip acquires self-sufficiency as a bridge between two voids, one inside and one out. Interior and exterior are, as it were, interchangeable.

Thus during the design process of the above series of houses the spatial consequences of the Domino frame gradually became apparent. With this the dimensional order for which the Maison Citrohan stands - the vertical element - was during the process in danger of going by the board. It is a long way from the Villa Schwob of 1917, where a central space two storeys high welds the surrounding rooms together, to the Villa Stein-de Monzie, where the void seems no more than a hole in the floor. Here the void is not the centre of the house any more, but is there merely to highlight the succession of objects lining the *"promenade architecturale"*.

In the realised versions of the Villas Baizeau and Savoye - cited as examples illustrating the last two of Le Corbusier's Four Compositions of 1929 - floors surfaces are continuous and the spatial development predominately horizontal. Only the connections between floors (the stairs and ramp) constitute a vertical element in the interior. The only room involving more than one storey - for we can consider the

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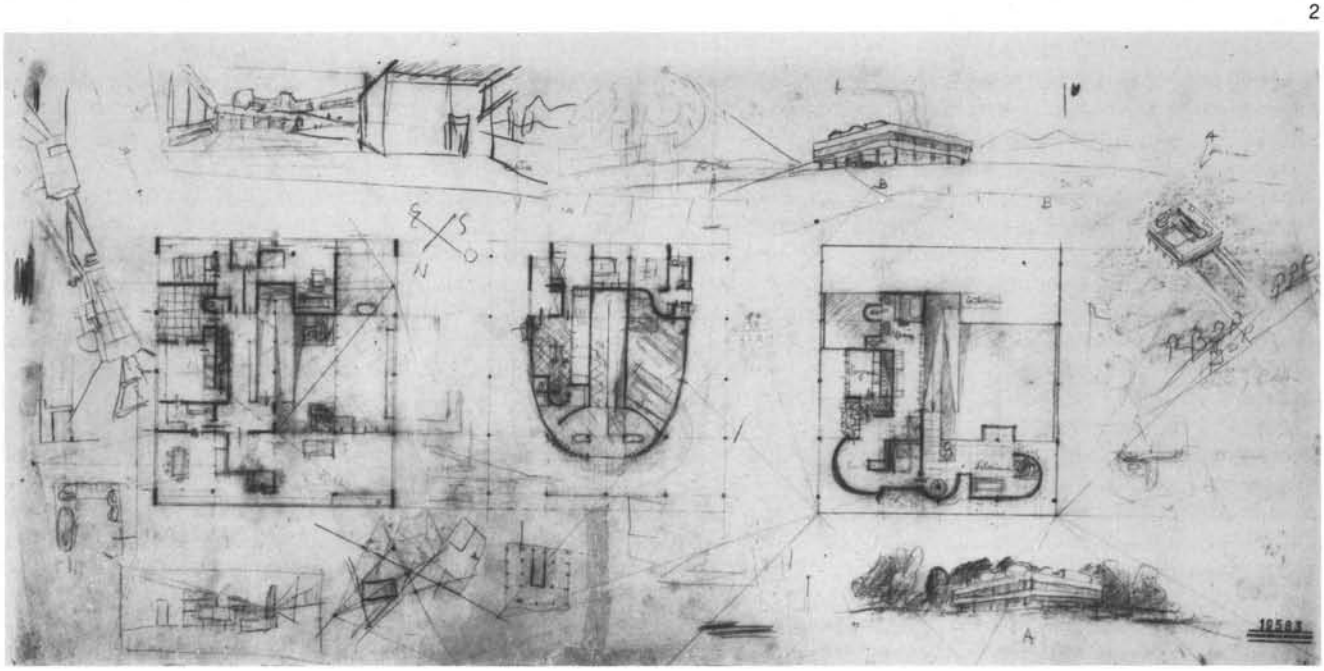


first-floor terrace of the Villa Savoye as such - was effected by omitting a number of floor areas. In these two villas the free facade has been removed; each floor can be read off in the facade. With this the principle with which the proportioning of the free facade was determined (the "regulating lines") has been eradicated. These facades are based on a modulor system of measurement governing the dimensions and the positions of the various components in relation to one another.

If we were to look into the protracted, complex design process of both villas, it would become apparent that establishing the primacy of the plan above the cross section was not all plain sailing. It was the first designs in particular of these two villas that brought together in synthesis the diverse qualities embodied in the Domino and Citrohan models, namely horizontality and verticality, and column and wall respectively. (fig. 1-2)

We can even discover traces of this desire in the way both villas are treated in the *Oeuvre Complète*. Here, of the first design of the Villa Baizeau only the sections are published, supplemented by a pair of perspectives of living room interiors meant to clarify the relationship between the double-height space and the mezzanine floor. Of the realised version of this villa we are given only the working drawings of the three plans and a section, which owing to its layered construction is at first scarcely distinguishable from the plans. Of this realised version no photographic illustrations are included in the *Oeuvre Complète*.

Remarkable is the way the Villa Savoye is presented in the *Oeuvre Complète*. In volume one (1910-1929) only the initial version of this design is published. At first glance it differs little from the built version. In this design there are, however, a number of departures at roof level: the private rooms of Madame Savoye, accommodated in a free-form volume and reached from within by the stair only. In this project the continuous ramp linking from the first floor the two roof gardens is on one side bordered in its entirety by a wall of the roof structure.

The second volume of the *Oeuvre Complète* (1929-1934) commences with extensive coverage of the realised version of the Villa Savoye, emphasising once again the special position accorded this, the last of the Four Compositions. In this stripped-down version Madame Savoye's rooftop quarters have been dispensed with: the curved walls of the sheltered sun terrace are all that remain of them. What is remarkable, however, is that the cross section illustrated on the same page as the floor and roof plans belongs to the first version. This section follows the ramp: the elevation is of the wall formed by the original roof structure which accompanies the ramp up to the roof garden. And though the captions place particular emphasis on the properties of a ramp - "offering an approach entirely different from a stair made up of treads. A stair divides storeys, a ramp unites them" - this drawing makes especially clear to us the importance of the double-height wall, which would have given the terrace both an extra vertical dimension and an orientation to the facade. It seems as though the architect wanted to make clear, both to himself and to us, what had been lost during the course of the design process.

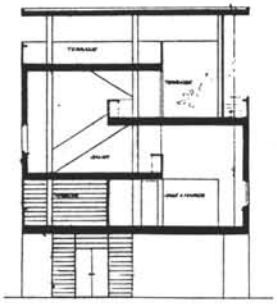
As much as Le Corbusier, possibly without realising it, was attached to the spatial characteristics of the original versions of both Baizeau and Savoye - versions in which the vertical dimensions still play such an important role - it can be inferred from the protracted design process that both projects evolved under pressure from external circumstances.

Villa Baizeau

A visit to the houses at the Weissenhofsiedlung in Stuttgart was what prompted the contractor Lucien Baizeau to commission Le Corbusier and Pierre Jeanneret to design a house near Carthage, Tunesia, overlooking the Mediterranean Sea.

In Stuttgart Le Corbusier demonstrated in two buildings his two basic dwelling types - the Maison Citrohan with its closed, vertical orientation, and the Domino frame with its open and horizontally developed potential. Though both houses are built according to the "five points" and have a frame, they differ in their use of the latter. In the Maison Citrohan it merely raises the house off the ground; in the dwelling proper the frame is confined to the walls and plays no spatial role. With the twin houses that constitute the other example the reverse is the case. In them the spatial consequences of the Domino frame are demonstrated to the full.

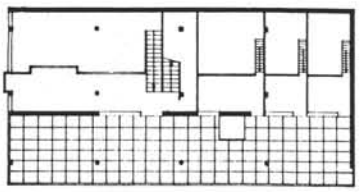
In the first version of the Villa Baizea these two concepts are fused. This occurs where five levels are stacked, the Domino frame forming a pair of bays with on either side a cantilever. Each bay contains a double-height space alternating vertically, in which not only the floor between the columns is absent, but also the projecting element. One result of this is a free-standing column spanning two storeys. In the centre this thereby gives rise to a strip one storey high laid lengthways round the central row of col-



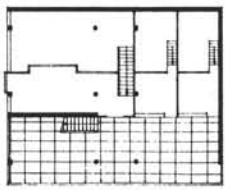
February 1928

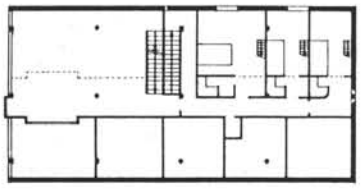
March 1928

July 1928

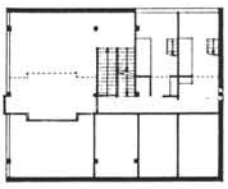


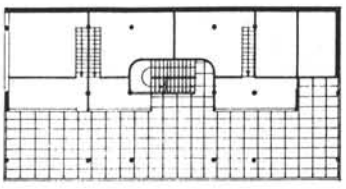
third floor

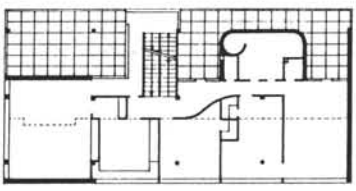




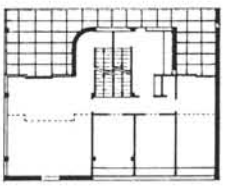
second floor

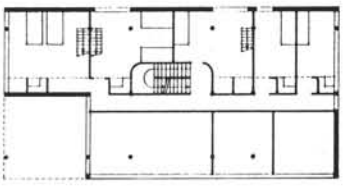


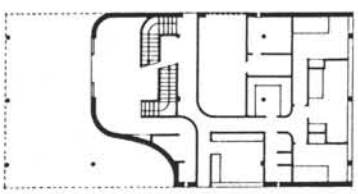




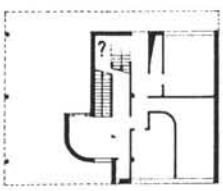
first floor

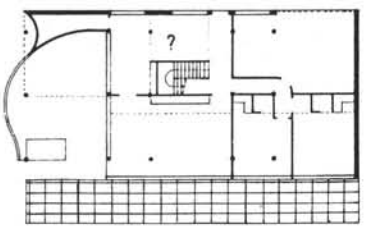






ground floor





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3. Villa Baizeau; preliminary designs respectively February 1928, March 1928, July 1928 - floorplans
4. Villa Baizeau; project March 1928; axonometric projection of the first reduced version (FLC 4878)
5. Villa Baizeau; project July 1928; floorplans of one of the variants (FLC 24968)
6. Villa Baizeau; project July 1928; sections of one of the variants (FLC 8479)

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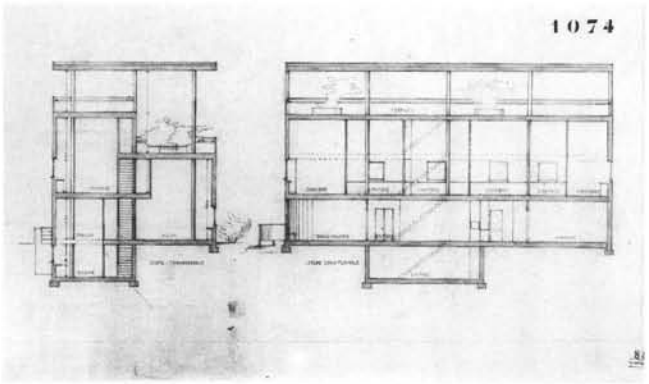

umns. At the living area this strip possesses an ambivalent character; to the higher of the two upper storeys it functions as a recess, to the lower as a gallery. At the sleeping and utility rooms this zone becomes the corridor that serves the independent double-height spaces.

Central to the block are the stairs separating the living and sleeping quarters. In this arrangement the building is fixed in one direction, i.e. in the width. Lengthways it can be extended at both ends: a characteristic of the Domino frame.

In section it is easy to discern the spatial structure of the Maison Citrohan. Equally, we can see here the first step towards the cross section of the later Unité d'Habitation, where two dwelling units with double-height spaces on the facade are ranged round a central corridor.

What was, in the Maison Citrohan, hitherto kept hidden behind the "closed" lateral walls is here completely visible in the front elevation, namely the cross section itself. And though both the lateral facades are non-loadbearing - they occupy the edges of the projecting element of the Domino frame - it is their very solidity that ensures the special qualities of this cross section as well as orientation to the view out. In both perspectives published in the *Oeuvre Complète* this relationship in particular between the large opening in the facade and the tall space with mezzanine is made explicit.

The cross section of the Villa Baizeau could well have been devised to effect a basic, natural ventilation. Thus on the uppermost floor are to be found the terraces covered in their entirety by a canopy.

Although based on the principles of both houses in Stuttgart - the client's reason for his commission - Baizeau was not happy with this design for his house. Ignoring the fact that because of the size it would have been too expensive, he was opposed in particular to the open vertical connections between living spaces. He also desired a terrace surrounding each floor as protection from the sun. He himself made a suggestion in this direction, of a building three storeys high with a conventional subdivision. On the ground floor were to be entrance and utility rooms, on the first floor the kitchen and living area, and above, the bedrooms.

Just how much Le Corbusier and his colleagues were attached to this new synthesis of Citrohan and Domino is apparent from the tenacity with which they followed up this concept in the subsequent, more economical proposals, against the wishes of the client.[5]

In the first place the cuts made were in the possibilities offered by the original concept, namely its flexibility lengthways. The length of the volume was diminished by half, creating an almost square plan. As a result the number of bedrooms was reduced as was the available living space; the cross section, however, remained intact. (fig. 4)

There then followed a series of variations, in which the original substructure of one storey high was abandoned. It had contained the entrance, garage, and utility rooms, which now had to be accommodated in the main volume. This necessitated the rearrangement of programme components, which meant sacrificing the clarity of the original concept. Entrance, garage, utility room, and kitchen now had to share the ground floor with the drawing room, which

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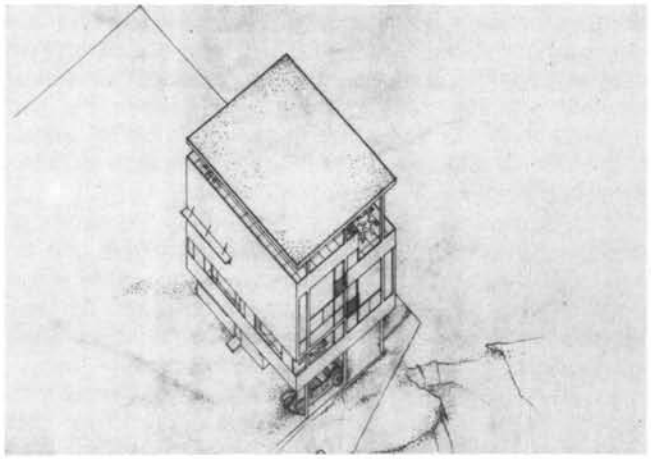

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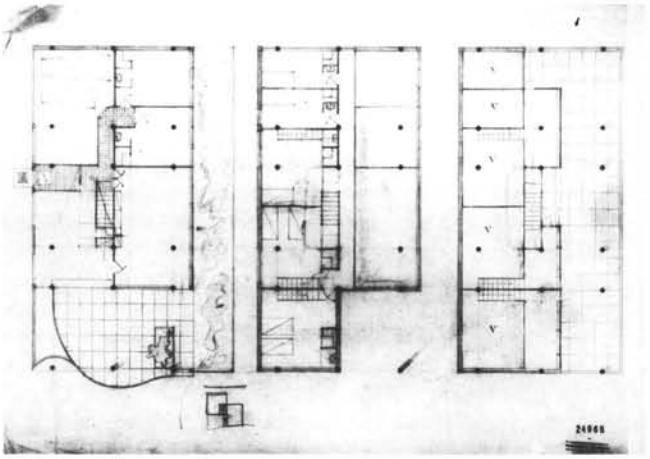

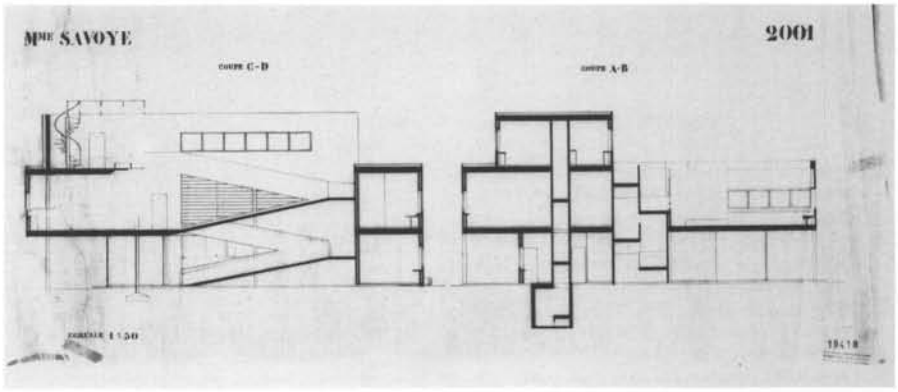

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was provided at the front with a roofed terrace, living and sleeping areas intermingled in the cross section, the stair was rotated 90°, and so on. (fig. 5-6)

In the end the original concept turned out to be too rigid, too inflexible, to assimilate the changes, and so Le Corbusier decided to revert to the obvious solution offered by the Domino frame. In this solution the consequences of this concept are carried to their limits. The columns and floor slabs with parapets on the projecting section define the main structure. Inside the programme of each storey has been given shape in complete freedom and expressed in the facade; the programmatic division is based on the original proposal of Baizeau himself. The vertical cohesion of the interior was achieved by a stairwell with three flights per storey, which made it possible to join up with each level at a different position. There is no facade in the traditional sense.

The disappointment dogging the entire proceedings can be read off in the way the Villa Baizeau was eventually published in the *Oeuvre Complète* and in the terse comments accompanying the third of Le Corbusier's Four Compositions of 1929, illustrated here by this villa: "Very easy, practicable, allows for combinations".

The Villa Savoye

Work on the Villa Savoye began in September 1928, immediately following the radical change of course in the design process of the Villa Baizeau. We may assume that it was the experience gained during the design of the Villa Baizeau that made Le Corbusier hark back to the Domino frame with its continuous floor surfaces, where the programma could be elaborated storey by storey.

In the volume of the Villa Savoye the characteristic orientation of the original Domino frame has vanished. In both directions there are four structural bays of 5 metres, which cantilever on two sides - through which the volume acquired a certain orientation - and which played an important role in fashioning the elevations. In this structural setup the programme's components are organised storey by storey each in a different and specific way.

On the ground floor are the entrance hall and utility rooms - garage, servants' quarters - in a volume that shrinks back from the building's periphery; the curved shape of this volume derives from the turning radius of a car. On the first floor are the majority of living functions; these are, in contrast to the ground floor, ranged along the periphery round a terrace which borders on a facade too, thus acquiring the status of a "room". At roof level are the private rooms of Madame Savoye, accommodated in an articulated, asymmetrical volume having reference to neither periphery nor frame. Only where it meets the ramp does this volume concur with the building's order. (fig. 8)

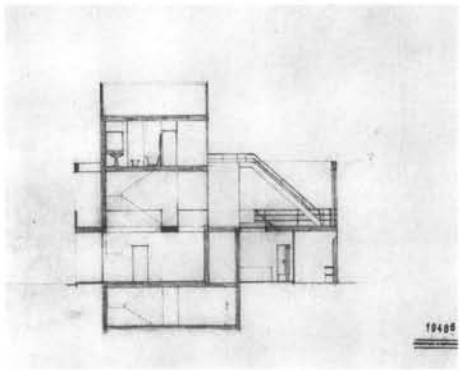
This division into three is also clearly recognisable in the outward appearance. As opposed to the built version of the Villa Baizeau the vertical order of the Villa Savoye is finite: a dominant middle layer with closed facades floating above the setback ground floor and crowned with a roof structure. In this tripartite arrangement, however, there is further ordering involving two floors by the facade columns, which on the ground floor are round "pilotis", and on the first floor square posts between the strip windows.

The spatial experience of the interior is forcibly determined by the way in which one moves through it, and the design of the connections between floors is the only means of achieving vertical cohesion. The explanatory text in the *Oeuvre Complète* includes the following: "Arab architecture can teach us a great deal. It favours the act of walking; this is the means, by moving from one place to another, with which to experience the articulation of architecture. Here is a principle opposed to that of baroque architecture, whose conception has a theoretically determined centre. I prefer the lessons taught by Arab architecture." All movement eventually come to rest at the terrace on the main floor shown with some emphasis in the first design as an "interior". Already mentioned is the continuation of the facade through which this space is given windows too - albeit minus the glass.

Essential here is the presence of the wall of the roof structure which accompanies the ramp. This wall ensures that the terrace is not seen as a space resulting from the omission of four floor surfaces: it determines the spatial nature of the terrace, its height and orientation. This vertical element also takes care of the link between the two annexes - the living room on one side and the roofed section of the outdoor area on the other - which compensate for the missing ceiling.

This observation appears confirmed by the series of designs carried out once it transpired that this one far exceeded the budget.[6] Little is known of the wishes of the Savoye family as regards this country villa and we may assume that Le Corbusier was given a free hand as to the spatial disposition of the programme components. We may therefore assume also that it was, and remained, his wish to retain the roof structure during the "economy drive" that ensued, perhaps for the reasons suggested above.

7. Villa Savoye; preliminary designs respectively October 1928, 6 November 1928, 26 November 1928 - floorplans
8. Villa Savoye; project September 1928, longitudinal and cross section of the ramp (FLC 19418)
9. Villa Savoye; project 26 November 1928, cross section of entrance hall and terrace (FLC 19486)



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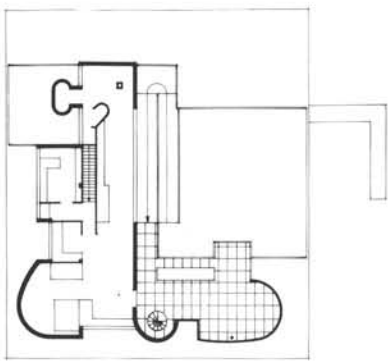
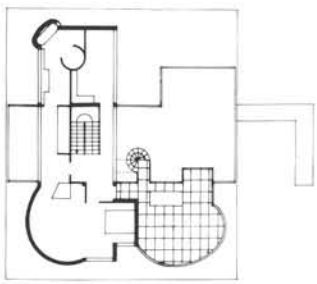
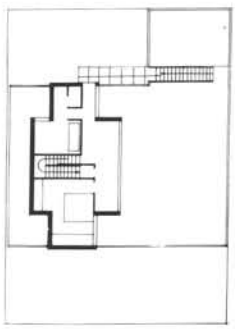
October 1928

6 November 1928

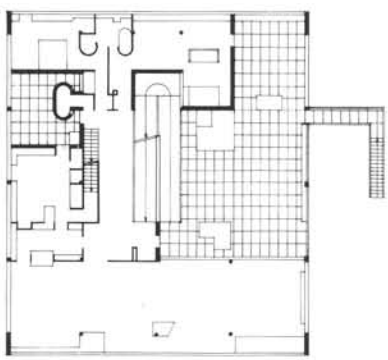
26 November 1928

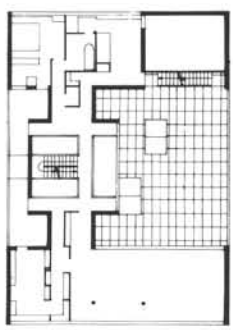




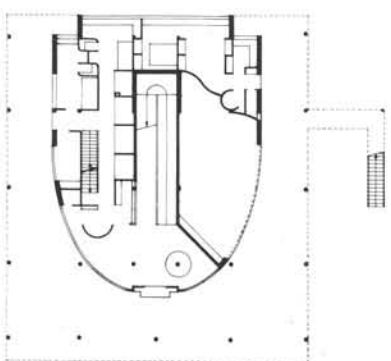


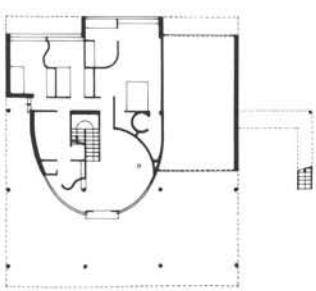
second floor

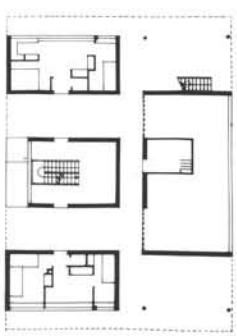




first floor







ground floor

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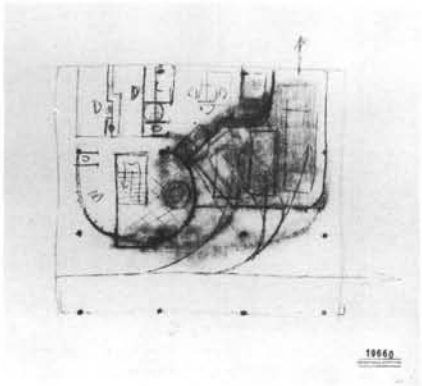

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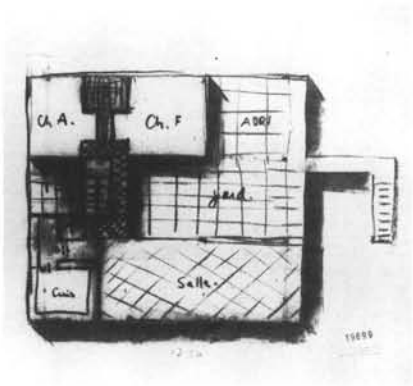

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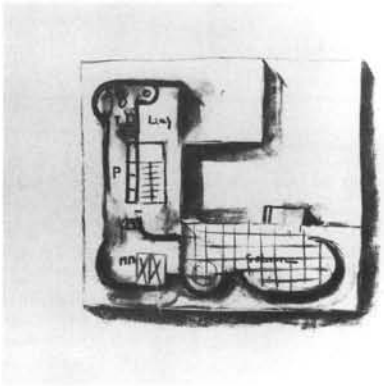

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In the first place the economising process consisted of a reduction in the horizontal plane, the programme being housed in a structure of three five metre bays in two directions. Owing to this reduction a number of fundamental points of departure from the first design had to be abandoned. Within the diminished surface there was no longer room for a car to turn a full circle. Also, the utility rooms and garage together occupied so much space that they extended to the periphery on three sides. Thus the building's original aspect, i.e. elevated on "pilotis", could be applied to one facade only.

It likewise became impossible to accommodate in this volume the elongated body of the ramp. A single stair - stationed in the central bay - now connects all floors. On the living floor this stair gains self-sufficiency as a free-standing element, situated between a small loggia and the terrace. The stair on this floor links two wings, one of which contains the living room and kitchen, the other the bedrooms of son and guests. The bedrooms of Madame Savoye on the roof are arranged in a volume placed at right angles to both the above-mentioned wings. (fig. 10-12)

In this close-knit design the rooftop floor dominates the terrace to a considerable extent. Another consequence of this compact construction is that programme components belonging together are combined in units coinciding with the structural bays; the columns are placed within the walls. Because of this the idea of the free plan becomes blurred; it is more a composition of box-shaped elements. This variant thus seems to combine those characteristics described by Le Corbusier with regard to the first Composition (Villa la Roche-Jeanneret) and the fourth (Villa Savoye). The consequences of these developments can be seen in a variant tantamount to a caricature, dated 26-27 November 1928. In this design there is no question of an overall arangements of free-standing columns; they appear only in the cantilevered lateral facades of the wings. On the ground floor the different functions are accommodated in separate units: garage, servants' quarters, and entrance hall giving access by way of a stair to the upper floors. Above, this stair turns out to be housed in a monumental volume two storeys high. Using bridges and voids one would gain access to the two wings which enfold a wide terrace dominated by the stair-tower containing Madame Savoye's sleeping quarters on top. By way of an outside stair the terrace below could be reached, from which through a void in the floor surface - at the place occupied in the preceding designs by the roofed section of terrace - one would descend to the ground floor. (fig. 13-14)

It is clear that by retaining the roof structure Le Corbusier was in fact a long way from his original concept, in which the horizontal-vertical relationship was accomplished with far more subtlety.

In the succeeding economising variant, which would ultimately generate the definitive design, it was therefore decided to leave out the roof structure and return to the spaciousness of four structural bays in both directions, now of 4.75 metres. Madame Savoye's bedroom was relegated to the first floor. On the roof, like archaeological remains, are several walls of the rejected structure, combining to enclose a sun terrace, and punctured by a "window" fram-

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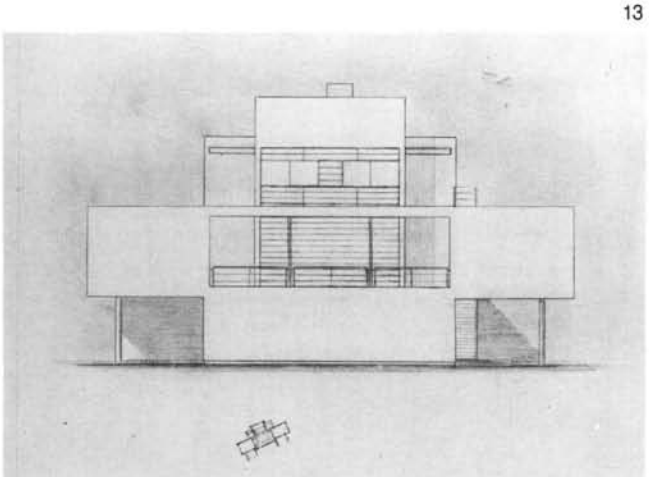

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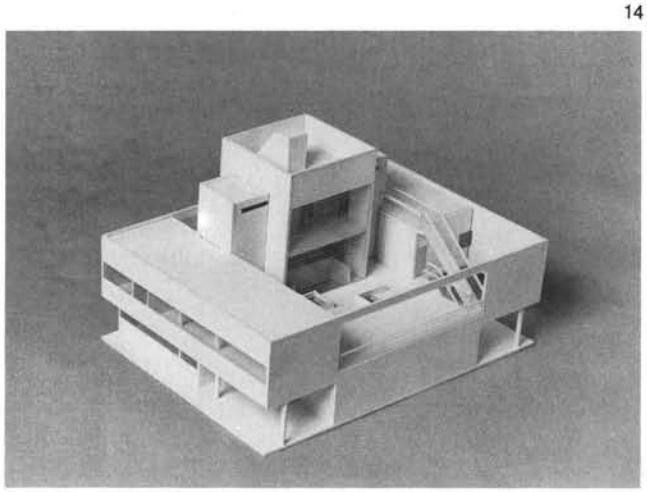


ing a view of the surroundings, because of which both ramp and sun terrace still classify as "interior".

That the loss of the high wall continued to be felt may be deduced from the way in which the upward route via the ramp is photographically recorded in the *Oeuvre Complète*. This picture was taken from a very low vantage point, giving the impression that the wall on the right is higher than it is in reality.

Translated by John Kirkpatrick

1. For a detailed argument see A. Hebly "The five Points and form", included in this catalogue
2. Colin Rowe and Robert Slutzki "Transparancy: Literal and Phenomenal", *The Yale Architectural Journal* nr 8, 1964. A German version with a comment in words and images by Bernhard Hoesli was published as *Transparanz*, Basel 1968
3. See chapter "Two villa's: a closer look", included in this catalogue
4. Le Corbusier, *Vers une architecture*, Paris 1923. For a detailed analysis of this text see P. Reyner Banham, *Theory and design in the First Machine Age*, London 1960
5. For the history of the design process of the Villa Baizeau see Tim Benton, "La matita del Cliente", *Rassegna* nr 3, 1980
6. For the history of the design process of the Villa Savoye see Tim Benton, *Les villas de Le Corbusier*, Paris 1984

10. Villa Savoye; project 6 November 1928, ground floor plan variant (FLC 19660)
11. Villa Savoye; project 6 November 1928, plan first floor (FLC 19699)
12. Villa Savoye; project November 1928, plan top floor (FLC 19698)
13. Villa Savoye; project 26 November 1928, west elevation (FLC 19694)
14. Villa Savoye; project 26 November 1928, view of the model

Beatriz Colomina

On Adolf Loos and Josef Hoffman:

Architecture in the Age of Mechanical Reproduction

"During long periods of history, the mode of human sense perception changes with humanity's entire mode of existence. The manner in which human sense perception is organized, the medium in which it is accomplished, is determined not only by nature but by historical circumstances as well."
Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*

Form and limit

"The excessive weight attached to the question of where one is, goes back to nomadic tribes, when people had to be observant about feeding-grounds."
Robert Musil, *The Man without Qualities*

Things, like ourselves, were losing their qualities with astonishing ease. Vienna, for instance, might well have been a city, but this alone did not make it a place. One cannot say that the condition was intolerable, only that the epoch of closed questions, of fixed places, of the objects in themselves had ended, and the period of relationships had begun. It was like an actualization of Einstein's theories, a wholly different way of protesting against "the natural". A thing made sense only in relation to something else. And this something else did not even have to be real. "If there is such a thing as a sense of reality," says Musil's central character Ulrich, "then there must also be something that one can call a sense of possibility" which "might be defined outright as the capacity to think how everything could 'just as easily' be, and not to attach more importance to what is than to what is not."

All this had occurred before Musil wrote his *Man Without Qualities*, although it corresponds precisely to the time in which he brings Ulrich to life. It was not important *where* one was, ever since the railway conveyed us impassively through the "emporium of the world"[1], place *in se* no longer permitted any differentiation. Just as in a department store where things are not differentiated by the places they occupy.[2] Even talking about travel had ceased to make sense, since despite the frenetic movement it was as if one did not move. Or to put it another way, one could say, with Huysmann, that it was only possible to travel if one did not move.[3]

If the notion of place was already indifferent and if Vienna was no longer a place, what could one do, if one lived there, in order to differentiate? What could one separate oneself from - if not from nature, then that mesh of cables and rails which entangled everything in order to be able *to know*?

"After all," says Musil's character, "each thing exists only by virtue of its limits, in other words, by virtue of a more or less hostile act against its environment." The setting of limits "will signify what cannot be said by presenting clearly what can be said" (L. Wittgenstein, *Tractatus Logico-Philosophicus*, 4.115). "The secret of form," says Simmel in his *Metaphysics of Death*, "is that it is a boundary; it is the thing itself and, at the same time, the cessation of the thing, the circumscribed territory in which the Being and the non-Being of the thing are only one thing."

The setting of limits is that which allows knowledge within the urban scene. All of so-called *fin-de-siècle* Vienna revolved about a search for form, the quest for limits. This is why its treatment is so difficult, for without meaning to, one finds oneself involved, as if by contagion, in the same nightmare; it is not only impossible to see the limits of what one is discussing, but one soon begins to realize that only form can establish these limits.

Mask and intimacy

"I dream, for example, I have not yet gained consciousness of how many different faces there are. There are quantities of people, but there are even more faces, for each person has several."
RM Rilke, *Die Aufzeichnungen des Malte Laurids Brigge*

Once there were cities where one could read from the spaces formed by their architecture what was thought in them, what was done, the values they made their own, their games of power. . . They were cities that were places, first and foremost. This was no longer possible in the Vienna of Ulrich, who thought that cities could be recognized by their pace, just as people can by their gait. This is also how the carrier of a mask can be recognized; while immobile he is undecipherable, in other words, only his mask *speaks*.

The mask was a very common theme in Ulrich's Vienna. This does not mean that it was always of the same order. If, according to Ulrich, "a civilian has at least nine characters: a professional one, a national one, a civic one, a class one, a geographical one, a sex one, a conscious, an unconscious and perhaps even too a private one", then he must also have as many masks. Freud spoke of the mask of sexual morality, opposing to its analysis the depths of the psyche; an opposition that was to become of great interest to the twentieth-century man, preoccupied with his "health". Namely, that the mask is responsible for certain *internal*

Wall Street, 1865.

1

disorders. Karl Kraus, in *Die Fackel*, objected to the mask of journalism, which, unlike the story-telling of former times, he accused of concealing rather than revealing what has happened. In his essay *In these great Times*, Kraus recognized that only facts were now able to speak, and that news was, in itself, apart from the event, a fact. The mask then was a fact, and if it could calmly speak of itself, then only that which was behind it, "that which is only thought," as Kraus put it, "is unutterable".[4]

In the case of Hofmannsthal's *The Letter of Lord Chandos*, the word is already incapable of revealing anything, it is a mask: "The language in which I would have been able not only to write, but even to think, is not Latin, English, Italian or Spanish, but a language of which I do not know a single word, a language in which mute things speak to me, and in which, perhaps once in the grave, I will justify myself before an unknown judge."

This Viennese attention to the mask finally focuses on the *inner* space. One might say that it is the mask that allows this space its content, that makes it "intimate",[5] were it not also a way to avoid the - more essential - question: namely why should it have been necessary at a certain moment to wear a mask? But limiting ourselves here to the relation mask-intimacy: the mask, causes us to question the field of which it is a frontier.

Adolf Loos recognized that Vienna was a city with a mask when he compared it to the villages erected by Potemkin, in the pages of *Ver sacrum*: "Who does not know of Potemkin's villages, the one's that Catherine's cunning favourite built in the Ukraine? They were villages of canvas and pasteboard, villages intended to transform a visual desert into a flowering landscape for the eyes of Her Imperial Majesty. But was it a whole city which that cunning minister was supposed to have produced?

Surely such things are only possible in Russia!"

But Loos neglected to tell us that Catherine perhaps thought she saw cities where there was only canvas and cardboards because she was travelling by. Likewise, Vienna started to wear a mask at the time that the railway became a fact of life. It is not surprising. In a city where the reality was not the place itself, but its displacement; in a place that was not a place because everything was fluid, to stop was to mask oneself, to cease to be real, to cease to have meaning. It was like "posing", as Sitte would say of those who dared to sit in a "modern" square, "for a photograph, like being an object in an exhibition."[6]

The true *difference* in a city of canvas and cardboard is not, obviously, between the different facades representing their supposed buildings. On the contrary, contiguities, relations, and so forth all contribute to presenting the city as a unitary whole, as a screen without fissures. The difference is *in* this very screen, this screen with two faces. The one facing outside, the mask, is distinct from the one facing inside, which is explicative. The relation between what the mask says on one side and the structure that supports it on the other is *arbitrary*. In the middle is the screen itself, *the differences*.[7] In this sense, to think of language as a system of difference is what makes knowing possible. The Viennese *philosophers* are philosophers of language.

How can architecture set limits in a city such as this, for here the limit cannot have anything to do with the enclosing and bounding of a place. There is not any place in "the capital of decoration", to use Hermann Broch's description of Vienna. The limit can only reside in the wall that is its mask.

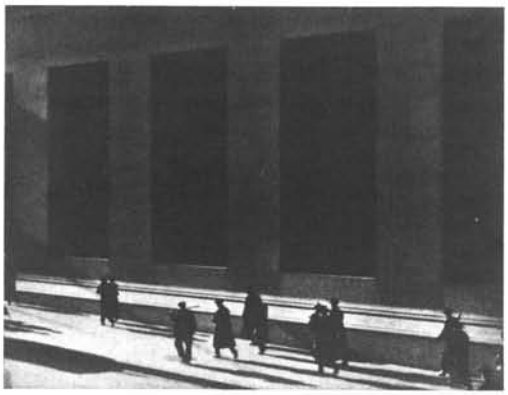
"Fences are interesting", said an unknown philosopher, "because one has to be either on one side or the other. Comme dans la lutte!" It is precisely because a wall, a fence, is a boundary, a limit, that it cannot at the same time be a place. It is impossible for one not to be either on one side or the other, for one to be *in the wall*.

The problem is no longer whether one is *here* or *there*, but whether I am on one side of the wall or on the other. And, to be sure, we have not yet said that one side is inside and the other outside. This might even become a matter of indifference,[8] but in any case one has already conceded to the wall itself an unprecedented importance. The wall is a limit.

It was no longer possible to think of Vienna in terms of public spaces - and this has its consequences for architecture - for the same reason one could no longer think of the press as the messenger of public opinion. "Opinions are a private matter".[9] Then, too, the press had its *other* matter: not opinions but facts, news as facts. The same could be said about architecture. It could only be "private", only in the sphere of the intimate could one build a place. Outside it was already an *other* matter; outside an *other* language was spoken, the language of information, the language of the mask, which understood nothing of places. Nor was it possible for us as individuals to understand the language of the mask.

Autism or convention

When Loos said, "The House does not have to tell anything to the exterior; instead, all its richness must be manifest in the interior",[10] not only had he recognized a limit to archi-



Wall Street, 1915.

tecture until then unknown, not only has he recognized a *difference* between *dwelling* in the interior and *dealing* with the exterior, but at the same time he had formulated the very need for this limit, which has implicit in itself the need for a mask. The interior does not have to tell anything to the exterior.

This mask is not, naturally, the same as the one which he had identified as being fake in the facades of the Ringstrasse; the face of equivocal, fictitious language implying that behind the walls was where the nobility were living, whereas in reality they were inhabited by *deracinated* upstarts. To be uprooted, Loos believed was nothing to be ashamed of, it was part of the modern condition. The silence that he prescribed is no more than the recognition of our schizophrenia: the inside has nothing to tell to the outside because our intimate being has split from our social being. We are divided between what we think and what we do.

Loos had realized that modern life was proceeding on two irreconcilable levels, the one of our experience as individuals, *the other* of our existence as society; and that which we could understand as abstract minds, namely as a collectivity, we were already unable to live as individuals. For that reason he renounced both the delusion of masks and the invention of *esperantos*. For Loos it was hopeless to try to render the outside in the experiential terms of the inside. They are two irreducible systems. The interior speaks the language of culture, the language of the experience of things; the exterior speaks the language of civilization, that of information. The interior is *the other* of the exterior, in the same way as information is *the other* of experience.[11] Thus, on the other hand, public buildings can calmly speak of what is going on behind their walls: "The courthouse must make a threatening impression on the furtive criminal. The bank building must say: 'Here your money is securely safeguarded by honest people.' " There is no contradiction between doing and informing.

The house's silence vis-à-vis the outside represents the impossibility of communication; but it is also this very silence that protects its incommunicable intimacy. At this moment silence is also its mask. It is a Simmelian mask. That mask of which Simmel writes in his essay "*Fashion*"[12] that it allows the interior to be *intimate*. "Over an old Flemish house," writes Simmel, "there stands the mystical inscription: There is more within me."

It is precisely in Simmel's terms that Loos speaks about fashion: "We have become more refined, more subtle. The herd must distinguish themselves by the use of various colours, modern man uses his clothes like a mask. His individuality is so strong that the cannot express it any longer by his clothing. He concentrates his own power of invention on other things."[13]

Loos draws a line: mask-intimacy-creation (and not ornamentation, tattooing, costume) as difference. Where is he who has assumed the condition of the modern (call him a displaced person, a dissident, a traveller, an exile, a foreigner, a melancholic, or a man without qualities) to find an identity? No longer protected by the fixed and the permanent, by the things that speak, he now finds himself surrounded by objects without meaning. As Loos indicated, in no way can he make use of these things, force them to speak an invented language, or to construct a false pedigree. Identity can only be recuperated from inside oneself. The duality inner self/outside world can only be overcome by the subject, not by his mask. The modern, like the artist and the primitive, can only restore an order in the universe and find a place in it by reaching within himself and his own creation.[14]

Josef Hoffmann was also conscious of the split in the modern individual between his private and public being, but he confronted it in a different way. For Hoffmann the house was to be intentionally designed to be in harmony with the *character* of its inhabitants. There is nothing as personal as character. But the client cannot add objects to the house on his own account, nor can he hire another artist to do so for him.[15] As if one only had one character for an entire life! This was the object of Loos' criticism. Loos believed that the house grows with one, and that everything that goes on inside it is the business of its inhabitants.[16] The same was to be, on the other hand, a reason for praise on the part of Peter Behrens. For Behrens, the house was a work of art. He added that Hoffmann's houses acquire meaning in social life,[17] and this remark clarifies any possible misunderstandings about the *character* with which the house was to be in harmony. Hoffmann was speaking about a *social* character. The individual cannot leave his traces on his own house because the house is in accordance with that part of his character that does not belong to him privately: the forms of social convention.

If one were to relate the attitudes that Loos and Hoffmann revealed in their architecture to the question we are here deliberating, that is, the *difference* in the metropolis between the space of the intimate and the space of the social, we might associate their respective positions with two different attitudes that one can have in society. Being in society, once one has recognized the schrizophrenia

Kafka at five years old.

between one's private and public self, is like being in a meeting where one does not understand what is being said. This happens very often in foreign countries, that is to say, everywhere. The *autism* of Loos would be a way to explain the introverted character of his houses, the way they close themselves to the exterior, with a silence that is not the silence of one who had nothing to say, but of one who had recognized the impossibility of any dialogue in a language that is not his own. It is a silence that speaks, similar to the disquieting gestures of autistic children. It is not a conventional silence; it is the rejection of a convention. As Karl Kraus wrote in *In these great Times*, "In these times you should not expect any words of my own from me - none but those words which barely manage to prevent silence from being misinterpreted."[18]

In the architecture of Hoffmann too the object closes upon itself, but not with an introverted gesture. In this case, it is more the will to fix in a precise way the object's limits as a monad, as if for fear of allowing it to be absorbed by the indifference of the environment (notice how defined the edges of Hoffmann's houses are, with what deliberateness he has concentrated a tension in them). But once this frontier has been delineated - it is a matter of the *distance* imposed by social courtesy - the object initiates a dialogue that has no other content beyond a series of adopted conventions. The fact that this speaking does not signify - it cannot signify; it does not conform to the conventions of a language, but speaks the *language* of a series of *invented* conventions[19] - is not important because there is not the intention to communicate, only to cover a void with forms.

For Hoffmann life is a form of Art. For Loos, who insisted on revealing the void, life is *the other* of Art. "I am anxious." said Behrens in an article on Hoffmann written for the English-speaking world, "that the buildings here illustrated should be considered from the right point of view: that the 'different' element in them shall not mislead anyone into thinking that it is due to affectation or to a desire deliberately to create something unusual." No, what is different here is not intended to shock you. No transgressions as knowledge, no avant-gardes. "On the contrary," Behrens continued, "there is a close connection between his great architecture and the easy and harmonious charm of a well-ordered life in beautiful surroundings."[20]

Art, for Hoffmann as for Olbrich, is *education*: "For the artistically inclined, to offer spaces corresponding to their individuality, and for the rest, education through the artistic interior." In other words, levelling, social integration, self-legitimation.

"Over his head hung the menacing proverb: 'Tell me what your house is like and I'll tell you who you are,' which he had often read in art journals. After intensive study of these journals he came to the conclusion that he preferred, after all, to take the reconstruction of his personality into his own hands."
Ulrich in *The Man Without Qualities*.

The author as producer

Loos and Hoffmann were both born in the same year, 1870, only a month apart and grew up in the same landscape, Moravia, then Austria; after the war to become part of Czechoslovakia. Both were to end up in Vienna.

Then, if one takes the press as a mirror (something that can only be done with care), Hoffmann's and Loos' paths took on a kind of inverse symmetry. Loos, not Hoffmann, is the Viennese figure who has occupied the greater number of pages of recent criticism on both sides of the Atlantic. This attention corresponds to that which the architectural press paid to the figure of Hoffmann in his own time. Loos was more or less ignored. All this coincides, naturally, with Hoffmann's more powerful position in the various *societies* for the production and reproduction of architecture and related activities, and also with his more frantic activity as a builder.

The decline of Hoffmann as a public figure[21] virtually coincides with the beginning of Loos' recognition, which - like that of the prophet - did not arise in Vienna but in Paris, in the circles close to *L'Esprit Nouveau*. In 1912 Herwarth Walden published five articles by Loos in the magazine *Der Sturm*. To have access to the pages of *Der Sturm*, says Reyner Banham, was to have access to a limited but international audience. It was through this channel that Loos' words arrived in Paris, where his writings were republished and where he was appreciated by the Dadaists.

Distance in space gave the figure of Loos the role of a protagonist, as later would distance in time; but between one moment and the other there is more than a coincidental relation, for where is Loos recognized today but in the intellectual circles, again a limited but international audience, in a certain sense the inheritors of the earlier avant-garde.[22]

The nature of a certain increase in interest in Hoffmann is also clear - in the market of cultural recuperations his reputation is growing - but I shall go no further than this observation. The *symmetry* between Hoffmann and Loos interests me because it points to the theme of how the press - the

Corrections in a page of *Die letzten Tage der Menschheit.*

Karl Kraus' study in the Lothringerstrasse.

architectural magazines - initiated a means of *producing* architecture with words, drawings, and photograps; as well as to the consequences that this could have in a profession which is structurally linked to permanent things and materials of substance. This theme did not escape Loos, who repeatedly attacked the manipulations of the magazines, offering as an ultimate argument the immortality of the work: "My greatest pride is that the interiors I have created are entirely unphotogenic. (. . .) I had to renounce the honour of having my works published in several architectural magazines. I denied my vanity this satisfaction. And thus my work has not had effect. Nothing of mine is known. But here is precisely where the force and correctness of my ideas show. I, who have had nothing published, whose work is ignored, am the only one - among thousands - who truly exerts an influence. (. . .) Only the force of the example is transcendent. It is that force which enabled the old masters to have an effect, whose work was quickly known in the most out-of-the-way places of the earth, despite, or more exactly, precisely because there was no post, no telephone, no periodical."[23]

Architecture then is to be opposed to *the other* means of communications, which are more abstract, more synchronized with the times. Architecture communicates itself in spite of them. But why did Loos not mention the printed word? I shall return to this question later. What interests me now about Loos' argument on publishing and architecture is its parallelism with that other, much better known one in which Loos talked about ornament.

For Loos ornament is that which makes art a commodity. Incidentally, Loos was referring in his writings to Hoffmann rather than to Olbrich, who was no longer in Vienna. By *ornament* he meant something *invented*, not something which had its origins in a genuine erotic impulse, or in a *horror vacui*, emotions that we overcome today by other, more sophisticated means. But where, asked Loos, will Hoffmann's work be in ten years time?[24]

Publishing, like ornament, by absorbing architecture into the universe of merchandise, by fetishizing it, destroys its possibility of transcendence. Architectural magazines, with their graphic and photographic artillery, transform architecture into an article of consumption,[25] making it circulate around the world as if it had suddenly lost mass and volume, and in this way they also *consume* it. It is not a question of the ephemeral character of the medium (otherwise Loos would never have written). The problem is that photography is not able to *interpret* architecture; otherwise the latter could live in the former. When Loos writes, "Good architecture can be described but not drawn", he is acknowledging, well before Benveniste, that the only semiotic system capable of interpreting another semiotic system is language. Leaving aside the difficulties of language interpreting architecture, what Loos realized was that photography makes of architecture an *other* thing, transforms it into a news item. And the news items is, in itself and apart from the fact to which it is referring, an event, a fact (Kraus).

As the work of art is different from the useful object, architecture is different from its news. But trying to disguise the limits that exist between the two is to make decoration.

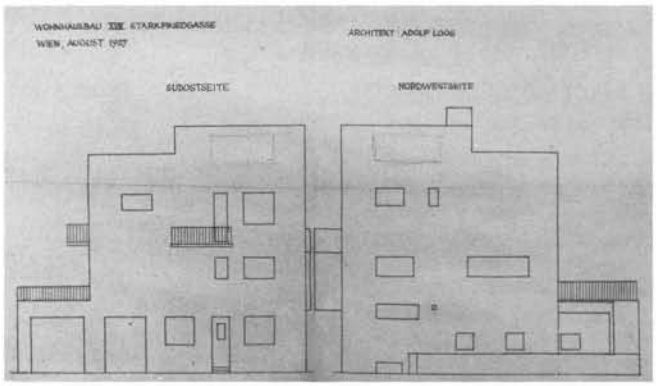
Is this architecture or cut-outs?

What can an *architecture for magazines* be when the magazine uses photography as its medium? Does the photographic transformation of architecture do no more than present it in a new vision, or is there a deeper transformation, a sort of conceptual agreement between the space that the architecture comprehends and the one implicit in the nature of photography? Does the fact that its relation with the masses is transformed through its reproduction not also presuppose a modification in the *character* of architecture?

Photography is born at almost the same time as the railway. The two evolve holding hands - the world of tourism is the world of the camera - because they share a conception of the world. The railway transforms the world into a commodity. It makes places into objects of consumption and, in doing so, deprives them of their quality as places. Oceans, mountains, and cities float in the world just like the objects of universal exhibitions. "Photographed images," says Susan Sontag, "do not seem to be statements about the world" - unlike that which is written, or that which is a hand-made visual statement - "so much as pieces of it, miniatures of reality that anyone can make or acquire."[26] Photography does for architecture what the railway did for cities, transforming it into merchandise and conveying it through the magazines for it to be consumed by the masses. This adds a new context to the production of architecture, to which corresponds an independent cycle of usage, one superimposed upon that of the built space, and *added value*.

But in addition to all this, the railway turned places into non-places because it posed itself as a new limit, whereas previously the built object had done so; but since the rail-

Loos: Moller House - Original drawing.



Hoffmann: detail of the Stoclet Palace.

way is a *fluid* limit, it actually nullifies the differences between inside and outside. It is often said of railway stations that they are a substitute for the old gates of the city, but what they do in fact is to erase the notion of *frontier*; not only do they fail to demarcate the edge of the urban fabric, but they ignore the city as such. The railway, which knows only of departure and arrival points, turns cities into *points* (as Arturo Soria y Mata understood when he called the cities of "the past", those which existed, "points" rather than "stains" which was more what they looked like), connected to the diagrammatical network that is now the territory. This notion of space has nothing to do with that of space as an enclosure within certain limits, a notion which the Greeks bequeathed to us along with the agora. It is a space that recognizes only points and directions, not the void and that which surrounds it, a space that does not know of limits but relations.

Photography participates in this spatial conception, and for this reason it is able to represent it (not so with the conception of space as a container). Photography shares with the railway an ignorance of the place,[27], and this gives the photographed objects an effect similar to that of the railway with respect to the points that it reaches: it deprives them of their quality as things. Loos said that "the inhabitants of my interiors were not capable of recognizing in photographs their own houses, in the same way that one who owns a Monet would not recognize his painting in Kastan." Kastan, Schachell tells us in his notes on Loos' writings, is the name of a panopticon in the Vienna waxwork museum. Kastan is therefore nowhere. It is the reproduction of an imaginary place. That is why one who owns a Monet is not able to recognize it *there*: because for him, the Monet that he possesses exists as an object, as a thing, and not as an idea about this object. To separate the object from its place, which is always part of the object itself, implies a process of abstraction in the course of which the object loses its aura, ceases to be *recognizable.*

Indifferent to the place where it is taken, photography destroys *the thing* (the object loses its aura). In Alain Resnais' film *Last Year in Marienbad*, X shows the woman a photograph which he took of her in the park one afternoon during the previous year, but for her this proves nothing. She says: "anyone could have taken it, anytime, anywhere..." He replies: "A garden... Any garden... I would have had to show you the white lace spread, the sea of white lace spread where your body... But all bodies look alike, and all white lace, all hotels, all statues, all gardens... (A pause). But this garden, for me, looked like no other one... Every day I met you here..." Only that which cannot be reproduced - neither the figure nor the garden, but that which the garden *is* for someone, as experience - can still be claimed.

For Sitte, the other Viennese, who hated photography and other abstractions that led to it, photography signified that sense of *unreality* which created the no-where of place. In his reasoning, Sitte took a route which was the inverse of that of Loos: in a *geometrical* space (geometrical in Sitte's sense) one becomes *unreal* and for that reason suitable only to be a *photographic model* or *an exhibit*.[28]

Something of all this must have been intuited by the first photographers, who from the beginning used scenography as if it were the most natural thing. It is clear that with the exposure time then required, their victims needed something to lean on, but this does not explain why columns were resting on carpets, or why, confronted with protests of unreality - "anyone will be convinced that marble or stone columns never rise from the base of a carpet" - the photographers will retire into the studio to reproduce an imaginary universe at leisure.[29]

Scenography is now used only by carnival photographers. Otherwise we have no need of props. Anything will do, even reality itself, particularly when it is little more than a prop, when it no longer matters where one is. "On planes,"

Hoffmann: Stoclet Palace.

says Israel Shenker, "we don't really travel, we just skip time and space. I once went from New York to Berkeley to make a speech. In the morning I left New York and in the morning I got to Berkeley. I made a speech I had made before, and I saw people I knew. The questions I had already heard, and I gave the same answers as before. Then I came home. I did not really travel."[30]

Photography, which finds itself at home in carnivals and in the *interpreted world*, has a hard time - as Loos recognized - representing space as *Raum*, depicting a space which while refusing to acknowledge the difference between inside and outside, is defined precisely by this difference. Sitte's plaza and Loos' *Raumplan* are spaces defined by the perception of the person whom they enclose, not by one who trespasses their limits.

Hoffmann's architecture is conceived from outside in. Giedion, who is always very perceptive in his comments, says laconically of the Stoclet Palace that "the flat surfaces of this banker's home are made up of white marble slabs, but they are treated like framed pictures."

The most notable thing about this house of Hoffmann when one looks at it in magazines - and one is obliged to look, because it is also there that his architecture is *produced* - is the moment of doubt as to whether what one is seeing is a built thing or a model. It does not have weight; it floats; it lacks corporeal existence; it is a box, walls surrounding space, which is not an empty hole dug out of building material. There is nothing - to use a concept of that moment - *sculptural* about it.[31]

The confusion with the cardboard model is not only to do with a conception of space. With this house, something occurs that is similar to what happens with those cut-outs which are used to make paper architecture: more important than whether a wall is internal or external, than whether a surface corresponds to the roof or to the kitchen floor, than the differences in the materials covering those surfaces, more important than whether an element is supporting or supported are the contiguities between those cut-outs. One can understand this very clearly when they are still on the paper, before having been cut-out. Everything is related to what is adjacent, as in a line of writing where a word relates to the one following it. Everything appears to be sewn, just like a treacherous narrative that links the most disparate things, and which in the cut-outs is represented by a seam of black dots marking the line where the paper is folded.

In the Stoclet Palace, the *narrative* is the metallic cable moulding that tirelessly follows the border of every plane it recognizes, indifferent to whether it is ascending an edge or turning a corner (therefore sewing together two right-angled planes); whether it is crowning a facade as a sort of cornice engaging en route every single window it encounters; windows which are in turn also framed by this banding; whether this ubiquitous cable surrounds the well of the staircase and in so doing stitches up the superimposed planes like a pocket sewn to a jacket; or, alternatively, it descends until it recovers a horizontal datum, thereby implying the suggestion of a socle. All this suggests another game: how can one form such a figure without ever taking the pencil off the paper?

In the Stoclet interior a whisper made itself felt. Peter Behrens remarked that it was the hall that impressed him most, that made him feel "as though one must not speak too loudly within its wall. Here, notwithstanding the diversity of their origin, a thousand lines, forms, and colours were combined to form a uniform whole." Here again the same banding goes up and down piers, dividing the balcony into compartments and making it look as if it were not a balcony but slabs hovering between the piers (Sekler). The same rhetoric appears in the hanging lamp; could anything have been further from the way Wittgenstein did it. The same approach appears in the *carpeting* of the floor with square tiles, which, even more than indicating the way one should move, end up giving the impression that it is not oneself who is moving but that which is underneath one's feet. Nothing is left to be itself. Furniture is made to take on the same quality as spaces themselves; there is nothing *sculptural* about it, nothing that reveals any contrast between the space and its occupant (the subject was to preoccupy Le Corbusier). Hoffmann tries not to differentiate, but to cancel differences. Space and furniture are part of the same whole. They *are* its inhabitants. One is one's mask.

The walls of the Stoclet Palace are like Giedion's "framed pictures", they are flat surfaces, independent in the sense that their *frames* delimit them as elements. But since in these walls the frame coincides with the edges that delimit them as planes, differentiating them from adjacent planes, they are at once independent and yet linked to those which are contiguous with them. The same moulding, the same metal band that gives them their existence by framing, also links them to surfaces adjacent thereby forming a three-dimensional object; a box.

All this creates a tension at the edges of the box, and in so doing, weakens the whole and produces in the observer the impression that the walls could well unfold, losing the condition of stability which had been guaranteed to them

Loos: Strasser House - living hall

by the cube which they formed; a premonition of unfolding by which they would recover their original condition as cut-outs. (The same impression is given by one of Hoffmann's chairs; namely that it has been designed without taking the pencil off the paper.) On the very same plane or sheet of paper are now to be found at once wall, roof and floor plans. Each one corresponds to its opposite on the paper. Across from the interior is the exterior.[32] It is a notion of space that is in accordance with the universe of technics - the railway, photography, electricity, reinforced concrete. It is a space that neither *closes* nor *opens*, but establishes relations between points and directions.

Citing the art historian August Schmarsow's observations, Peter Behrens writes that architecture is the art of defining space, and is achieved with sparse geometrical forms, while sculpture, the art of volume and spatial occupation, provides its plastic counterpart.[33] When Peter Behrens wrote this, he was reflecting - it was always a favourite theme with him - upon the impact of technological means of transportation on visual perception and on the necessity of adapting architecture to this new way of seeing.[34]

Under a photograph of Otto Wagner's Karlsplatz Station of 1894, Giedion reiterates Wagner's prophecy: "The new architecture will be dominated by slab-like tabular surfaces and the prominent use of materials in a pure state" (*Moderne Architektur*, 1895).

Information is *the other* of experience

"The sign of a truly felt architectural work is that in plan it lacks effect."
Adolf Loos.

Hoffmann's architecture conveys its strongest impression not only in plans but also in the photographed record of itself. Not only is it an architecture conceived to be experienced primarily in visual terms, but because of the emphasis on the flat, two-dimensional aspect it seems conceived to be experienced through the monocular, mechanical eye of the camera lens.

By the words "truly felt", Loos meant a perception of space involving not only the sense of sight (human sight, two eyes), but also the rest of the senses. It is a way of perceiving that corresponds to a time prior to the epoch of mechanical reproduction in architecture. In Loos' view, the only criterion by which space can be considered *architectural*. Of all the senses, Loos privileged the sense of touch, and perhaps it is no accident that this is the one domain which - even today, when in Japan they are *photographing* smells - has not yet been the object of reproduction. Touching is not yet a mental act.

"Every work of art obeys such strong internal laws that it can take only one form" (Adolf Loos). An architecture that exists *already in drawing*, as architects like Boullée and Hugh Ferriss would have liked, was not possible, in Loos' view: "What has been conceived in one art does not reveal itself in another." Drawing and architecture are irreducible systems: "If I were able to erase from the minds of my contemporaries that strongest of architectural facts, the Pitti Palace, and let the best draughtsman present it as a competition project, the jury would lock me in a lunatic asylum." The reverse is not possible either: "But it is terrible thing when an architectural drawing, itself (. . .) a graphic work of art, is built in stone, steel, and glass, for there are truly graphic artists amongst architects."[35]

For Loos, the architectural drawing could be no more than a technical language: "The true architect is a man that in no way needs to know how to draw; that is, he does not need to express his inner state through pencil strokes. What he calls drawing is no more than the attempt to make himself understood by the craftsman carrying out the work."[36] Architecture is a concrete means of communicating the experience of space. Architectural drawing is an abstract, that is to say, technical, means of communication: "The architect first senses the effect he wishes to produce then he visualizes the spaces he wishes to create."[37] In no way, then, is it necessary for him to draw -were it not for the social division of labour. But the fact that such a division exists - and with it a kind of bilingualism: the language of information is severed from the language of experience - does not sanction impossible pseudo-translations. We are living in an absurd tower of Babel; what we can understand as abstract minds, that is as collective beings, we can no longer understand privately.

Architecture, then if we take Loos' thinking to its logical conclusion, can do nothing but reflect upon the disjunctive character of modern culture. It must not attempt impossible syntheses, nor must it mask things as they are. Information is *the other* of experience, life is *the other* of art ("Everything that serves a purpose should be excluded from the realms of art"), the spirit is *the other* of matter, culture is *the other* of civilization, the individual is *the other* of society, the interior is *the other* of the exterior. . . This is a system of differences. Almost all of Loos can be read in a linguistic key. The house by the architect is an undesirable scream that alters the tranquility of the mountain lake (*Architektur*).

Loos: Khuner House - Master's room, as published in Kulka; *Adolf Loos*, Vienna 1931.

Loos: Khuner House - Master's room.

And the scream, as in Munch, is the impossibility of *the word*. "The architect comes from the city. He possesses no culture, he is an upstart. I call culture that balance of inner and outer man which alone can guarantee reasonable thought and action."

Loos realized that objects in his culture had lost their immediate meaning. The use by the artists of the Secession of objects as symbolic expressions of inner states confirmed this. But if objects had lost their meaning for Loos it was not a matter of trying to make them speak Esperanto, but of making an effort to *distinguish* them. Karl Kraus gave form to this thought in his famous statement: "All that Adolf Loos and I have done, he literally and I figuratively, is to show that there is a difference between a chamber pot and an urn, and in that difference there is a small margin left for culture. But the others, 'the positive ones', are to be distinguished between those who would use a chamber pot for an urn and those who would use an urn for a chamber pot."

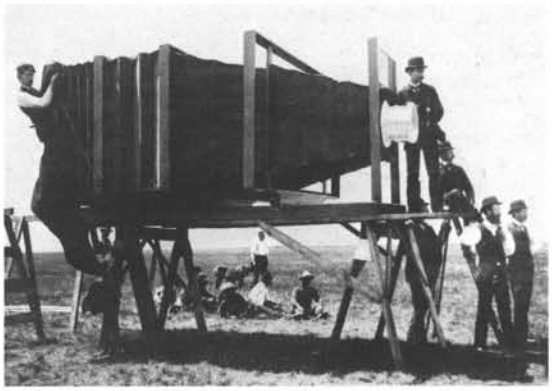
Culture and difference, here is the main thrust of Loos' thinking. Ornament can only be read as metaphor. It is all that is *fake*, all that tries to confuse limits, all unnecessary words, "all words that exceed their condition for meaning."[38] Loos wrote: "Art comes from know-how, (in German), Kunst from Können. But as for those dilettantes who from their comfortable studios want to prescribe and trace out for the artist, for the man who produces, just what he should do, let them keep to their field - that of graphic art."[39]

To know, in the civilization of indifference, is to transgress. Disjunction is a form of knowledge. The narrative of a graphic art is dis-knowledge (negation of knowledge); it is decoration. Loos' interiors are conservative and at the same time disjunctive. They are conservative because they conform to a traditional idea of comfort. In the houses of Loos it is easy to imagine many places where one would like to esconce oneself, depending on one's mood, the hour of the day, what one desires the space to provide, to communicate, to protect. With the houses of Hoffmann one can think immediately of how to move through them, but is very difficult to imagine actually using these spaces. It is not that we feel excluded from them; it is that ritualistic way they have of including us. As if we were in a museum or a church. Unless one is a "believer" one can only think of moving around inside.

In Loos' houses, disjunctions often occur in the very places where they seem most peaceful: "In many of Loos' houses," says Kenneth Frampton, "disjunctive, subversive effects appear unexpectedly amid an overall aura of bourgeois comfort and tradition. This repeated strategy of disjunction is perhaps never more dramatic than in Loos' ambiguous, reciprocal play with the adjacency of real and apparent mirrors, wherein actual openings appear to be mirrors, or apparent mirrors are, in fact, openings. Equally shocking are contradictory structural components, such as in the Strasser House living room, where an open stairway passes over the brick traditional volume of the fireplace, occupying the place of the chimney, and where the rubbed brick arch itself is 'falsely' constructed."[40]

There is a sentence of Theodor Reik cited by Benjamin to the effect that: "Memory is essentially conservative; remembrance is destructive." Benjamin is referring to Bau-

The 1400 lb camera of George R. Lawrence, 1895.



delaire and also Proust, Freud and Bergson. The question is how to take hold of the "true experience", "as opposed to the kind that manifest itself in the standardized, denatured life of the civilian masses."

This is the same question that interests Loos in *Architektur* when he writes, "The work of art is revolutionary, the house conservative... The work of art aims at shattering man's comfortable complacency." The similarity with Reik's formulation is more than apparent; Loos too was distinguishing between *memory* and *remembrance*: "Does the house therefore," he continued, "have nothing to do with art, and should architecture not be classified as an art? This is so. Only a very small part of architecture belongs to art: the tomb and the monument." The tomb and the monument are places of remembrance, of *memoire involuntaire*, in Proust's terms. Loos wrote: "If we find a mound in the forest, six feet long and three feet wide, formed into a pyramid shape by a shovel, we become serious and something within us says, 'Someone lies buried here.' This is architecture."

As *collective* beings, we can make architecture only in the tomb and in the monument. Only in these two forms can an experience take place "which includes ritual elements" - an experience secluded from crisis - because they evoke a world outside time and therefore, beyond reason.

When Loos arrived in Paris, writes Banham, he was already famous, but his fame was due to his writings, some of which had been published in France, rather than to his buildings, which seem to have been known only by hearsay. Loos would have liked this comment: his architecture was passing by word of mouth like that of "the ancient masters in the times when there was no post, telegraph, or newspaper." But why is it that Loos, who opposed architecture to all the other means of communication that make an abstraction of place, dit not also condemn the printed word? Why should this technology be able to transmit an experience of things when it is precisely printing which first prepared us "to act without reacting"[41], when it is printing that provided the basis for that *take-off* from place that ends by turning the world into an immense landing strip?

The printed word can only communicate by recuperating common sense, by de-intellectualizing writing, by giving language back to culture. The habit in the German language of beginning nouns with capital letters was seen by Loos as symptomatic of "the abyss that opens up in the German mind between the written and the spoken word": "When the German takes a pen in hand, he can no longer write as he thinks, as he speaks. The writer is unable to speak; the speaker cannot write. And in the end the German can do neither."[42]

Still today Loos is more famous for his writings than for his buildings, which nobody dares to interpret without relying on the former. This hardly happens with any other architect. But do these writings really explain his buildings or him as a figure? "The replacement of the earlier story-telling tradition by information, of information by sensation, reflects the increasing atrophy of experience. At the same time there is a contrast between all these forms and the story, which is the oldest form of communication. The objectieve of story-telling is not to convey an event 'per se' which is the purpose of information - but rather to embed the event in the life of the storyteller in order to pass it on as experience to those listening." (W. Benjamin)

Loos' writings share something of this ancient form; like those of Benjamin, they have an almost biblical structure. They are writings in which one can start reading at any point and still sense the totality of the message. As in oral communication, the problem and its solution are touched upon at the beginning of the discussion, and then the message is conveyed again and again as in the concentric rings of a spiral. In spite of the seeming redundancy, one can read this type of writing over and over without tiring of it because one never understands exactly the same thing on subsequent readings. It is writing that requires *entry*. By entering, one extract from every reading an experience that is unique. Such writing reveals the traces of the teller the way the clay vessel betrays, the fingerprints of the potter. It is always *modern*, just like Loos' houses, because it requires that someone *enter* in order to make sense of it, that someone make it his own.

Life is *the other* of art

"The art which gave the ancient man his basis and the Christian man the curvature of his vaults will now be transferred into boxes and bracelets. These times are much worse than what we suppose."

This quotation of Goethe appears at the end of Loos' text *Cultural Degeneracy* (1908), where he criticized the confusion of Hoffmann and the members of the Werkbund in distinguishing between art and commodities (articles of consumption): "The members of this confederation are men who are trying to replace our present day culture with another. Why they are doing this I do not know. But I know they will not succeed. No one yet has thrust his podgy hand

Accident at the Montparnasse Station, Paris.

into the spinning wheel of time without having it torn off by the spokes."

With regard to this Bertold Brecht wrote: "If the concept of 'work of art' can no longer be applied to the object that emerges once the work is transformed into a commodity, we have to eliminate this concept with cautious care but without fear, lest we liquidate the function of the very object as well." While Walter Benjamin said: "By the absolute emphasis on its exhibition value the work of art becomes a creation with entirely new functions, among which the one we are conscious of, the artistic function, later may be recognized as incidental."

Mechanical reproduction qualitatively modifies the nature of art in modifying the relation of the masses with it. But what can possibly be meant by transforming architecture into an *object*? Surely it has to have something to do with the change in sensibility that has induced us to desire the *proximity* of the things, to take possession of them. The *objects* of Hoffmann answer such social conditioning. They are part of the effort of architecture to reach the masses. To present architecture as an *object*, to assimilate the object within its image, is to make it accessible. "By virtue of their very accessibility objects diminish fears of an apocalyptic future" (G.C. Argan). "In the past, a discontent with reality expressed itself as longing for another world. In modern society, a discontent with reality expresses itself forcefully and most hauntingly by the longing to reproduce this one" (Susan Sontag), by the compulsive desire of appropriating its fragments.

In Hoffmann everything is made into an object: "The mother-of-pearl and ebony of a cigarette box invite comparison with the marble cladding and metal moulding of the Stoclet Palace exterior. A jewellery box inlaid with a stylized plant motif has the proportions of a miniature pavilion (. . .) It is tempting to view Hoffmann's use of perforated sheet metal for vases and plant-stands as a bold three-dimensional projection of the paper's original grid, making design and object one."[43] Hoffmann makes decoration not so much because he makes use of ornament but because he sees continuities there where there are differences. The object is confused with its drawing, the house with its model, the model with its photograph and in the latter one would recognize nothing, were it not for the legend which informs us of the material measures, of what it is.

Loos' position is one of a *resistance* against the levelling brought about by consumption. "The building stands in front of posterity and, from that point, we can explain to ourselves why architecture, in spite of all the changes of our times, will always be the most conservative of the arts." Or as Walter Benjamin wrote: "Buildings have been man's companions since primeval times. Many art forms have developed and perished. Tragedy begins with the Greeks, is extinguished with them, and after centuries its 'rules' only are revived. The epic poem, which had its origin in the youth of nations, expires in Europe at the end of Renaissance. Panel painting is a creation of the Middle Ages, and nothing guarantees its uninterrupted existence. But the human need for shelter is lasting. Architecture has never been idle. Its history is more ancient than that of any other art, and its claim to being a living form has significance in every attempt to comprehend the relationships of the masses to art. Buildings are appropriated in a twofold manner: by use and by perception - or rather, by touch and sight. Such appropriation cannot be understood in terms of the attentive concentration of a tourist before a famous building. . ."[44]

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Notes

1. Wolfgang Schivelbusch in his book *The Railway Journey*, New York, 1979, compares the world of tourism of the 19th century with a department store of landscapes and cities.
2. Everything under the same roof and fixed price are the essential characteristics of a department store. The slogan adopted by Aristide Boucicaut of his invention of the first department store: the Bon Marché founded by him in 1852. Everything under the same roof means indifference to place. In medieval cities, streets have names for what is done in them. On perception in the big cities see, for example, Ozenfant and Jeanneret, *Formation de l'optique moderne* in *L'Esprit Nouveau* n. 21, 1923.
3. Joris Huysmann, *A Rebours*, Paris 1884.
4. Karl Kraus, In dieser grossen Zeit, 1914:

"If one reads a newspaper only for information, one does not learn the truth, not even the truth about the paper. The truth is that the newspaper is not a statement of contents but the contents themselves and more than that, it is an instigator . . ."
"In the realm of poverty of imagination where people die of spiritual famine without feeling spiritual hunger where pens are dipped in blood, and swords in ink, that which is not thought must be done but that which is only thought is inutterable."

5. On what is intimacy as different from privacy see Hanna Arendt's *The Human Condition*: "The intimacy of the heart, unlike the private household, has not objective tangible place in the world, nor can the society against which it protests and asserts itself be localized with the same certainty as the public space", p. 39.
6. Camillo Sitte, *City Planning according to Artistic Principles*.
7. Ferdinand de Saussure in his *Cours de linguistique génerale* uses the metaphor of a sheet of paper: "thought is the front and the back: one cannot cut the front without cutting the back; likewise in language, one can neither cut sound from thought nor thought from sound (. . .) Linguistics then works in the borderland where the elements of the sound and thought combine; their combination produces a form, not a substance." part II, chapter IV.
8. Rudolph Schindler, who was a pupil both of the Wagnerschule and Loos and who emigrated to America in 1914. He wrote: "The distinction between indoors and outdoors will disappear, our house will lose its front-and-back door aspect. It will cease being a group of dens, some larger ones for social effects, and few smaller ones in which to herd the family." David Gebbard, *Schindler*, Peregrine Smith, Inc. 1980.
Moholy-Nagy says in his *The New Vision*, N.Y. 1947 (*Von Material zu Architektur*, Munich 1928): "The new architecture on its highest plane will be called upon to remove the conflict between the organic and artificial, between the open and closed, between the country and city", Frederic Kiesler, "Manifest", in *De Stijl* VI, 1925, 10, 11; T. Van Doesburg, $-+-R_4$, in *De Stijl* VI, 6, 7, 1924, pp. 91-92: "By the disruption of enclosure (walls) we have abolished the duality between interior and exterior"; Bart van der Leck, "De Plaats van het Moderne Schilderen in de Architektuur", in *De Stijl*, I, I, 1917, p. 67; T. Van Doesburg, "Tot een beeldende Architektuur" in *De Stijl*, 1924, VI, n. 6/7, pp. 78-83: "The new architecture has rendered equal in value 'front' and 'back', upright, and perhaps also 'upwards' and 'downwards'."
9. Walter Benjamin, Karl Kraus, English translation in *Reflections*, Ed. by Peter Demetz, New York 1978.
10. Adolf Loos, "Heimatkunst", 1914.
11. "In realizing this, however, Diotima discovered in herself the affliction from which modern man is well known to suffer and which is called civilization. It is a frustrating state of affairs, full op soap, wireless waves, the arrogant symbolic language of mathematical and chemical formulae, economics, experimental research and mankind's inability to live in simple but sublime community . . ."
"Accordingly civilization meant, for her, everything that her mind could not cope with. And hence too, it had for a long time meant, first and foremost, her husband." Robert Musil, *The Man Without Qualities*.
12. Georg Simmel, "Philosophie der Mode" 1904, English translation "Fashion", *International Quarterly* New York, October 1904, p. 130-155.
13. Adolf Loos, "Ornament and Verbrechen", 1910.
14. It was Georg Simmel who pointed out, at the beginning of his *Die Grosstadt und das Geistesleben* (1903) (The metropolis and intellectual life), that the deepest conflict of modern men (and one could add calmly, and for the same reason the source of all his cultural production) is not any longer in the ancient battle with nature, (this could be only a metaphor when the limits between city and nature have once again stopped to exist), but in the one that the individual must fight to affirm the independence and peculiarity of his existence against the immense power of society, in his "resistance to being levelled, swallowed up in the social-technological mechanism".
15. Peter Behrens, "The work of Josef Hoffmann", *The Journal of the American Institute of Architects*, Oct. 1924, p. 426.
16. Adolf Loos, "Die Interieurs in der Rotunde", 1898.
17. Peter Behrens, "The work of Josef Hoffmann", cit, p. 421.
18. Karl Kraus, "In dieser grossen Zeit", 1914.
19. For invented conventions I understand here that they are not socially accepted signs, as the linguistic signs or the signs of traditional architecture are. In this sense, the explanation that Behrens feels obliged to give about the different in Hoffmann speaks for itself (see the following paragraph in this text). In Vienna there was not a need for it, but in a society such as the Anglo-Saxon one which had not lost what Loos had called common sense an explanation had to be given.
20. Peter Behrens, "The work of Josef Hoffmann", cit. p. 421.
21. Vitoria Girardi, "Josef Hoffmann maestro dimenticato", *L'Architettura Cronache e Storia*, anno II n. 12, oct. 1956.
22. On the way, however, something has been lost of what made Loos attractive for the avant-gardes: his destructive character, the relentless taunt that he made of the Beaux Arts, Arts and Crafts, and in general, of everything that could be recognized as established and no genuine authority. Loos is of interest today more for his polemical attitude than for this quality between the hermetism and transparency which is the richness of his message and also what invites projections. If Aldo Rossi, Kenneth Frampton, Jose Quetglas and Massimo Cacciari have something in common when they write about Loos this is something of what made Loos say to Wittgenstein: "You are me".
23. Adolf Loos, "Architektur", 1910.
24. Adolf Loos, "Kulturentartung": "Ten years ago, at the same time as the Café Museum, Josef Hoffmann created the interior installations of the Apollo-Kerzenfabrik's store. The work was praised as an expression of our time. Today nobody could be of this opinion. The distance of ten years has shown that this work was a mistake and thus in ten years more it will seen clearly that the present day works of the same tendency do not have anything in common with the style of our days." Richard Neutra seems to have felt also that the true opposite of Loos was Hoffmann when he wrote: "Hoffmann was 'the professor' whom Loos demolished in my eyes, or had tried to demolish in the eyes of his generation". Loos himself, in the foreword to the first edition of *Ins Leere gesprochen* (see *Spoken into the Void*, p. 130) makes it clear how much he was alluding to Josef Hoffmann, even if he could not mention him by name. This did not escape his contemporaries. Loos says in this foreword, "Mr. Breuer, who had taken great pains collecting the essays, sent them to the publisher and soon received from the publisher's reader, who is in charge of the art department, a note informing him that the publisher could only carry out the publication if I would agree to alterations and deletions of the attacks against Josef Hoffmann - who, however, was never mentioned by name."
25. In this sense it is interesting to note the early observation of John Ruskin. (The purchase of a photograph of a building) "is very nearly the same thing as carrying off the palace itself; every chip or stone and stain is there and of course there is no mistake about proportions", *Works*, vol. 3, note p. 210.
26. Susan Sontag, "In Plato's Cave", in *On Photography*, New York 1973, p. 4.
27. "Photography had helped man to discover the world under new lines of sight (visual angles): it has suppressed space. Without it we will have never seen the surface of the moon." Giselle Freund, *Photographie et*

Societé, 1974; "What changes must now occur in our way of looking at things, in our notions! Even the elementary concepts of space and time have begun to vacillate. Space is killed by the railways and we are left with time alone . . . Now you can travel to Orleans in four and a half hours and it takes no longer to get to Rouen. Just imagine what will happen when the lines to Belgium and Germany are completed and connected up with their railways! I feel as if the mountains and forest of all countries were advancing in Paris. Even now I can smell the German linden trees." Heinrich Heine, *Lutetia*, Cit. by W. Schivelbus in *The Railway Journey*, cit.

28. Camillo Sitte, *City Planning According to Artistic Principles.*
29. Walter Benjamin, "Small history of Photography".
30. Israel Shenker, "As Traveller", *New York Times*, April 1983.
31. It has been Eduard Sekler who has given more thought to the atectonic character of Hoffmann's architecture. See his essay, "The Stoclet House by Josef Hoffmann" in *Essays in the History of Architecture Presented to Rudolph Wittkower*, London 1967.
32. "There is such as thing in Japanese architecture as the TATEOKOSHI Plan drawing. In this all surfaces of a space are analyzed as if they were floor plans. The theory is that the person examining them will mentally raise the drawings for the walls to their position in the completed rooms and in this way imagine the way the space will look. In Japanese thought, space is composed of strictly two-dimensional facets. Depth is created by a combination of two-dimensional facets. Time-scales (flows) measure the space between these facets. (. . .) The basic reason for the use of the word to express both time and space seems to be that the Japanese have understood space as an element formed by the interaction of facets and time." Arata Isozaki, *Space-Time in Japan MA*, Cooper Hewitt Museum, New York. This conceptualization of time and space is strangely contemporary and it coincides with present day theories that equate space and time. Thus, for example, Van Doesburg writes in "Tot een beeldende Architektuur" (cit.): "The new architecture does not take into account only space but also time, as architectural accent. The unity of space and time gives to the physiognomy of architecture a new, completely plastic aspect (spatial and temporal aspects in four dimensions)." See also note 8 of this text.
33. Stanford Anderson, "Peter Behrens and the new Architecture of Germany: 1900-1917", Columbia University PhD. Published in part in *Oppositions* n. 11, 21 and 23.
34. Peter Behrens, "Einfluss von Zeit und Raumausnutzing auf moderne Formentwicklung", *Deutscher Werkbund*, Jahrbuch, 1914, pp. 7-10. And see also, "Über den Zusammenhang des baukünstlerischen Schaffens mit der Technik", Berlin, *Kongress für Aesthetik und Allgemeine Kunstwissenschaft 1913, Bericht*, Stuttgart, 1914, p. 251-265. And also in "The aesthetics of industrial buildings", *Scientific American Supplement*, 23 August 1913, pp. 120-121.
35. Adolf Loos, "Architektur", 1910.
36. Adolf Loos, "Ornament und Erziehung", 1924.
37. Adolf Loos, "Das Prinzip der Bekleidung", 1898.
38. Massimo Cacciari, "Loos-Wien" in *Oikos, da Loos a Wittgenstein*, Roma 1975, p. 16.
39. Adolf Loos, "Glas und Ton", 1898.
40. Kenneth Frampton, from a lecture at Columbia University, Fall 1982.
41. Marshall McLuhan, *Understanding Media*, 1965, p. 4.
42. Adolf Loos, "Foreword" to *Ins Leere gesprochen*, Vienna 1921. English, *Spoken into the Void*, 1982.
43. Marcia E. Vetrocq, "Rethinking Josef Hoffmann", *Art in America*, April 1983. She makes this comment with a positive intention.
44. Walter Benjamin, *The work of Art in the Age of its Mechanical Reproduction.*

Max Risselada

Documentation of 16 houses

The following documentation of houses by Loos and Le Corbusier presents the projects best suited to illustrate the development an the result of the Raumplan and Plan Libre concepts. In the case of Loos, the documentation covers the residences he designed in his last creative period (1918-1933). These designs express in word and image the essence of his critisism of the two-dimensionality of the work of the Sezession architects and of the later avant garde of the 1920s. These residences are no longer conceived in plan and elevation; they have become part of an indivisible unit - space.

At first Loos refused to publish the plans and photographs of his work, convinced that the media would distort the reception of his work. He held that the three-dimensional experience could not be conveyed, but only its concretization in form and material.

Consequently, it was not until 1931, two years before Loos' death, that his pupil and later collaborator, H. Kulka, published a verbal and pictorial description of Loos' work. For this publication, systematic drawings were made from the plans and sections, and pictures were taken at the express request of Loos himself, by the Viennese photographer Gerlach. Our documentation is based on this material.

Loos himself never expounded a Raumplan theory; he did, however, describe his method in an occasional article or interview. In 1929, for instance, in an obituary for Josef Veillich, the man who made the furniture for his clients, he wrote: "When I attempted to have a house exhibited in Stuttgart (in the Weissenhofsiedlung), I was turned down flat. I would have had something to exhibit: the solution of how to arrange the living rooms in three dimensions, not in the flat plane. . . For that is the great revolution in architecture: the three-dimensional rendering of a ground-plan! Before Immanuel Kant, mankind was unable to think in terms of space, and architects were forced to make the toilet as high as the drawing room. Only by halving was it possible to obtain lower rooms."

In a conversation with his colleague Lhota he once said: "My work does not really have a ground floor, first floor or basement. It only has connected rooms, annexes, terraces. Each room requires a particular height, the dining room a different one from the larder. That accounts for the different floor levels. The rooms must then be connected in such a way as to make the transition imperceptible, and to effect it in a natural and efficient fashion."

Kulka, finally, introduced the concept of Raumplan in the afore mentioned publication. He summarizes as follows:

"Adolf Loos brought an essentially newer, loftier concept of the space into the world: regarding space freely, planning spaces on different levels and not confined to a single storey, composing related rooms into a harmonius, indivisible whole, into something that makes economical use of the space. According to their purpose and significance, the rooms are not only of different sizes but also of different heights. This enables Loos to create a larger living area with the same constructional means, since he accommodates in this manner more rooms in the same cube, on the same foundations, under the same roof, between the same enclosing walls. He makes the utmost use of the material and the building volume."

The passages quoted above illustrate the difference between the two architectonic ideas which Loos had earlier described in his essay "The principle of cladding" (1898): "The required sturdiness and necessities of construction often call for materials which are at odds with the actual purpose of a building. The architect may, for instance, be asked to make a warm, cosy room. Well, carpets are warm and cosy. He therefore decides to have one carpet on the floor and to hang four up to form the walls. You cannot build a house with carpets, though. Carpets on both floor and walls call for a constructional system to keep them in place. The architect's second task is to contrive it."

"This is the right, logical path for architecture to take. This is the manner and order in which man learnt to build. . ."

Loos saw architecture primarily as the designing of rooms, rather than meaningful building forms; he gave priority to "cladding" above construction, to the interior above the exterior.

The significance of the exterior and of construction in the development of Raumplan, however, deserves a brief examination.

Unlike the English country houses which Loos admired so much, he did not realize his programme for three-dimensional differentiation within the volume of an articulated building but in a compact form, oriented at first towards the (neo)-classical villa, its symmetry enhanced by the addition of classical elements. This static form accommodated the dynamic disposition of the Raumplan with its displaced symmetries and changes of level, placing maximum emphasis on the difference between the interior (private) and the exterior (public).

Later the classical elements disappeared, leaving an uncompromising shape, its public side monumental, its private side more or less differentiated by loggias, terraces and balconies.

This distinction between interior and exterior, between the private domain and the public realm, reflects Loos' ideas about the combination of practicality and symbolism in a house. On the one hand there is architecture as a monument, on the other there is the "building" of rooms to be lived in. To the town, the house is a sign; to those who live in it, a utensil. The tension between these two worlds is expressed in various ways in each of the houses.

The compact form of the houses is also an integral part of its construction. Loos used load-bearing walls and wooden beams; only with these traditional means could his Raumplan be realized. The complex spatial structure is conceived within a simple construction plan; a load-bearing outer shell, often with one load-bearing wall inside, facilitating the introduction of split levels, even perpendicular to it held by means of tie-beams.

In a number of domestic projects (the Rufer and Moller Houses, for example), starting on the living level the inside wall is reduced to a load-bearing shaft containing the flue. The Raumplan was now apparently completely "free" to develop.

In a later stage (the Dice House and the Müller House), the inside wall acquires independent status as a differentiated screen, regulating the relationship between the contiguous room.

The bourgeois residence with its specialized, separate rooms is thus transformed into a house with rooms which open into one another but without losing their own identity.

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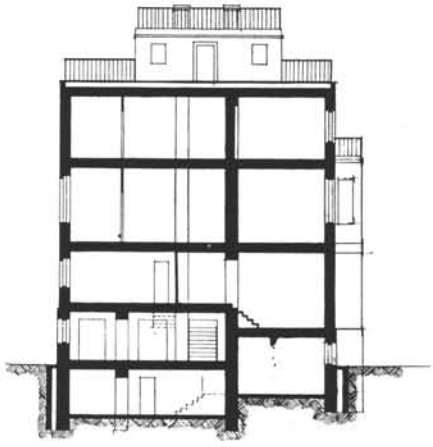


The Strasser House (1918/19)

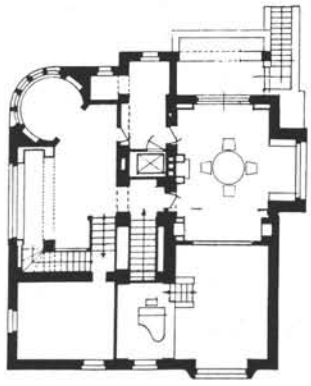
This is one of two conversions which featured Raumplan for the first time. The raising of part of the floor in the existing structure produces a low space at ground level for a lobby and cloakroom, from which stairs proceed to a reception hall at the level of the original living floor. Above the cloakroom a low study gives on to the landing of an open staircase which links the hall and sleeping level.

The dining room and salon are partitioned off from the hall in their own part of the house; the salon has a raised concert platform (also above the cloakroom, next to the study) overlooking the hall. This means that at musical soirées the guests could hear the music wherever they happened to be on that floor of the house!

The interior surfaces echo the pattern of previous designs; different rooms have different materials. The hall has ceiling beams and panelled walls of white painted woodwork. The dining room walls are covered with sheets of green and yellow veined onyx, cut from a single block of marble, and topped by a frieze of figures. Finally, the salon has smooth white walls, divided into fields by plaster meanders.

In the opening in the wall where the level between the music podium and salon changes, two separate items are placed: a stone column and a glass cabinet. The column symbolically replaces the load-bearing inside wall; the cabinet is the material expression of the actual opening.

The outer walls were completely redesigned, the street facade being sectional and asymmetrical. The entrance has an unusually modest position in the corner, dominated by a large extension on the top floor overhanging the windows of the study and the music-daïs, resulting in tempered light in these two parts of the house.



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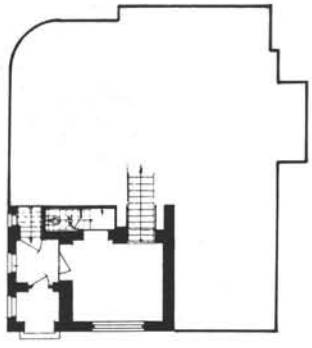

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1. Street facade
2. Salon and music podium
3. Hall with view into the raised study
4. Dining room

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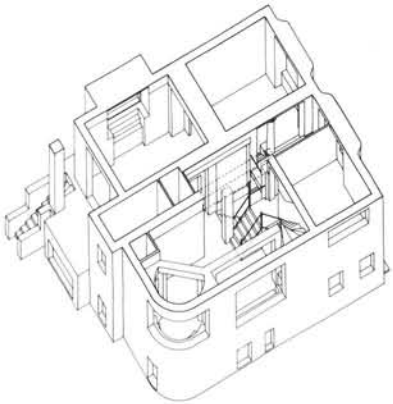

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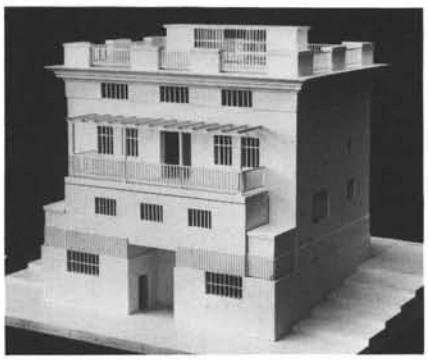

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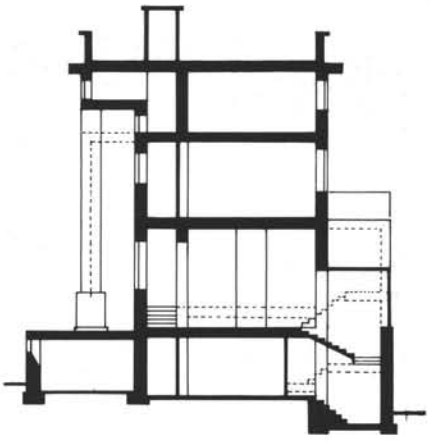

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The Stross House (1922)

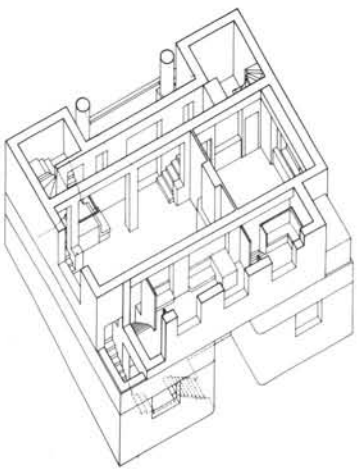
This is an unrealized domestic project from Loos' period of "reorientation" towards Classical Vernacular for the exterior. The street aspect is symmetrical and articulated horizontally by extensions and terraces. On the garden side, two colossal Ionic columns flank a three-storey high recess.

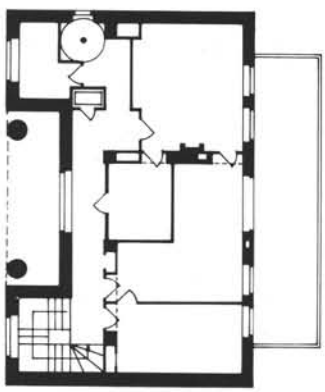
The interior develops according to Raumplan principles, with asymmetrical movement and raised levels grouped round a living hall.

The entrance is situated in the left-hand wall of the central open recess at street level; the garage behing provides access to a service flat and to the kitchen.

Nine steps lead from the lobby to a raised cloakroom, from which more steps lead along the external wall to the spacious hall.

The other living areas, which have raised floors, adjoin this hall, but in this case do not open out onto it. Along the facade is a study situated, above the entrance and lobby; at the side, situated above the kitchen, is the dining room, which opens up into a breakfast recess on the facade and at the same level as the study. The disposition of the functions suggests that this facade was supposed to face south. This means that the monumental garden facade faces north. There are stairs in the two recesses in the garden-facing wall; a wide staircase with landings leads from the hall to the bedrooms; the service stairs being on the other side.





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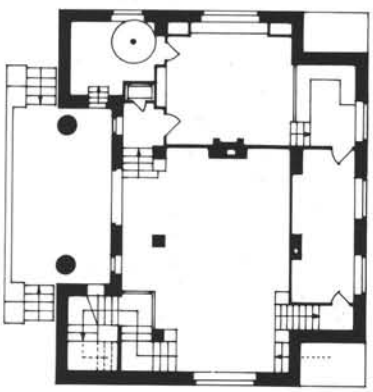

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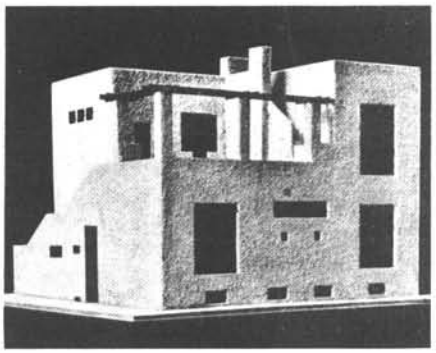
1. Street facade (model: Technische Universität München, Lehrstuhl Prof. Kurrent)
2. Garden facade



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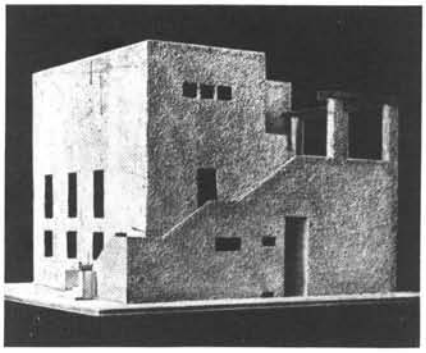

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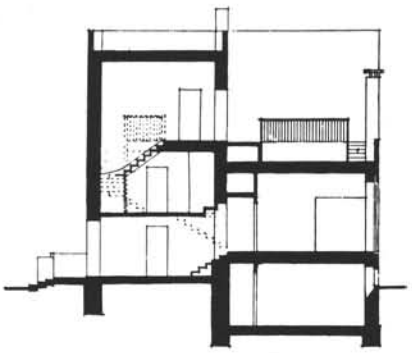


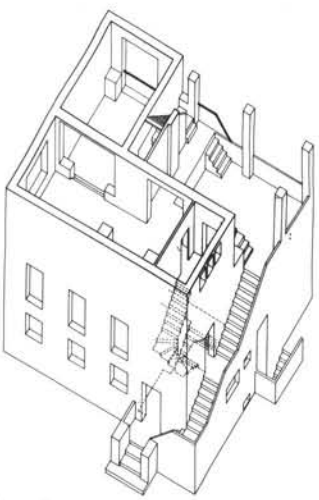
The Moissi House (1923)

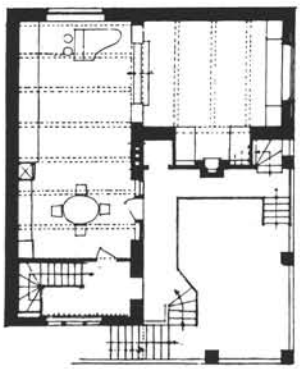
The exterior of the Moissi House displays already many of the characteristics of Loos' later work. With its coarse plaster "cladding", the facade presents a dour, withdraw face to the street; the private exterior wall has terraces. On this side a garden on the top floor is connected with the living room; the roof is also accessible from the ground floor by way of a long outside staircase which starts next to the entrance.

Due to the specific situation of the living room on the top-floor this is certainly not a case of Raumplan with connected rooms on different levels, reached by various flights of stairs. Here, service and sleeping rooms must be passed on the way to the living level. These rooms - each with its own height - are disposed at halfstorey intervals on either side of the central inside wall, access being by way of an ingeniously designed "stairwell". Raised sections of floor and lowered ceilings allow light and air to circulate through the passages in the middle zone.

The design was never executed. Loos had a model made for the first presentation of his work in Paris, at the 1923 Salon d'Automne. It was this project in particular, with its sober design, devoid of all decoration, but with an articulated mass - static at the front and dynamic at the back - that marked Loos as a precursor of modern architecture.

At the same exhibition Le Corbusier showed a scale model of a preliminary design for the La Roche-Jeanneret houses.





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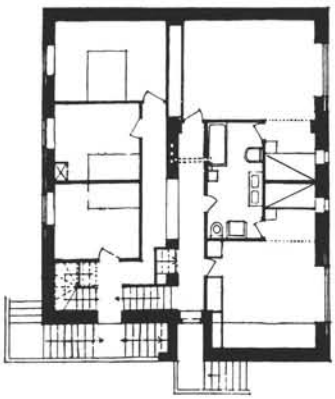

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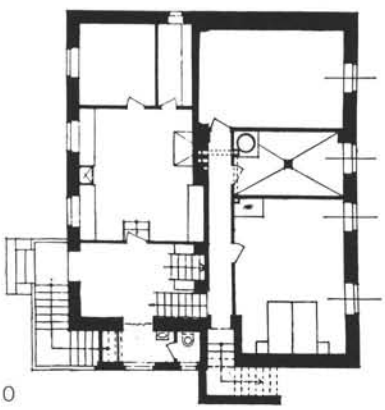

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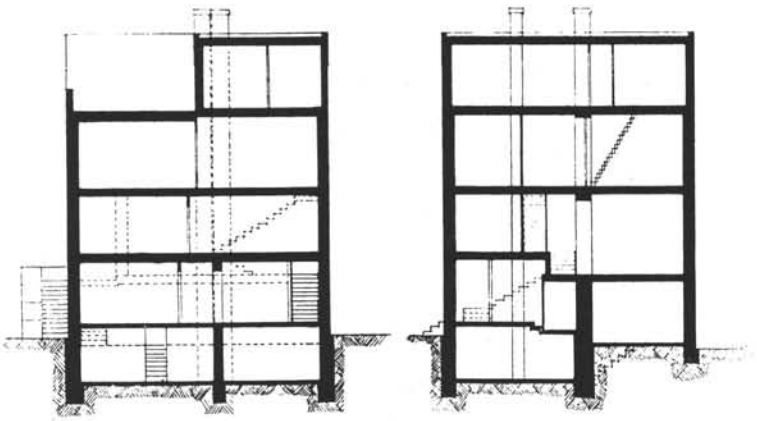
1. Villa Moissi seen from the south-west; original model for the Salon d'Automne, Paris 1922
2. The same model, seen from the north-west



The Rufer House (1922)

This house may be regarded as the basic type on which the majority of subsequent Raumplan houses are modelled.

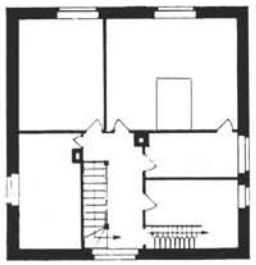
Enclosed in a compact cubic shape, half the living level is occupied by a reception hall connecting with a raised dining "nook". The rest of the remaining quadrant contains a small, separate study on the same level as the dining area. Underneath are the lobby and cloakroom, from which an open staircase rises along the facade wall, arriving at the side of the hall.

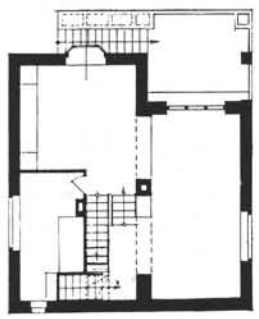
In this "open" floor plan the load-bearing inside wall is reduced at the level of the living rooms to a column which also contains the central-heating flue. Two pairs of tie-beams link this column with the wall. The column determines the opening and the diagonal relationship between the dining area and the living room, as well as screening to some extent the passage to the sleeping level.

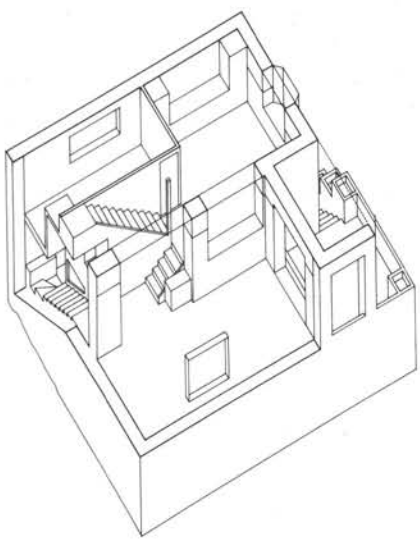
The living-level surfaces are still "traditional"; white-painted beams and wainscoting with recessed panels in both hall and dining area. There is no differentiation of material here as a means of reinforcing the different volumes in the opened-up living floor.

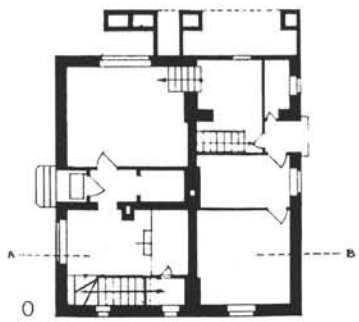
Notably in this house the position of the window apertures is determined by the interior; variously shaped and sized, they are dotted about the facade.

The compact form is relieved only by a small loggia on the living level and a terrace along one quadrant on the roof level; the broad cornice creates the context.









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1. Street aspect
2. Garden aspect
3. Entry to the hall and staircase to the second floor
4. View of the hall from dining area
5. View of dining area from the hall

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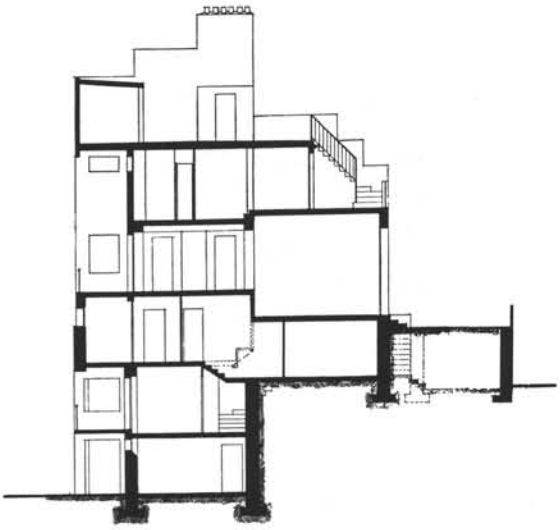


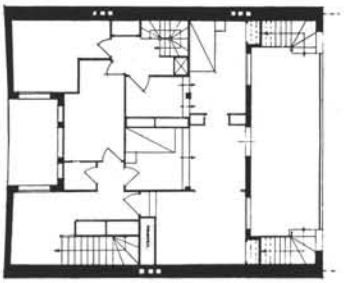
The Tzara House (1926)

If Raumplan is at all in evidence here, it is chiefly apparent in the ingenious arrangement of the two residences - the actual house and a service flat - in relation to each other and to the sloping terrain. On the living level the volumes focus on the relationship - in form and material - between the salon and the raised dining room opened onto it. It is however not possible to descend into the salon from the diningroom; the connection is made via the stairwell at the side. In this house the difference between the front and rear facades is extreme, and the qualities of the situation are enhanced. The front facade is organized vertically, the rear horizontally.

The bipartite division of the high front facade - in the actual building the top floor was dispensed with, against the architect's wishes - suggests two dwellings; the different materials clearly indicate the difference in levels between the front and the back. The symmetrical arrangement does not directly reveal the internal organization; in short, the facade "tells the town a story".

The rear facade is linked directly with the interior; each floor of the main dwelling has its own terrace, causing the mass to taper towards the top. A diagonal turn in the articulation makes these terraces face an inner courtyard at the side.

A studio was added to the terrace at a later date, again without the architect's consent.



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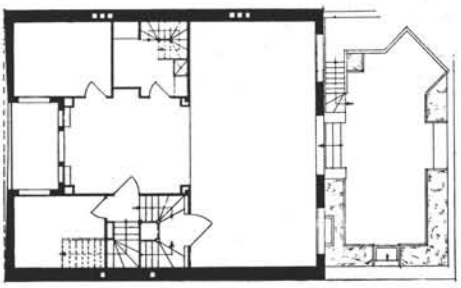

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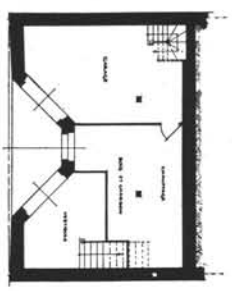

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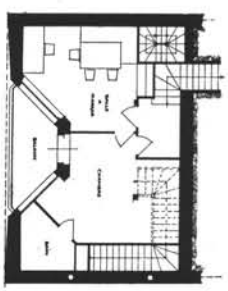

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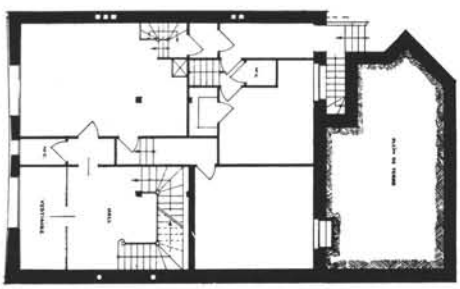

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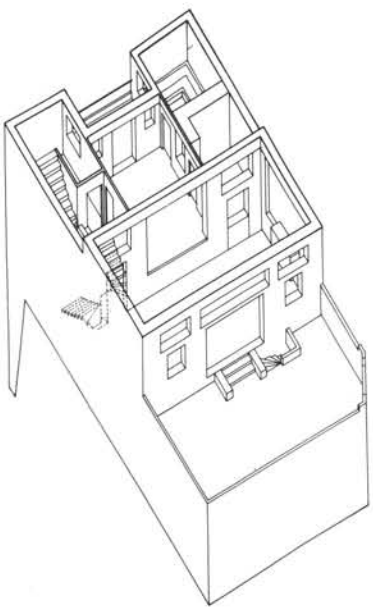

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1. Facade as originally intended
2. Facade as executed
3. View from the salon to the dining room
4. Dining room with view of the salon
5. Rear facade

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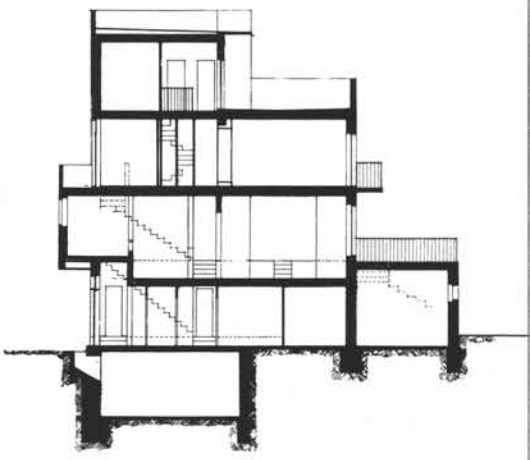
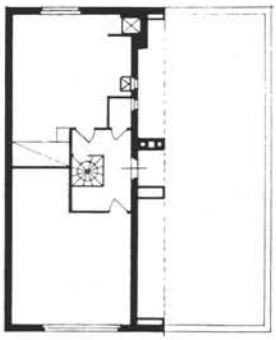


The Moller House (1928)



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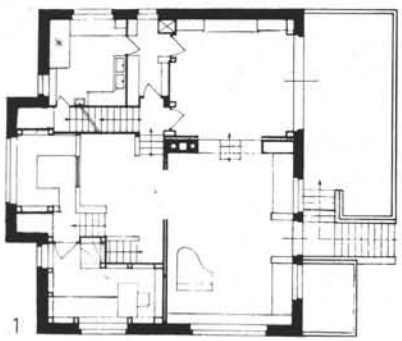
This house differs from most subsequent projects in having a separate reception hall, which is entered by ascending from the entrance and via the cloakroom, and provides access to the sleeping floor. The separate music room and dining room occupy the entire length of the rear wall, an arrangement corresponding with the constructional elements and already observed in earlier domestic projects, e.g. the Strasser House.

Both the spatial articulation and the treatment of the materials used reinforces the difference between the two halves of the living level.

The dynamic living hall features a multitude of items: balusters, balustrades, ceiling beams and flights of stairs, all painted in bright colours. The peacefull dining and music rooms are subdued, with wood-veneered walls and a white ceiling.

This house's exterior is characterized by the difference between the front and the rear facades, the two side-walls are indeterminate.

The symmetrical front facade with its central extension above the entrance is the face the house present to the outside world. In the rear facade with its two axes of symmetry and staggered terraces, the complex spatial construction of the interior is revealed.



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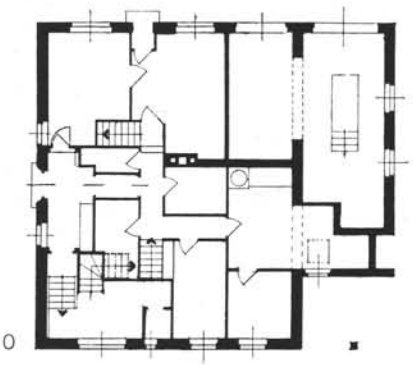

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1. Street facade
2. Rear facade and garden
3. First floor reception hall, looking back to cloakroom access
4. View of music room from the dining room
5. View of dining room from the music room
6. Cloakroom recess midway between entrance and reception hall

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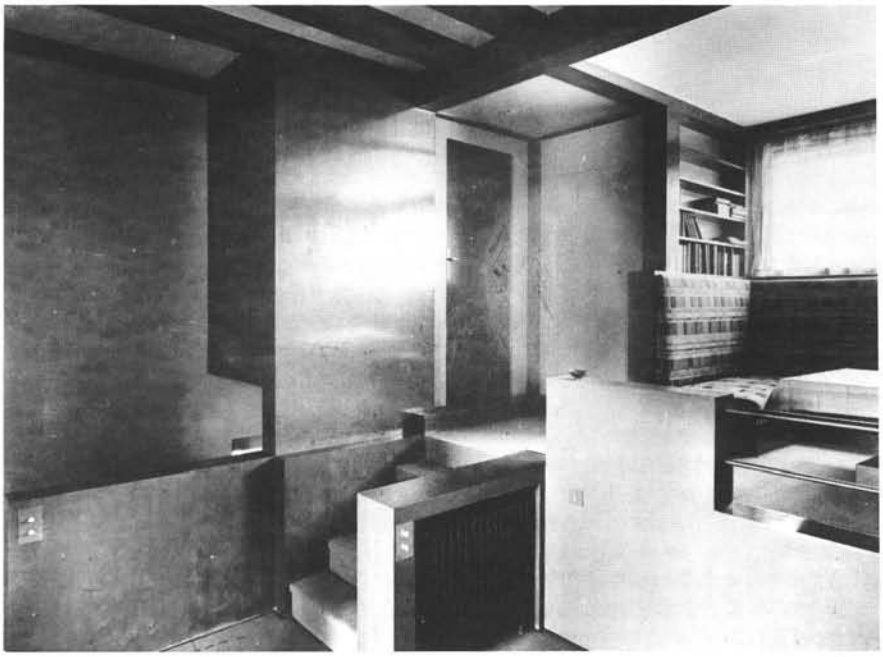

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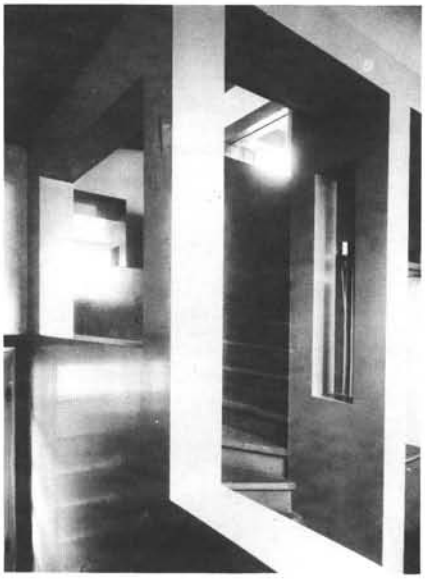

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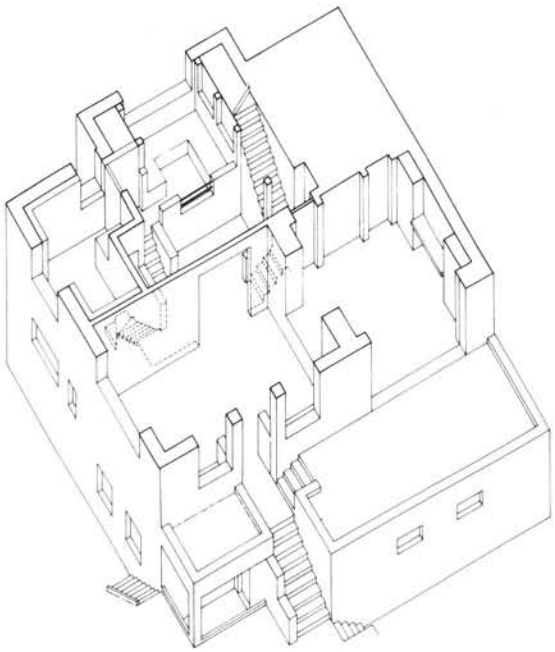

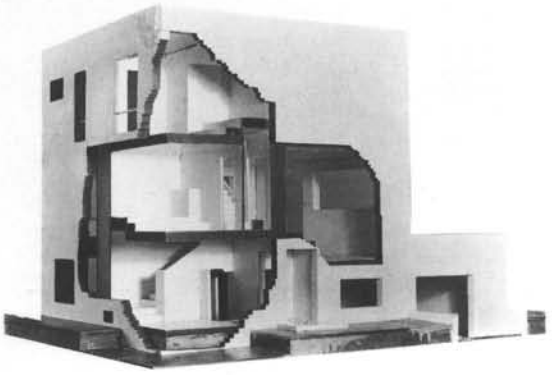

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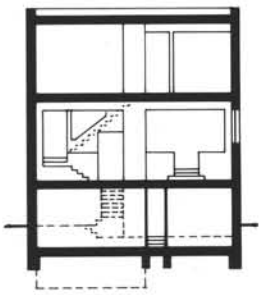
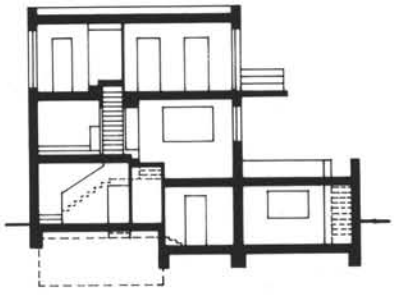


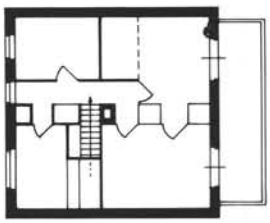


The "Dice House" (1928/29)

Only four photographs of scale models exist of this project, which was designed in collaboration with Kulka. It is a variant of the Rufer House and the fundamental nature of the plan suggests that it was not a private commission.

As in the Rufer House, half the living level is occupied by the salon, in the other half the stairs fit into a quadrant, A short flight of steps leads from the streetlevel cloakroom to the salon, from which a spiral ascent to the bedrooms passes a landing which gives access to a low study situated above the cloakroom. The extremely accurate proportions in this quadrant generate a compact composition of staircases and rooms. The dining room in the other quadrant above the kitchen, is not on the staircase route. Due to the salon's casement doors, the dining room is oriented to the terrace, under which the garage is built.

In this design the load-bearing inside wall develops into an independent element for the first time, regulating the complex relationships of the openly connected rooms, the design is static at the dining room and dynamic at the stairs.



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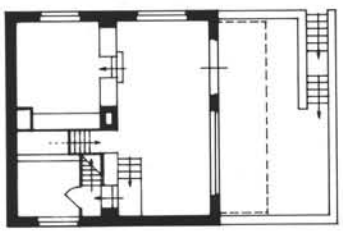

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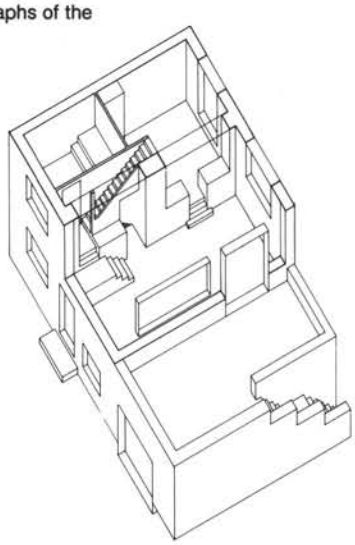
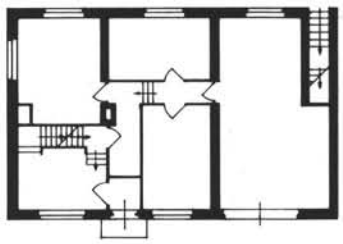
1. One of the four existing photographs of the original model





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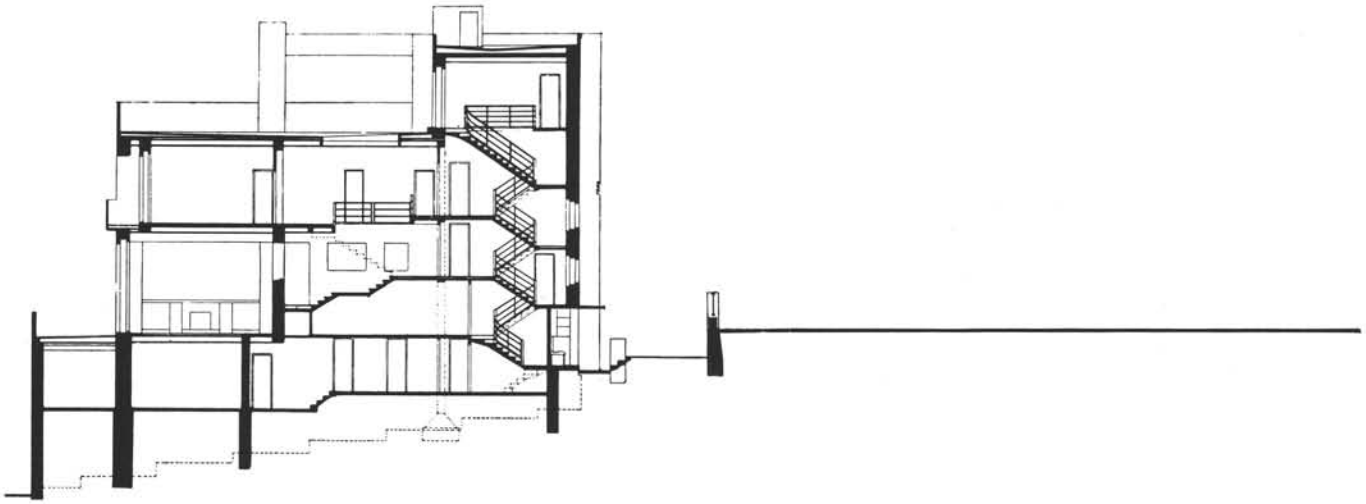
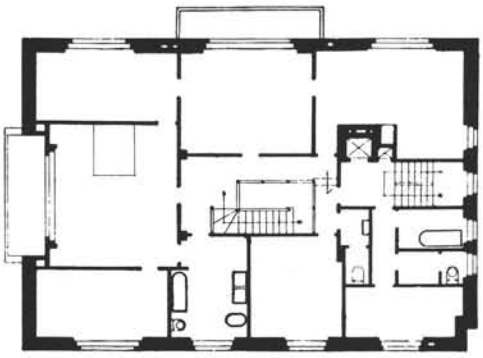


The Müller House (1929)



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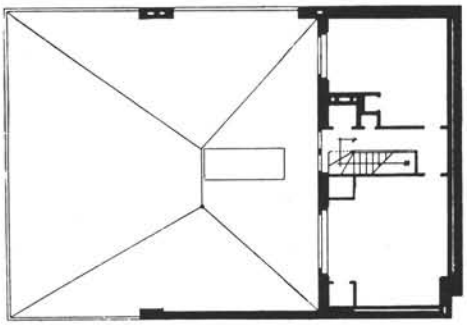

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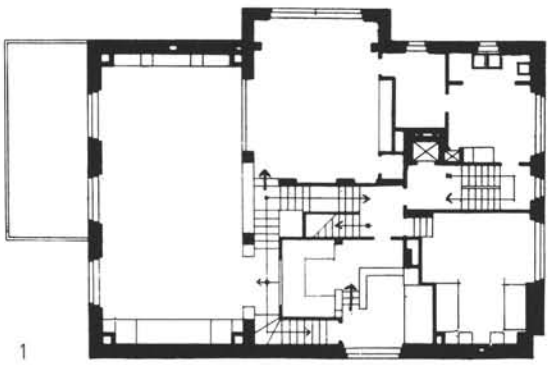

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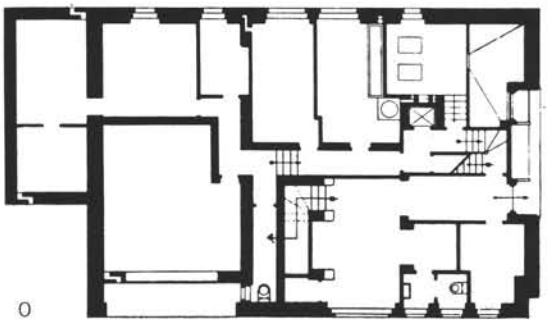

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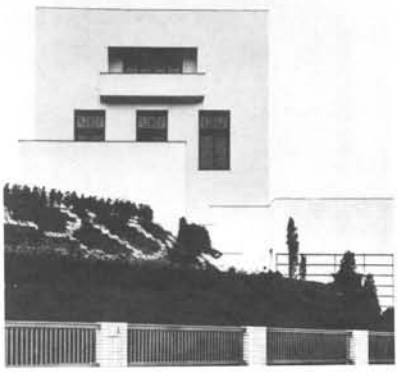
This complex house may be seen as a variant of the "Dice House". Here, too, a large reception hall occupies the entire width of the construction, backing onto a raised dining room and study, for the lady of the house, above the cloakroom. In between, a screen of green-veined marble doubles as part of the continuous covering of the walls in the hall as well as having its own raison d'être: not only because the marble covers both sides of the wall, but also because of the articulation which expresses the various inter-relationships of the rooms on either side.

The extensive programme called for an extra constructional bay. In it, on the same level as the living rooms, the dining room backs onto the kitchen, and the wife's study onto the husband's.

Due to its open situation, on a slope between two streets, this house has an introverted character. The main private outside space is thus on the roof, onto which the breakfast room leads.



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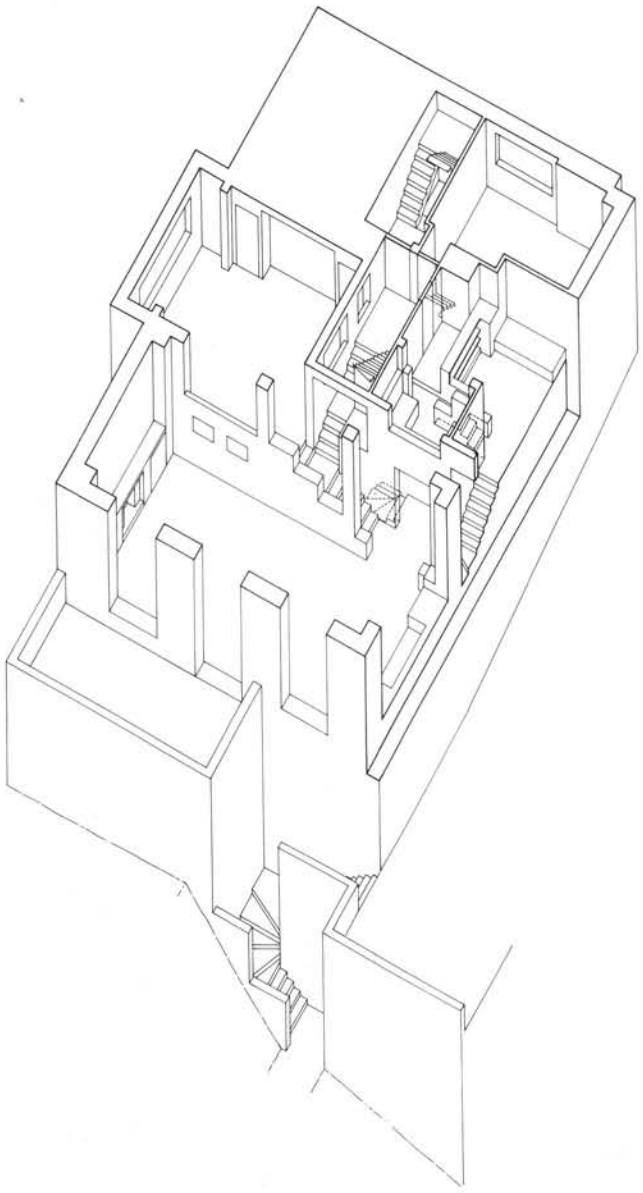
1. View of garden facade
2. Stairs to the dining room, behind the marble screen
3. View of ladies' room
4. View of the recess in the ladies' room
5. Reception hall with view of dining room
6. View of reception hall, looking back towards the entrance
7. View of dining room



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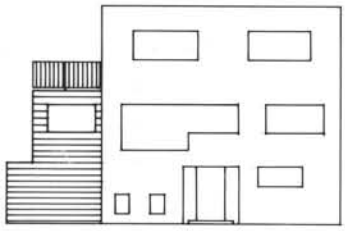
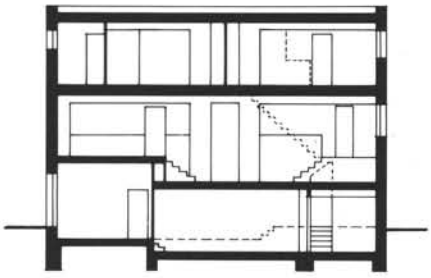
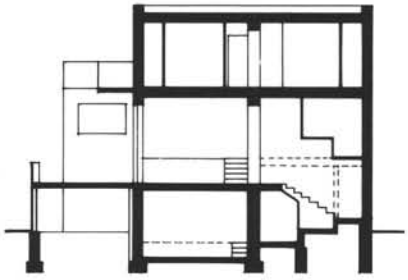






The Bojko House (1929)

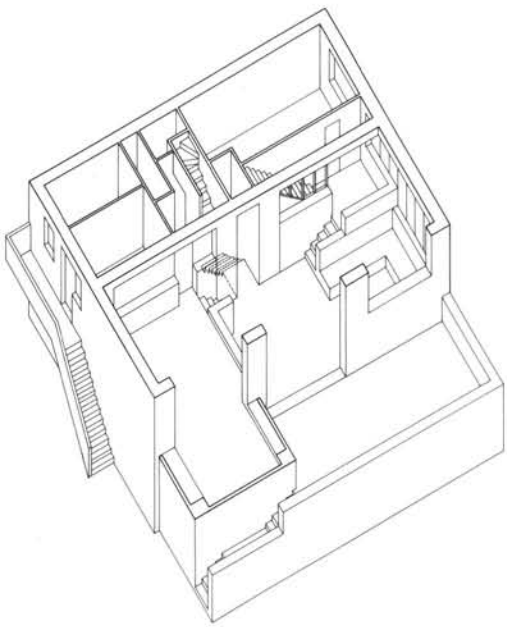
This unrealized design was developed in collaboration with Kulka. Although its volumes are differently organized, it can be seen to derive from the "Dice House". What deviations there are result from, among others, the narrow site, the orientation towards the sun and the fact that the house was situated at the and of a row.

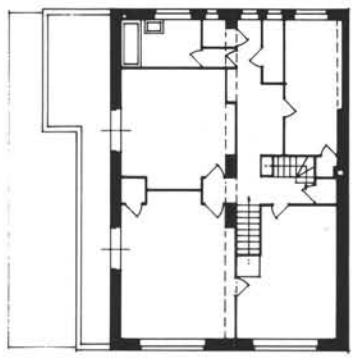
The short side of the main mass, containing the entrance, faces the road. The living room and raised dining "nook" are in the same section of the house, on the sunny side, leading respectively to a veranda and a conservatory.

Due to the displacement of the dining room there is room for a kitchen on the living level, it is adjacent to the dining area.

This allots much more space to the lobby at street level, and invests it with a living function. The staircase rising from it, situated in the middle of the mass of the building, arrives in the empty centre between the raised dining area and a built-in seat. The stairs proceed up to the bedrooms, pausing at a landing which provides access to a closed study above the lobby.

In this design, once again, the articulation of the central wall expresses the nature of the relationships between the rooms on either side. The living room is entered through a narrow, high opening between two piers, next to which are large openings, variously filled with cupboards and balusters.





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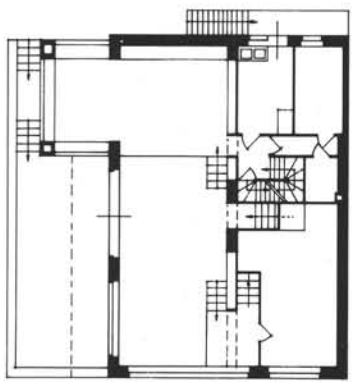

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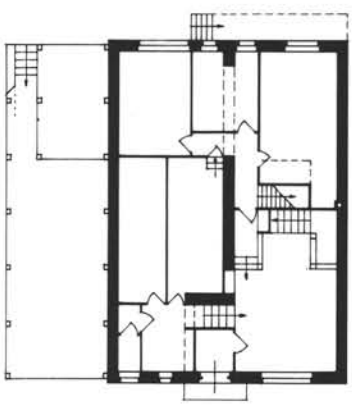

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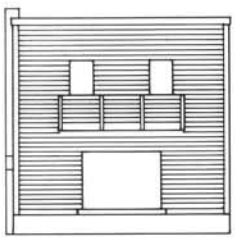
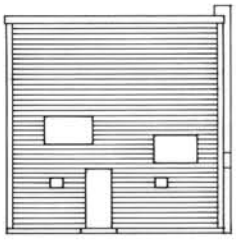
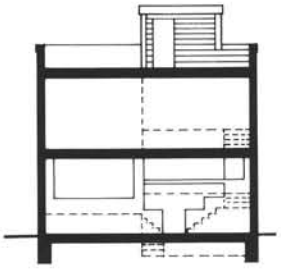
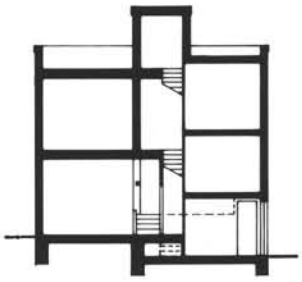








The Last House (1932)

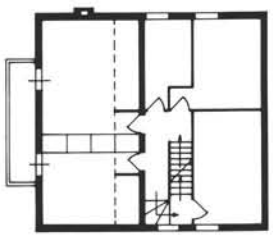
The notes on the drawing of Loos' last design suggest that it was to be a standard wooden house. But although intended for a private client - the daughter of the Dr. Müller who had commissioned Loos' biggest Raumplan house - it was clearly not merely a matter of standardized construction - a balloon frame. The house is entered at street level in the quadrant accommodating low rooms: the kitchen and a study. A staircase in the lobby ascends, describing a quarter-turn, to a landing on the same level as the living room, still behind the central wall. From here, stairs lead along this wall to the dining room and on to the bedrooms; a landing halfway up provides access to the study. Again, the articulation of the central wall reflects what is on the other side.

Loos' houses are basically derived from a form of the English house, in which a number of different rooms (dining room, drawing room) are grouped round a "living hall", a lay-out also observed in some Raumplan houses (Strasser, Moller).

The Raumplan rules result however in a new spatial concept, in which "rooms" are not primarily separated by walls, but by different levels.

This concept can be reduced to a basic type in which the relationship of the main areas (entrance hall - living hall - dining room - study) is established in a fixed scheme.

Depending on the assignment, situation and budget, various versions of this scheme werd devised. The bourgeois residence with its specialized, separate rooms is transformed here into a house whose rooms open onto one other. The load-bearing inside walls has developed into a differentiated screen which regulates the mutual relationship of the rooms.



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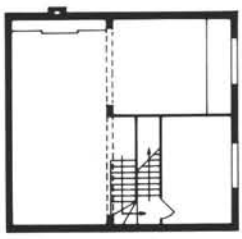

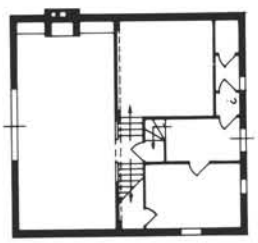

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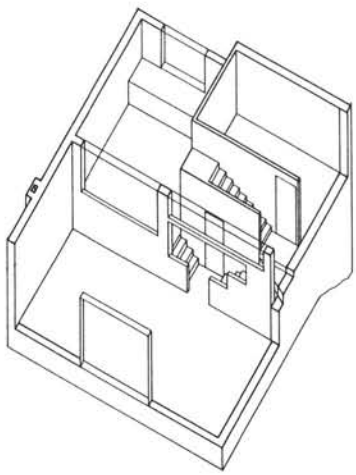
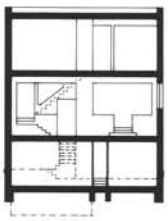
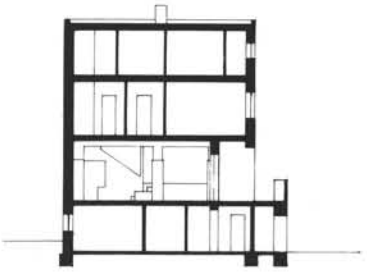


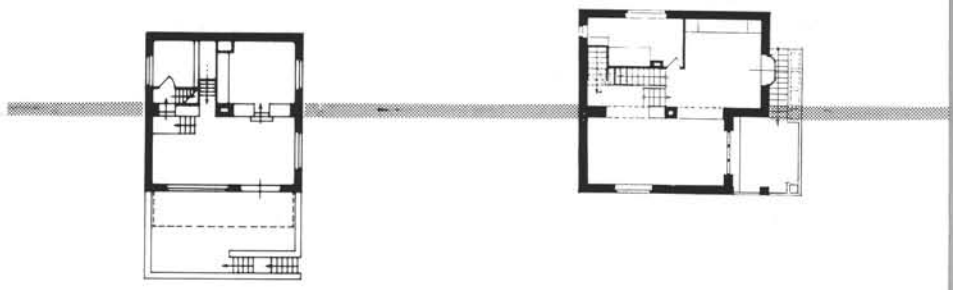
In retrospect, one can discern certain principles on which the Raumplan houses by Adolf Loos are based. These principles are most clear in the theoretical project for the "Dice House". This project provides a basic type of which other Raumplan houses seem to be variations.

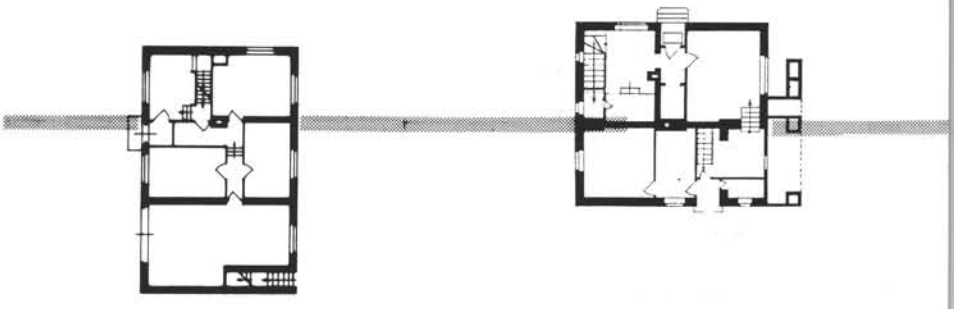
The "Dice House"



The Rufer House



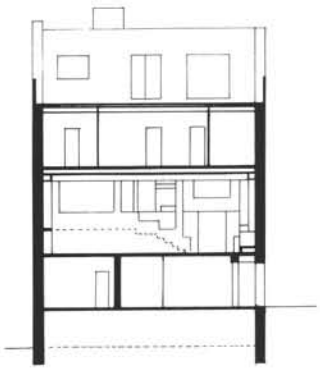


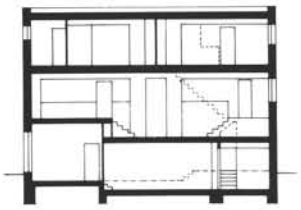


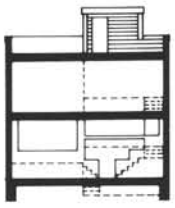
The Müller House

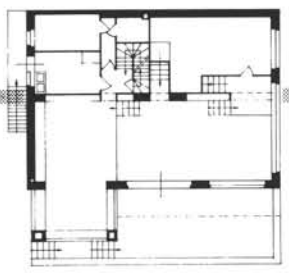
The Bojko House

The Last House

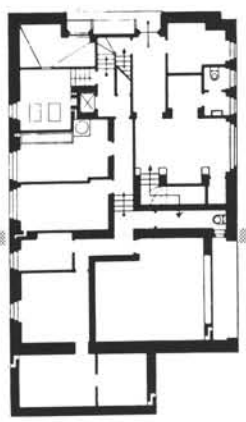


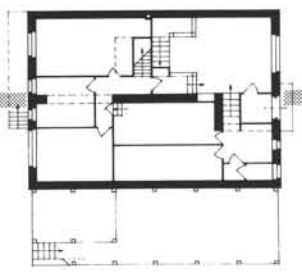






first floor

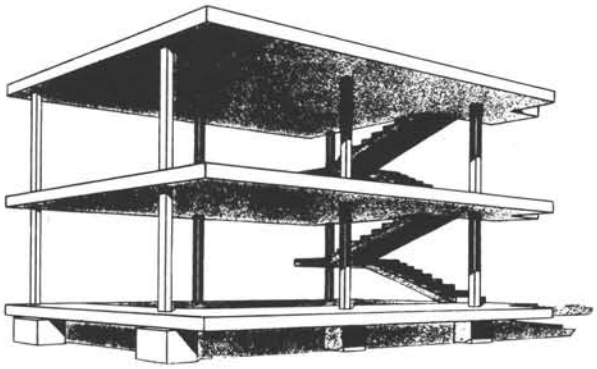




ground floor

1. The Domino frame; perspective of 1919
2. The original model of the "Dice House"
3. Model of Maison Citrohan
4. Maison Domino; patent drawing of repeatable units (1915)
5. Axonometric projection of the houses in the Weissenhofsiedlung
6 The Four Compositions (1929)

1



Whereas it took a long time for a basic type to develop from Loos' Raumplan, in the case of Le Corbusier a basic type emerged at the beginning of his official career, in the form of the Maison Domino and the Maison Citrohan. This contradicts Le Corbusier's writings of that period, in which the followed Loos in postulating that a good product should be developed in a cyclic process, perpetually enriched with the fruits of experience. However in a sense, both Domino and Citrohan may be regarded as products of a condensed collective experience of that kind, the Domino skeleton emerging from the sophisticated concrete technology which had been developed in France by Freysinet, Perret etc., and the Citrohan House from the anonymous Parisian studio dwelling.

Le Corbusier, however, conceived, and propagated the two types in his publications as his inventions; he even tried to register them. The fact, too, that these designs were not commissioned enhances their model-like character; they express and idea, and demand further elaboration. It is notably in the projects for private houses designed in the twenties that these models were tested and elaborated; such factors as the client's own ideas, the available budget, the site, the means of construction and execution, provided impulses for the further development of the initial concepts.

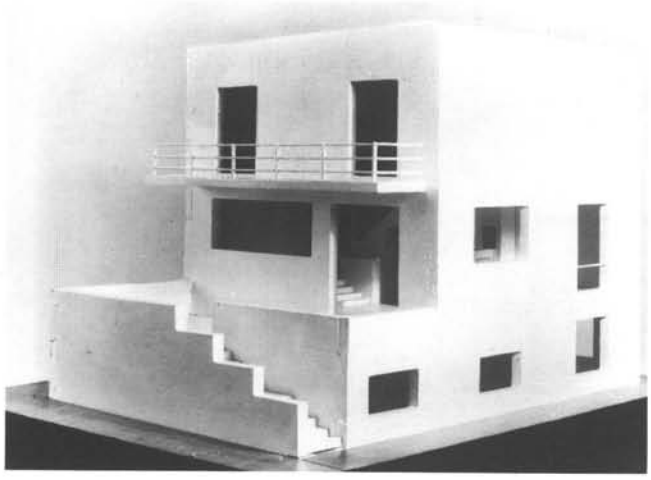
Two phases can be distinguished in the evolution of this series of domestic projects. Up to 1927 there were experiments in which the three-dimensional possibilities of the Domino skeleton and the habitation possibilities of Citrohan were explored. These experiments took the form of the Meyer, Cook and Stein-de Monzie Villas respectively, and led to the formulation of the 5 Points of a new architecture (1926): the "pilotis", the roof-garden, the free plan, the ribbon window and the free facade.

The two post-1927 villas (Baizeau and Savoye) were based on these premisses, best expressed in the use of an independent grid of columns as a structurizing element during the various phases of development. The Domino skeleton was used in different ways in these two villas, however; in the first version of the Villa Baizeau in a spatial "constellation", dominated by the section. In the executed version of the Villa Savoye, horizontal organization is again much in evidence.

In the first part of the Oeuvre Complète (1919-1929), Le Corbusier summarizes the development of the series of residences in four compositions focusing on the relationship between programme, construction system and architectural form. The La Roche-Jeanneret Houses stood model for the first composition: picturesque and full of movement, calling for classical principles of organization for its accomplishment.

The Villa Stein-de Monzie is represented in the second composition as "very difficult" but nonetheless "satisfying to the spirit" because of its pure form. The third composition - the executed version of the Villa Baizeau - is the most pragmatic. The construction system determines the form, allowing the programme to develop freely. The last diagram - The Villa Savoye - is described as "very generous; one is asserting an architectural desire on the outside, while satisfying all functional needs on the inside".

2



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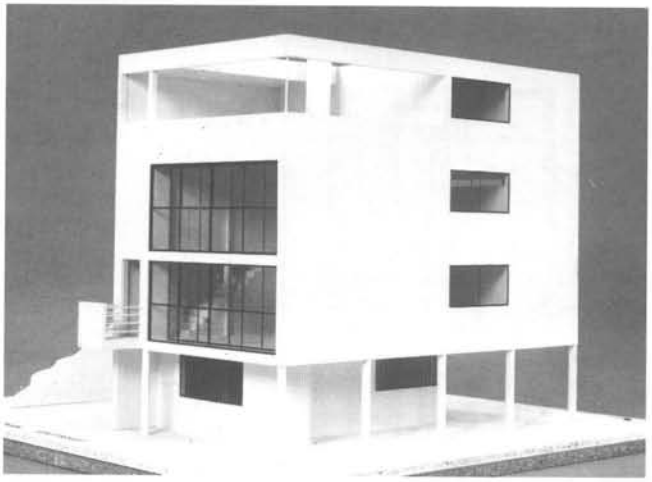
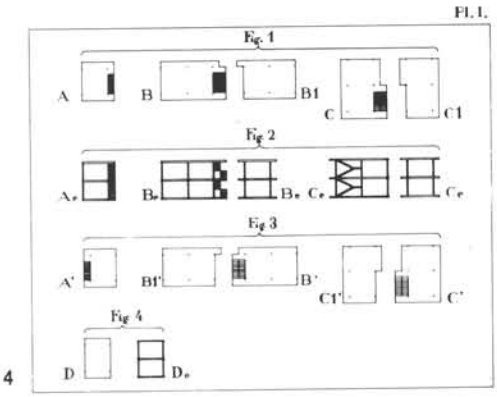


Maison Domino (1915/19) & Maison Citrohan (1919/27)

The concept for the Maison Domino was based on existing concrete technology, and envisaged a repeatable unit without a standardized living programme, but keeping to the framework: a prefabricated skeleton in which various types could be realized.

In the 1915 version, Domino is only feasible as a party-wall structure. The well-known 1919 perspective shows one such variant. It is this drawing which in retrospect seems to contain the potential of The 5 Points for a new architecture. The Maison Citrohan poses the problem of the mass-produced, repeatable dwelling unit in a different way.

This concept standardizes a particular form whose spatial organization not only derives from the artist's studio but also refers to the closed concept of the car. Cooking, washing and sleeping (the 'engine') are minimized in size and accommodated in one half of the building volume; the double-height living room (the 'cabin') is in the other half. This is not the only reference; like a car, the Citrohan House is basically a detached entity and can be envisaged in various situations. In later versions of the design this is emphasized still more by the introduction of a columnar structure. This independence of situation emerges clearly in the only built version, in the Weissenhofsiedlung in Stuttgart, where only the ground floor had to be designed.



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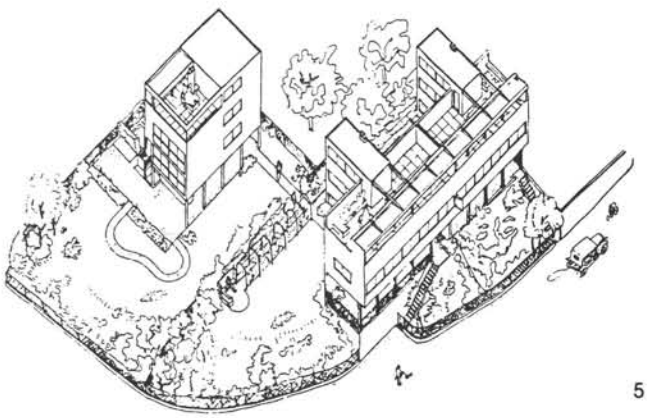
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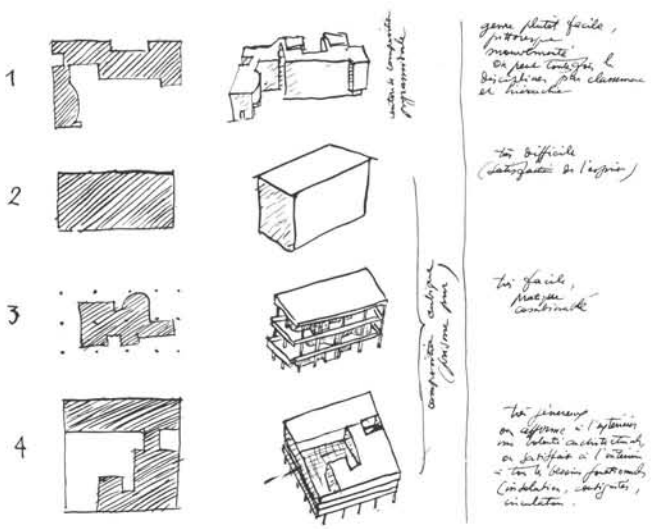

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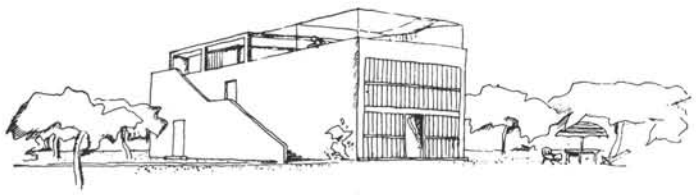
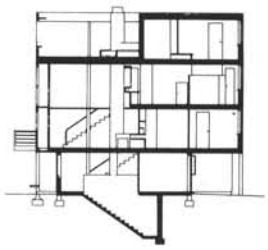
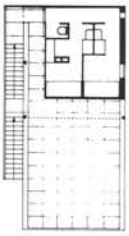
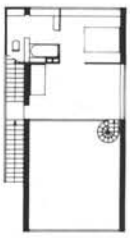
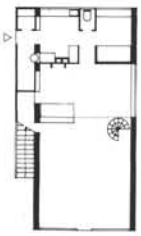




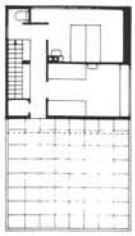
Maison Citrohan
1919

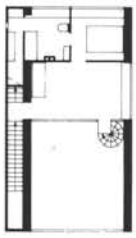


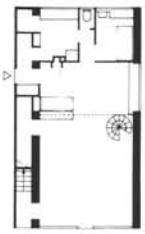




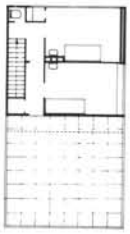
Maison Citrohan
1920

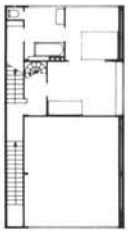


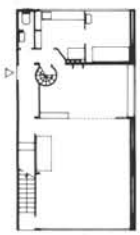




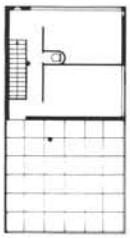
Maison Citrohan
1922

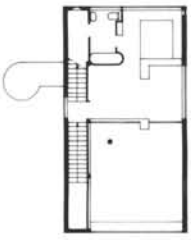


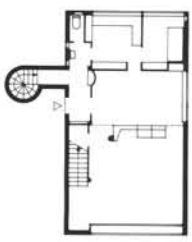


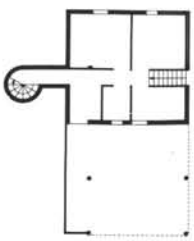


Maison Citrohan
1926 Stuttgart

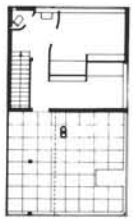


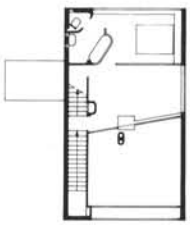


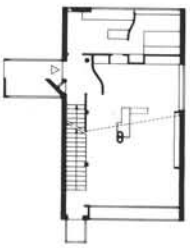


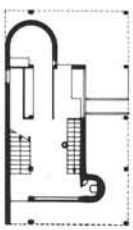


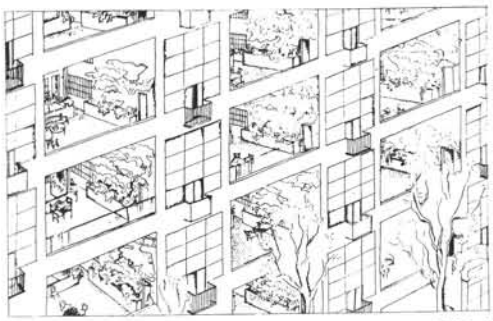
Maison Citrohan
1927 Stuttgart





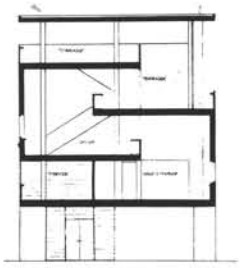




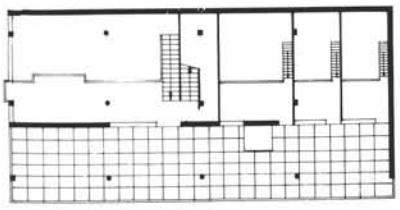


Immeubles-Villas
1922

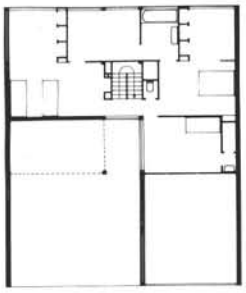
Villa Meyer
1925 Paris

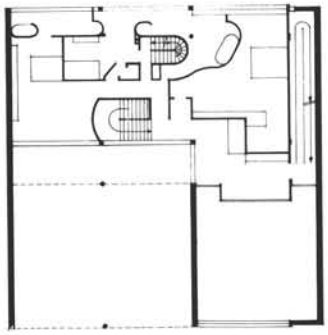


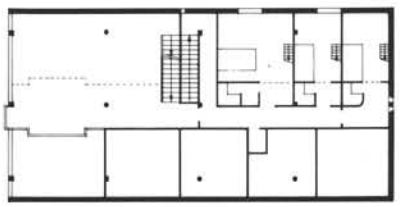
Villa Baizeau
1928 Carthage



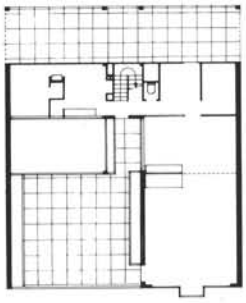
third floor

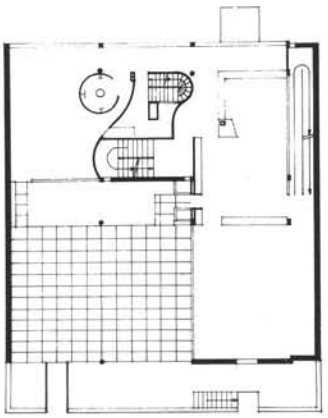


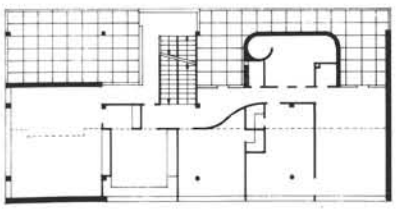




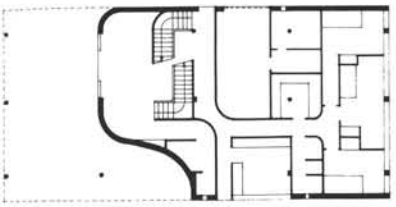
second floor



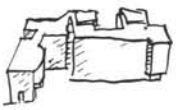


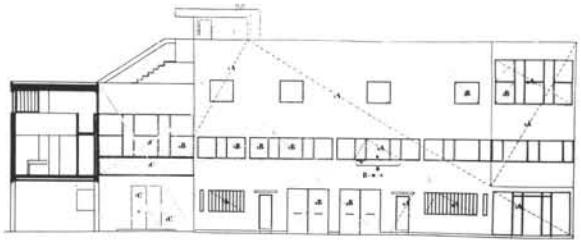


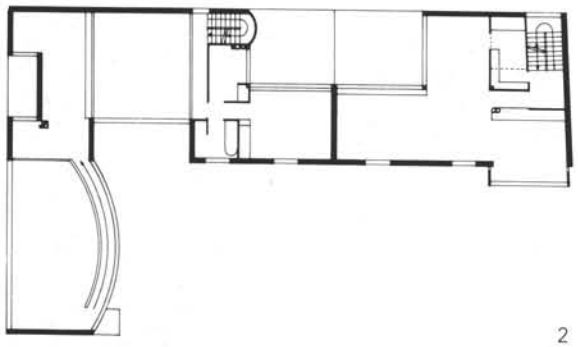
first floor



ground floor







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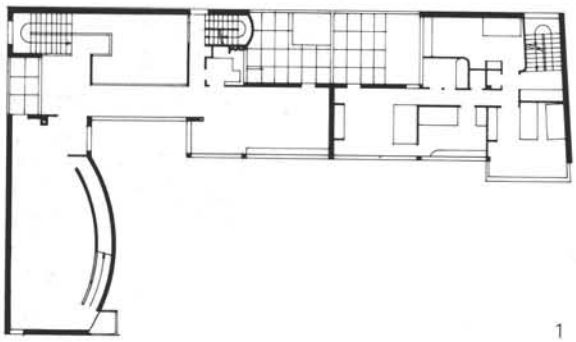

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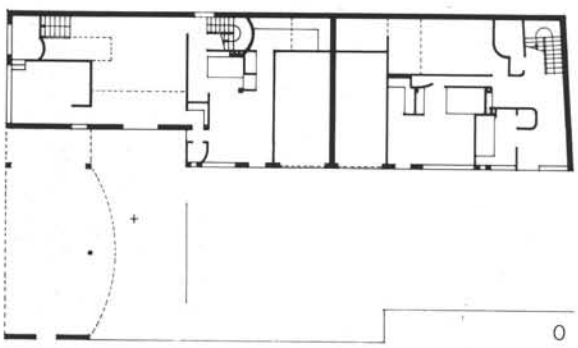


0

Villa La Roche-Jeanneret (1922)

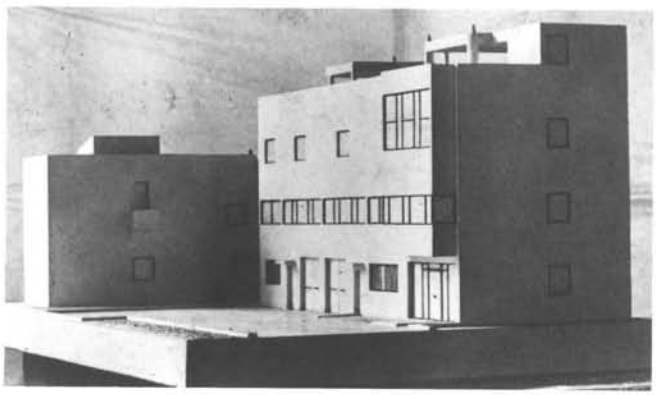
The form of these connected houses is of an articulated building mass at the end of a cul-de-sac in a large housing block and contains a duplex, its interior organisation is adapted to the requirements of the inhabitants. In the unit for the banker La Roche, a bachelor and art collector, the volumes develop horizontally, whereas the Jeanneret family wanted a compact dwelling with a vertical organization and living-room proximity to the roof-garden.

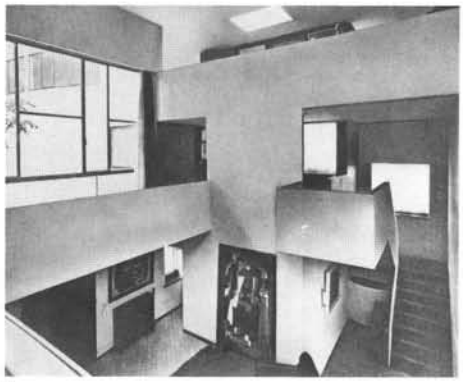
The articulation of the mass does not occur at the line dividing the two dwellings but within the La Roche part. Here, a hall occupies the entire height - ramps and stairs form a promenade architecturale - and dramatizes the encounter of the two volumes.

The development of the 5 Points is presaged by

- the roof-garden, necessitated by the unfavorable situation;
- the evelated mass of the La Roche studio, symbolically supported at the centre by a round column. Not an independent columnar structure by any means, the skeleton is integrated in the walls and only assumes local independence, between the strip windows.

1

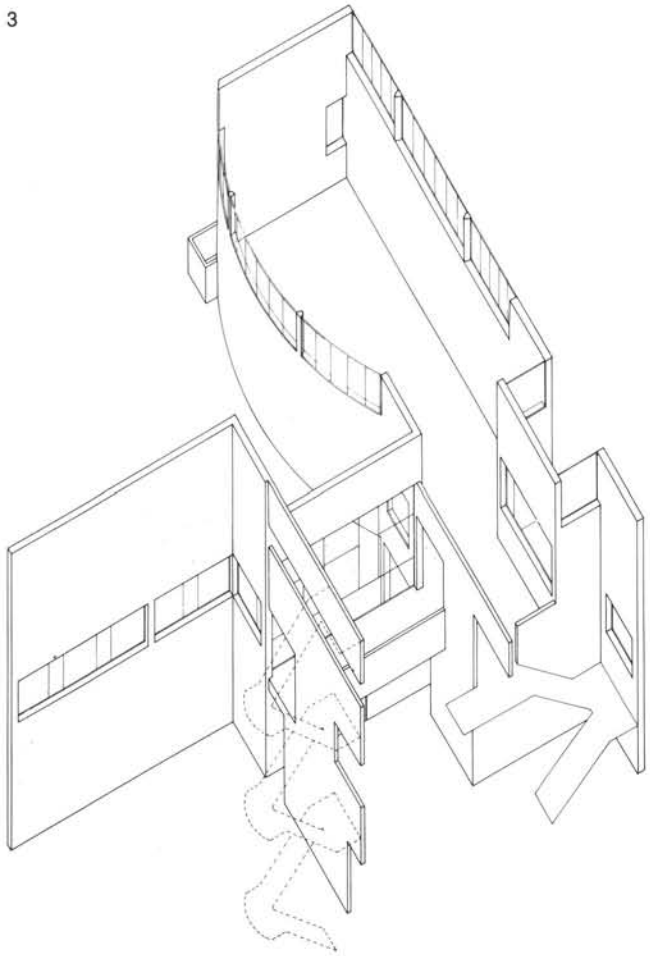




2

1. Original model of a preliminary design
2. Entrance hall, seen from first floor landing
3. Axonometric projection of the entrance hall
4. View from area under the La Roche studio
5-7. Model of the realized design, with sections dismantled

3



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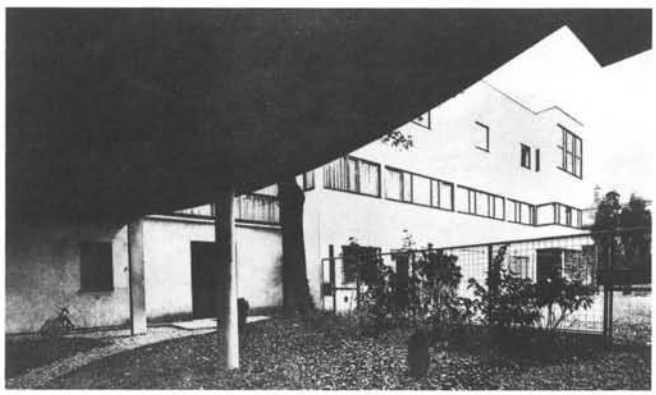

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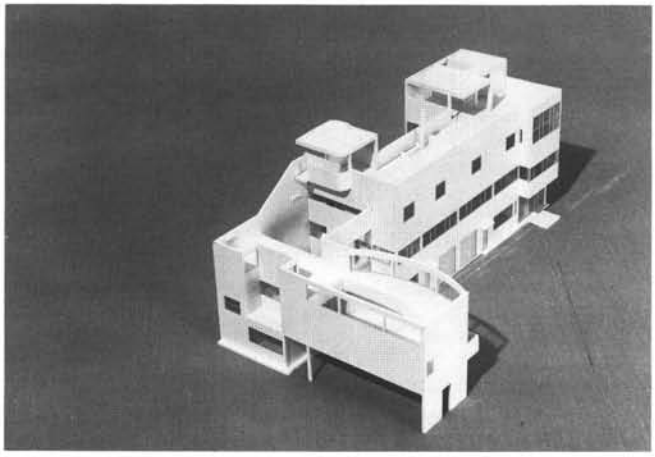

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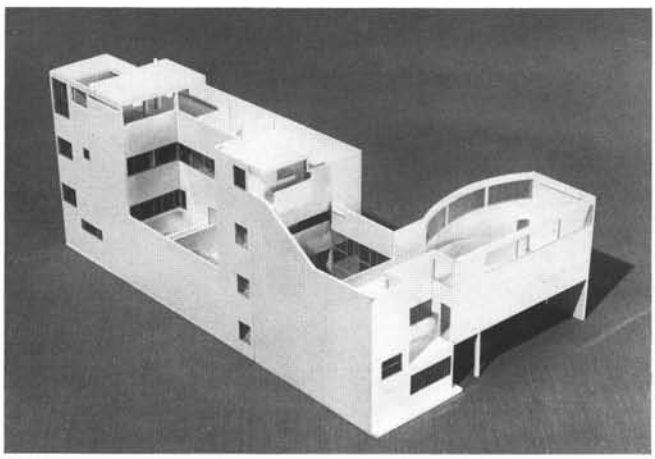

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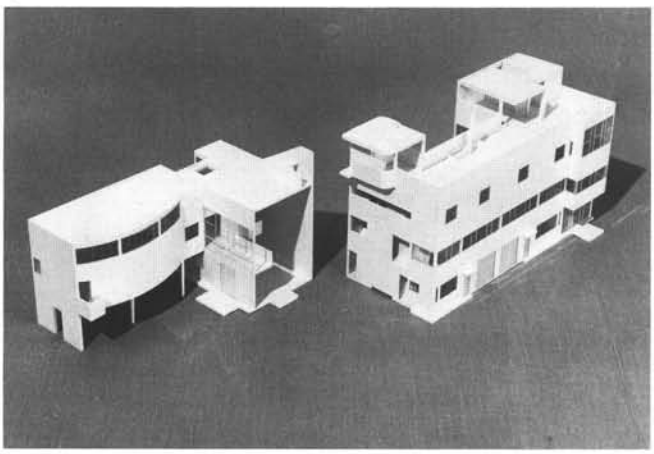

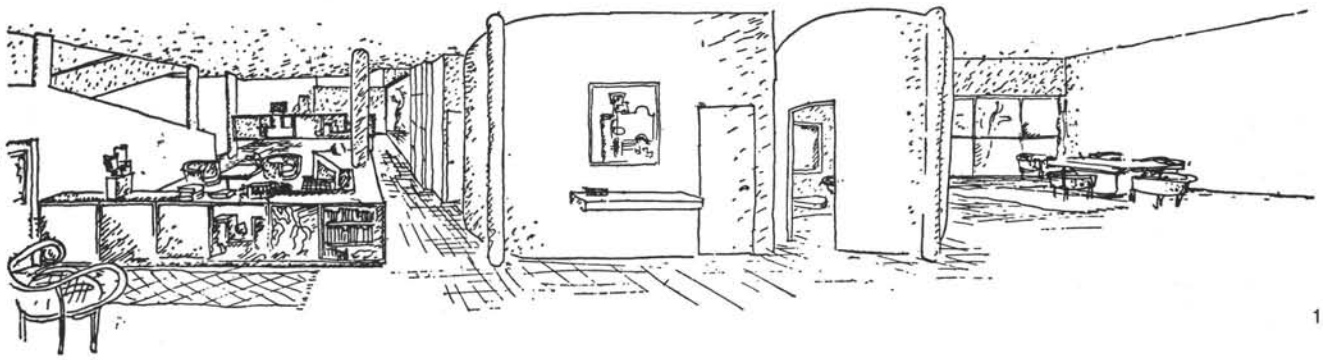

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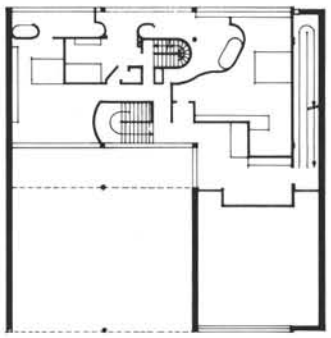
1. Design of April 1926; sketch of salon and dining room interior on first floor
2. Design of April 1926; axonometric projection; view from garden
3. Design of June 1926; axonometric projection; view from garden



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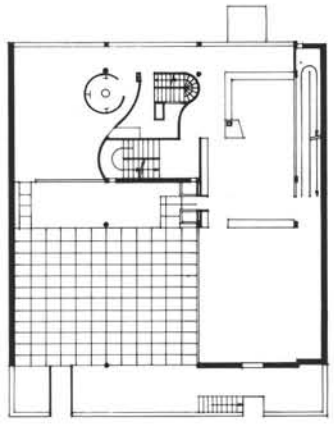

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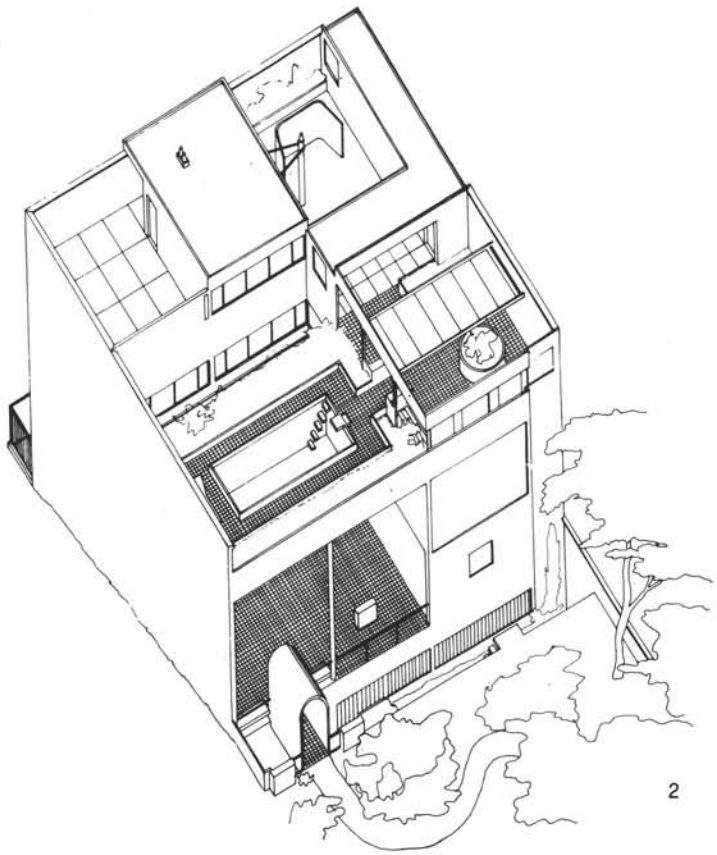

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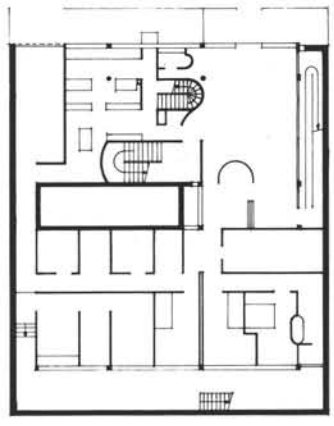

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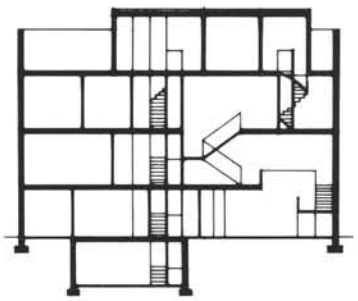

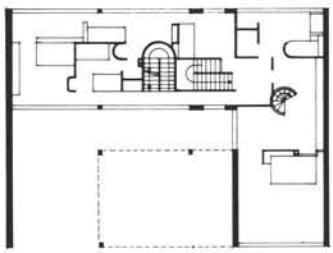

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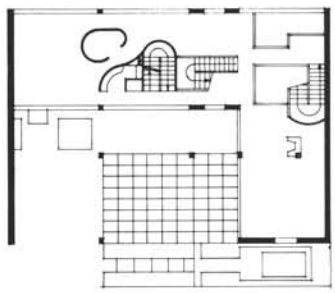

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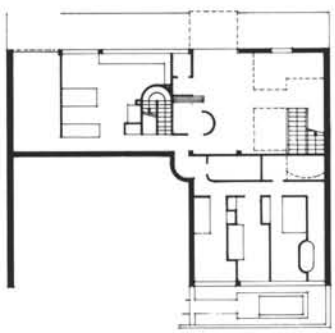

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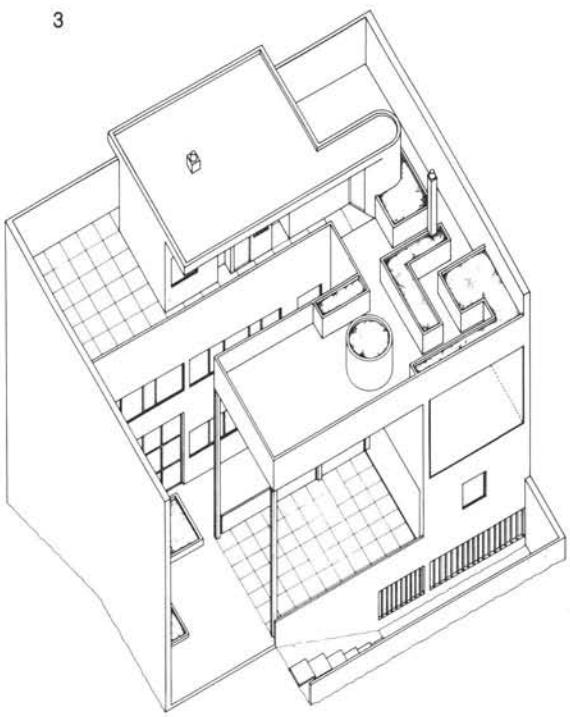
Villa Meyer (1925/26)

Four designs exist of the Villa Meyer, which was never built. The connections between the levels constitute a major problem in all four designs - in the last two as a consequence of the columnar structure, which creates new formal problems for stairwells and open spaces.

The design of April 1926 envisages two through staircases and a ramp serving all floors, built at the side of the house; the design of June 1926 features service stairs throughout, in combination with stairs and landings situated individually on each floor. A "*promenade architecturale*" leads the visitor from the street-level entrance to the living rooms on the bel-étage. Both designs feature a "free-plan" and a "free facade" for the first time, as a consequence of the introduction of a frame; support and separation have become independent qualities. Characteristic here is that:

- small items of the programme are planned as autonomous bodies (staircase, bathroom, pantry);
- connections to the facade-wall are reduced to a minimum, with noticeable consequences in the bedroom level.

3

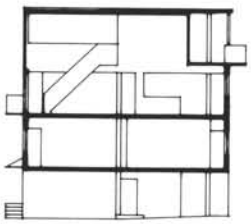


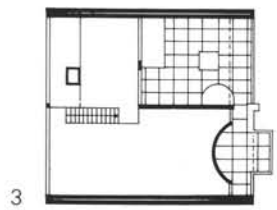
June 1926

Maison Cook (1926)

In the Oeuvre Complète 1910-1929, Maison Cook is used to illustrate the 5 Points for a new architecture. Although the 5 Points are presented as independent items, it is easy to see their interaction in Maison Cook.

1. The "pilotis", for instance, their position independent of the internal organization, lift the house away from the damp surface. This leaves the ground floor unbuilt, except at the entrance.
2. The roof-garden is the most directly accessible outside space in the elevated house. In Maison Cook this reverses the traditional vertical organization of the bourgeois residence with its living rooms downstairs and bedrooms upstairs. Here, the living rooms have access to the roof-garden, and the bedrooms are below.
3. The free plan is evident at the second level, in the bedrooms.
4. There are ribbon windows at both the front and the back; the uniform ribbon window provides no clue as to the functions behind the facade.
5. The only sign of the free facade in Maison Cook is the street wall with its overhang. No supporting elements are visible, and the fill-in wall is more or less free between the floors. The two ribbon windows run the entire width of the house demonstrate the freedom of the facade.





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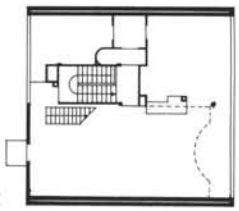

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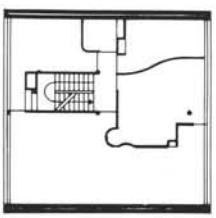

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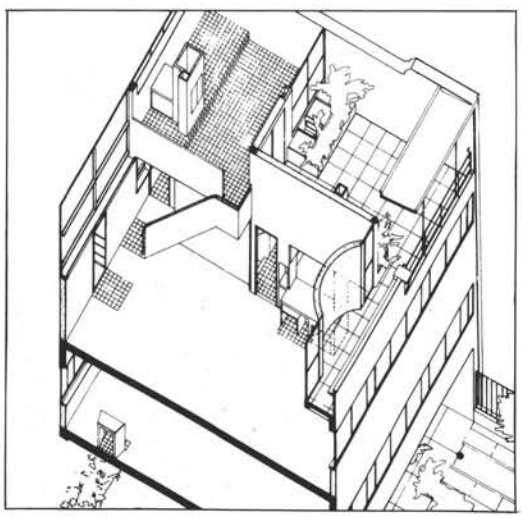

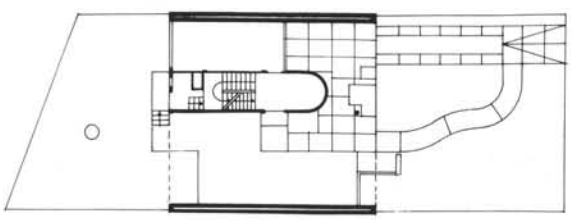

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1. Street facade
2. View of the entrance, with the street in the background
3. Ribbon window on second floor
4. Mirror recess in dining room
5. View of the living room

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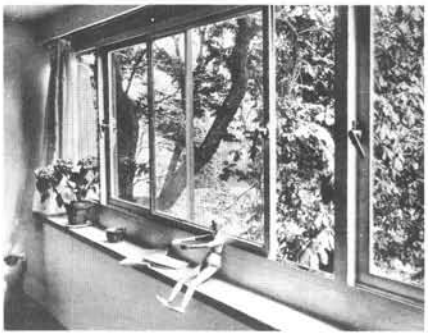

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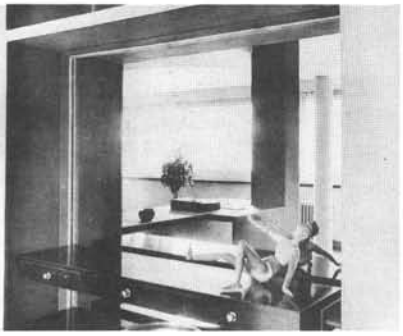

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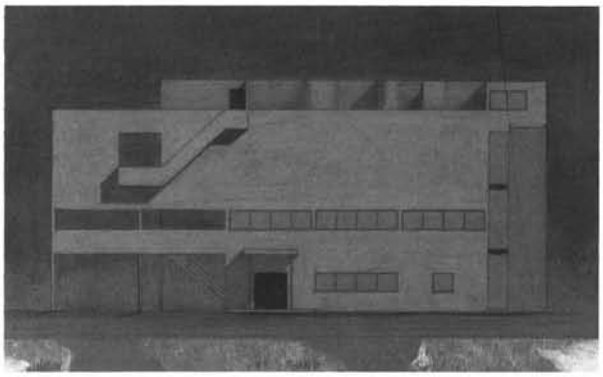

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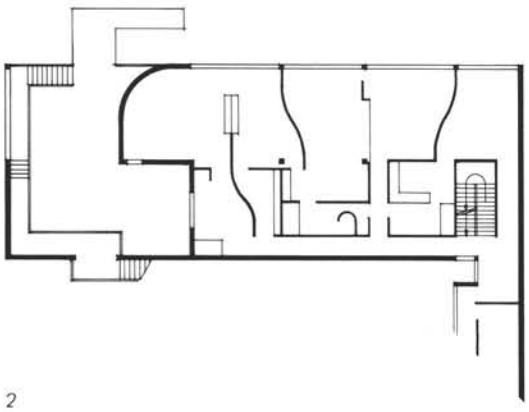
Villa Stein de Monzie (1926/27)



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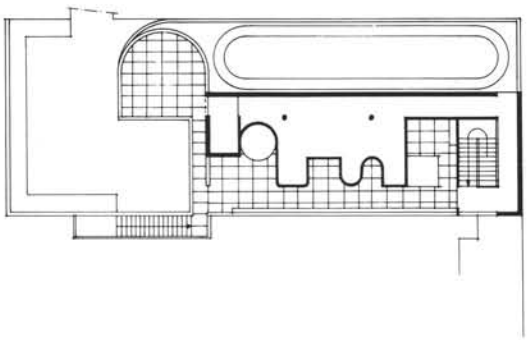

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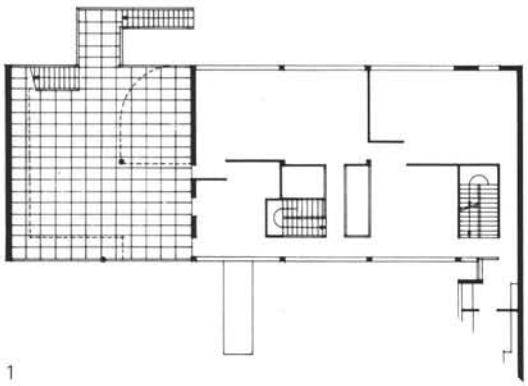

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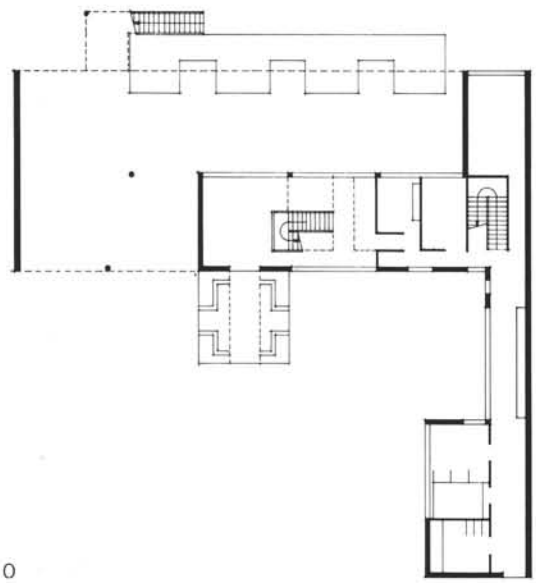

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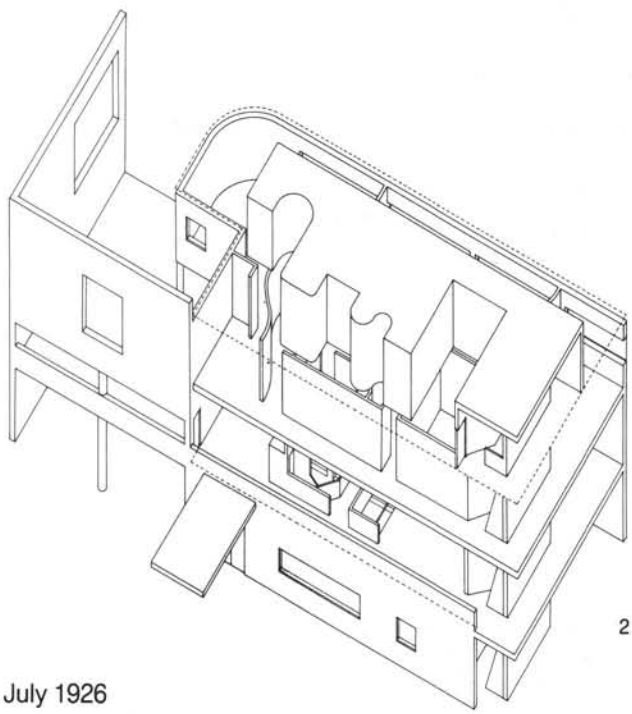

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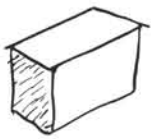
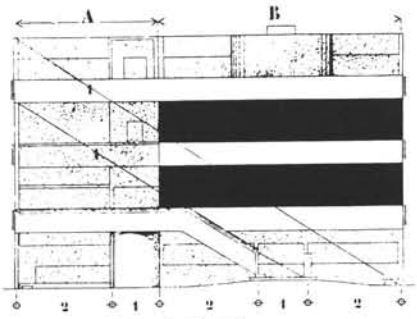
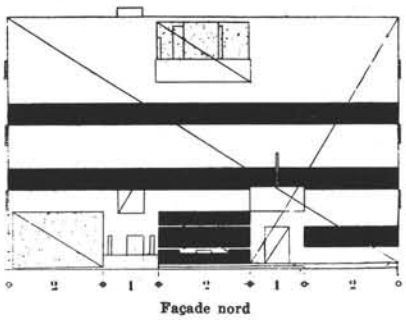




Façade sud


Façade nord

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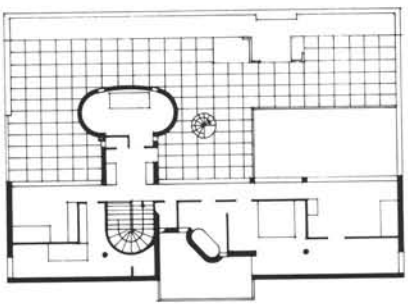

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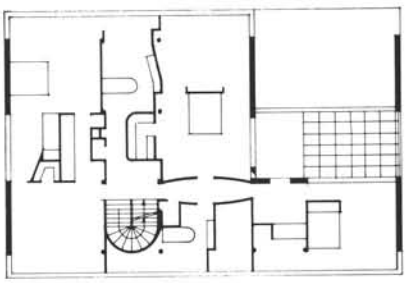

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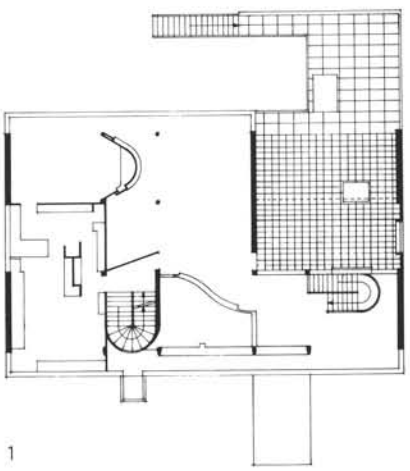

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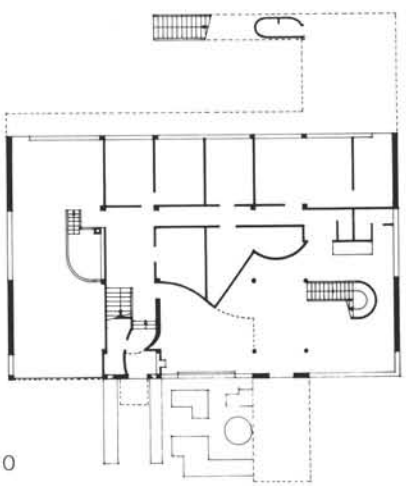
Together with the Cook House, this villa exemplifies the 5 Points in featuring:
- an independent "pilotis" structure with alternating long and short bays and overhangs on two sides,
- free plans, which are different on each floor,
- ribbon windows and
- a freely composed facade.

Unlike Maison Cook, the realized version is not raised off the ground, and the living accommodation is organized along traditional lines: entrance on the ground floor, living rooms on the first floor and two floors of bedrooms above.

A continuous flight of service stairs is built in one of the narrow bays, the main stair in the corresponding narrow bay skirts the pilotis. Together with a freely formed wall and an uninterrupted staircase, a "*promenade architecturale*" is thus formed.



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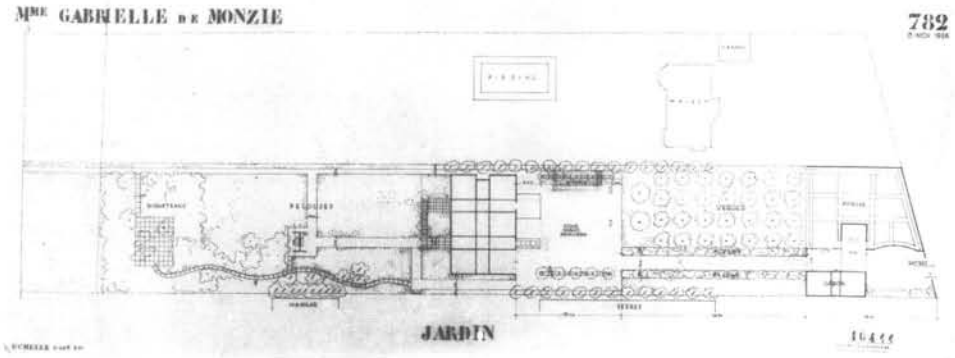
1. Design of July 1926; facade rendered in color
2. Design of July 1926; axonometric projection
3. Definitive design of July 1927; facades with tracés regulateurs

July 1927



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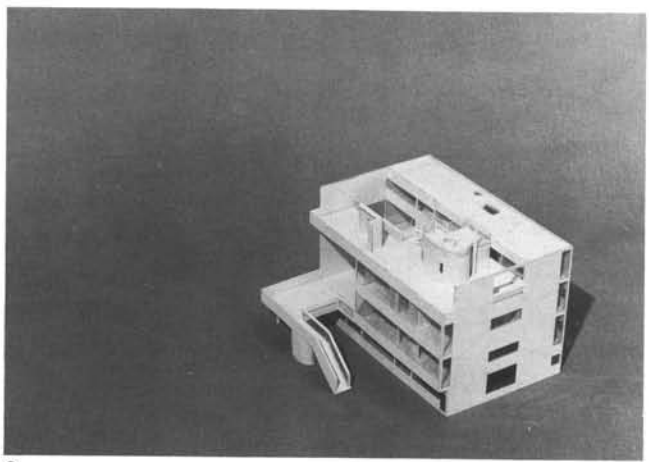

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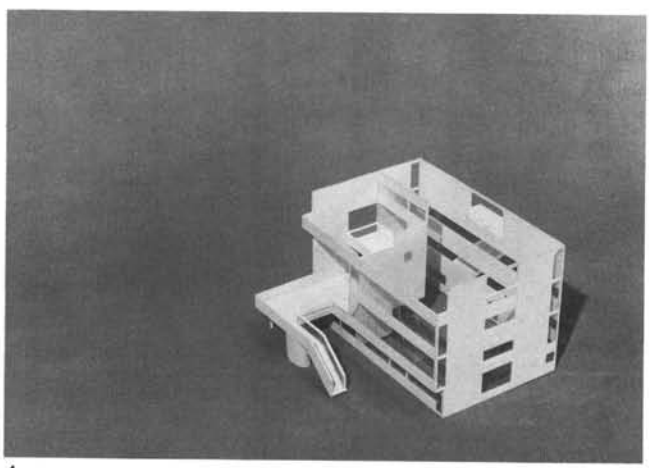

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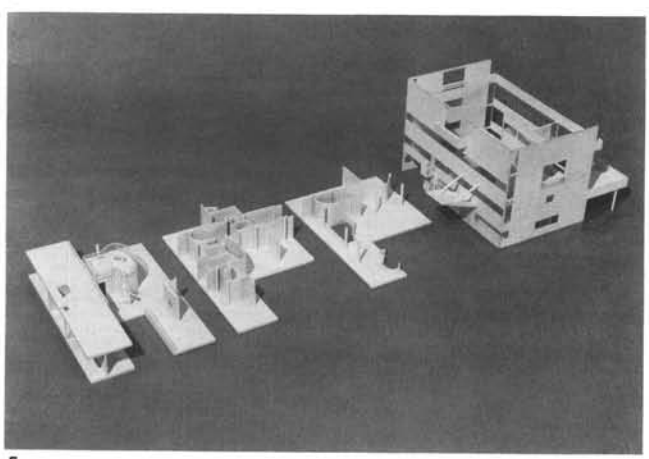

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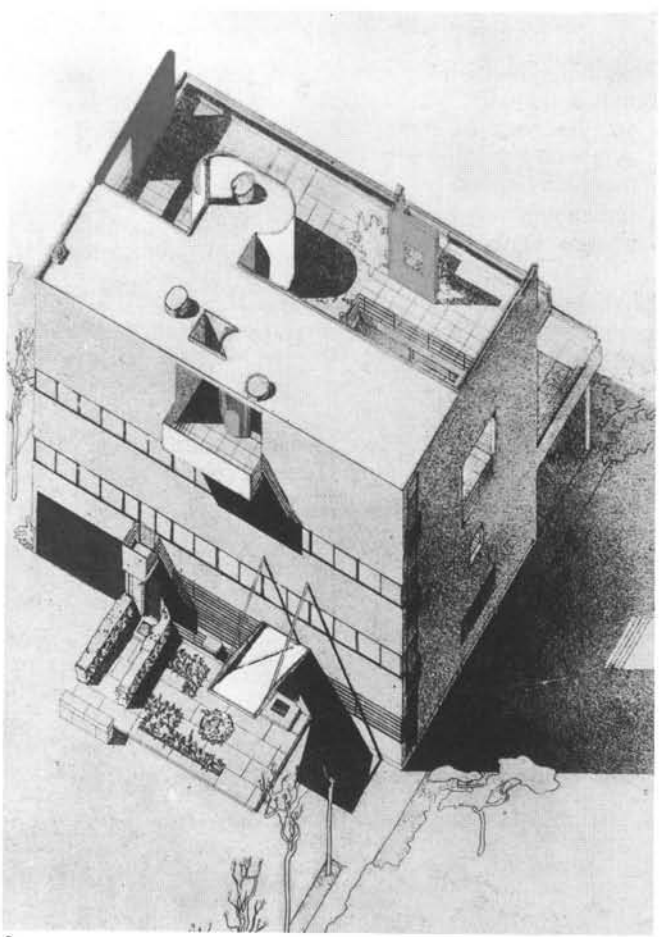

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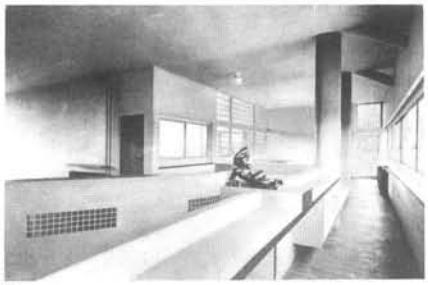
1. Design of January 1927; site sketch
2. View from street
3-5. Model of the realized design with dismantled sections
6. Original axonometric projection of exterior with colors
7-9. Views of the first floor
10-11. Views of entrance hall on the ground floor
12. View from the garden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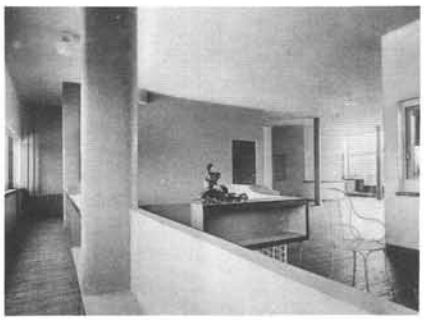
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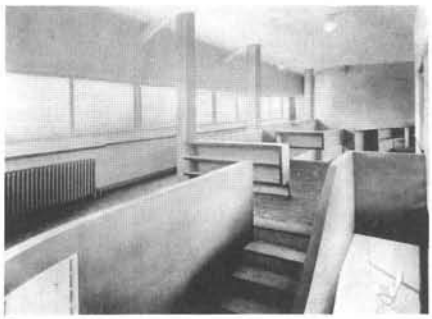
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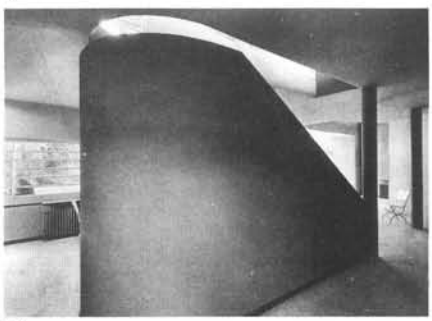
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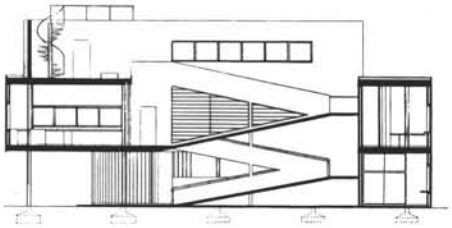
12

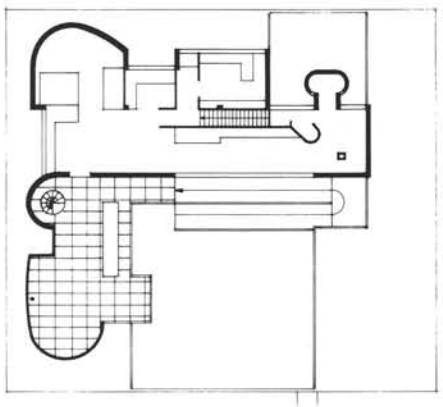
Villa Savoye (1928/30)

This villa invoked the principle of an independent piloti structure from the very start. In two directions there are four bays of five metres each, a different "plan libre" being devised for each floor:

- on the ground floor, where the garage and service rooms are, the main form is defined by the turning-circle of a car;
- on the first floor, living rooms and bedrooms are planned along the sides of the house, around an open central space dominated by the roof structure, which contains the bedroom of the lady of the house.

Between the floors, vertical coherence is only possible by means of the stairs and the central ramp.





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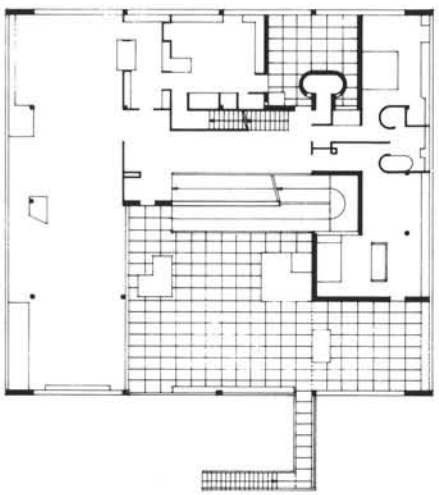

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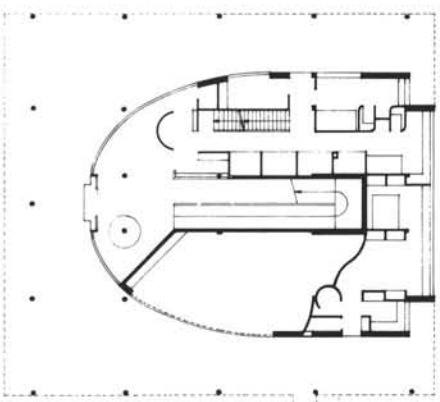

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October 1928

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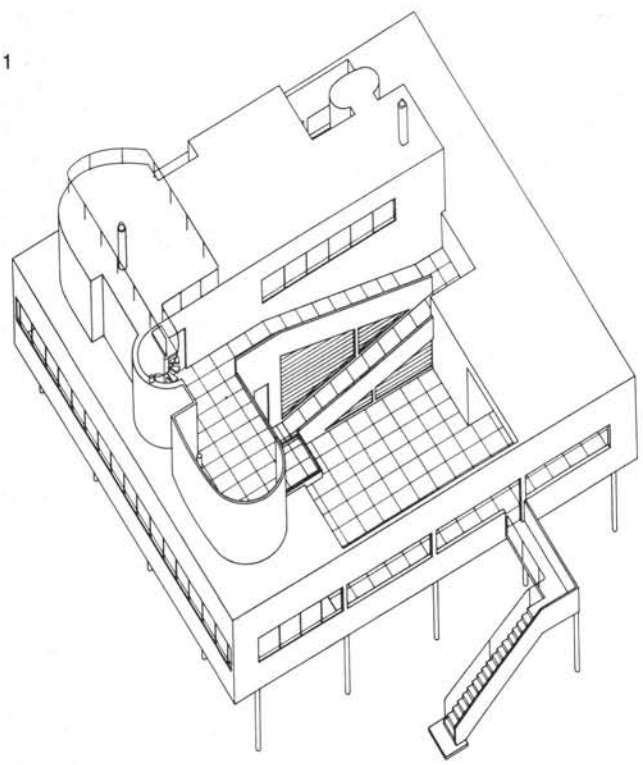

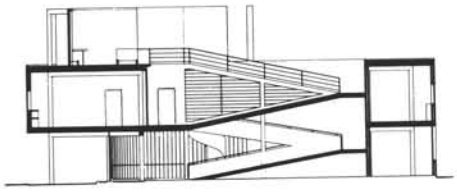

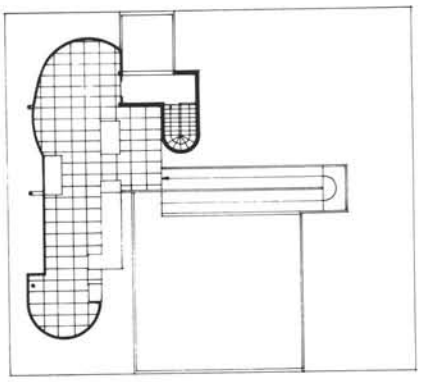

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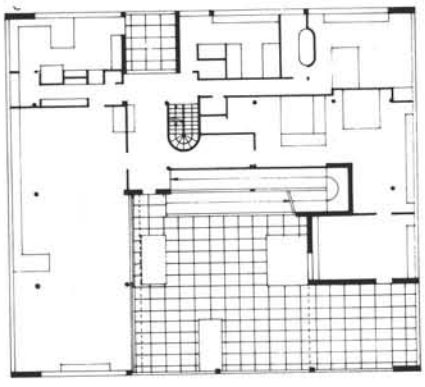

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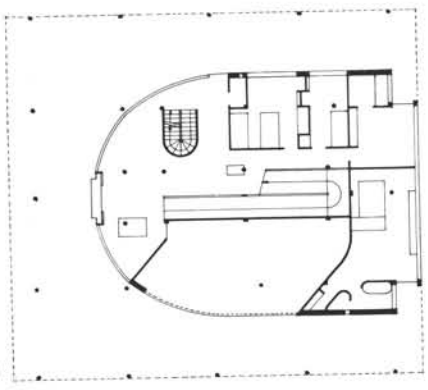

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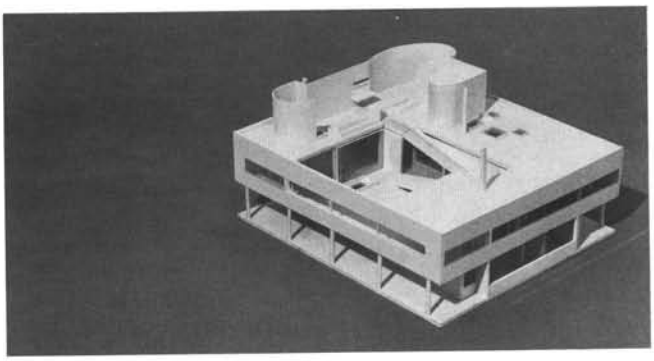
April 1929

The eventually realized design is a variant of the first one, and retains all its essential features. Economy was achieved by reducing the bays and scrapping the roof structure.

The rounded walls were preserved, rather like archeological remains, marking the end of the continuous ramp. In the realized design, not all the pilotis are on the square grid. They are displaced inside the "box" as necessary, but only in the direction of the overhangs.

1. Design of October 1928; axonometric projection
2. Model of the realized design with dismantled sections



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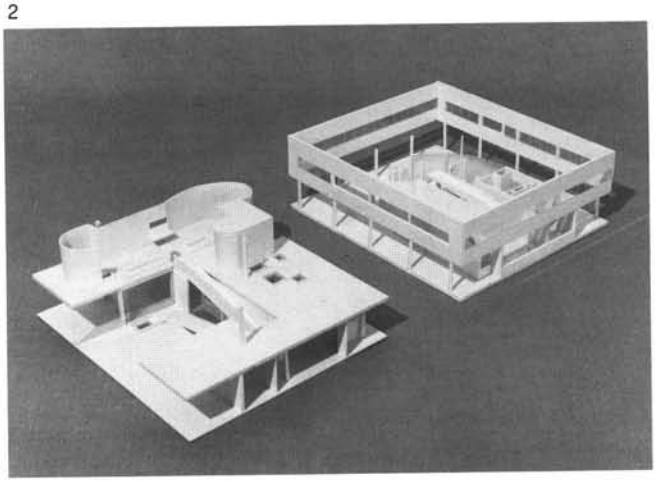
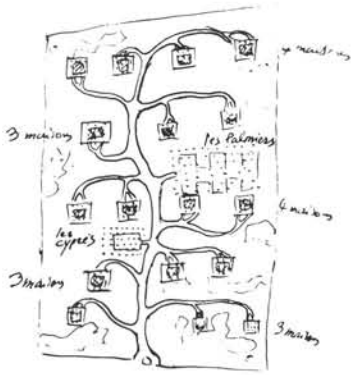


1. View of the entrance under the pilotis
2-3. Views of the entrance hall
4. Facade seen form the west
5. View of the living room during execution
6-9. Views of the living room in relation to the terrace
10. Site drawing of the design of October 1928

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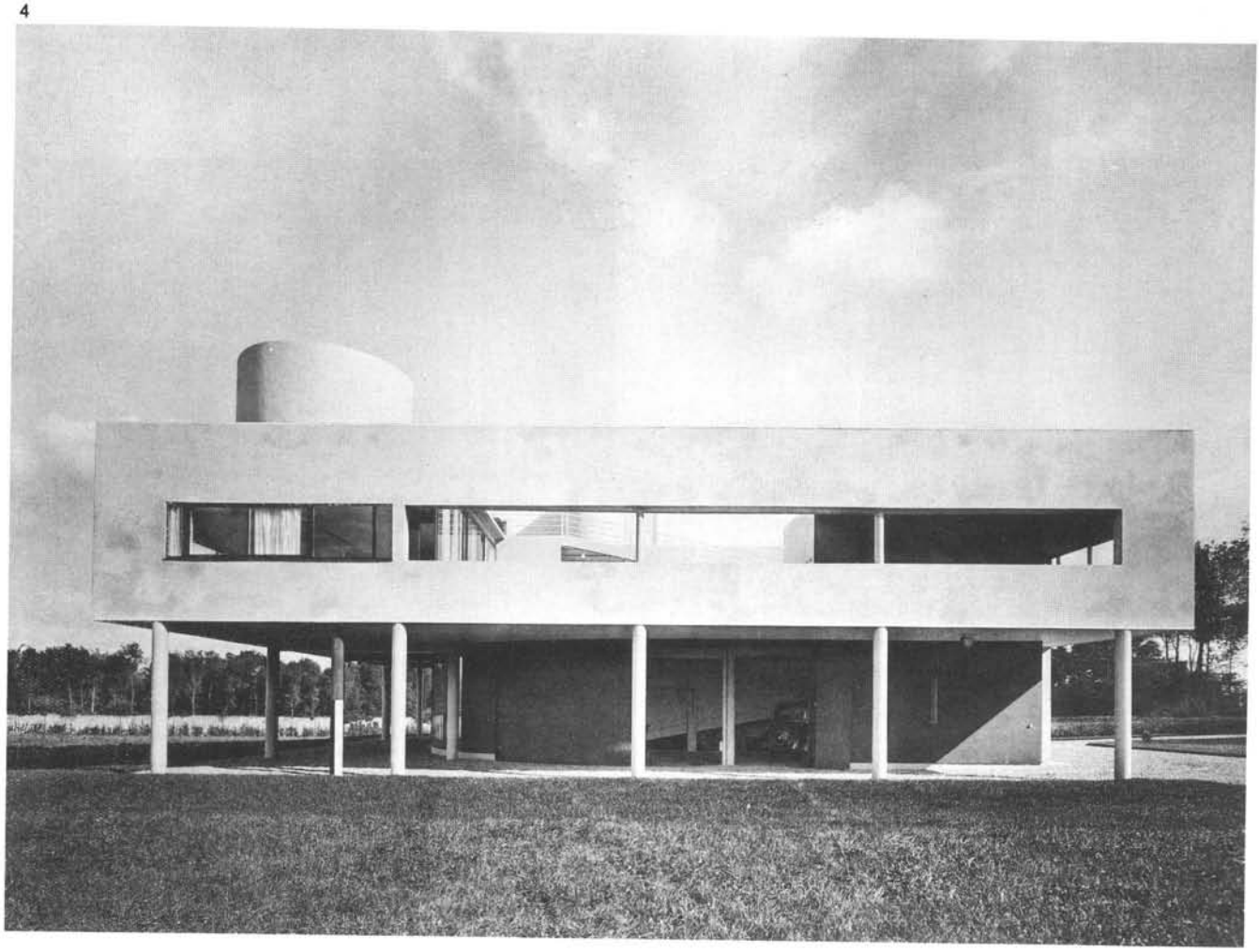

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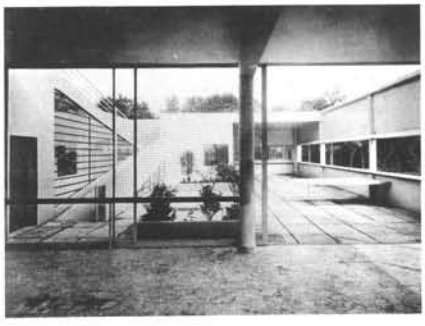

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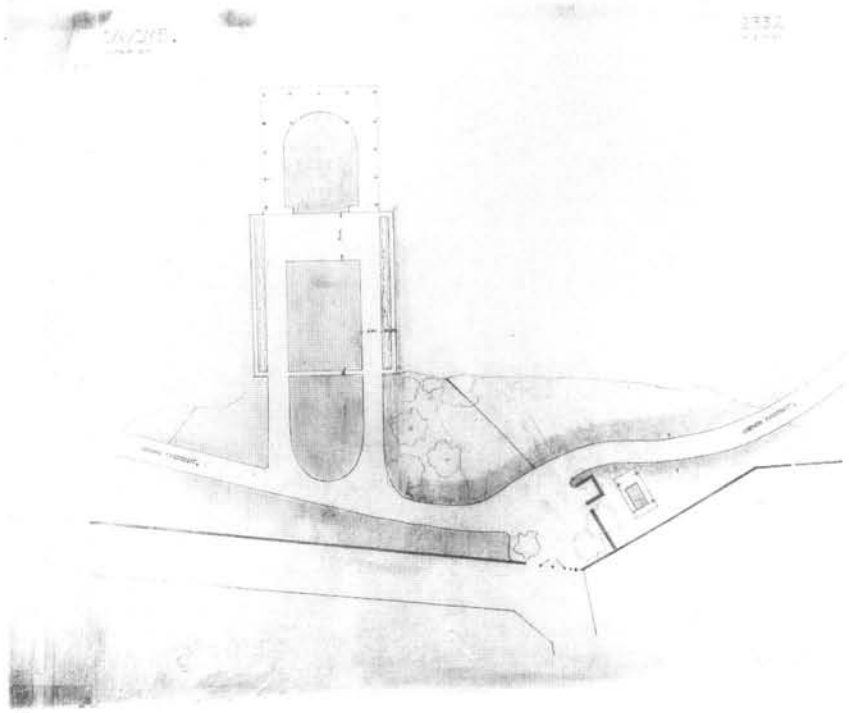

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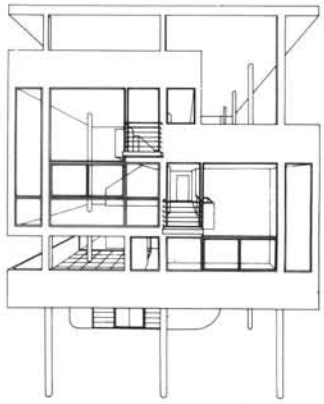

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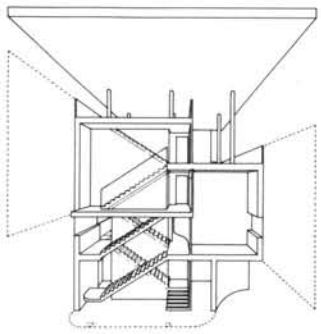
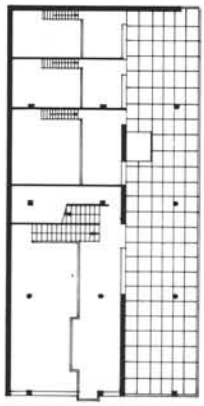


Villa Baizeau (1928/29)

In the first designs for the Villa Baizeau - built at Carthage in North Africa - the Domino frame was envisaged as an independent supporting structure from the start; in this case as a "sectional" concept, with alternating rooms of double height on each floor. What had hitherto only been feasibly by the laborious piercing of the floors, here appears to be integrated into the frame. The vertical connections, too - two parallel flights of stairs - were evident structural elements on the plans from the start. They separate the living areas from the bedrooms and the service rooms, so that any expansion or reduction can be effected in either one direction. A striking feature is that the nonstructural outside walls are closed at the cantilevers, whereas the end-wall is completely visible in section from the outside. No longer organized according to tracés regulateurs, the facade is based on a square module.

February 1928



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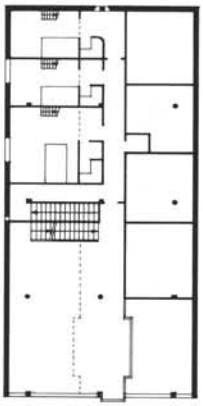

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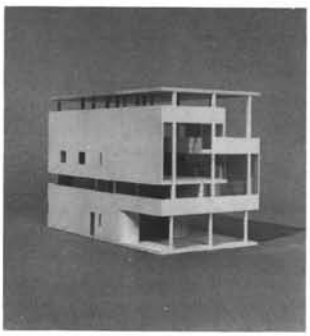

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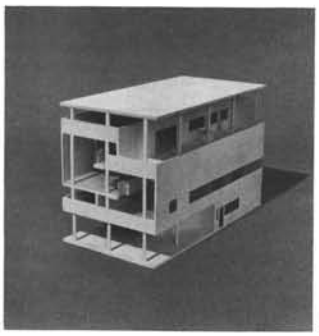

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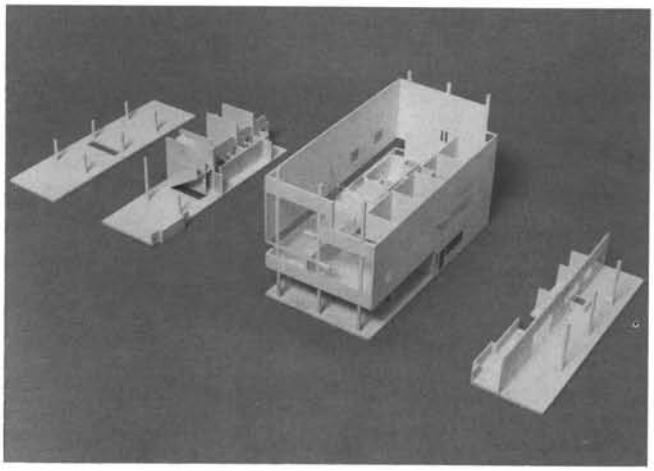

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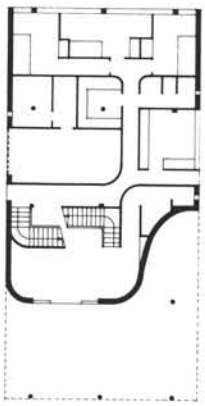

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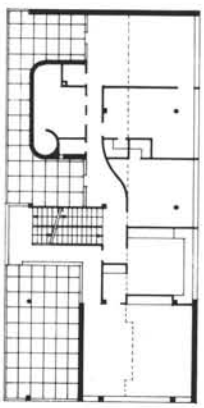
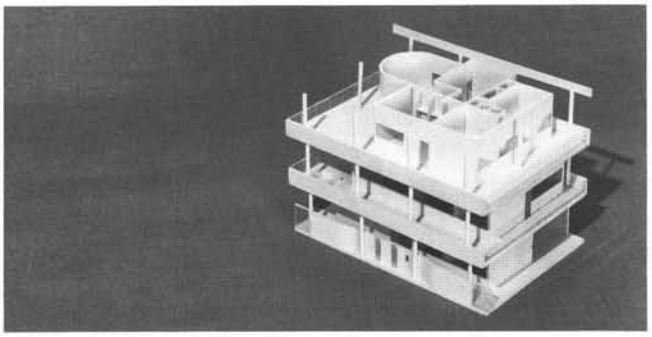


1

1. Design of February 1928; elevation and section
2-4. Model of the design of February 1928
5-6. Model of the design of February 1929

The realized design for the Villa Baizeau exploits the potential of the Domino skeleton, with its "plan libre", to the utmost; the pilotis and floors indicate the main form, which encases and reveals the various functions (originally painted in a different colour on each floor).

The organization of the plan is based on a sketch made by the client, who because of the climate, wanted terraces and galleries on almost every side. The interdependency of supporting structure and spatial organization in the first design was found to be not flexible enough to cater to several of the client's requirements.



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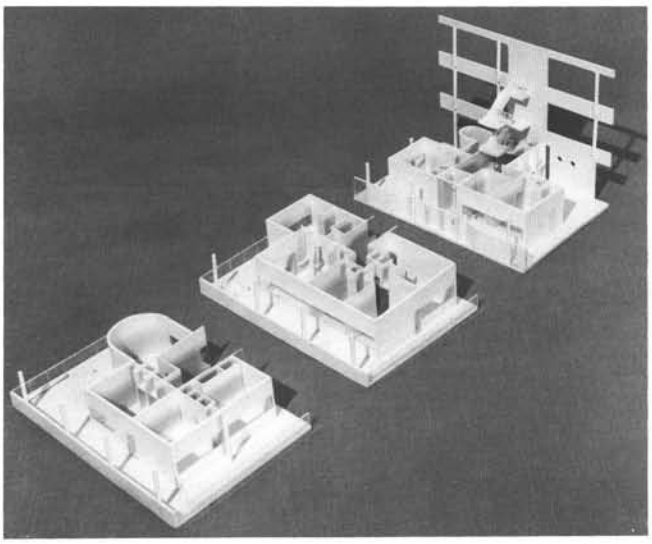

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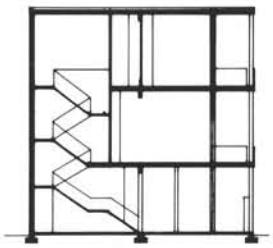
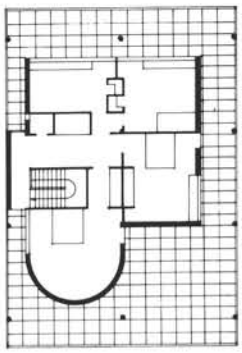


February 1929



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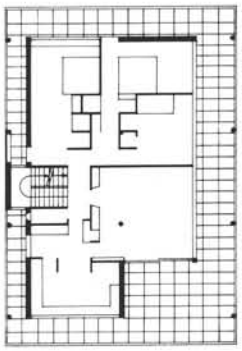

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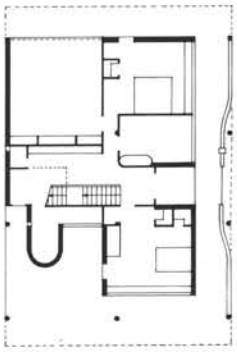

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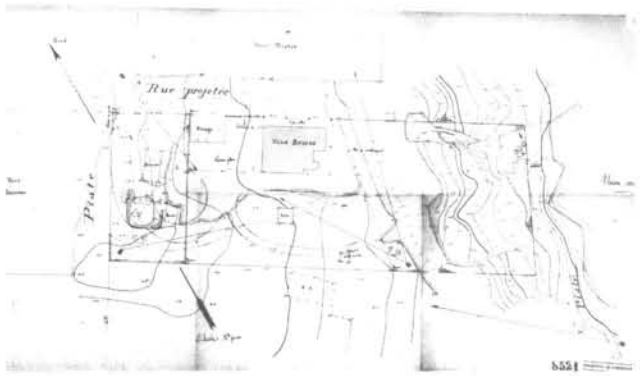

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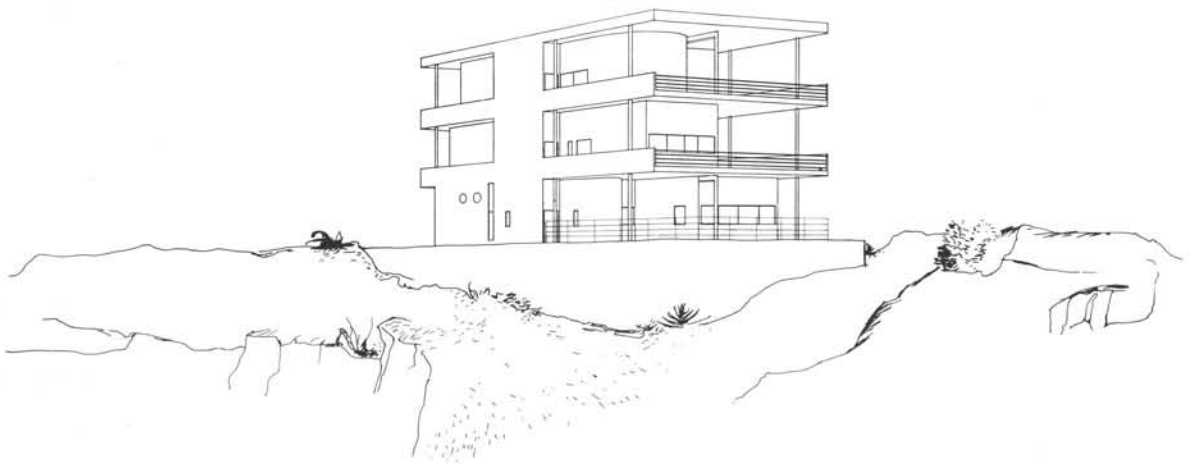
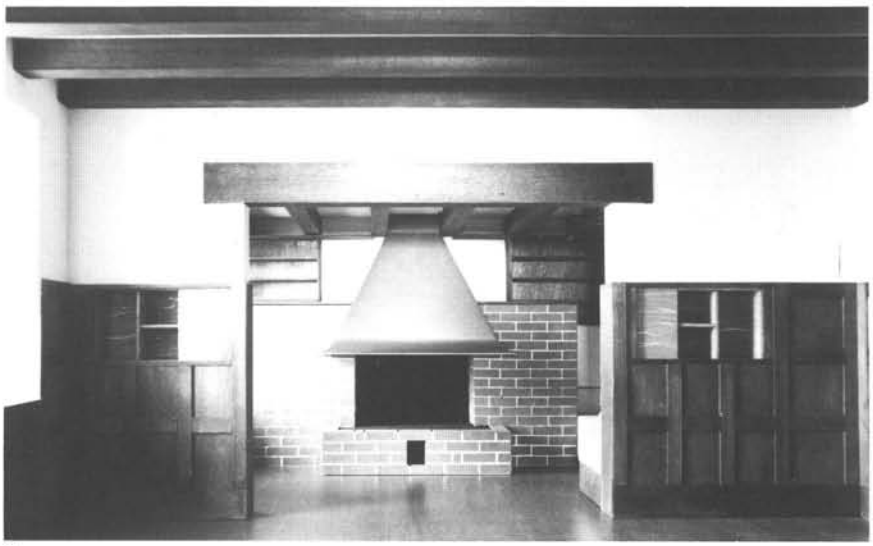


3

1 Site drawing of the design of February 1929
2–3 Views from the sea

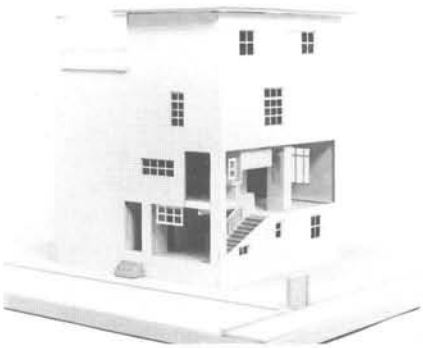
Documentation of the models

Frank van Duijn, Gerard de Jong.
Model of the apartment Adolf Loos.
Adolf Loos, Vienna 1903.
Scale 1 : 10.
Reconstruction of the interior of living room and hearth recess, with indication of material and colour. The ceiling is removable.
Construction: chipboard and limewood.


1

Friedo van Nieuw Amerongen.
Model of the Rufer House.
Adolf Loos, Vienna 1922.
Scale 1 : 50.
Reconstruction of the executed design. Parts of the facade are transparant to show the development of the "Raumplan".
Construction: plexiglass and polystyrene.

Bertha van den Dolder, Marius Voet.
Model of Villa Stross.
Adolf Loos, Vienna 1922.
Scale 1 : 50.
Reconstruction of this unexecuted project.
The upper stories can be removed to show the complex "Raumplan" of the living area.
Construction: chipboard and plexiglass.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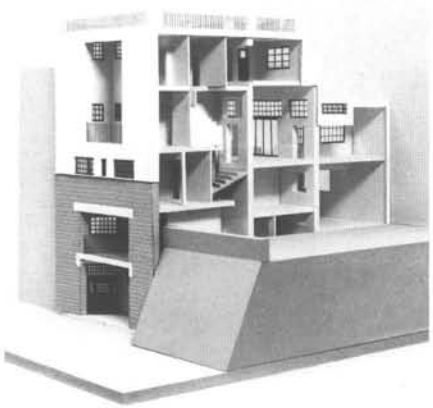
Nicole Jacobs, Silvie Beugels.
Model of the Tzara House.
Adolf Loos, Paris 1925-1926.
Scale 1 : 50.
Reconstruction of the executed design. Parts of the side walls are transparant to show the living area.
Construction: plexiglass and polystyrene.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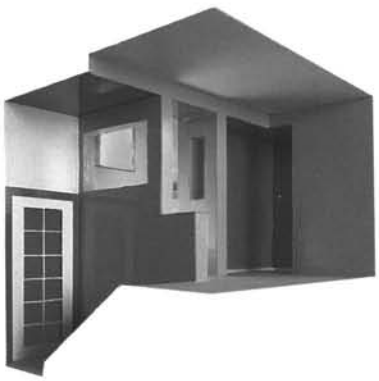
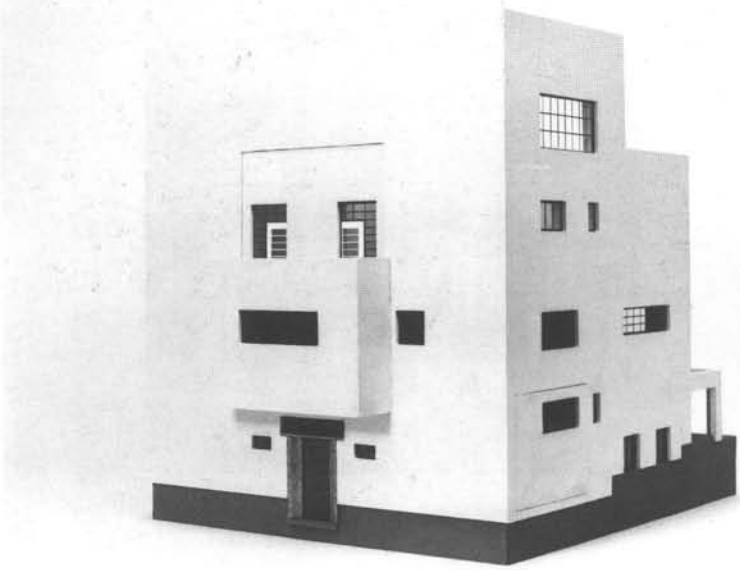
1. Apartment Adolf Loos
2. The Rufer House
3. The Tzara House



2

Dick van Gameren, Esther Gramsbergen and Max Risselada.
Model of the Moller House.
Adolf Loos, Vienna 1927-1928.
Scale 1 : 20.
Reconstruction of the executed design with indication of material and colour. The two upper stories have been omitted to show the living area. A part of the right side-facade can be folded out to reveal the position of the cloak-room halfway between entrance and living level. The reconstruction of colours in the interior is based on black and white photographs, the description by Kulka in his book, and other Loos' interiors of this period.
Construction: chipboard and foamboard.

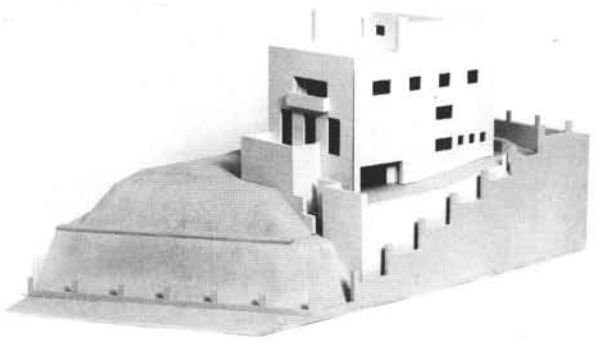


1

Bertha van den Dolder, Marius Voet.
Model of the Bojko House.
Adolf Loos, Vienna 1929.
Scale 1 : 50.
Reconstruction of the second design for this unexecuted project. The upper storey can be removed to show the "Raumplan" of the living area. For the same reason, the blind wall against the adjacent houses is made transparant.
Construction: chipboard and plexiglass.

3

Frank van Duijn, Gerard de Jong.
Model of the apartment Leo Brummel.
Adolf Loos, Pilsen 1929.
Scale 1 : 10.
Reconstruction of the interior of dining-room and hearth recess, with indication of material and colour. The reconstruction is based on black and white photographs and descriptions. The ceiling can be removed.
Construction: chipboard, plexiglass and polystyrene.

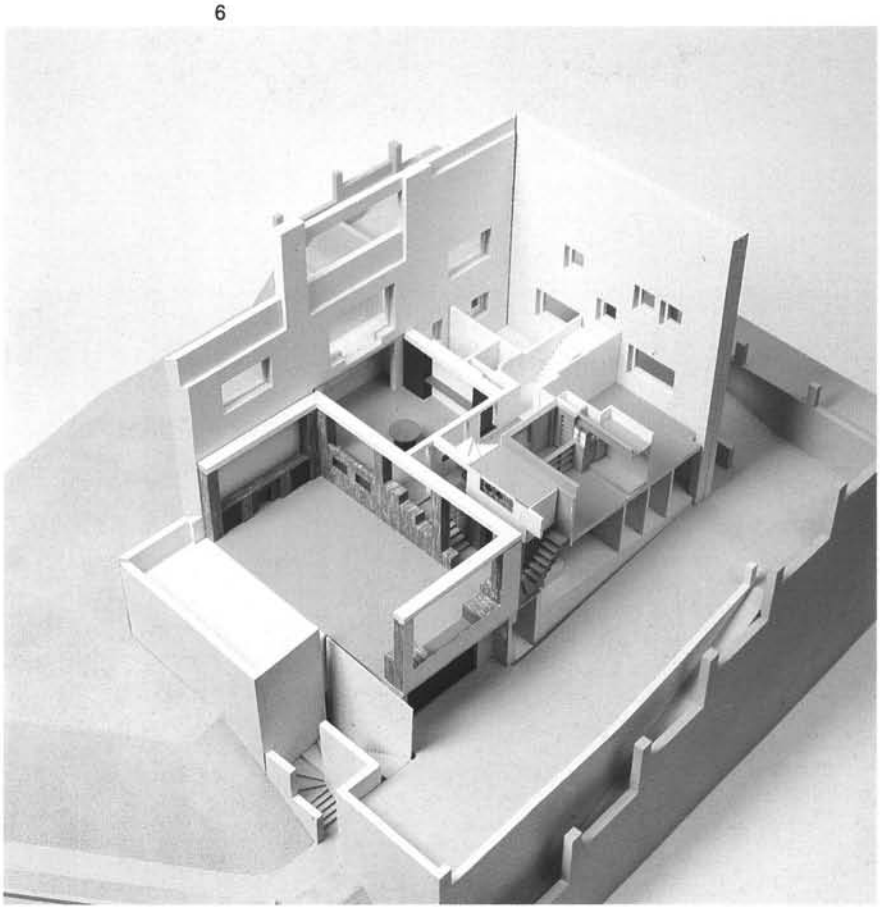


4

Bertha van den Dolder, Marius Voet.
Model of the Müller House.
Adolf Loos, Prague 1928-1930.
Scale 1 : 50.
Reconstruction of the executed design on its site, with indication of material and colour. The two upper stories and the west facade can be removed to show the complexity of the "Raumplan" of the living area.
Construction: chipboard, plexiglass and polystyrene.

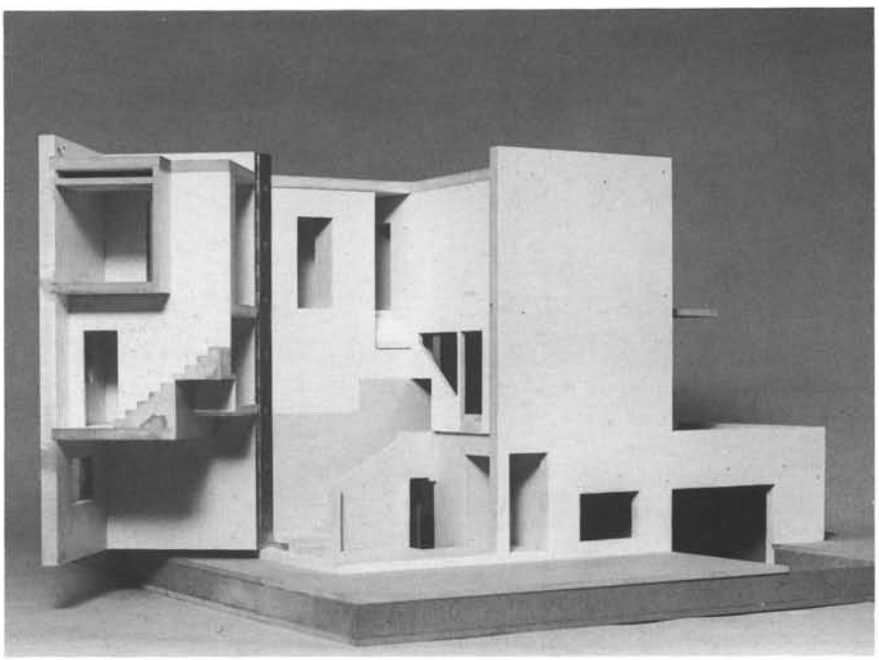
5

6



1. The Moller House
2. Cloakroom of the Moller House
3. Apartment Leo Brummel
4-6. The Müller House

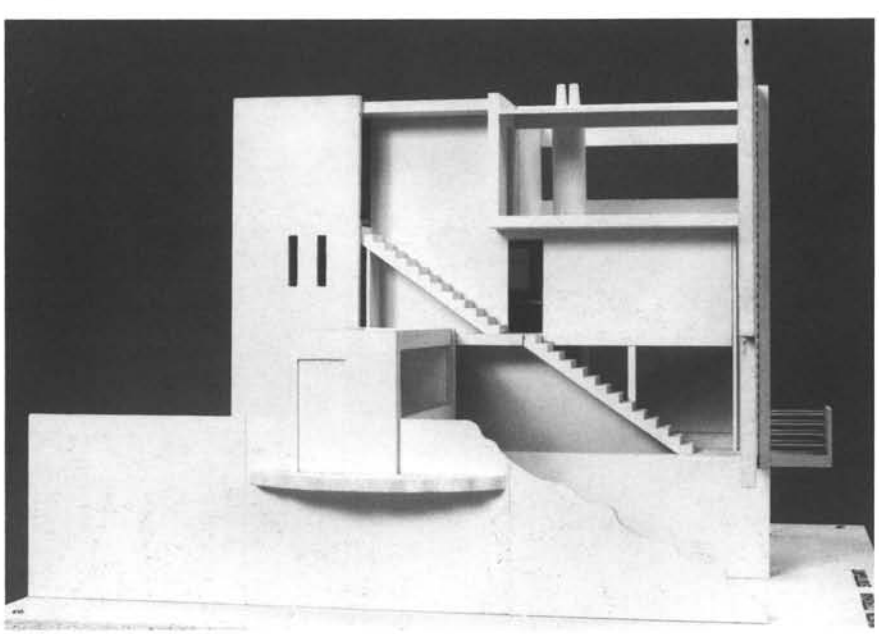
1. The "Dice House"; one quadrant is folded out
2. Maison Citrohan; the entrance facade is folded out
3. Maison Cook; view of the living room
4. Villa La Roche; view of the entrance hall



1

Jacques Keet.
Model of the "Dice House" (das Würfelhaus)
Adolf Loos, circa 1929.
Scale 1 : 20.
Reconstruction of this study project, based on photographs of an original model. The quadrant in which the stairs are located, can be folded out.
Construction: chipboard.

Jacques Keet.
Model of "Domino"frame
Le Corbusier, 1914-1919.
Scale 1 : 20.
Reconstruction of the best known module of the "Domino" patent.
Construction: plywood and limewood.



2

Jacques Keet.
Model of Maison Citrohan.
Le Corbusier - P. Jeanneret, Stuttgart 1927.
Scale 1 : 20.
Reconstruction of the contracted design, March 1927. A section of the entrance facade can be folded out to reveal the position of the staircases.
Construction: chipboard, plywood and perspex.

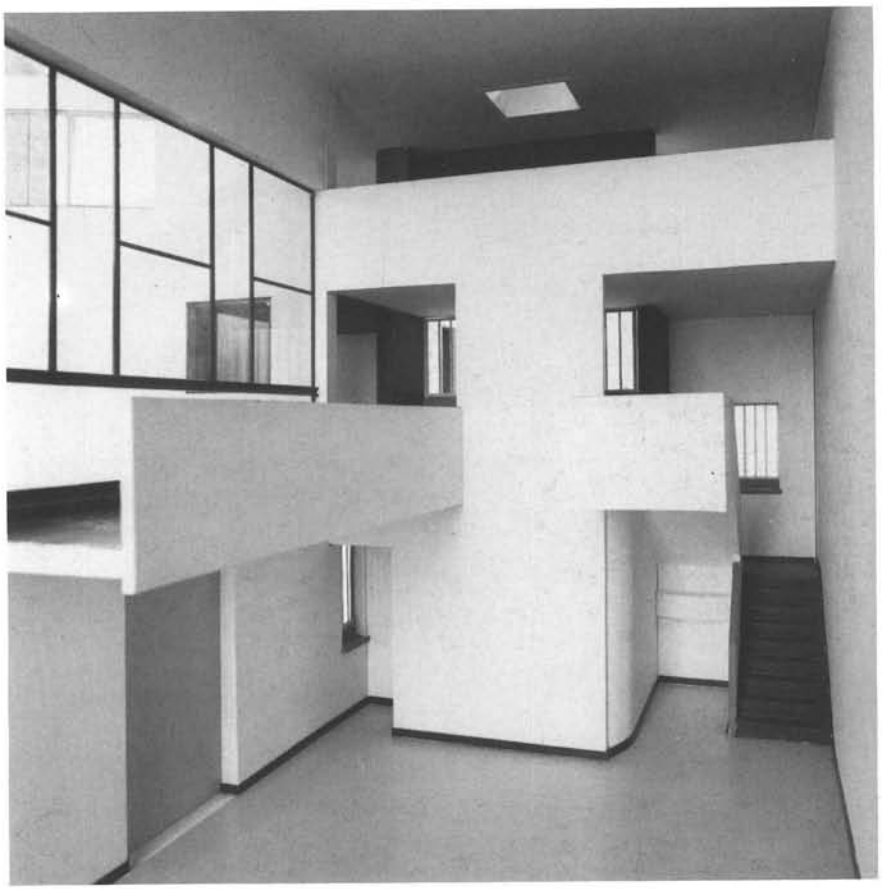
Ton Venhoeven.
Model of Villa La Roche - Jeanneret.
Le Corbusier - P. Jeanneret, Paris 1922-1923.
Scale 1 : 100.
Reconstruction of the executed design. The roof of Villa La Roche can be removed. Gallery and entrance hall of Villa La roche can be seperated from the rest of the house.
Construction: plexiglass and polystyrene.

Jacques Keet.
Model of Villa La Roche.
Le Corbusier - P. Jeanneret, Paris 1922-1923.
Scale 1 : 20.
Reconstruction of the executed design of the gallery and entrance hall of Villa La Roche. The colour scheme is based on the original interior design before the alterations of 1928. The roof of the gallery can be removed.
Construction: chipboard and perspex.

Arjan Hebly, Ber Mooren.
Model of Maison Cook.
Le Corbusier - P. Jeanneret, Paris 1926.
Scale 1 : 100.
Reconstruction of the executed design. The floors can be removed.
Construction: plexiglass and polystyrene.

Jacques Keet, Bjarne Mastenbroek
Model of Maison Cook.
Le Corbusier - P. Jeanneret, Paris 1926.
Scale 1 : 20.
Reconstruction of the executed design, with indication of material and colour. The colours in the interior are reconstructed from black and white photographs and an original coloured axonometric drawing (FLC 8309). A part of one side wall can be folded back, the other one is partly transparant.
Construction: chipboard and perspex.

Arjan Hebly, Ber Mooren.
Model of Villa Stein - De Monzie.
Le Corbusier - P. Jeanneret, Garches 1926-1927.
Scale 1 : 100.
Reconstruction of the executed design. The floors can be removed.
Construction: plexiglass and polystyrene.



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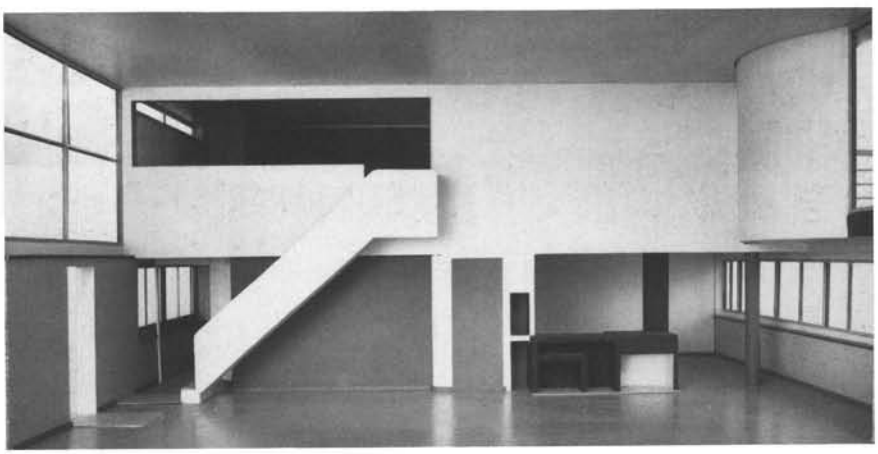
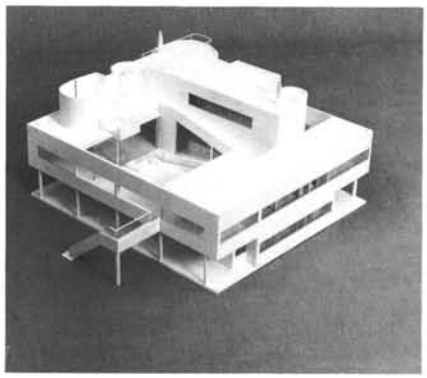


3

1. Villa Stein-de Monzie
2. Salon d'Automne
3. Villa Savoye; design of October 1928



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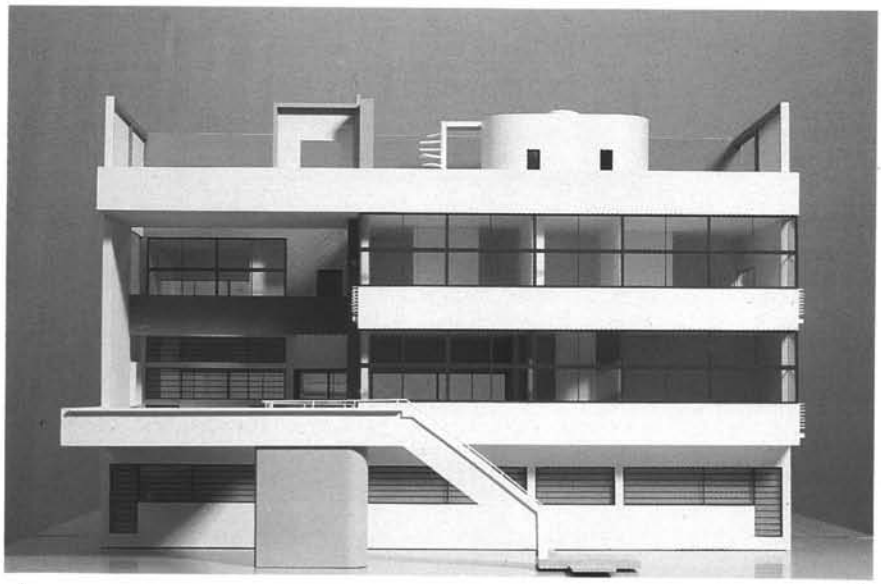

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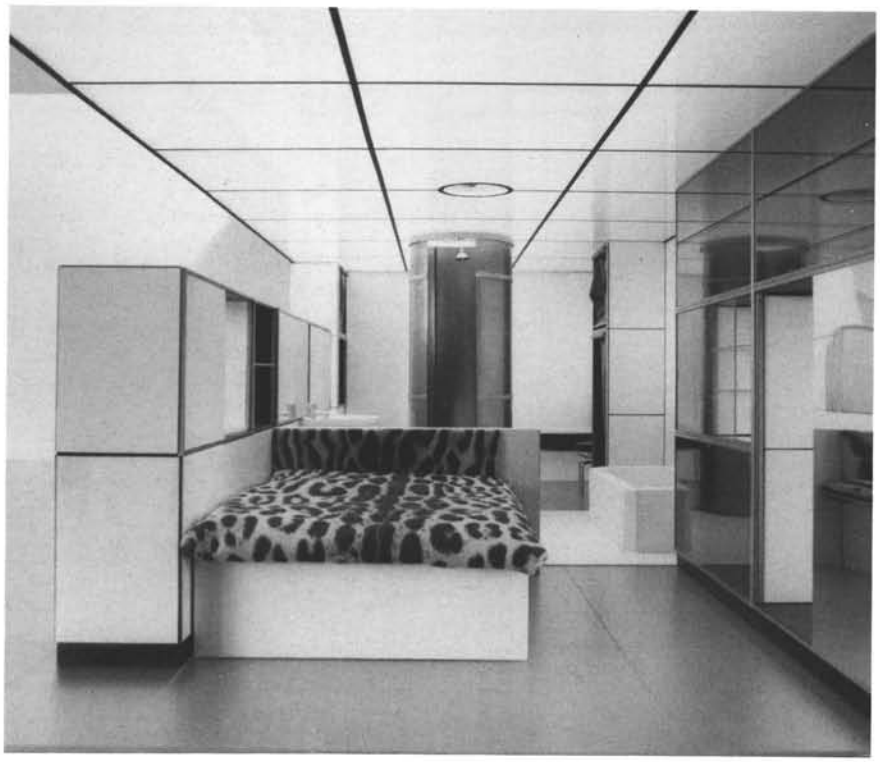


2

Bjarne Mastenbroek, Leen Kooman.
Model of Villa Stein - De Monzie.
Le Corbusier - P. Jeanneret, Garches 1926-1927.
Scale 1 : 20.
Reconstruction of the contracted design, March 1927, in which the void between the entrance hall and the first floor is larger than in the executed version. The exterior, as well as the interior of the entrance hall and living spaces on the first floor, are reconstructed in colour.
Construction: chipboard, plywood, plexiglass and polystyrene.

Daan ter Avest, Ton Venhoeven.
Model of Villa Baizeau.
Le Corbusier - P. Jeanneret, Carthage 1928.
Scale 1 : 100.
Reconstruction of the design, February 1928. Floors can be removed.
Construction: plexiglass and polystyrene.

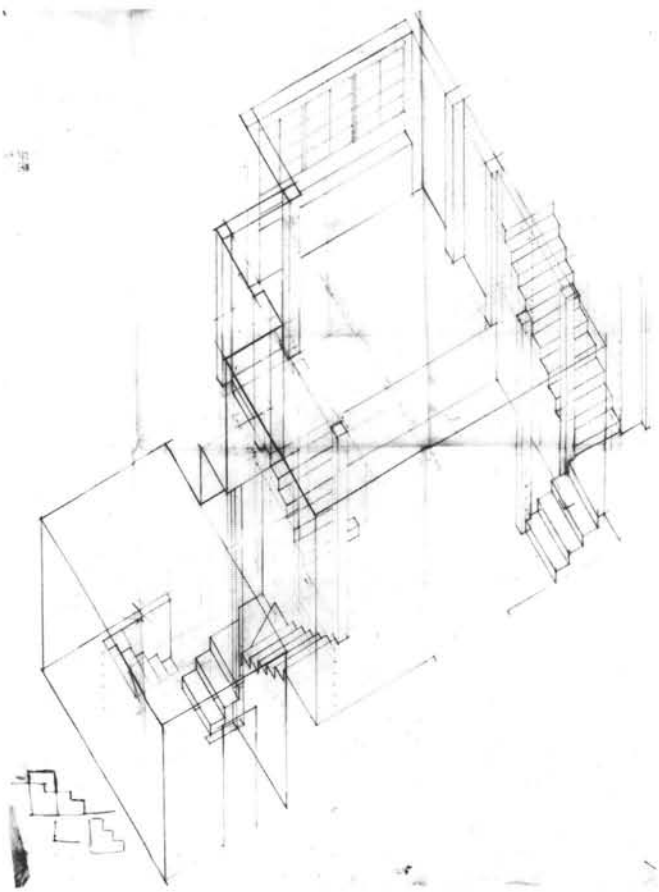
Ton Venhoeven.
Model of Villa Savoye.
Le Corbusier - P. Jeanneret, Poissy 1928.
Scale 1 : 100.
Reconstruction of the design, October 1928. Floors can be removed, with the ramp as an autonomous element.
Construction: plexiglass and polystyrene.

Elena Jiskrova, L. Cahn (furniture).
Model of the Salon d'Automne 1929.
Le Corbusier - P. Jeanneret - C. Perriand, Paris 1929.
Scale 1 : 10.
Reconstruction of the executed exhibition project for the Salon d'Automne 1929, in Paris, with indication of material and colour and models of the furniture.
Construction: chipboard, plexiglass, copper and aluminium.

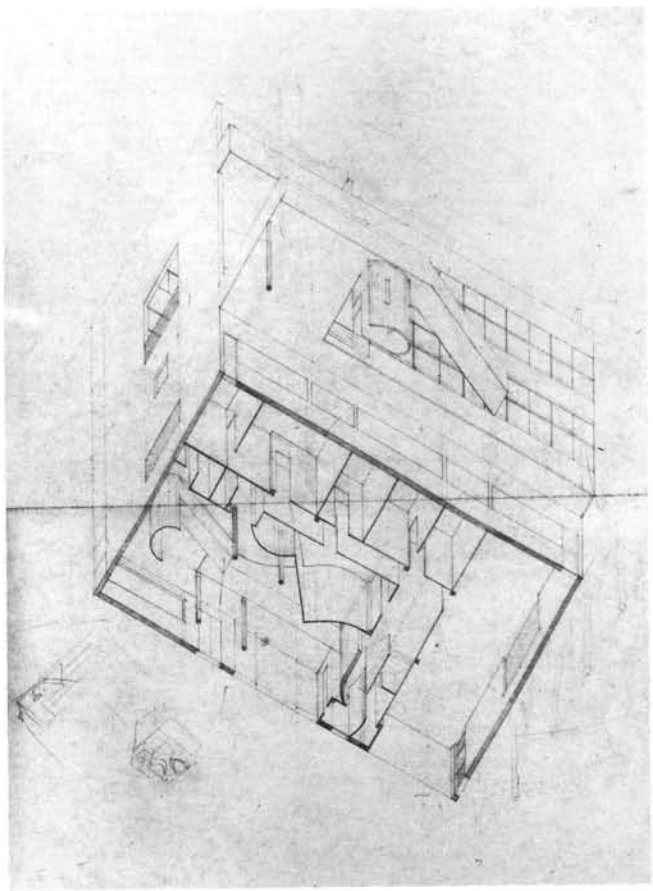
Two houses: a closer look

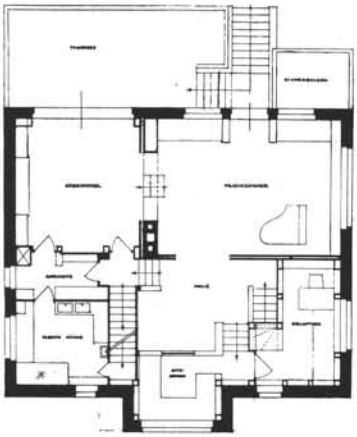
Villa Stein-de Monzie and the Moller House

The Moller House; axonometric projection of cloak room recess and living hall on the first floor; project of June 1927 (original drawing: Galerie Metropol, Vienna)



Villa Stein-de Monzie; axonometric projection seen from under the building, project of March 1927 (FLC 10572)





3

The Moller House

assignment: April 1927
contract: October 1927
occupied: January 1929

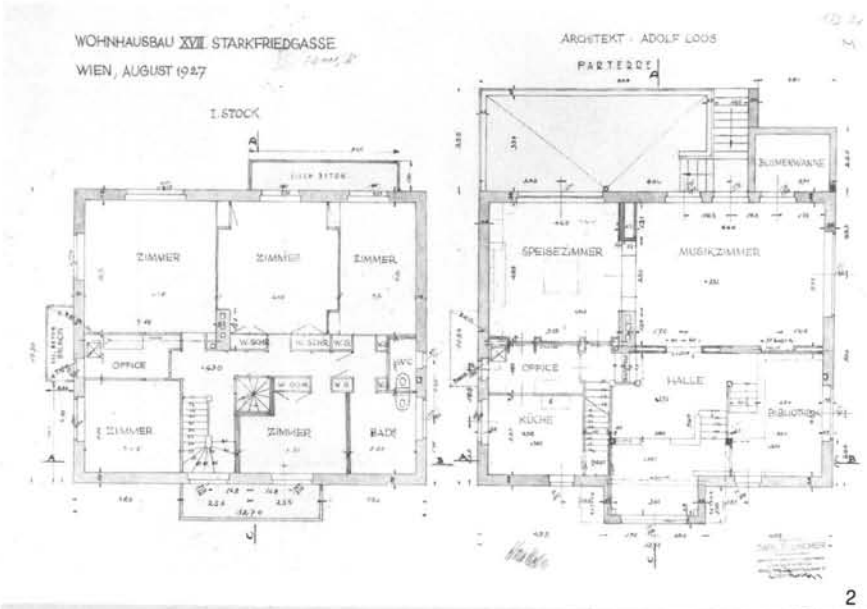
The house of the textile manufacturer Moller in Vienna was built in the period that Loos lived, alternately, in Paris, Vienna and Prague. For the preparation and execution of the diverse projects he was working on, Loos sought the assistance from several of his former pupils. The design for the Moller House, for example, was developed and drawn by Zlatko Neumann in Paris; the contract-drawings were prepared in Vienna, by Jacques Groag who also supervised the actual construction of the house.

Loos considered drawings to be merely a means of recording what had to be built: the positions of the walls, the supporting structure, the volume and the measurements. Many more decisions would later be made at the building-site itself in consultation with the foreman.

In this traditional method of working, designing is chiefly a mental process of which few traces can be found in the drawings. For this reason also, great changes did not occur between the first design and the building as executed. One alteration however, made during the actual execution, is quite remarkable.

Originally the form of the projection in the street facade opened upwards, a movement enhanced by the disposition of the window openings, notably the set of three horizontal windows at top level. In this way this projection was only one of the compositional elements of the facade.

In the actual facade this projection became the center of the composition, around which the window openings were grouped, thus denoting the central position of the living hall in the plan of the house.



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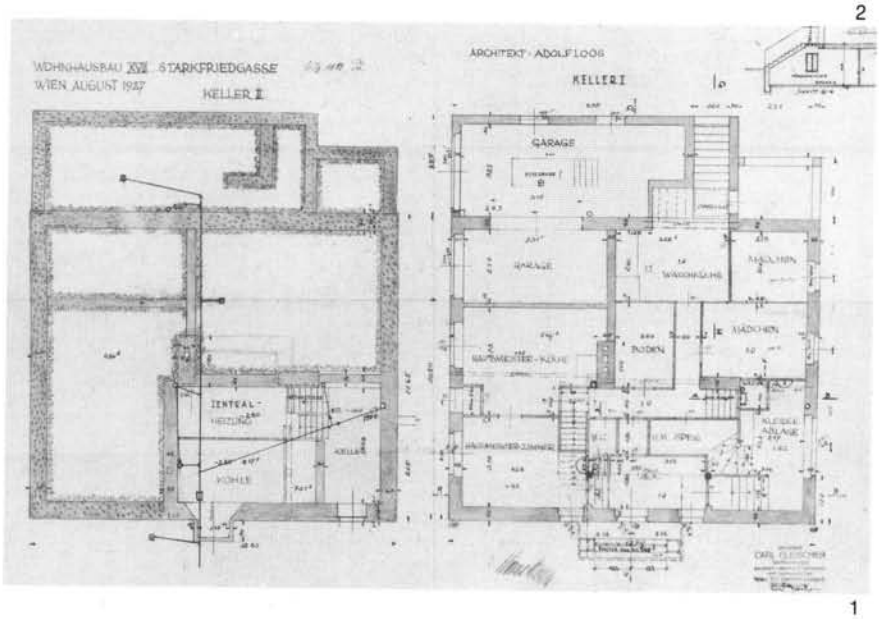

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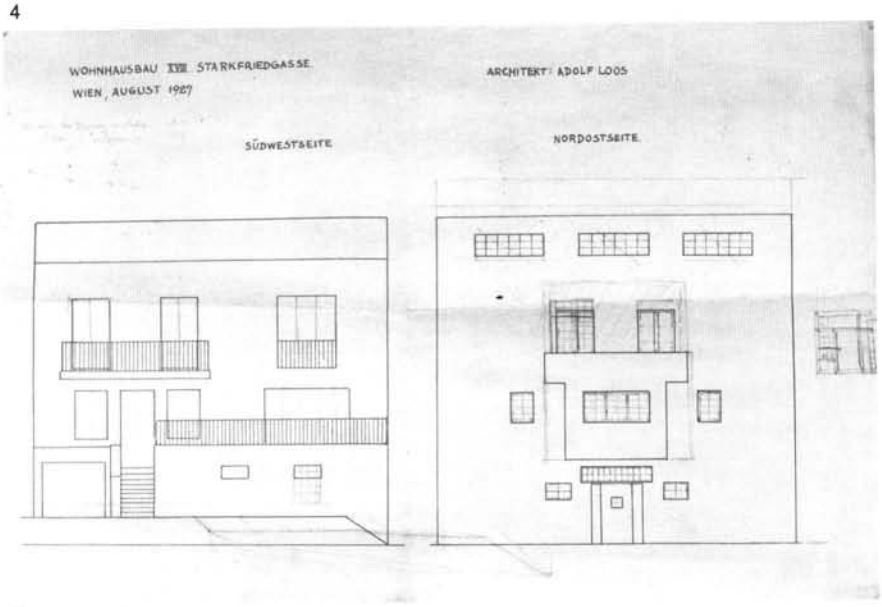

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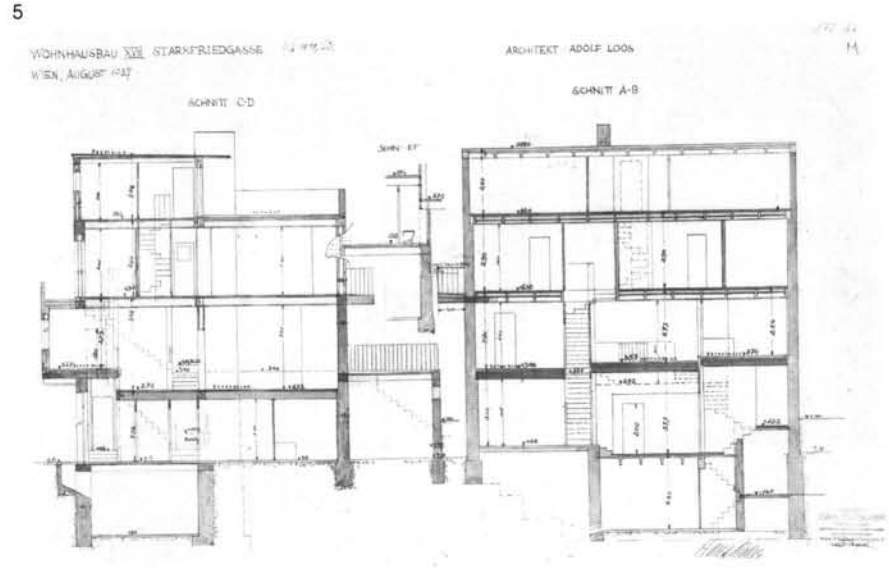
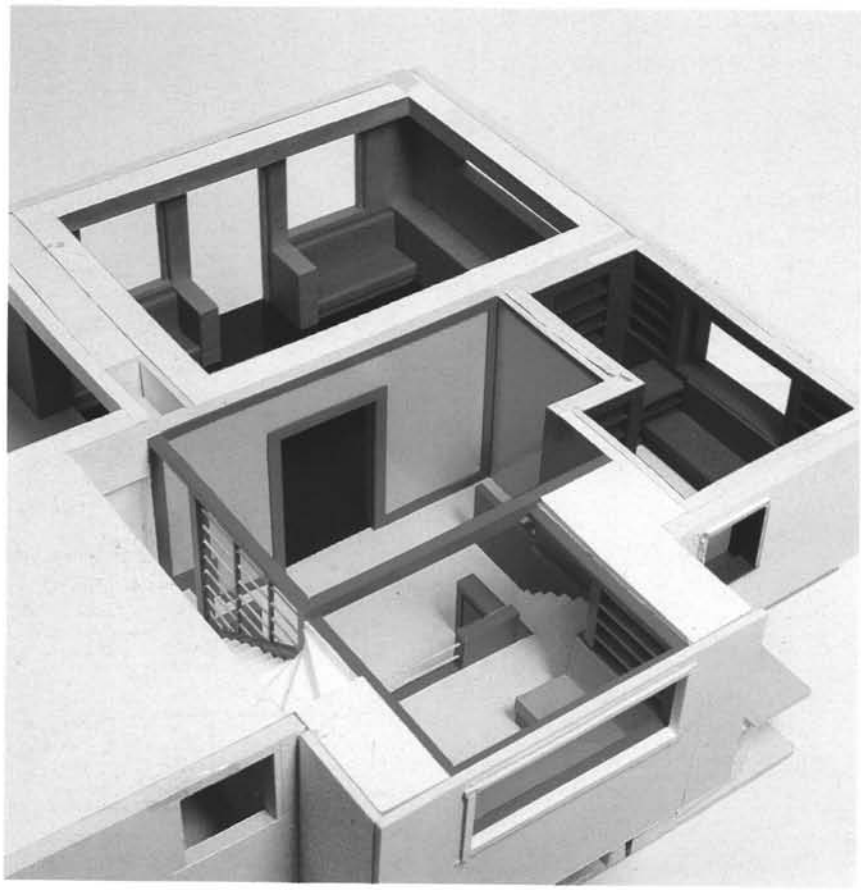


1. Contract drawings of cellar and ground floor August 16th 1927 (Plan- und Schriftenkammer, Vienna)
2. Contract drawings of first and second floor August 16th 1927 (Plan- und Schriftenkammer, Vienna)
3. Plan of first floor as published in H. Kulka: Adolf Loos, Vienna 1931
4. Drawings of front and garden elevation, with alterations sketched by Loos himself (original drawing: Galerie Metropol, Vienna)
5. Contract drawings of sections, August 16th 1927 (Plan- und Schriftenkammer, Vienna)
6. Revised drawings of front and garden elevations as submitted after the completion of the building, December 1928 (Plan- und Schriftenkammer, Vienna)

The Moller House

For the first time in the work of Loos, colour by painting was applied extensively in this house, notably in the living hall and its annexes. The cheerful colours of these cosy rooms, facing north, differ strongly from those of the more formal and tranquil living areas on the south side, which are paneled in wood veneer.

In our reconstruction of those interiors, based on black and white photographs, we have chosen for a combination of green and red, the colours also to be found in interiors of later projects.



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1. Model of the Moller House: view of the living area
2. View in the model from the built-in seat in the recess to the music room
3. View in the model from music room to dining room

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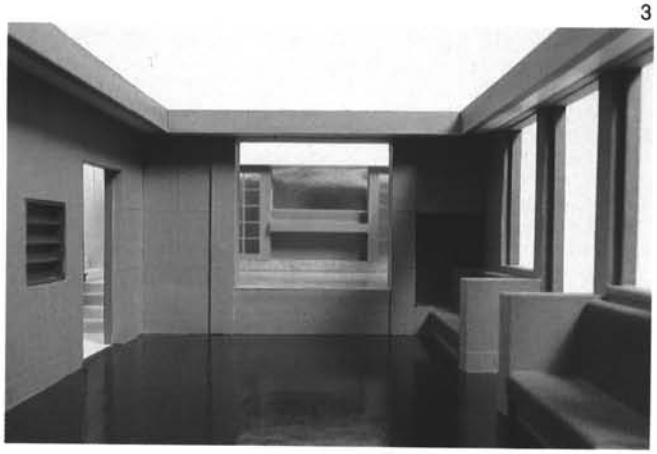

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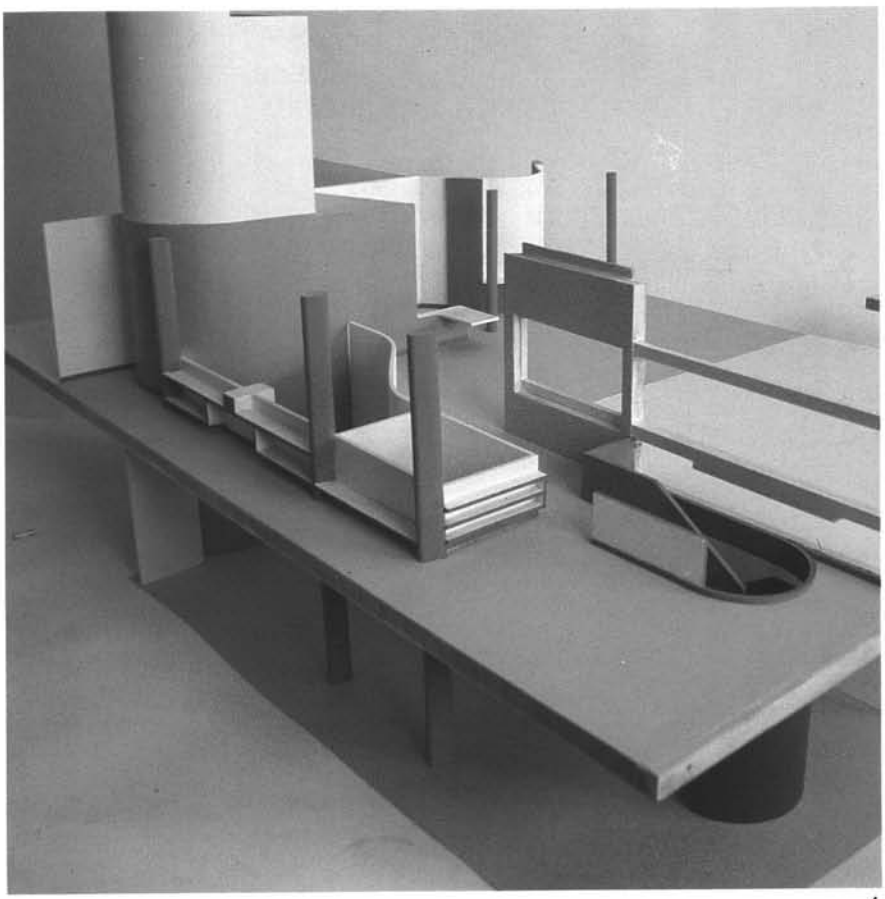
Villa Stein-de Monzie

Although nothing is known about the use of colour, it is possible to deduce from black and white photographs that colour has indeed been used in the interior of this house too.

The colours transform the abstract and static architectural system into a dynamic series of experiences. In our reconstruction of the interior particular emphasis is placed on this aspect; we remain uncertain as to the accuracy of the colours employed.



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4. Model of Villa Stein-de Monzie: view of the first floor in the dismantled model
5. View of the first floor from above
6. View of the ceiling of the entrance hall

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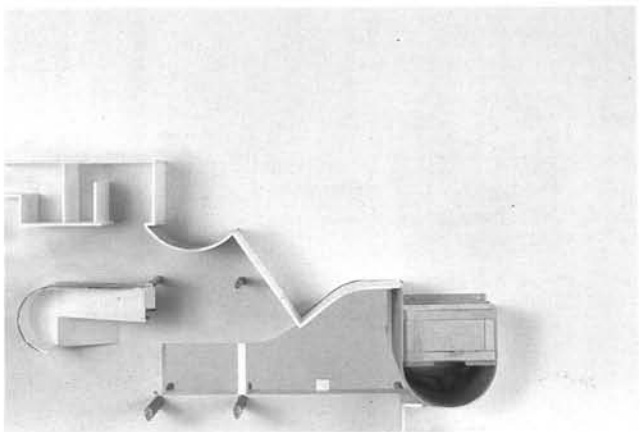

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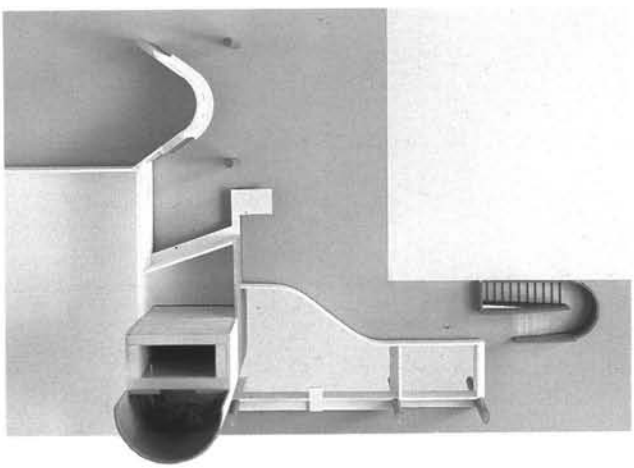
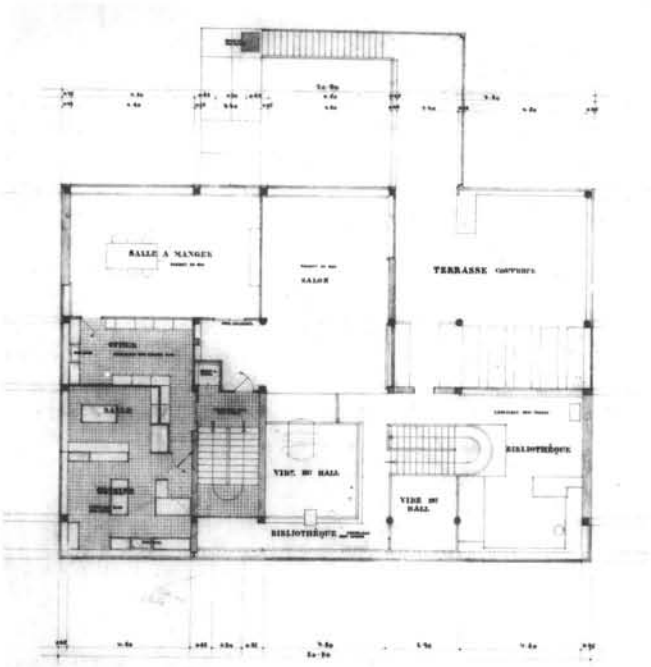


5

Villa Stein de Monzie

assignment:	May 1926
contract:	April 1927
occupied:	December 1928

1. Plan of the first floor; project January 1927 (FLC 10417)
2. Sketch of first floor plan made after project January 1927 (FLC 10516)
3. Ditto (FLC 10498)
4. Preliminary study of plans of ground floor and first floor; project March 1927 (FLC 10498)
5. View of the first floor during construction; the part of the void located in the narrow entrance-bay is still present
6. Working drawing of lateral section on the spot of the void between ground floor and first floor; June 1927 (FLC 10428)



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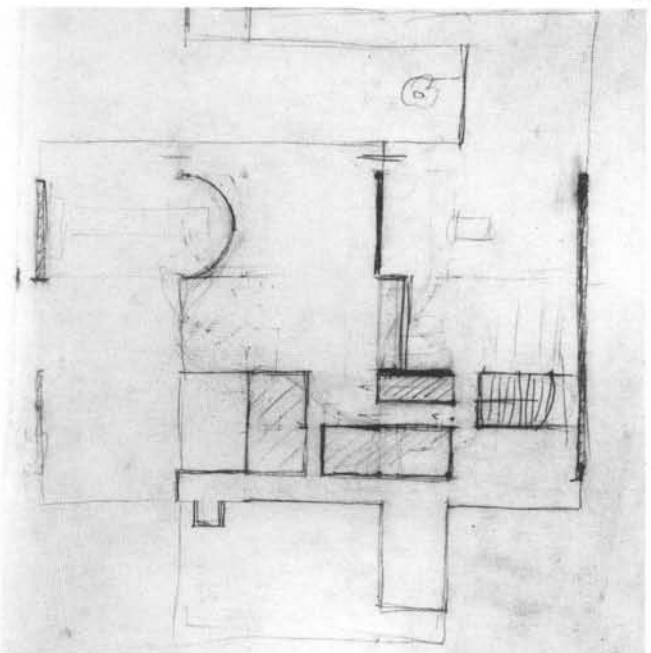

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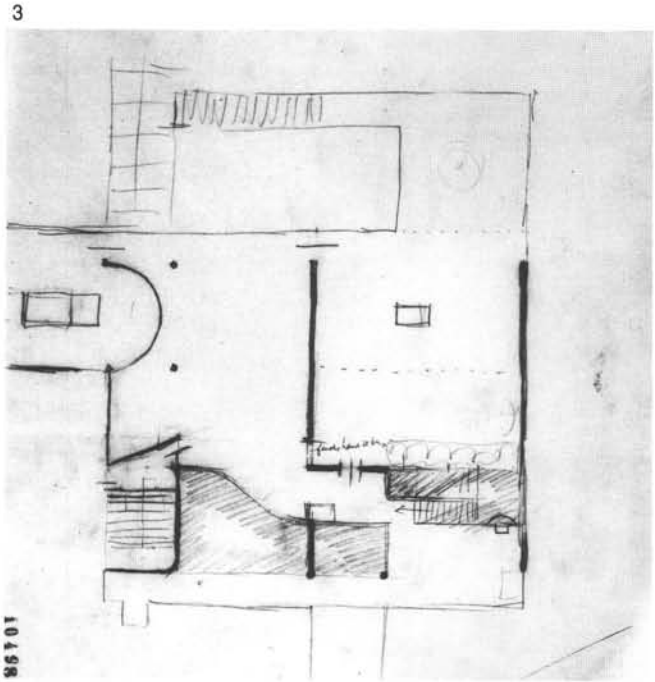

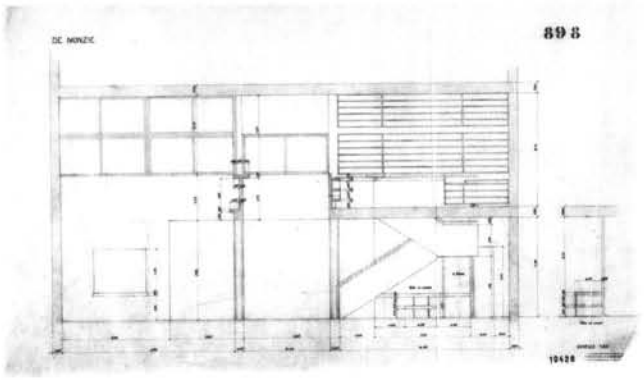

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The villa Stein-de Monzie was built to house the Stein couple and mrs. De Monzie and her daughter. This double occupancy triggered a complex design process, leading to the development of many alternatives, whose sequence is not completely tracable.

There are more causes to be cited for this abundance of alternatives. On the one hand there is the difference between the milieus of clients and the architect; many of the wishes and longings of the clients only became distinct during the process itself. On the other hand it is the structure of the building process itself, characterized by the division of labour, not only between the design activities and the actual execution of the work, but also in the atelier of Le Corbusier himself.

Drawings, from sketches to working drawings were the essential instruments for keeping the process operative, as well for recording all the details of the design to guarantee its execution.

An important theme within the designing process is the spatial relationship between entrance hall and the first floor which acquires form and substance by means of a staircase and voids.

The spatial possibilities of the Domino-frame have been explored to the utmost, especially the relationship between the "free plan" and the "free facade". The independent status of the projection of the Domino frame is the result: in this case as a "bridge" located between the facade and the void, between "outside" and "inside", which appears to be interchangeable. The void is not the centre of the house any more, it only makes the objects visible between which the *"promenade architecturale"* is enacted.

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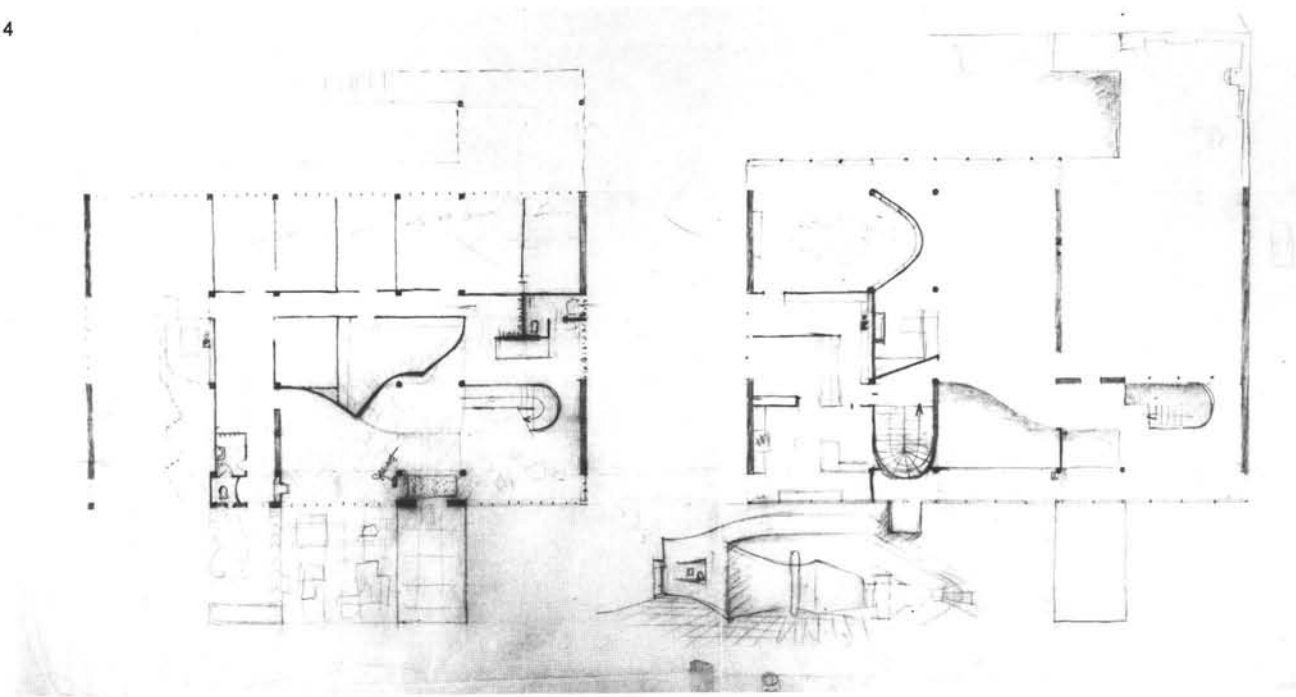

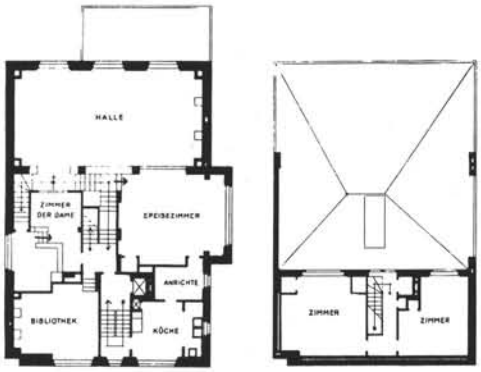

Interiors by Adolf Loos and Le Corbusier

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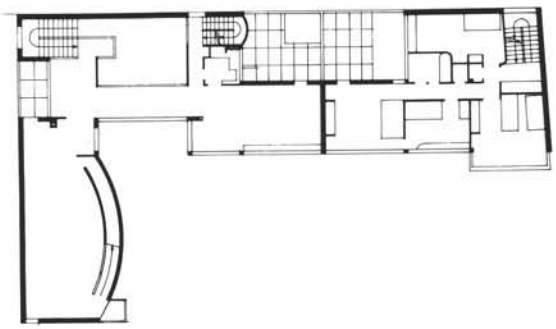
1. Adolf Loos, the Müller House: view of the breakfast room on the roof
2. View of the ladies' room in the Müller House
3. Adolf Loos, the Khuner Country House: one of the children's bedrooms. View of the podium in front of the wash-stand. The podium is situated above the staircase leading to the first floor
4. View of a guest room in the Khuner House
5. View of the sleeping recess in the mistress' bedroom of the Khuner House
6. Le Corbusier, Villa La Roche: view of the gallery
7. View from the landing near the gallery to the dining room in Villa La Roche
8. View of the dining room in Villa La Roche



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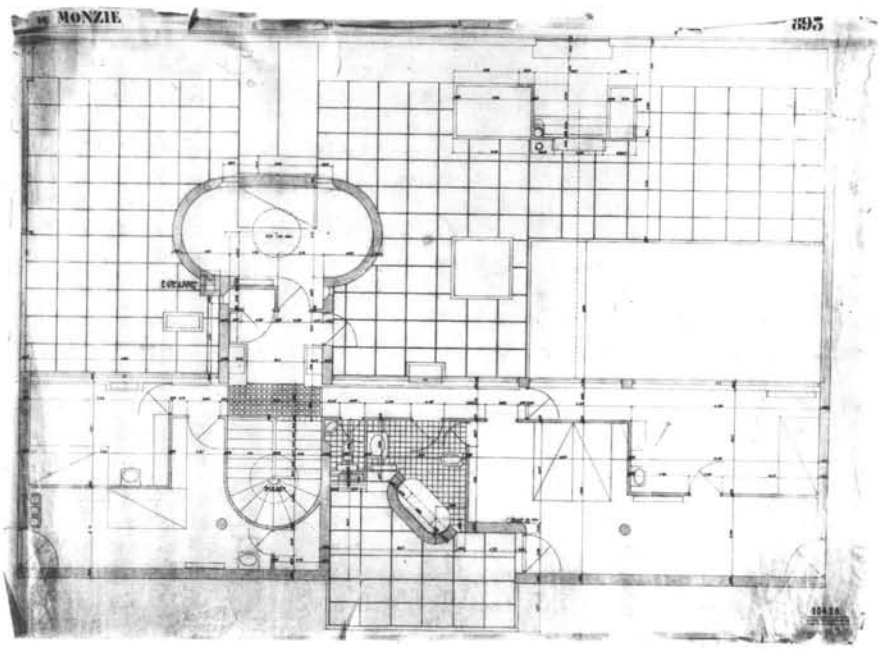
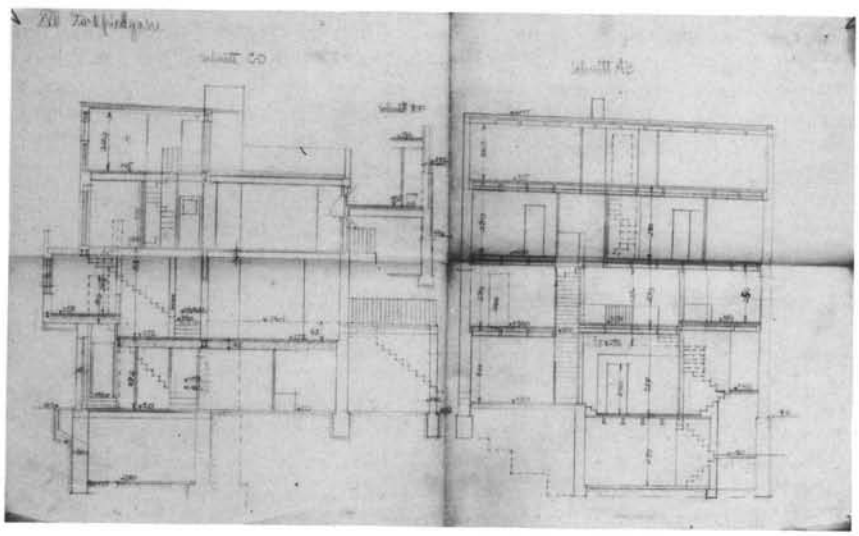


1. Villa Stein-de Monzie: working drawing of the top floor, scale 1 : 20. Drawn by Kunio Maekawa



2. The Moller House: working drawing of two sections (original drawing: Galerie Metropol). Drawn by Zlatko Neumann

Adolf Loos

The principle of cladding

Even if all materials are of equal value to the artist, they are not equally suited to all his purposes. The requisite durability, the necessary construction often demand materials that are not in harmony with the true purpose of the building. The architect's general task is to provide a warm and livable space. Carpets are warm and livable. He decides for this reason to spread out one carpet on the floor and to hang up four to form the four walls. But you cannot build a house out of carpets. Both the carpet on the floor and the tapestry on the wall require a structural frame to hold them in the correct place. To invent this frame is the architect's second task.

This is the correct and logical path to be followed in architecture. It was in this sequence that mankind learned how to build. In the beginning was cladding. Man sought shelter from inclement weather and protection and warmth while he slept. He sought to cover himself. The covering is the oldest architectural detail. Originally it was made out of animal skins or textile products. This meaning of the word is still known today in the Germanic languages. Then the covering had to be put up somewhere if it was to afford enough shelter to a family! Thus the walls were added, which at the same time provided protection on the sides. In this way the idea of architecture developed in the minds of mankind and individual men.

There are architects who do things differently. Their imaginations create not spaces but sections of walls. That which is left over around the walls then forms the rooms. And for these rooms some kind of cladding is subsequently chosen, whatever seems fitting to the architect.

But the artist, the *architect*, first senses the effect that he intends to realize and sees the rooms he wants to create in his mind's eye. He senses the effect that he wishes to exert upon the spectator: fear and horror if it is a dungeon, reverence if a church, respect for the power of the state if a government palace, piety if a tomb, homeyness if a residence, gaiety if a tavern. These effects are produced by both the material and the form of the space.

Every material possesses its own language of forms, and none may lay claim for itself to the forms of another material. For forms have been constituted out of the applicability and the methods of production of materials. They have come into being with and through materials. No material permits an encroachment into its own circle of forms. Whoever dares to make such an encroachment notwithstanding this is branded by the world a counterfeiter. Art, however, has nothing to do with counterfeiting or lying. Her paths are full of thorns, but they are pure.

One could cast St. Stefan's Tower in cement and erect it somewhere, but then it would not be a work of art. And what goes for the Stefan's Tower also goes for the Pitti Palace; and what goes for the Pitti Palace goes for the Farnese Palace. And with this building we have arrived in the midst of our own Ringstrasse architecture. It was a sad time for art, a sad time for those few artists among the architects of that time who were forced to prostitute their art for the sake of the masses. It was granted to only a small number consistently to find contractors broad-minded enough to let the artist have his way. Schmidt was probably the luckiest. After him came Hansen, who, when he was having a rough time, sought solace in terra-cotta buildings. Poor Ferstel must have endured terrible agonies when they forced him at the last minute to nail an entire section of façade in poured cement onto his University. The remaining architects of this period - with a few exceptions - knew how to keep themselves free of nightmarish agonies like these.

Is it any different now? Allow me to answer this question. Imitation and surrogate art still dominate architecture. Yes, more than ever. In recent years people have even appeared who have lent themselves to defending this tendency (one person, of course, did so anonymously, since the issue did not seem clear-cut enough to him); so that the surrogate architect no longer need stand diminutively on the sidelines. Nowadays one nails the structure to the façade with aplomb and hangs the "keystone" under the main molding with artistic authority. But come hither, you heralds of imitation, you makers of stenciled inlays, of botch-up-your-home windows and papier-mâché tankards! There is a new spring awakening for you in Vienna! The earth is freshly fertilized!

But is the living space that has been constructed entirely of rugs not an imitation? The walls are not really built out of carpets! Certainly not. But these carpets are meant only to be carpets and not building stones. They were never meant to be taken as such, to imitate them in form or color, but rather to reveal clearly their own meaning as a cladding for the wall surface. They fulfill their purpose according to the principles of cladding.

As I already mentioned at the outset, cladding is older even than structure. The reasons for cladding things are numerous. At times it is a protection against bad weather - oil-base paint, for example, on wood, iron, or stone; at times there are hygienic reasons for it - as in the case of

enameled tiles that cover the wall surfaces in the bathroom; at times it is the means to a specific effect - as in the color painting of statues, the tapestries on walls, the veneer on wood. The principle of cladding, which was first articulated by Semper, extends to nature as well. Man is covered with skin, the tree with bark.

From the principle of cladding, however, I have derived a very precise law which I call the law of cladding. Do not be alarmed. It is usually said that laws put an end to all progressive development. And indeed, the old masters got along perfectly well without laws. Certainly. It would be idleness to establish laws against thievery in a place where thievery is unknown. When the materials used for cladding had not yet been imitated, there was no need for laws. But now it seems to me to be high time for them.

The law goes like this: we must work in such a way that a confusion of the material clad with its cladding is impossible. That means, for example, that wood may be painted any color except one - the color of wood. In a city where the exhibition committee decided that all of the wood in the Rotunda should be painted "like mahogany", in a city in which wood graining is the exclusive type of painted decoration, this is a very daring law. There seem to be people here who consider this kind of thing elegant. Since the railway and tramway cars - as well as the entire technique of carriage building - come from England, they are the only wooden objects that display pure colors. I now dare to assert that this kind of tramcar - especially one of the electric line - is more pleasing to me with its pure colors than it would be if, according to the principles of beauty set out by the exhibition committee, it had been painted "like mahogany".

But a true feeling for elegance lies dormant, although deep and buried, even in our people. If not, the railway administration could not count on the fact that the brown color of the third-class cars painted to look like wood would call forth a lesser feeling of elegance than the green color of the second- and first-class cars.

I once demonstrated this unconscious feeling to one of my colleagues in a drastic manner. On the first floor of a building there were two apartments. The tenant of the one apartment had had his window bars, which had been stained brown, painted white at his own expense. We made a bet according to which we brought a certain number of people to the front of the building and, without pointing out to them the difference between the window bars, asked them on which side they felt that Herr Pluntzengruber lived and on which side Prince Liechtenstein - these were two parties that we told them rented the apartments. All of those who were taken to the building unanimously declared that the wood-stained side was Pluntzengruber's. Since then my colleague has only painted things white.

Wood staining is, of course, an invention of our century. The Middle Ages painted wood bright red for the most part, the Renaissance blue; the Baroque and Rococo painted interiors white, exteriors green. Our peasants still retain enough good sense to paint only with pure colors. Don't the green gate and the green fence of the countryside, the green jalousies against the freshly whitewashed wall, have a charming effect? Unfortunately several villages have already adopted the taste of the exhibition commission.

One will still recall the moral indignation that arose in the camp of the surrogate arts and crafts when the first furniture painted with oil-base paint came to Vienna from England. But the rage of these good men was not directed against the paint. They painted with oil-base paints in Vienna too as soon as softwood came into use. But the fact that the English pieces dared to display their colors so openly and freely instead of imitating hardwood provoked these strange fellows. They rolled their eyes and acted as if they had never used oil-base colors at all. These gentlemen presumably thought that everyone hitherto had assumed their stained-wood furniture and buildings were actually made of hardwood.

I trust I can be assured of the Association's gratitude if, after such observations, I name no names among the painters at the exhibition.

Applied to stuccowork, the principle of cladding would run like this: stucco can take any ornament with just one exception - rough brickwork. One would think the declaration of such a self-evident fact to be unnecessary, but just recently someone drew my attention to a building whose plaster walls were painted red and then seamed with white lines. Similarly, the type of decoration so beloved in kitchens - imitation stone squares - belongs in this category. In general, any and all materials used to cover walls - wallpaper, oilcloth, fabric, or tapestries - ought not to aspire to represent squares of brick or stone. It is thus easy to understand why the legs of our dancers when covered with knit stockinets have such an unaesthetic effect. Woven underclothing may be dyed any color at all, just not skin color.

The cladding material can keep its natural color if the

area to be covered happens to be of the same color. Thus, I can smear tar on black iron or cover wood with another wood (veneer, marquetry, and so on) without having to color the covering wood; I can coat one metal with another by heating or galvanizing it. But the principle of cladding forbids the cladding material to imitate the coloration of the underlying material. Thus iron can be tarred, painted with oil colors, or galvanized, but it can never be camouflaged with a bronze color or any other metallic color.

Here *chamottes* and artificial stone tiles also deserve mention. The one kind imitates terrazzo (mosaic) paving, the other Persian carpets. Certainly there are people who actually take the tiles for what they are imitating - for the manufacturers must know their customers.

But no, you imitators and surrogate architects, you are mistaken! The human soul is too lofty and sublime for you to be able to dupe it with your tactics and tricks. Of course, our pitiful bodies are in your power. They have only five senses at their disposal to distinguish real from counterfeit. And at that point where the man with his sense organs is no longer adequate begins your true domain. There is your realm. But even here - you are mistaken once more! Paint the best inlays high, high up on the wood ceiling and our poor eyes will have to take it on good faith perhaps. But the divine spirits will not be fooled by your tricks. They sense that even those intarsia decorations most skillfully painted to look "like inlay" are nothing but oil paint.

translated by Jane O. Newman and John H. Smith

Das Prinzip der Bekleidung appeared first in the *Neue Freie Presse*, September 4, 1998.
In 1921 it was published by Georges Crès & Cie. in Paris in a collection of essays by Adolf Loos: *Ins Leere gesprochen*.

Regarding economy

This article was compiled by Bohuslav Markalous, the editor of "Wohnungskultur", *from various conversations with Adolf Loos: hence its fragmentary nature. In accordance with the author's wishes, the article has been entitled* "Regarding Economy".

An item becomes out-of-date the instant our feelings turn against it, as soon as we would feel ridiculous for staying faithful to it.

A top hat can take a variety of forms. Imagine a row of a hundred of them. I want to go to a funeral. I try various shapes and see that most of them are impossible, ridiculous, and that only one hat fits. The 1924 hat, let's say.

This hat is the only possible one for me and the time in which I live.

People find only possible things modern.

The 1924 top hat is definitely possible, and if I could have worn it twenty years ago and still wear it today, everything would be fine. And because I can actually wear it, this top hat is fully justified in production terms, or more generally speaking, in commercial terms.

But these are just fashions, which soon change.

But if it so happens that a desk loses its aesthetic value for me after ten years, that I find it impossible, get rid of it and buy myself a new one, then that is a gigantic waste in commercial terms.

I reject any form of innovation-mania. Only a conservative person is economical, and every innovator is wasteful.

On the other hand, someone who has a lot of clothes takes good care that they do not go out of fashion.

Someone who only has one suit has no need to be cautious. On the contrary. Through constant use, he wears out his suit in a very short time, and in so doing forces the tailor to keep inventing new styles.

The counter-argument, that these constant changes in fashion are a very useful thing in that they provide the producers with plenty of work, is actually back-to-front.

One needs to have a lot of clothes so that one can change them according to one's needs of the moment. When it is raining I wear a mackintosh, in spring I wear an overcoat, in winter a worsted suit, and in this way I treat my wardrobe with respect. Fashion is something ephemeral only because we do not make things last. As soon as we have objects which last a long time and stay beautiful, fashion ceases. We should measure beauty in

terms of time. I cannot judge rails by how many trains can pass along them, but only by how long they last. They will remain good as long as they do a good, reliable job.

Anyway, matter is alive. And it is essential for matter, substance, product, cloth to enjoy a certain period of molecular rest.

This is why I sing the praises of those great, four-square wardrobes: this is real progress, for besides anything else, such a wardrobe constantly assures me of my own autonomy.

Changing the form where no physical improvement is possible - this is the height of senselessness.

I can devise something new when my task is a new one; in architecture: a turbine-house, an airship-hangar. But a chair, a table, a wardrobe? I refuse to acknowledge that a compulsive imaginativeness should lead us to alter tried and tested froms familiar for centuries.

A yawning gulf separates the eighteenth from the nineteenth century. In the former, 95 percent of the people worked so that 5 percent could wear wigs and expensive clothes and play the gentleman. This was utter social immorality.

Today the factory-worker and the King of England wear what are basically, from a formal point of view, the same clothes. Our twentieth-century presidents and monarchs have not the slightest need for masquerades with crowns and ermine cloaks.

This has a deeper meaning than meets the eye. The intelligent man of today has to wear a mask in front of his fellows. The mask is the form of his clothing, fixed and common to all men. Only half-wits wear individual clothes. They have a need to cry out to all the world who and what they really are.

It is the same with furniture. We make arbitrary changes to let people know immediately who is the article's lord and master, and that as a person he is quite different from everybody else.

It is right that there should be cheap and expensive clothes. This is determined by the quality of the cloth and the skill of the tailor. But even here there are limits. In sport we have a champion who can run 100 yards in the shortest time possible. There is someone who can jump higher than anyone else. Hence, somewhere, there is a master-tailor who knows how to make the most perfect of clothes from the very best material. He could be in New York, in London, in Paris - I do not know.

Luxury is a necessity. Top-quality work has to be paid for by someone. And the manufacture of luxuries for the sake of the few involves what I was saying about the fastest sprinter and the best high-jumper: that at least a handful of the finest craftsmen manage to attain perfection in what they produce. Through skill and perseverance. This must stand as an example of the best that man is capable of. Otherwise everything, everywhere, goes downhill, Through the uplifting example of his perfect craftmanship, the tailor of the King of England has an effect on the whole of the English clothing trade. Without such outstanding men we cannot rise above the mediocre.

Every effort to reduce the durability of an item is wrong. We must make all the articles we produce last longer. This is correct.

I buy some poor-quality material and have a suit made from it: the suit lasts a third as long as a good-quality one. One to three! A good suit is economical, a bad one wasteful. This is a matter of great economic significance.

But when objects crafted from top-quality materials with consummate technical skill go out of fashion in a few years through wilfulness of form - this is waste.

Labouring for months to produce lace only to have the lace torn in a single night is also a bad thing. Such lace can be produced effortlessly and at much less cost by machine.

Let us strive for refinement and economy. I do not know who is the more economical: the man who drinks good wine or the one who quaffs great quantities of bad wine.

But I would also like to say something about the psychology of economy. If I buy a cigarette-case, that does not mean I wish to be bludgeoned, to be deprived of the joy of material and workmanship and be given the dubious pleasure of ornamentation in its stead. I want the material itself, suitably finished. A ring is a hoop-shaped piece of good gold. A cigarette-case means two flat trays of good silver, perfectly smooth. The beautiful smoothness of polished silver, so fine to the touch, is the best ornamentation.

But people do not like this. They want something complex, painstaking. Our standards here are still African, medieval, it seems!

Painstakingness, complexity! How can I enjoy a meal that has been eight days of great effort and skill in the making? Such painstakingness, such complexity, so much trouble makes the banquet utterly tasteless, insipid. For the very reason that eight days' work went

into it. Modern man has trouble accepting such excesses of effort.

What pleasure can I take in something which took five years to make? This is upper-class sadism. Nowadays we have simply outgrown such things. We want the opposite: to economise on labour, to spare our fellow men and, above all, to economise on materials. I must confess that I am almost pathologically thrifty and would willingly become leader of the savers.

If I see a lopped-off shelf, I feel sorry for the material, for I restore the missing piece through imagining it in the empty space. And I feel sorry for that piece.

In Prague I have seen people ruthlessly cutting fine materials and making them into elaborate, intricately-assembled items. This is a sin.

Every age is economical in its own way. The 18th century spent a lot on food and made great savings in cleanliness. The century stinks. You can even smell it on the furniture.

Today we pay more attention to cleanliness.

Even in the trenches the American soldiers built bathrooms. And what happened then? People said: "And you call them soldiers?" Why? Because, for us Europeans, the image of a good soldier is bound indissolubly with that of a dirty soldier.

What is more, everyone saves differently on different things.

I am convinced that the proletarian is a much less economical person, that he spends money much more easily. The labourer does not ponder long over whether he should have a glass of beer, whereas the civil servant dillies and dallies - but the same civil servant thoughtlessly throws money away on a stupid ornamental cravat, the purchase of which would require at least half a day's deliberation from the labourer.

The old love of ornament must be replaced by pleasure in the material itself. Material is something completely unknown to us. At one time golden ducats were thrown out of the window (an upper-class diversion), and pearls dissolved in vinegar and the solution drunk. Pearls were even cut. Nobody would do anything as sinful today.

And we have the least feeling for material, we show least respect for substance, in furniture-making. In architecture and joinery, the architects and designers of today have done away with this feeling for material.

A Chinaman was entrusted with the job of going into the forest and looking for a suitable tree. He looked for a long time, but in the end he found it and said: "If I had not found it, I would not have done my job."

Now that is feeling for material!

Matter must become divine again. Materials are utterly mysterious substances. We must feel a deep, respectful wonder that such things were created at all.

And as for decorating fine materials, perfect in themselves, with ornamentation? "Improving" fine mahogany with purple stain? These are crimes.

When someone tells me that it would be a cruel punishment to be sent to an ordinary prison, one which is pleasant in its plainness, in the language of whitewash and wooden bunks, I can just imagine how much more terrible the prison would be with a completely up-to-date decor created by a "modern designer", from carpets to curtains, from ashtray to clock-hand, from coal-scuttle to inkwell!

Ten years imprisonment for such designers!

Our designers of furniture and interiors see their main task as that of outdoing. I repeat: outdoing. A shoemaker who makes good shoes can never outdo these good shoes of his. And if I manage to keep his products well, for I have many pairs of shoes, they will always stay up-to-date. Thank God that shoemakers are not yet trying to outdo one another. And God forbid that interior designers should ever design shoes. Then shoemakers would be burning with enthusiasm to outdo each other at least once every two years.

I have had shoes for twenty years and they have not gone out of fashion.

I have no need whatsoever to draw my designs. Good architecture, how something is to be built, can be written. One can write the Parthenon.

I am against the photographing of interiors. Something quite different comes out of it. There are designers who make interiors not so that people can live well in them, but so that they look good on photographs. These are the so-called graphic interiors, whose mechanical assemblies of lines of shadow and light best suit another mechanical contrivance: the camera obscura. My home interiors are impossible to judge from photographs or reproductions. I am certain that, if photographed, they would look wretched and ineffective.

For photography renders insubstantial, whereas what I want in my rooms is for people to feel substance all round them, for it to act upon them, for them to know the enclosed space, to feel the fabric, the wood, above all to

perceive it sensually, with sight and touch, for them to dare to sit comfortably and feel the chair over a large area of their external bodily senses, and to say: this is what I call sitting! How can I prove this to someone by means of a photograph, how can I let the person looking at this photograph feel how good my chair is to sit on, no matter how well-photographed it is?

So photography says nothing, you see. Photography draws pictures, pretty or not so pretty. Their effect is to distract people from the thing itself. To give them the wrong upbringing. Photography has on its conscience the fact that people want to furnish their homes, not so that they are good to live in, but so that they look pretty. Photography deceives. I have never wanted to deceive anybody with my activities. I reject such methods. But our architects have had their upbringing exclusively in the deceptive method, and are rooted in it; they base their reputation on pretty drawings and fine photographs. They do so consciously, for they know that people are so helpless that they find a graphic, photographic illusion enough to live in and even be proud of. And in this way the clients, living a life of self-deception in all these drawings and photographs, show so little honesty towards themselves that they refuse to admit the fact.

Folk art? What is that? Bare knees? Folk costume? Folk dances? And we townspeople are supposed to go as if to the theatre, to sit on benches and stare? What silliness! Surely it is as degrading for us as for the country people themselves? Do we town and country folk really need this sort of thing?

Sooner or later the barriers between town and country will be gone. The distinction is an artificial one, and hence ridiculous. We regard country people as primitive. We find them ridiculous in the city. They find us ridiculous in the country. This is an artificial barrier, one we should be ashamed of: failing to understand life's basic functions, failing to understand man's work, the lofty mission of every working man, whatever useful task he may do, wherever he may live, be it in Paris or the remotest Moravian village. Any two such men may have eminent qualities, for the Moravian is not forced to be worthless as a human being, and the Parisian may well be a perfect dunce, or one of them is such-and-such and the other not - whatever happens, one's circumstances, whether one lives in a certain part of the globe or does this work or that for a living, add not a jot to one's value as a human being. Only a narrow-minded native of Prague or Vienna can imagine himself to be worth more than someone who lives and works in Iglau or Lhota.

I always feel glad when I have been living for a length of time in America and England.

An English bride would be happiest if she could acquire all her parents' furniture. Our brides will hear nothing of easing their parents' financial burden by taking over some of their furniture. They want something new, "fashionable", "modern". They even want an "artistic design". And in four years they will want another "artistic design", because their furniture is already thoroughly out-of-date and completely new designs are now on the market. This is dreadful! It is a waste of energy, labour and money, and is economically ruinous.

In contrast, English furniture is the acme of comfort, and *our* - "artistically designed by modern designers" - is a heap of nonsense and crimes against substance, purpose and workmanship.

An English lounge chair is perfection itself. Similarly shining examples of many other types of furniture are also to be found in America and England. I believe that each year, in the whole world, we produce just one good model which is able to serve for any length of time. All the rest disappear within a few years and become as unbearable for people as an old bonnet. Our so-called *Kunstgewerbe,* or art-and-craft trade, creates nothing but the ramshackle, and such "artistic interiors" only exist because they have been ordered and paid for beforehand, because they are ready-made anyway, because they are there in the home as one single package which people must suffer patiently, like it or not, once they have already fallen for something of the sort.

This is why I do not like people calling me *Architekt.* My name is simply Adolf Loos.

To the Viennese, economy is absolutely unheard-of. They have a veritable mania for constantly changing their homes, buying new things, rearranging, running from *Architekt* to *Architekt.* This chaos is a sign of the times. And anyone who can contribute a little calm to the state of our architectural design is worthy indeed.

We do not have architecture, we have dressed-up houses. It is as if I were to say "a dressed-up saddle" instead of "a saddle". That is a saddle whose shape is decorative and whose purpose is either totally obscure, or all but hidden beneath an "artistic" saddlecloth, like a woman's body swaddled in an "artist-designed" dress.

Original text: "Von der Sparsamkeit", compiled by Bohuslav Markalous from *Wohnungskultur*, Heft 2/3, 1924.

We may need to dress up, but why we dress up architecture escapes me.

If the Ringstrasse were built today instead of in the eighteen-seventies, we would have an architectural disaster on our hands. I only want one thing of an architect: that he show human decency in what he builds.

Whenever I was in Brünn and saw the *Deutsche Haus* and the Czech *Beseda*, the character of these two buildings told me immediately what was in store for Brünn. It is obvious! I would like to have these two pictures reproduced somewhere next to each other. But from what I have seen in Prague recently, I believe that the Czech architects are becoming converted to the form of the *Deutsche Haus*. This is a bad sign.

One millimetre more or less in cross-section hurts me. In disposition and education, the architect or designer of today is an uneconomical person. And as for theatrical set designers, nothing sensible whatsoever can be expected of them. They are people who make a habit of extravagance with materials. They become specialists in papier-maché rocks, in all manner of illusions and cleverness, totally losing all sense of dimension, for this is the theatre's very nature: everything is incidental, just for looking at. Directors have invited me to performances of plays. I did not go. It is against my whole nature. I cannot abide theatrical design. It is anything but design.

One can best recognise something modern by seeing whether it fits in with old things. I assure you that my furniture goes well with European furniture of whatever century or nation, and no less well with Chinese, Japanese and Indian items too. I would dearly like to see some of our *Kunstgewerbe* products attempt as much!

A chair is first and foremost in a room. When furnishing a room I first need a chair; I use it as a point of departure in order to arrive at the rest.

I consider it a great mistake for people to buy furniture made of fine woods and expensive fabrics. Then they have to be constantly on their guard against damaging anything. And we have materials we can live with for all eternity: hide, oak, wool.

A home should never be finished. Is man ever complete, finished in physical or mental terms? Indeed, does he ever come to a stop? And if man is in constant motion and development, if old needs pass and new needs arise, if the whole of nature itself and all around us are in a state of change, is the thing closest to man, his home, to stay unchanged, organized for all eternity? No. It is ridiculous to specify where people should put a thing, to organize everything for them from the lavatory to the ash-tray. On the contrary: I love it when people arrange their furniture as they (not I!) need, and I find it completely natural and approve wholeheartedly if they bring in their old paintings, their beloved memories, be these things tasteful or tasteless. It matters little to me anyway. But for them they are sensitive fragments of life, of familiar intimacy. In other words, I am an architect who designs human interiors, not artistically inhuman ones. I am frankly astounded that so many people allow themselves to be bullied by the so-called interior designers!

At the academies our architects and designers are told how fine things used to be, and how everything modern is worthless. I too was given that. And it took years for me to wrest myself free of this impossible education, to re-educate myself and realize that, in one respect, the aristocrat stands as an example for us all. Because he had a feeling for material. So he chose not just horses, nor even fine horses, but thoroughbreds, even if they were less pleasing to the eye. Not just any trunk, but one made of the very best materials. One built to last for centuries. And so I came to realize that the basic philosophy of many an otherwise hidebound Jockey-Club member is utterly correct. Aristocrats paid attention only to materials and to precise, perfect workmanship. This was a difficult process for me to undergo. Why? Because it was considered outrageous to say that this attitude was correct. Incidentally, Ruskin has a great deal to answer for here. I am his sworn enemy. It was sometime in 1895, when I was in America, that I first realized that a Thonet chair is the most modern chair there is.

Any joiner can make the objects I furnish with. I have not made a patented architect of myself. Any stonemason, any weaver or artisan can make my objects without begging me respectfully for permission. The main thing is that he do an honest job of work. And I have not been as wary of anything in life as of the production of new forms.

The role of the designer is to grasp the deepness of life, to think a need through to its most far-reaching consequences, to help the socially weaker, to equip as large a number of households as is feasible with articles of perfect utility, but never to invent new forms.

But these are all views which as many people will understand in Europe today as can be counted on the fingers of one hand.

translated by Francis R. Jones

Le Corbusier

The decorative art of today

The decorative art of today! Am I plunging into paradox? - a paradox that is only apparent. To include under this rubric everything that is free from decoration, whilst making due apology for what is simply banal, indifferent, or void of *artistic intention*, to invite the eye and the spirit to take pleasure in the company of such things and perhaps to rebel against the flourish, the stain, the distracting din of colours and ornaments, to dismiss a whole mass of artefacts, some of which are not without merit, to pass over an activity that has sometimes been disinterested, sometimes idealistic, to disdain the work of so many schools, so many masters, so many pupils, and to think thus of them: "they are as disagreeable as mosquitoes"; and thence to arrive at this impasse: *modern decorative art is not decorated.* Have we not the right? A moment's thought will confirm it. The paradox lies not in

reality, but in the words. Why do the objects that concern us here have to be called *decorative art*? This is the paradox: why should chairs, bottles, baskets, shoes, which are all objects of utility, all *tools*, be called *decorative art*? The paradox of making art out of tools. Let's be clear. I mean, the paradox of making *decorative* art out of tools. To make art out of tools is fair enough, if we hold with Larousse's definition, which is that ART is *the application of knowledge to the realisation of an idea.* Then yes. We are indeed committed to apply all our knowledge to the perfect creation of a tool: know-how, skill, efficiency, economy, precision, the sum of knowledge. A good tool, an excellent tool, the very best tool. This is the world of *manufacture*, of industry; we are looking for a standard and our concerns are far from the personal, the arbitrary, the fantastic, the eccentric; our interest is in the norm, and we are creating type-objects.

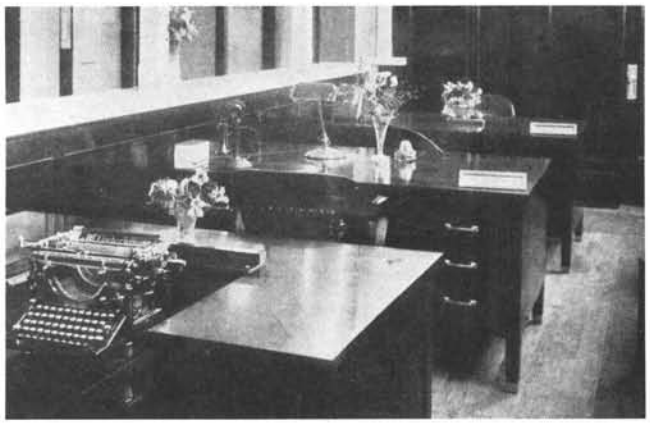
So the paradox certainly lies in the terminology.

But we are told that decoration is necessary to our existence. Let us correct that: art is necessary to us; that is to say, a disinterested passion that exalts us. Decoration: baubles, charming entertainment for a savage. (And I do not deny that it is an excellent thing to keep an element of the savage alive in us - a small one.) But in the twentieth century our powers of judgement have developed greatly and we have raised our level of consciousness. Our spiritual needs are different, and higher worlds than those of decoration offer us commensurate experience. It seems justified to affirm: *the more cultivated a people becomes, the more decoration disappears.* (Surely it was Loos who put it so neatly.)

So, to see things clearly, it is sufficient to separate the satisfaction of disinterested emotion from that of utilitarian need. Utilitarian needs call for tools brought in every respect to that degree of perfection seen in industry. This then is the magnificent programme for *decorative art* (decidedly, an inappropriate term!).[1]

To provoke elevated sensations is the prerogative of proportion, which is a sensed mathematic; it is afforded most particularly by architecture,[2] painting, and sculpture - works of no immediate utility, disinterested, exceptional, works that are plastic creations invested with passion, the passion of a man - the manifold drama that arrests us, jolts us, rouses us, moves us.[3] Now and always there is a hierarchy. There is a time for work, when one uses oneself up, and also a time for meditation, when one recovers one's bearing and rediscovers harmony. There should be no confusion between them; we are no longer in the age of the dilettante, but at an hour that is harsh and epic, serious and violent, pressured and productive, fertile and economic. Everything has its classification; work and mediation.

The classes too have their classification: those who struggle for their crust of bread have the simple ideal of a decent lodging (and they love to see the fanciest furniture, Henry II or Louis XV, which gives them the feeling



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Fauteuil fond feuillard dossier à lyre

of wealth - an elementary ideal). And those well-enough endowed to have the ability and the duty to think (and they aspire to the wisdom of Diogenes).

Previously, decorative objects were rare and costly. Today they are commonplace and cheap. Previously, plain objects were commonplace and cheap; today they are rare and expensive. Previously, decorative objects were items for special display: the plate which the peasant family hung on the wall and the embroidered waistcoat for holidays; grist for the propaganda of princes. Today decorative objects flood the shelves of the Department Stores; they sell cheaply to shop-girls. If they sell cheaply, it is because they are badly made and because decoration hides faults in their manufacture and the poor quality of their materials: decoration is disguise. It pays the manufacturer to employ a decorator to disguise the faults in his products, to conceal the poor quality of their materials and to distract the eye from their blemishes by offering it the spiced morsels of glowing gold-plate and strident symphonies. Trash is always abundantly decorated; the luxury object is well made, neat and clean, pure and healthy, and its bareness reveals the quality of its manufacture. It is to industry that we owe this reversal in the state of affairs: a cast-iron stove overflowing with decoration costs less than a plain one; amidst the surging leaf patterns flaws in the casting cannot be seen. And the same applies generally. Take some plain calico and soak it in colour; the printing machine will instantly cover it in the most fashionable patterns (for example, copies of Spanish mantillas, Bulgarian embroidery, Persian silks, etc.) and without incurring much expense one can double the sale price. I quite agree that it can be as charming, as gay, and as shop-girl-like as you could want, and I would want that to continue. What would spring be without it! But this surface elaboration, if extended without discernment over absolutely everything, becomes repugnant and scandalous; it smells of pretence, and the healthy gaiety of the shop-girl in her flower-patterned cretonne dress, becomes rank corruption when surrounded by Renaissance stoves, Turkish smoking tables, Japanese umbrellas, chamber pots and bidets from Lunéville or Rouen, Bichara perfumes, bordello lamp-shades, pumpkin cushions, divans spread with gold and silver *lamé*, black velvets flecked like the Grand Turk, rugs with baskets of flowers and kissing doves, linoleum printed with Louis XVI ribbons. The pretty little shepherdess shop-girl in her flowery cretonne dress, as fresh as spring, seems, in a bazaar such as this, like a sickening apparition from the show-cases of the costume department in the ethnographic museum.

Not only is this accumulation of false richness unsavoury, but above all and before all, this taste for decorating everything around one is a false taste, an abominable little perversion. I reverse the painting; the shepherdess shop-girl is in a pretty room, bright and clear, white walls, a good chair - wickerwork or Thonet; table from the *Bazar de l'Hotel de Ville* (in the manner of Louis XIII, a very beautiful table) painted with ripolin. A good well-polished lamp, some crockery of white porcelain; and on the table three tulips in a vase can be seen lending a lordly presence. It is healthy, clean, decent. And to make something attractive, as little as that is enough.

Certainly, the modern decorative art of the decorators has different objectives, and it is fair to say that the picture I painted above was no more than the vulgarisation of much worthier intentions. So at this point in our search for a guiding principle, we arrive at the impasse of decorative art: decorative art that is not decorated. And we assert that this art without decoration is made not by artists but by anonymous industry following its airy and limpid path of economy.

The guiding principle of decorators with serious intentions is to cater for the enjoyment of life by a sophisticated clientele. As a result of fashions, the publication of books, and the assiduous efforts of a whole generation of decorators, this clientele has seen its tastes sharply awakened to matters connected with art. Today there is a lively aesthetic awareness and a taste for a contemporary art responding to very much more subtle requirements and to a new spirit. As a result there is a distinct evolution towards ideas reflecting the new spirit; the experience of decoration as art from 1900 to the war has illustrated the impasse of decoration and the fragility of the attempt to make our tools expressive of sentiment and of individual states of mind. There has been a reaction to this obtrusive presence, and it is being rejected. Day after day, on the other hand, we notice among the products of industry articles of perfect convenience and utility, that soothe our spirits with the luxury afforded by the elegance of their conception, the purity of their execution, and the efficiency of their operation. They are so well thought out that we feel them to be harmonious, and this harmony is sufficient for our gratification.

Articles de série.

And so, having opened our eyes and rid ourselves of the romantic and Ruskinian baggage that formed our education, we have to ask ourselves whether these new objects do not suit us very well, and whether this rational perfection and precise formulation in each does not constitute sufficient common ground between them to allow the recognition of a *style*!

We have seen that, freed from all reminiscence and traditional preconception, a rational and reassuring rigour has been applied to their design. Their choice of material, first of all, has been dictated by considerations of strength, lightness, economy and durability alone; objects for centuries made of wood have been adapted to metal and steel - objects such as office furniture, from which an entirely new precision of operation is demanded. Thus the "Voltaire" low armchair has become a totally different machine for sitting in since it was covered in leather.

As a result of this adaptation to new materials, the structure has been transformed, often radically; for a long time these new forms offended us and, by a fatal process of reasoning, provoked a violent *nationalist* (that is to say, regionalist) reaction, an appeal to handicraft as opposed to the machine, seen as a modern hydra. A sterile reaction: one cannot swim back against the current, and the machine which does its work with purity and exactitude is from today dispelling this anachronistic backwash. Let us allow one or two generations brought up in the religion of patina and the "hand-made" to fade away quietly. The young generations are born to the new light and turn naturally and with enthusiasm to the simple truths. When an electric light bulb is at last *weighed*, one fine day, in the design office of a manufacturer of chandeliers, its 50 grams will weigh heavily in the scales that determine the fate of industries doomed to disappearance; the technological firm will replace the artistic: so it is written.

Thus, as new materials and forms were inevitably introduced into the decorative art industries, at the dictate of the all-powerful gods of price and performance, some alert and enquiring minds noted the unvarying laws that were shaping the new products. These laws endowed everything with a common character, and the confidence that they gave to the mind constituted the basis of a new sense of harmony.

If we pause to consider the situation , we are bound to admit that there is no need to wait any longer for objects of utility.

Without a revolution, barricades, or gun-fire, but as a result of simple evolution accelerated by the rapid tempo of our time, we can see decorative art in its decline, and observe that the almost hysterical rush in recent years towards quasi-orgiastic decoration is no more than the final spasm of an already forseeable death.

In face of this unbroken and continuing evidence, good sense has gradually rejected the tendency to luxuriousness as inappropriate to our needs. Its last popular resort has been a devotion to *beautiful materials*, which leads to real byzantinism. The final retreat for ostentation is in polished marbles with restless patterns of veining, in panelling of rare woods as exotic to us as humming-birds, in glass pastes, in lacquers copied from the *excesses* of the Mandarins and thence made the starting point for further elaboration. At the same time, the Prefecture of Police has set about pursuing the pedlars of cocaine. This is all of a piece: feverish pulses and nerves shattered in the aftermath of war like to cool themselves by contact with these inhuman materials that keep us at a distance; in other circumstances they could well offer us a delicate slice of the miracle of nature; but the matrix of amethyst split and polished, or a lump of rock crystal set on my desk is just as expressive, and a great deal more comfortable as an exemplar of the glittering geometries that enthrall us and that we discover with delight in natural phenomena. When we have occasion to enter one of these troubled sanctuaries where so many artful reflections flit about amongst the black or white marbles, the gilt, the red or blue lacquers, we are seized by malaise, by anguish: we long to leave this den, to escape to the open air, and there, reassured and confident, to seat ourselves in a cell such as that in the convent of Fiesole, or better still, to get down to work in the superb office of a modern factory, which is clear and rectilinear and painted with white ripolin and in which healthy activity and industrious optimism reign.

The religion of beautiful materials is now no more than the final spasm of an agony.

During these last years we have witnessed the successive stages of a development: with metallic construction, the *separation of decoration from structure*. Then the fashion for *expressing the construction*, the sign of a new construction. Then the ecstasy before *nature*, showing a desire to rediscover (by however circuitous a path!) the laws of *the organic*. Then the craze for the *simple*, the first contact with the truths of the machine leading us back to

good sense, and the instinctive manifestation of an aesthetic for our era.

To tie up the final strand: a triggering of our consciousness, a classification, and a normal perception of the objects in our life will emerge, which distinguishes the highly practical things of work from the intensely free, living, ideal things of the mind.

translated by James I. Dunnett

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The translation by James I. Dunnett is published here by permission of Architectural Press, London.

Notes.

1. It has to be said that for thirty years no one has been able to find an accurate term. Is that not because the activity lacks precision, lacks direction, and that as a result it is impossible to define it? The Germans invented the word *Kunstgewerb* (industrial art); that is even more equivocal! I was forgetting that pejorative term *applied art*.
2. Architecture begins where calculation ends.
3. And without doubt furniture can lead us towards architecture, and in place of decoration we shall see the rise of architecture.

1. The supporting façade: surface gnawed away by windows and support walls thereby weakened: *below* section of supporting façade.

Twentieth century building and twentieth century living

Structural systems determine architectural systems. Technical processes are the very abode of lyricism. There is a modern spirit which is a process of thought and which determines a new architecture.

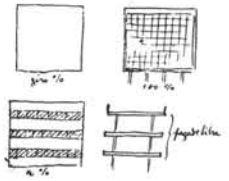
Let us try and formulate some basic truths.

The house is a shelter, an enclosed space, which affords protection against cold, heat and outside observation. It is formed of floors, walls and roof. It contains various compartments, in which are performed definite, daily and regular functions. Life within these compartments is carried on in accordance with a series of rational, definite, daily and regular actions.

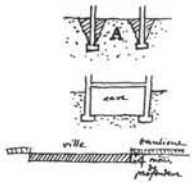
The day consists of twenty-four hours only. This regulates the size of the house and the rôle it has to fulfil. For the twenty-four hour day is short, and our acts and thoughts are spurred on *by time*. If we were taught to regard the hand of the clock as a beneficent but implacable god, we should order our lives more rationally.

The house is a question of materials. Its walls, floors and roof are questions of suitability: which part supports, which is supported, which does neither one nor the other. The various compartments of the house raise the question of utility: what function is served by one or the other: what is its appropriate form, its size and its capacity for providing light. Why is furniture movable, and need it be so. What actually is furniture, for what is it used, where exactly ought it to be. Life within the compartments of the house raises the question of *moving about*: fatigue hampers us, efficiency is precious. The necessity for free movement inside the house suggests a number of architectural ideas, tending to an effect of orderliness. Are the moments we spend each day in the interior of the house enjoyable or wearisome? The house is a product of the spirit; as we ourselves are, so can our house be, if we bring our natural tastes and logical reasoning to bear on it. The question of our dwelling is a question of attainable well-being. Teach this to the children, you who are schoolmasters! *But first teach yourselves*, else your precepts might only be falsehoods. Alas, are not our present-day houses (now and then very charming I admit) often a monstrous lie? If the social relations between men were as false as the taste (or more exactly the ethics) which govern the construction of our houses, we should all be in prison!

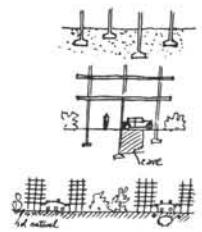
Having thus briefly set forth the true meaning of the house, I have turned my back on the Schools, on the history of styles, on the pedantic composition of the Masters. I have washed my hands of the burdensome accumulations of vague, pedantic and dangerous teachings, I am



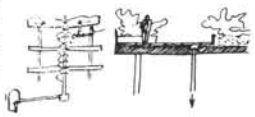
2. The free façade. The whole wall surface, which is free from the necessity to support, may be used for windows: *from top to bottom* no windows: 50 per cent window space; 100 per cent window space; section of free façade.



3. Sectional diagram of supporting walls: *above* the walls sunk in the ground, leaving "core" A to be excavated for cellar; *centre* the cellar after earth is excavated; *below* the excavated earth removed from site and transported outside the town.



4. Pillar construction showing *above* spaced out pillars; *centre* space beneath available for shelter, garage, garden, etc.; *below* the "double street".



5. The roof garden showing drainage of snow water inside the house, with heating system; trees and plants established on the roof.

free, but I am stripped bare. A problem arises: it is ahead of me, and must be faced. It is my task to fashion an entirely new kind of implement, that is to say, an implement which is pure, efficient, healthy, loyal, clear as crystal. Do I therefore turn my back resolutely on tradition? Do I break down bridges? Reject the past? Do I no longer believe in anything which has previously existed?

No! *I deny academic teaching.* And inspired by the spirit of honesty, I search *in the past* and *in the present*, in my own country and in other countries, in my own race and in others, for *vernacular* houses, *human* houses for human-man and spirit-man, which are shining exhortations, marvellous examples of efficiency, economy, lyricism and intelligence. That is the one school in which I shall look for Masters on the day when my task is to construct the house of the machine age.

I shall find my clue in cold analysis. At each stage my duty will be to put the question: "Why?" *Nothing has any right to exist which cannot give a precise answer.*

Modern science brings us a *new construction.*

The culmination of Western cultures came with *supporting walls* (supporting the floors and roofs). These walls were of necessity pierced by windows, of which the dimension and number was limited by the fact that they weaken the capacity of the walls. This system was *bastard, hybrid, confused* and even *expressed total contradiction.* The supporting mass was gnawed away by the apertures of the windows (diagram 1).

Ferro-concrete or metallic construction have abolished this bastard architectural system (which was responsible for the whole Renaissance and the Louis periods, culminating in Haussmann). They give us the *independent framework* and the *free façade. The façade no longer has to support either the floors or the roof*; it is itself supported by the floors. The façade fulfils its true destiny; *it is the provider of light.* It can provide light with *either 0 or 100 per cent of its surface.*

The façade is enabled to supply 100 per cent of light, because support is provided by the framework, of which the uprights are in the interior of the house and of which the crossbeams (borne by these uprights) terminate behind the surface of the façade and its windows (diagram 2).

From this emerges the true definition of the house: stages of floors, light interior partitions varying on each floor and in strict conformity with the functions of the interior *(the free plan)*: all round them *walls of light.*

Walls of light! Henceforth the idea of the window will be modified. Till now, the function of the windows was to provide light and air and to be looked through. Of these classified functions I should retain one only, that of being looked through. Air is provided by scientific methods of ventilation, which include heating in winter and coolness in summer. Light? Glass in many different forms fulfils this function without having to reckon with windows (the most restricted organ of the house). We have submitted to the laboratories of St Gabain the basis of a new lighting substance which may have far-reaching consequences. *To see out of doors, to lean out*, that is henceforth all that the window need be used for. Is this necessary in every part of the house? No! And where the window is built into the luminous façade it will be as a definite organ, in the form of a complete mechanism. *Plate glass* replaces window panes. The sashes run horizontally, unhampered by the clumsy accessories of the sash window. They make possible the *lengthwise window*, the source of an architectural motive of great significance.

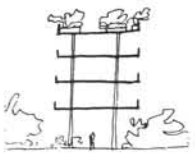
These illuminated walls date back a long way; for instance, the cathedrals of the middle ages (the Sainte-Chapelle in Paris). Then in particular the steel palaces of the Paris International Exhibitions which abjured "classicism" (the Hall of Machinery, the Palace of Industry). In 1900, however, the Academy was responsible for a premature decline; the *Grand Palais* was in the clutches of the Institute. The façades were not of glass (that would have been neither Roman nor Greek nor Classical!); a facing of stone was superimposed on the metal framework and the *Grand Palais*, which had been destined for art exhibitions, was as dark as the inside of an oven!

In 1914, Walter Gropius reintroduced the glass façade at the Cologne Exhibition. My skyscraper (*Esprit Nouveau*, 1921) was built of clear glass from top to bottom.

The *free plan* (resulting from the interior framework) the *free façade* (resulting from the surface available for lighting being 0 to 100 per cent) - these are the great architectural reforms due to the new technical possibilities of ferro-concrete and metal construction. History teaches us that technical achievements have always overthrown the most ancient traditions. It is destiny. There is no escape!

The two magnificent corollaries of this solution are: *pillars* and the *roof garden.*

Pillars. Formerly the building of support walls necessitated their being sunk deep in the earth. The excavation of the foundation trenches left a core (A) between them,



6. Roof garden and pillar construction. Sectional diagram showing garden on flat roof, living rooms below with direct access to the garden. Ground floor "in the air" and space beneath free for car, etc.

which was also removed. *Cellars* were formed, compartments with a constant temperature, usually damp, deprived of light, unfit for habitation. And in this way there resulted this futile operation: the town soil for four metres deep was transported to the outskirts (3). What an expensive process! What a ridiculous state of affairs! The new static methods are based on the *supporting framework*. The weight of the house is exactly calculated, and distributed over the spaced-out pillars, whose function is reckoned out meticulously and in conformity with the resistance of the soil. Costs are considerably reduced. But instead of *fruitlessly* incurring the expense of flooring raised 60 centimetres above the ground (as is required by hygienic regulations in most countries), the pillars are erected three to four metres in height. The first floor will be *up in the air*, on *naked pillars, and the space beneath the house will be completely restored.* Children will play there, sheltered from rain or sun. The car may be conveniently housed there. The entrance to the house will be under cover. The garden will extend underneath the house. There will no longer be either a back or a front to the house.

And the soil of the town will no longer have to be transported to the outskirts. Extensive use of pillars will make possible the *double street* (heavy weight on the ground, light weight on the raised ground level). And lastly (a considerable advantage), the town pipes (a modern organ of vital importance), will no longer be *buried in the ground*, a system which is evil, barbarous, ruinous and lamentably idiotic (diagram 4).

The roof garden. Ferro-concrete normally provides a roof surface which is flat, water-tight and homogeneous. Severe climates, such as snow in high mountain districts, demonstrate that the drainage of snow water, melted *under the influence* of central heating (a present-day problem which is very disturbing) should take place in the interior of the house, *in the warm*, protected from frost. Expansion is the great enemy of ferro-concrete and metal construction. *The establishment of gardens on the roof* successfully combats expansion. Plants, flowers and trees grow better in roof gardens than in the open ground; they are practically under the conditions of a greenhouse. Gardens planted on roofs do splendidly. A client of mine said to me this spring: "Come and see the lilac on my roof; it has over a hundred clusters of blossom!" (The house was completed in 1924.) (diagram 5)

Let us sift the advantages of pillars and roof gardens. The plan of the modern house *can be reversed.* The reception rooms will be at the top, in direct communication with the roof garden, in the fresh air, away from the street with its noise and dust, and in full sunshine. The roof becomes a *solarium*, and the demands of modern hygiene are satisfied. Generalization: the whole ground surface of the town is free, available for walking on. The ground is in a sense doubled; transported to gardens up aloft, right in the sun (diagram 6).

At Moscow this year, the President of the Labour Soviet, after the explanations I had given about the plans of our *Centrosojus Palace*, made this resolve: "We will build the Centrosojus Palace on pillars, for if we did not do so we should be renouncing the fundamental idea which will solve for us the problem of the urbanization of Moscow". And Mr. Krassin reminded a recalcitrant member of the Soviet that the Russian "isbas" had always been built on pillars. I finished my explanations by pointing out that man, desirous of health and security, had since the beginning of the human race, and right up to our own times, constructed buildings on pillars, in Europe, in Africa, in America and Asia.

The new construction upsets the conventional. I shall be accused of being fanatical! But I say this: if the inhabitants of the great towns die of suffocation, or are a prey to diseases, it is owing to this prevailing "sentiment". *Prevailing sentiment bars the way to proved solutions, to indispensable solutions, to urgent and to honest solutions.*

A sentiment which is false puts us in danger of dishonesty, of slackness. This sentiment is artificial. It is *not human, it is academic.* It leads to laziness. Academicism does not look ahead, its gaze is fixed steadfastly backwards. Academicism in setting out to honour the past *denies the past*, for all the great epochs from which it pretends to draw inspiration have been revolutionary manifestations, *acts of creation. Creation*, that is to say: faith, courage, initiative, enthusiasm, curiosity, the joy of discovery. Academicism, that is to say: *imitation, servility, senility, laziness, lassitude, fear of responsibility.* Academicism is an army which turns tail. It is paralysis for a society, for a country. It is a public danger. I define academicism thus: *it does not reply to the question "Why?"* Academicism is cultivated by the Institutes but (we must not delude ourselves) it is rife also in modern architecture! A man is academic once he no longer possesses a *clear* judgement. Academicism is supreme in religion, as

in diplomacy or the higher command, even in machinery! and in morality!

But why has the case of academicism such dramatic relation to the present epoch? It is because our "today" is the result of a hundred years of Science. This century of gigantic achievement, in which inventions have been our "great adventure", has given us the *machine age*. Is this word empty of all meaning! Has nothing changed - is it just a figure of speech? Pitiable creatures are they who affirm such monstrous notions!

The world is turned upside down. The ideas of village, district and country are abolished. The framework of society is broken, and the tension is at the point of cracking social laws. Capital, a new and modern power, a sudden evil, as though it were not understood and not under control, is not administered according to its natural constitution. Capital is the dust raised by labour, which spreads throughout the inactive state, and by means of a simple mechanism is suddenly converted into a power for active work on a gigantic scale. Anything can be undertaken if reason balances action. This equilibrium is the *eternal phenomenon of cause and effect*, which is the law of the universe, which acts, develops or assimilates in nature and which *selects. Artificial equilibriums*, arbitrarily maintained, are a danger; they contain in themselves the reactions which one day will be the overthrow of everything. Violence exists (we are well aware of it!), but also claim, steadfast and certain progress. To balance, that is, to *harmonize*, is the human task in this world of movement. *To harmonize is to reply with a new solution to the eternal "why" which each nation propounds.*

Architecture is the outcome of the spirit of an epoch. This conclusion, proclaimed by every great period of history, sets us face to face with the task of the present day.

What then is the spirit of the present day? Are we in a period of *regionalism*, that is to say, in a period when each district and each village affirms and develops its own peculiar spirit (costume, customs, trades, materials, construction)? Are we in a period when contact is difficult or almost non-existent between districts, countries, nations or continents? Are we in an age when empiricism rules in our achievements, when formulas patiently established by time are handed down from father to son? Is ours an age of handicrafts, of products lovingly and painfully fashioned by skilled fingers poorly aided by precious tools? Is ours an age of ornamentation, when the laboriously finished task attracts to itself the ingenuous lyricism of him who so patiently executed it? The unique piece, the rare piece, the exceptional piece, do they occupy in our empty dwellings the chosen place of a household god? We are in an age in which the steam engine has destroyed frontiers, abolished districts, is disturbing local folklore, killing local customs. The steamboat has thrown bridges from continent to continent. The aeroplane has abolished our ideas of distances; telegraphy and the wireless have made possible universal interpenetration. Printing (a stupendous thing) in eight days distributes throughout the world discoveries great and small, in vivid pictures. The exodus of races is a *fait accompli*. State schools (a new departure) have demolished local individuality. The universal fact is revealed to all, is within the reach of all. The laboratory, scientific analysis, expert, accurate, precise calculations reveal the object to the mind more quickly than the hand can execute it. The hand (conscious but inexact) is replaced by the machine (unconscious but exact). The idea of exactness has become omnipotent. Our eyes behold a new spectacle. The son thinks differently from his father, and the grandson will leave the son, with his conceptions of "another age", far behind. Thirty years are a sufficient space of time for three generations to overlap each other: three conceptions, in reality three separate stages, which are uninterrupted but startling in their regular course. The machine has destroyed the lyricism of local habit and local poetry. Indeed, throughout the world there exist countless works, new in spirit, constant, universal. The dwelling is filled (and will be filled) with useful implements. Useful, but also harmonious (for the aesthetic function is at the base of human work: the conception is an aesthetic phenomenon; the attempt at harmony is simply a need for equilibrium, completeness, security, ease). Efficacious, efficient, exact and so much the more sensitive, mathematical and so much the nobler, the modern product bears witness to a tremendous revolution. A new age is born. We are in it, and we do not see it because we are in it. *Cause, effect*. The cause is outside us, it is destined. The effect is all round us, unavoidable, daily apparent.

A new construction, resulting from the most scrupulous research by experts, has established a new system of architecture.

New technical and scientific processes with rich possibilities of application, not to be compared with those of

previous epochs, have placed new products in our hands, have placed gigantic resources ready to our hand, resources which will enable those on intrepid spirit, animated by civic enthousiasm and sincere love of humanity, to conceive new cities, to transform cities, *to evolve the city of today*, magnificent, more stately than before, efficient, practical: the city which will save men from the diseases which are at present tearing at the rotten heart of ancient towns, and which will instil into the inhabitants the spirit of pride which brings content. Technical processes are the very abode of lyricism. A modern lyricism exists. The phenomenon of the day, the machine age, is a state of affairs of great poetic significance. Day by day there emerge its marvellous manifestations. Happy are they who can discern the profound poetry of modern times.

There is a modern spirit which is a process of thought. To think clearly, to see ahead, to act, to create! The highest joys of creation, joys of the spirit, wealth within the reach of all! A new architecture is born as a result of the technical labour of a hundred years of science. Breaking down the regional and national boundaries, prevailing from continent to continent, it is formed of inspiring associations which bind its elemental constituents. A single man can set them in motion, can make them apprehensible and clear. Architecture, an exalted art, is a function of the nobility of the individual.

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