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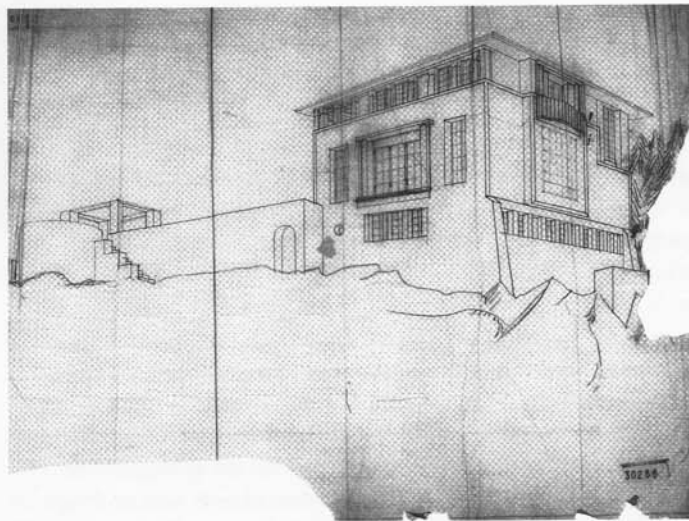
The Design of the 1912 Villa Jeanneret-Perret: Le Corbusier between Past and Present

LEO SCHUBERT. Charles-Edouard Jeanneret, who would adopt the name Le Corbusier only in 1920, started work on the project for his parents' villa in November 1911, immediately after arriving back in La Chaux-de-Fonds from his 7 month long "Voyage d'Orient". The imposing building (fig.1), situated on the south slope of the Mount Pouillerel and overlooking La Chaux-de-Fonds, was chiefly built from April to October 1912¹.

In this article we will focus on the origins of the forms Jeanneret used for this villa and the aesthetic principles he tried to apply in its design. The detailed genesis of the project, the process of the construction and an interpretation of Jeanneret's formal choices will be discussed elsewhere².

On first examination, the villa Jeanneret-Perret may be interpreted as the expression of the strong influence that contemporary German Architecture had on Jeanneret, causing him to break with the local Arts and Crafts vocabulary of his previous buildings, designed under the supervision of his former tutor, L'Eplattenier, and the local architect René Chapallaz.

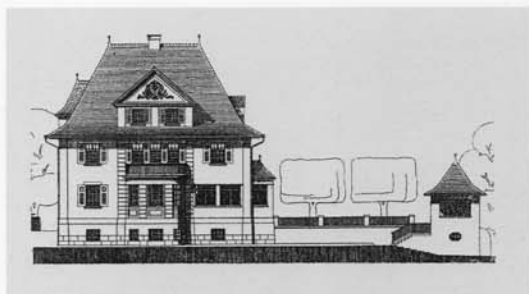
The oldest known sketches for the villa, realised shortly after Jeanneret left Peter Behrens' office in Berlin, in April 1911, confirm this interpretation³. They already show the disposition of the terraced garden, added laterally and not set in front of the facade facing the valley (figs. 2,3). Its positioning there takes advantage of the difficulties of the sloping terrain, to enrich both the building and the gardens. Terraces are part of the "good examples" Jeanneret studied and copied in 1910 from volume 4 of the *Kulturarbeiten* by Schultze-Naumburg. From this book about town-planning, part of a series of nine volumes published between 1901 and 1917, Jeanneret assimilated several ideas, not only about the correct disposition of streets and squares, fountains and monuments, but also about the design of garden walls and gateways, terraces and outdoors steps. The "vorgelegte Terrasse", illustrated in the *Kulturarbeiten* with an example from old Prague (fig. 4), is photographed by Jeanneret in Bamberg (fig. 5) and again in Prague⁶. Schultze-



Naumburg used this terracing feature in his own projects (see Kehrl house in Brandenburg, 1908 (fig. 6)), as did the later better known Mies van der Rohe (Riehl house in Potsdam, 1906/07) or the now forgotten Briedler and Völkli (Waldkirch house in Neuhausen, 1911 (fig. 7)); all published in journals Jeanneret could easily consult in the library of the Ecole d'Art in La Chaux-de-Fonds⁷.

The terraced garden of the villa Jeanneret-Perret with its pergola, wooden pavilion and parterres, also seems to be directly inspired by contemporary German architecture. Those elements, present in works by Friedrich Schinkel and in the anonymous architecture of the Biedermeier period, were reused in the works of Heinrich Tessenow, Richard Riemerschmid, Hermann Muthesius and Peter Behrens, to cite the most famous architects. These were all appreciated by Jeanneret for their classical vocabulary, based on severe formal principles, in contrast to the formal individuality and liberty of the "Jugendstil", considered old-fashioned by the German élite by 1910⁸.

—1 For a synthesis of the construction of the villa see Harold Allen Brooks, *Le Corbusier's Formative Years*, University of Chicago Press, Chicago and London 1997, pp. 307-330. —2 In preparation the publication of a monograph on the villa Jeanneret-Perret. —3 Cf. Giuliano Gresleri, *Le Corbusier. Les voyages d'Allemagne. Carnets*, Electa, Milano and Paris 2000 (2), Carnet 4, pp. 3, 73. —4 Cf. Leo Schubert, "Jeanneret, the City, and the Photography", in Stanislaus von Moos and Arthur Rüegg, *Le Corbusier before Le Corbusier*, Yale Univ. Press, New Haven and London 2002, pp. 55-67.



1. Villa Jeanneret-Perret. Perspective study, May/June 1912 (FLC 30266)

2. "Pour la petite maison en a jardin, plus profond en b terrasse". Sketch for the villa Jeanneret-Perret, April/Mai 1911 (*Les voyages d'Allemagne "Carnet"* 4, p. 3)

3. "Pour la petite maison [...], solution peut-être pour le salon". Sketch for the villa Jeanneret-Perret, April/Mai 1911 (*Les voyages d'Allemagne "Carnet"* 4, p. 73)

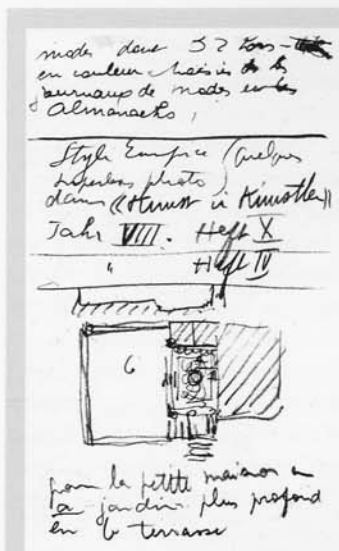
4. "Vorgelegte Terrasse". From Paul Schultze-Naumburg, *Kulturarbeiten*, vol. 4, p. 269

5. Böttingerhaus in Bamberg. Photograph by Jeanneret, 1910 (Bibliothèque de la ville de La Chaux-de-Fonds)

6. Paul Schultze-Naumburg, Kehrl house in Brandenburg. From *Dekorative Kunst*, 1908

7. Briedler and Vötkli, Waldkirch house in Neuhausen. From *Schweizerische Bauzeitung*, 1911

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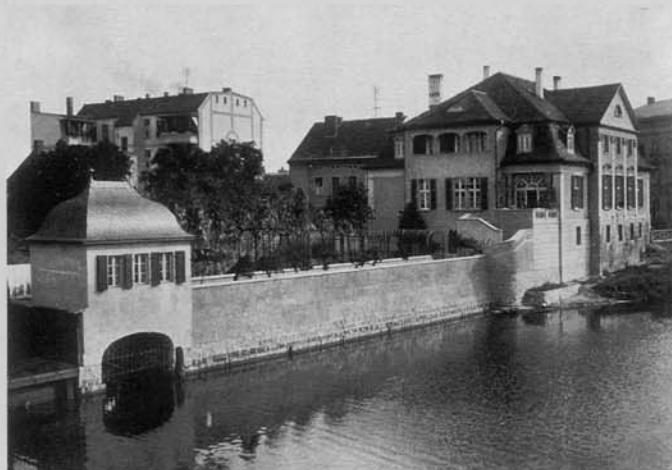
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—5 Terrace built in front of the facade. —6 Cf. Paul Schultze-Naumburg, *Kulturarbeiten*, Callwey, München 1906, Bd. 4, p. 269, Giuliano Gresleri, *Le Corbusier. Viaggio in Oriente*, Marsilio, Venezia 1995 (3), pp. 154, 170. —7 For Kehrl house cf. *Dekorative Kunst*, 1908, p. 253; for Riehl house cf. *Innendekoration*, 21 (July 1910), pp. 265-272; for Waldkirch house cf. *Schweizerische Bauzeitung*, 57, 1911, p. 166. —8 See Jeanneret's judgement in a letter to Charles L'Éplattenier (16.1.1911), published in Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 405.



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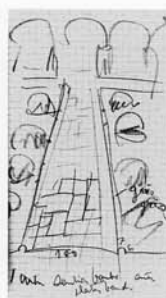
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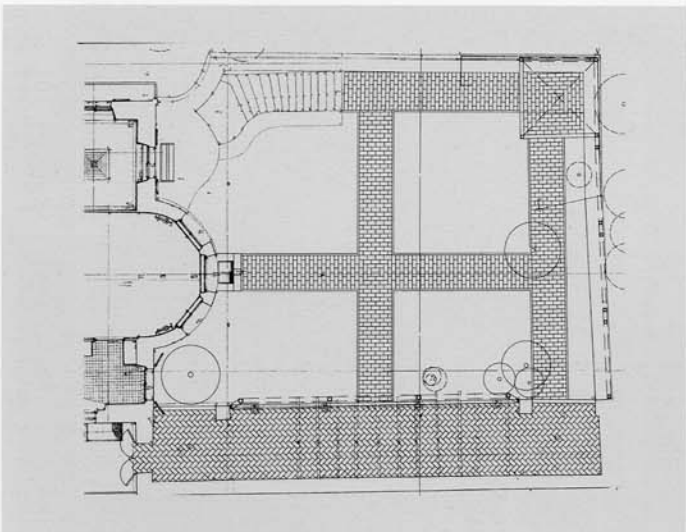


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But the garden-terrace in La Chaux-de-Fonds, as built in May 1913, has a more complex genesis. The drawing from spring 1911, previously cited, shows a kind of sunken lawn-courtyard in front of the building (fig. 2), similar to the garden in front of a villa sketched by Jeanneret near the Waldfriedhof in Munich⁹. The completed "Chambre d'été", as he called the terrace, shows a different layout (see our reconstruction (fig. 8) with the aid of the photographs taken during its construction and until 1919)¹⁰; the lawn is divided into four parterres by brick-paved paths (fig. 9); two of them being intersected by the curved bay of the west facade. With regard to this garden, Jeanneret had made, in May 1911, while visiting the Lichtenstein Gallery in Vienna, a singular annotation in one of his "carnets":



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"For the parents' small house see Bellini's painting at the Uffizi (Sacra Conversazione)."¹¹

The painting mentioned is the well-known Sacra Conversazione conserved in the galleries of the Uffizi in Florence and painted around 1490 by Giovanni Bellini. The masterpiece, which still poses difficult problems of iconographic interpretation, shows a terrace facing a landscape with mountains and lakes (fig. 10). The terrace is delineated by a marble balustrade, its pavement being conceived as four large squares composed in coloured marble. The throne of the Virgin is located on a four-step marble plinth, having a semi-circular termination which partially overlaps two of the four squares, in exactly the same manner as the curved bay of the villa overlaps its parterres. Several sketches of balustrades encountered during his "Voyage d'Orient" testify to how obsessed Jeanneret was in finding the right elements to compose his garden-terrace: the balustrade he sketched on Mount Athos looks very similar to the one in Bellini's painting (fig. 11), while the realised version has horizontal bars in metal. In fact, in Turkey, Jeanneret annotated a drawing of a similar fence around a coffee-terrace in Rododsto (fig. 12):

"The horizontal bars work very well."¹²

He showed the same tenacity in his search for the right pavement type, drawing and photographing the courtyard of a recent residential complex by Albert Gessner in Charlottenburg, focusing on the detail of the parterres separated by paths of red tiles:

"The things that are most astonishing are the red tiles of the floor as clean as a kitchen, the rose bushes, the flowers, the lawns. The borders in red bricks, too."¹³

However, rather than tiles 'as clean as a kitchen', he chose bricks for his own pavement, as he observed in Hadrian's

⁻⁹ Jeanneret wrote on the sketch: "pour la petite maison en a jardin plus profond; en b terrasse", Gresleri, *Le Corbusier. Les voyages d'Allemagne*, cit., Carnet 4, p. 3. For the sketches of the Waldfriedhof cf. *ibidem*, Carnet 3, p. 23. ⁻¹⁰ The photographs are preserved in the Bibliothèque de la ville de La Chaux-de-Fonds. ⁻¹¹ "Pour la petite maison des parents consulter le tableau de Bellini aux Offices (la conversation Heilige)", Giuliano Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, Electa, Milano and Paris 2000 (2), Carnet 1, p. 44. ⁻¹² "Les barres horizontales font très bien", *ibidem*, Carnet 2, p. 57. For the balustrades on the Athos peninsula cf. *ibidem*, Carnet 3, p. 52. ⁻¹³ "Ce qu'il y a d'étonnant ce sont les carreaux rouges du sol propres comme 1 cuisine, les rosiers, les fleurs les gazons. Les bordures en briques rouges aussi." Gresleri, *Le Corbusier. Les voyages d'Allemagne. Carnets*, cit., Carnet 1, p. 35. The sketched building (from 1907/08) in the Grolmannstrasse was published on various revues, cf. *Moderne Bauformen*, 1, 1908, p. 9 and *Berliner Architekturwelt*, 1908, pp. 451-459. ⁻¹⁴ For Hadrian's Mausoleum cf. Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 4, p. 137; for Hadrian's villa at Tivoli cf. *ibidem*, Carnet 5, p. 88; for the Certosa del Galluzzo, called "d'Enna" by Jeanneret cf. *ibidem*, Carnet 6, pp. 7, 9. ⁻¹⁵ Cf. Gresleri, *Le Corbusier. Les voyages d'Allemagne. Carnets*, cit., Carnet



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8. Reconstruction-hypothesis of the garden-terrace of the villa Jeanneret-Perret (by author)
9. Villa Jeanneret-Perret, garden-terrace. Photograph by Jeanneret, before 1919 (Bibliothèque de la ville de La Chaux-de-Fonds)
10. Giovanni Bellini, *Sacra Conversazione*, ca. 1490. Gallerie degli Uffizi, Florence
11. "Barrière M. excellentes proportions". Sketch of a terrace on the Athos

- peninsula. August 1911 (*Voyage d'Orient*, "Carnet" 3, p. 52)
12. "parapet sur la terrasse du café à Rodosto les barres horizontales font très bien". Sketch of a terrace in Rodosto. July 1911 (*Voyage d'Orient*, "Carnet" 2, p. 57)
13. "Au cloître Ema sentier dallé de briques, entre haie de buis". Sketch of the cloister of the Certosa del Galluzzo, near Florence. October 1911 (*Voyage d'Orient*, "Carnet" 6, p. 7)

14. Sketch of a pergola at the exhibition "Ausstellung bemalter Wohnräume", Munich. October 1910 (*Les voyages d'Allemagne* "Carnet" 3, p. 37)

Mausoleum in Rome or in the atrium of the Basilica in Hadrian's villa at Tivoli, arranging them in the same pattern he had sketched in the cloister of the Certosa del Galluzzo near Florence¹⁴ (fig. 13).

Further, the pergola and the pavilion of the villa's garden are not simply a copy of contemporary German architecture (see for example Schroeder house by Peter Behrens from 1909, near Hagen), but a synthesis of several vernacular or antique examples studied during his travels.

If the input came from contemporary architecture –see the detailed sketches of a pergola pillar at the exhibition "Ausstellung bemalter Wohnräume" in Munich in 1910 (fig. 14)¹⁵–, the "architecture" of the pergola is based on two observations, made respectively in Pompeii and on the Athos peninsula.

In Pompeii Jeanneret photographed and sketched, in plan and perspective, the pergola in the garden of the House of Sallustius¹⁶. This pergola runs along a wall and covers, on one end, where the wall turns with a right angle, a sitting space delimited by a masonry pillar (fig. 15) –exactly the same solution as adopted by Jeanneret in la Chaux-de-Fonds– but the photograph he took from the finished pergola of his villa shows another detail, not present in Pompeii. Taken from this end of the pergola along the axis that leads to the entrance door, it shows a visual interruption placed half way: it is the gate of the entrance to the garden, with its arch echoing the arch of the entrance to the house (fig. 16). This scenographic interruption extends virtually the space of the pergola up to the entrance, as does the "interruption" in the form of an arch in the convent of Hagios Panteleimon on the Athos peninsula –"exalting" the corridor– as Jeanneret wrote in his "carnet" (fig. 17)¹⁷.

Plan and elevation were the principal tools with which

Jeanneret controlled and formed into reality his architectural intentions. It is therefore worth making a careful analysis of them, comparing the original plans with the villa as built –for this purpose a precise survey was undertaken (figs. 18,19).

In February 1912 Jeanneret wrote to his travel companion, August Klipstein, that he had found "a happy plan" for his parents' house¹⁸. The original plan-set is dated March/April of the same year and it can be seen, in comparison to the realised building, that only the ground floor closely follows the project as drawn¹⁹. Its shape is quite different from what we can see on the two initial sketches discussed above (figs. 2,3), but like them strongly linked to the experience Jeanneret had in Behrens' office in 1911. While the lowered lawn-court on Jeanneret's first sketch is an element also to be found on his copy of the garden plan of the Wiegand house, designed in this period by Behrens, the four pillars in front of the living room shown on the second sketch utilise a solution Behrens had already exploited for the Schroeder house²⁰.

Neither of these motifs remained in the definitive plans for the villa Jeanneret-Perret, but Behrens' influence is still present in the hierarchic organisation of the rooms, expressed through their proportions. The rooms on the ground-floor of the Schroeder house were designed with the ratios 4:5, 5:6 and 7:8 (width by length), the living-room of the Wiegand house with the ratio 1:√2, a proportion based on the diagonal of the square already used to design the ground-floor of Behrens' Obenauer house in Saarbrücken (1905) and reused for the living-room of his Cuno house in Hagen (1910), visited by Jeanneret in 1911²¹. There are no remaining sketches showing us Jeanneret's interest in the proportions used in contemporary architecture, but he wrote beneath his survey of the Apollo temple in Pompeii:

3, p. 37. –16 Photograph and sketches in Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., pp. 360, 364. –17 "Ce qui fait l'exalt[ation] de ce corridor c'est sa proportion avec ses nombreuses portes [...] mais [underlined in the original] surtout l'interruption A formée de l'arc berceau, et le transept B", Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 3, pp. 88-89. –18 Letter to August Klipstein (3.2.1912), cf. Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 472. –19 The blueprints are preserved at the Bibliothèque de la ville de La Chaux-de-Fonds. –20 "Pour la petite maison; quand on est sur le seuil du crématorium de Behrens, les 6 piliers qui supportent le bâtiment font un effet très noble avec le paysage (ces piliers sont en cyanite noir, solution peut-être pour le salon)", Gresleri, *Le Corbusier. Les voyages d'Allemagne. Carnets*, cit., Carnet 4, p. 73. –21 For Behrens' use of proportional systems based on the ratio 1:√2 cf. Kurt Asche, "Geometrie und Schinkel-Volute im Werk von Peter Behrens", in Hans-Georg Pfeifer, *Peter Behrens "Wer aber will sagen, was Schönheit sei?"*, Beton, Düsseldorf 1990, pp. 70-95. For the proportions of the Wiegand house cf. Wolfram Hoepfner and Fritz Neumeyer, *Das Haus Wiegand von Peter Behrens in Berlin-Dahlem*, Philipp von Zabern, Mainz 1979, pp. 13-24.



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15. Sketch of the House of Sallustius, Pompeii, October 1911 (recto/verso, FLC 5887)

16. Villa Jeanneret-Perret, pergola, before 1919. Jeanneret's parents, Jeanneret and his brother Albert (Bibliothèque de la ville de La Chaux-de-Fonds)

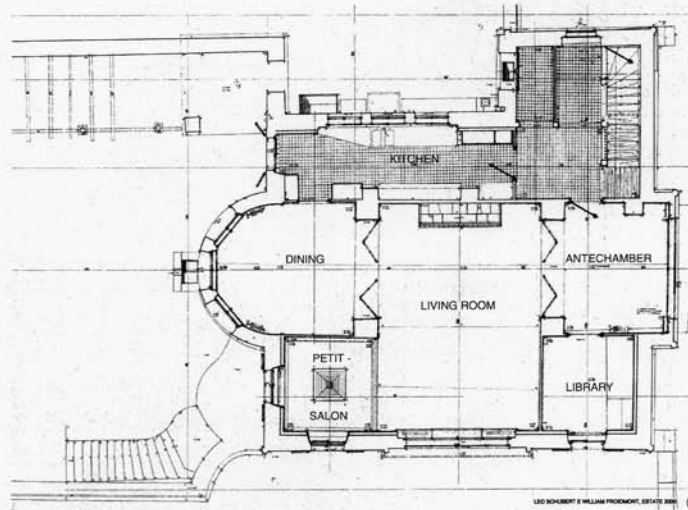
17. Sketch of the corridor in the convent of Hagios Panteleimon, Athos peninsula. August 1911 (*Voyage d'Orient*, "Carnet" 3, p. 88)

"the open cella of the temple of Apollo made an exedra of a beautiful proportion."²²

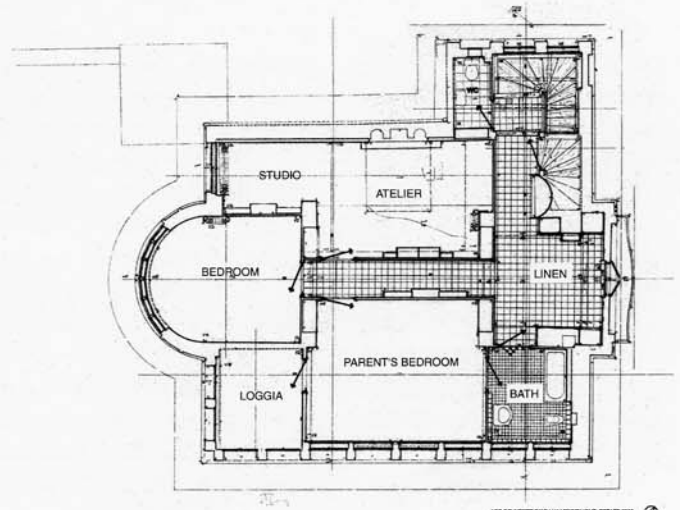
The measurements he indicated on his sketch for the cella of the temple (570 x 810 centimetres) correspond to the ratio $1:\sqrt{2}$ to an approximation of only 4 centimetres (fig. 20). Even greater evidence of Jeanneret's search for clear proportions in antique buildings can be found in the sketches he made in Pompeii at the temple of Jupiter, indicating the width and length of the pronaos (12.00 and 15.00 metres, i.e. 4:5) and of the cella (12.00 and 16.00 metres, i.e. 3:4), commenting: "the interior echoes the ext[erior] - proportions"²³. In the calidarium of the baths in the

Forum he further surveyed a room of approximately cubic proportions²⁴.

Having measured the application of these "beautiful" proportions on antique buildings, once back in La Chaux-de-Fonds, Jeanneret didn't hesitate to apply them to the design of an apartment for his own use in the old farmhouse called "Le Couvent". In a letter to William Ritter he insisted twice that the "generous space", with its "very wide walls", had the dimensions 5x7x2 metres²⁵. The ratio 5:7 is indicated to approximate the irrational number generated by $1:\sqrt{2}$, which, to be precise, would call for a 5.00 metres wide room having a length of 7.07 metres. Now, con-

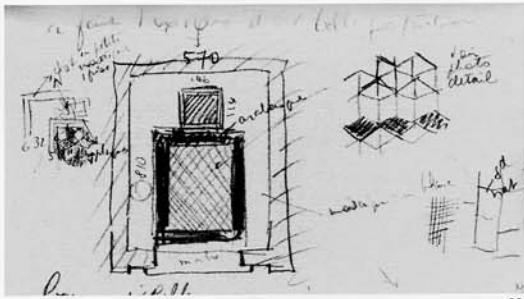


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—22 "La celle ouverte du temple d'Apollo a fait 1 exèdre d'1 belle proportion" Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 4, pp. 26-27. —23 "L'intérieur amène l'ext[érieur] -proportions" *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 4, pp. 104-105.



18. Villa Jeanneret-Perret, survey of the ground floor (by author, 2000)

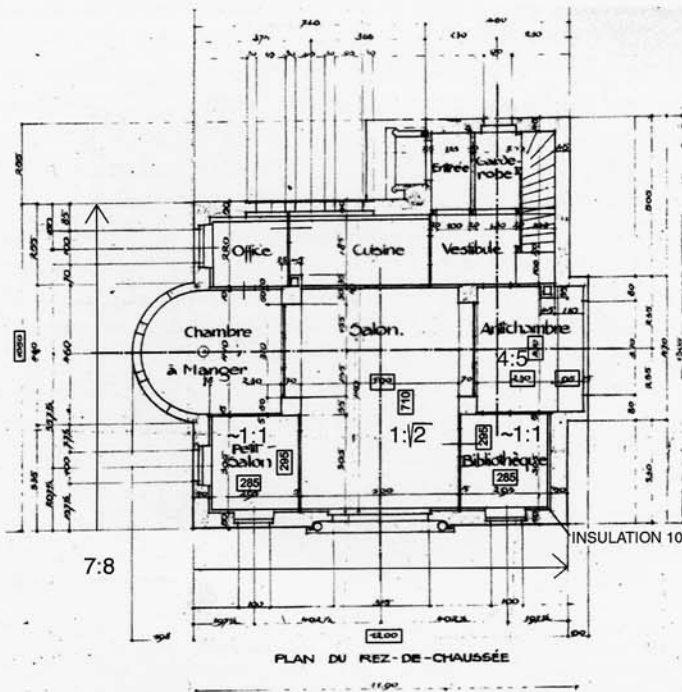
19. Villa Jeanneret-Perret, survey of the upper floor (by author, 2000)

20. "Fait une exèdre d'une belle proportion": Sketch of the cell of the temple of Apollo, Pompeii. October 1911 (*Voyage d'Orient*, "Carnet" 4, p. 57)

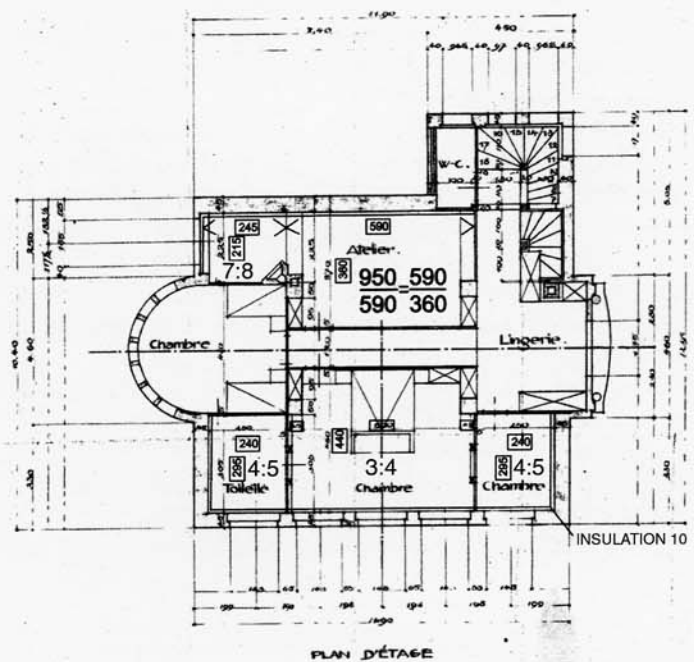
21. a, b. Villa Jeanneret-Perret. Interpretation of the measures indicated on the plans from March/April 1912 (original blueprints at the Bibliothèque de la ville de La Chaux-de-Fonds)

sidering the dimensions Jeanneret indicated on the plans of the villa for his parents (figs. 21a, b), we notice that the length he chose for the 5.00 metre wide living room is the best possible approximation of the ratio $1:\sqrt{2}$: he indicated 7.20 metres for it, bearing in mind that the 10 centimetre thick inner insulation (special bricks and an empty space) against the external walls would shorten the length of the room (i.e. to be 7.10 metre long). The presence of this insulation and its position is of fundamental importance for a correct interpretation of the dimensions indicated on Jeanneret's plans. Even if the realisation of the 50 centimetre thick walls in rubble stone masonry on the irregular side

didn't allow a very precise execution (the east facade is 12 centimetres too long, the corners are not exactly at a 90° angle etc.), the result is a living room still close to the projected dimensions ($503 \times 715 \times 298$ centimetres instead of $500 \times 710 \times 300$)²⁶. The upper floor was designed with the same attention to proportion but was realised with small but significant modifications. On the plans dated March/April Pompeii is, in the succession of the three rooms on the south side, again present: the indicated measurements are proportioned with the ratios 3:4 and 4:5, like the temple of Jupiter (the approximation is only about 3-4 centimetres, subtracting again 10 centimetres due to the insulation)²⁷. The two

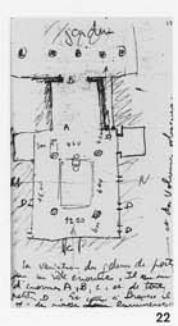


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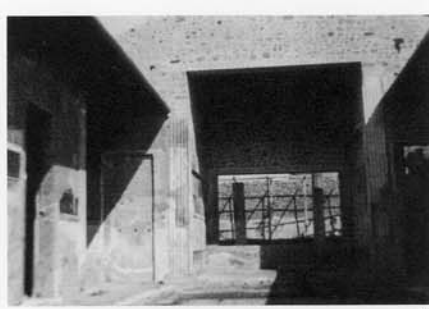
—24 Cf. *ibidem*, Carnet 4, p. 45. — 25 Letter to William Ritter (15.12.1911), cf. Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., pp. 460-461. —26 Average of several measures. —27 I.e. for the parents' room at south 440×590 cm, for the other two rooms 295×240 cm.



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22. Sketch of the Casa delle Nozze d'Argento, Pompeii. October 1911 (*Voyage d'Orient*, "Carnet" 4, p. 127)

23. Sketch of the "Green Mosque", Bursa. August 1911 (*Voyage d'Orient*, "Carnet" 3, p. 19)

24. House of Sallustius, Pompeii. Photograph by Jeanneret, October 1911 (Bibliothèque de la ville de La Chaux-de-Fonds)

rooms on the north, designed for Jeanneret himself (studio and atelier with a rooflight) are a kind of demonstration of the judicious ability the young architect had reached in applying proportions with a symbolic hierarchy: the "painter's" atelier is proportioned with the golden section (with an approximation of 2.8 centimetres) while the studio of the "architect" repeats in miniature exactly the proportion that characterises the entire building (10.50 metres wide and 12.00 metres long), i. e. the ratio 7:8, and this, with an approximation of only 0.6 centimetres!²⁸

These may explain the pride Jeanneret exhibited when he wrote in 1919 about the villa:

"the proportions of every room have been studied carefully, and [...] certain of the rooms even obey, through their proportions, certain laws of architecture completely lost today and which were used in the past in the great epochs of the art of antiquity (numerical ratio, width, length, height)."²⁹

Of course, by this period, the use of proportion was anything but forgotten and not only Behrens, but also Hendrik Petrus Berlage, Theodor Fischer, J.L.M. Lauweriks, Auguste Perret and several other architects well known to the young Jeanneret used different proportional systems to design their buildings – in perfect continuity with the renewed interest for proportions offered in writings dating from the second half of the 19th century (see for example Viollet-le-Duc, Auguste Choisy or August Thiersch)³⁰.

The central living-room of the villa Jeanneret-Perret, with its dimensions based on the diagonal of a square and framed by two approximately cubic rooms, is the heart of the composition. Jeanneret sketched several times this spatial configuration – in Bursa, Pompeii and Tivoli (Hadrian's villa)³¹.

To understand its importance it is necessary to consider the

planimetric sketch of the Casa delle Nozze d'Argento in Pompeii (fig. 22), Jeanneret/Le Corbusier published ten years later in *Vers une Architecture*³². The text beneath the sketch says:

"The variation of the dimensions of the doors is enormously important. There are enormous-ones A, B, C, and very small-ones D. And like in Bursa there are luminous masses and obscure volumes."³³

And on the previous page of the "carnet" on which the sketch is to be found one reads:

"The height of a cathedral filled with shadows and at the end the brightness of the garden."³⁴

On the drawing Jeanneret did of the Külliye of Mohammed I ("Green Mosque") in Bursa (fig. 23), the various light intensities of the different spaces (numbered from 1-7) is indicated, while on the sketch of the Casa delle Nozze d'Argento the walls enclosing the big opening on the garden are drawn darker than the remaining plan. Jeanneret photographed and sketched the same light contrasts in the House of Sallustius, where again a dark room enhances the brightness of the garden, framed by a big window (figs. 15, 24)³⁵. This system of visual axes, leading from the well-illuminated patio, through a dark room with a single big opening which frames the view onto a garden, characterises the Römische Bäder in Potsdam (fig. 25) designed by Friedrich Schinkel and visited in June and October 1910 by our architect³⁶.

In his parents' villa the "lesson" taken from Pompeii – presumably focussed through the lens of the Römische Bäder – turns into a 14 metre long axis, that leads from the dining room on the west – curved like an apse – through the bright living room (marked by four pillars) to the dark anti-chamber situated on the east, where a single big window frames the landscape scenographically (fig. 26).

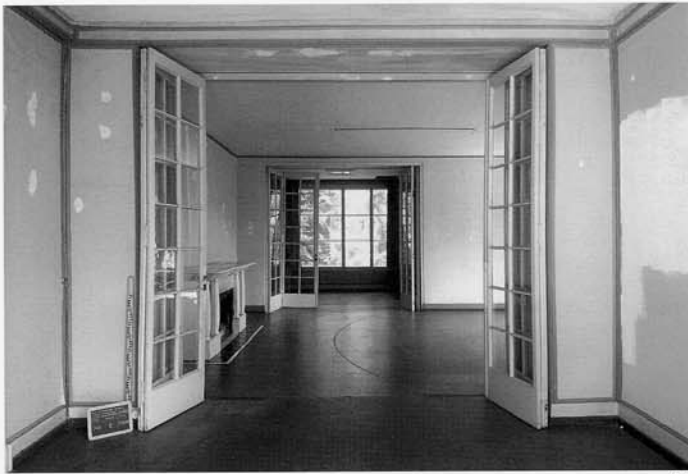
–28 I. e. 590x360 cm for the atelier and 215x245 cm for the studio. –29 "Les proportions de toutes les pièces ont été étudiées de très près et [...] certaines des pièces obéissent même, par leur proportion, à certaines lois de l'architecture complètement perdues aujourd'hui et qui ont été employées autrefois dans les grandes époques d'art de l'antiquité (rapport numérique, largeur, profondeur, hauteur)", letter "Vente de l'immeuble" (21.1.1919), Bibliothèque de la ville de La Chaux-de-Fonds. – 30 Eugène Emmanuel Viollet-le-Duc, *Entretiens sur l'architecture*, A. Morel, Paris 1863, pp. 385-448; Auguste Choisy, *Histoire de l'architecture*, Gauthier-Villars, Paris 1899; August Thiersch, "Die Proportion in der Architektur", in *Handbuch der Architektur*, Teil IV, vol. 1, Darmstadt 1883. –31 For the plan of the "Green Mosque" in Bursa cf. Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 3, pp. 19, 29; for the plan of the House of Sallustius in Pompeii *ibidem*, Carnet 4, p. 110; for the plan of the Casa delle Nozze d'Argento *ibidem*, Carnet 4, p. 127; for the plan of the Piazza d'Oro (Tivoli) *ibidem*, Carnet 5, p. 85. For a comparison of 7 villas at Pompeii characterised by an atrium with two cubic annexes, see Paul Zanker, *Pompeii*, Einaudi, Torino 1993, p. 51. –32 Le Corbusier published his sketch of the Casa delle Nozze d'Argento (and not "del Noce" as he wrote) together with his sketch of the mosque of Bursa and of the Piazza d'Oro and other sketches from Pompeii, the Acropolis, Hadrian's villa and Istanbul in the crucial chapter "L'illusion des plans", cf. Le Corbusier, *Vers une architecture*, Crès, Paris 1924 (2), pp. 141-160. – 33 "La variation des grandeurs de porte joue un rôle énorme. Il en est d'énormes A, B, C, et de toutes petites D. Et comme à Brousse [Bursa] il y a des masses lumineu-



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25. Römische Bäder, Potsdam (by author, 2000)

26. Villa Jeanneret-Perret, ground floor, view from the Dining Room to the Living Room (by author, 2000)



26

Jeanneret explained to Auguste Perret his composition with the following words:

"Glass walls open when necessary, freeing a 14 metre long path with its end on the east; an enormous window projecting over a quarry, which frames, vis-à-vis, the majestic wood of pines that protects us from winds –Cézanne would paint, from here, the amazing stratification of the abandoned quarry behind."³⁷

But an "enormous" opening framing a landscape is not an absolute novelty in Jeanneret's work. In 1906 he had decorated, together with other students of the Ecole d'Art, the music room of the near-by villa Matthey-Doret. The surviving photograph shows that the room was characterised by a big window framed by curtains, like a proscenium arch revealing the landscape³⁸. In fact we are looking at a motif which had interested Jeanneret since the early years

of his professional career, analysing its architectonic potentiality in Potsdam, presumably, as well as in Pompeii.

There is another observation Jeanneret could have made at Römische Bäder, although, in fact, it is annotated in one of his "carnets" while visiting Hadrian's villa in Tivoli. Trying again to identify a formal law in the spatial organisation of an antique building, he wrote:

"One has to remember that in every roman hall there are always 3 plain walls. The remaining wall is opened widely and allows the hall to participate in the whole building: hence the very typical location of the doors, already noted in Pompeii."³⁹

In La Chaux-de-Fonds this "antique" spatiality is attainable by closing the glass-doors realised as folding walls to cut the 14 metre long west-east axis. In this way the so delimited living room opens only to the "petit salon", communicating with each other in the absence of a separating wall. The floor of the "petit salon", indeed, recalls, with its coloured linoleum, floors sketched in Pompeii⁴⁰.

Also the large window of the living room has a precise meaning: in a letter to William Ritter, Jeanneret says:

"[...] the big window] is marking the matrix of this house because it's behind this glass –where you stand and while looking outside you feel the big volume of the unified rooms, the transept of 'the cathedral', as my father says wandering through these magnitudes!"⁴¹

In synthesis, the plan of the ground floor is a system of proportioned volumes organised along axes, each room being characterised by a different window type. In fact Jeanneret wrote to Perret:

"And I tried to make it that every room would have its signification and its soul given through its cube of air and its opening or its windows."⁴²

ses et des volumes obscures", Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 4, p. 127. – **34** "Une hauteur de cathédrale pleine d'ombre et au fond l'éclat du jardin", *ibidem*, Carnet 4, p. 126. – **35** See note 16. – **36** Cf. Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 27 and pp. 149-150. – **37** "Des parois vitrées tombent à l'occasion, donnant quatorze mètres de parcours dont l'extrémité est à l'est, un immense vitrage situé sur l'à pic d'une carrière, dans lequel s'encadre, vis-à-vis, la majestueuse forêt de sapins qui nous abrite des vents – Cézanne peindrait, de là, l'étrange stratification de la carrière abandonnée, au fond", letter to Perret, undated [1913], FLC E1-11-69/72. – **38** For the photograph see Harold Allen Brooks, *Le Corbusier's Formative Years*, cit., p. 86, fig. 76. – **39** "Il faut retenir ça que dans toute salle romaine il y a toujours 3 murs pleins. L'autre mur s'ouvre largement et fait participer la salle à l'ensemble: De là une situation très typique des portes, relevée déjà à Pompéi", Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 5, p. 83. – **40** See *ibidem*, Carnet 4, p. 113. – **41** "[La grande fenêtre] marquant la matrice de cette maison puisque c'est derrière cette vitre – là qu'on se tient et que regardant dehors, on sent le vaste volume des pièces réunies, le transept de 'la cathédrale' comme dit mon père errant dans ces vastitudes!", letter to William Ritter (10.02.1913), FLC R3-18-252/255. – **42** "Et j'ai cherché que chaque chambre ait sa signification et son âme donnés par son cube d'air et de la percée de ses ou de sa fenêtre". Letter to A. Perret undated [1913], FLC E1-11-69-72.



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A further important window type is introduced on the upper floor. Like in the Crematorium of La Chaux-de-Fonds (by a team of fellows of the Ecole d'Art, 1909) or in the villa Stotzer (designed by Jeanneret in winter 1907 and constructed in the following year under the supervision of René Chapallaz), a continuous gallery of windows placed on this level hides the inner disposition of the rooms. Once more, this window type, found in other contemporary architecture (see buildings by Olbrich, Riemerschmidt or Muthesius, for example)⁴³ as well as in vernacular architecture from the Balkans or Switzerland determines the character of the rooms⁴⁴:

"From the room of my father, on the upper story and above the high slope of the mountain, one can see the entire chain of mountains, through four windows touching each other and forming a gallery beneath the long overhanging roof made of plaster and which delimits the sky and seems to lead the eye further away."⁴⁵

The opposite happened in the atelier designed for Jeanneret himself: in this room, with its proportions based on the golden section, contact with the exterior is denied:

"In my room the light is from the ceiling: with a big square of matt glass that prevents me from seeing the top of the big pine which was so agitated while we were building, this summer. There is, in my room, the austere nudity of a hospital or of a cloister. It is two days now that I live in this room and I desire hours of serenity here which will allow me to get tonsured and cleaned from the daily renewed dirt of this town, of this province and of this Switzerland."⁴⁶

Jeanneret used the plan as the principal instrument to control the volumes and the visual axes, the relationships between the rooms and their proportions. In order to realise his formal intentions - based on "images" and categorised in his mind by typical

solutions - Jeanneret had to liberate the plan from static constrictions. In fact, the floors of his parents' villa are supported only by the perimeter walls and four central pillars, leaving him at complete liberty when organising the inner partitions. Jeanneret had already become familiar with buildings, the weight of which was carried on pillars, while working in Auguste and Gustave Perret's office in Paris in 1907/08, but there are significant differences between the material used in the slim concrete structures of the French architects/entrepreneurs and the massive pillars in masonry Jeanneret adopted. The structures designed in Perret's office at this time (see the office building itself, 25bis rue Franklin or the plan for a building which Perret had Jeanneret drawn during his internship)⁴⁷ had, in perfect adherence to the functional distribution of their plans, numerous concrete pillars positioned in the crossing points of the inner partitions, while in the villa in La Chaux-de-Fonds, the four perfectly visible and symmetrical pillars signify the centre of the building (fig. 18). This formal choice may have been influenced by a further meeting between Jeanneret and Auguste Perret that happened in Istanbul in 1911, when the two architects discussed Perret's project for the Théâtre des Champs-Élysées⁴⁸. Two years later the French architect would describe the essence of his theatre as a structure based on "four groups of two pillars"⁴⁹. Still in Istanbul, Jeanneret studied the mosques, writing about the enormous square that describes the inner space, where "nothing has to be hidden to the eye" and "the four gigantic structures rise to bring together the pendentives"⁵⁰. He also sketched one of the four pillars of the Sultan Ahmet mosque ("Blue Mosque"), indicating its diameter of nearly 4 metres⁵¹. After Istanbul he drew several plans of buildings he visited, characterised by a structure formed of four inner pillars or columns, like the

⁴³ For "horizontal windows" supported by pillars, see for example the Hochzeitsturm in Darmstadt by Joseph Maria Olbrich (1905-08) or the Deutsche Werkstätten in Hellerau by Richard Riemerschmidt (1909), both buildings known by Jeanneret. ⁴⁴ See for example the rural buildings sketched and photographed by Jeanneret in Serbia and Rumania (?), cf. Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 1, pp. 64-65, and Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 186; for vernacular buildings photographed in Switzerland see von Moos and Rüegg, *Le Corbusier before Le Corbusier*, cit., p. 165. Also Frank Lloyd Wright used a similar type of continuous window and Jeanneret could have seen it on the *Schweizerische Bauzeitung*, 60, 1912, pp. 165-168 where 4 illustrations of the monumental *Ausgeführte Bauten und Entwürfe*, edited by Ernst Wasmuth in Germany in 1911/12 are reproduced, cf. Frank Lloyd Wright, *Ausgeführte Bauten und Entwürfe*, Ernst Wasmuth, Tübingen 1986, 1998(3). ⁴⁵ "De la chambre de mon père et de ma mère, à l'étage sur le flanc élevé de montagne, on voit toute la chaîne des monts par quatre fenêtres qui se touchent, formant galerie sous un long avant toit plat de plâtre qui limite le ciel et semble diriger la vue plus loin", letter to Auguste Perret, undated [1913], FLC E1-11-69/72. ⁴⁶ "Dans ma chambre, la lumière est au plafond: un grand carré de verre mat qui m'empêche de voir le bout du grand sapin qui s'agitait cet été alors qu'on bâtitait. Ça a, chez moi, le nu austère d'une clinique ou d'un cloître. Voici deux jours que j'habite cette pièce et j'augure ici des heures de sérénité qui me permettront de me toiser et de laver la salissure



30

27. Villa Jeanneret-Perret, north facade (by author, 2000)

28. Hermann Muthesius, villa Neuhaus, Berlin-Dahlem, 1906 (from *Die Kunst*, 1911)

29. Bulgaria (?). Photograph by Jeanneret, 1911 (Bibliothèque de La ville de la Chaux-de-Fonds).

30. Villa d'Este, Tivoli. Photograph by Jeanneret, October 1911 (Bibliothèque de la ville de La Chaux-de-Fonds)

churches of the monasteries of Iviron and Filotheou on the peninsula of the Athos or the previously cited Casa delle Nozze d'Argento in Pompeii (fig. 22)⁵².

Given this background, the four pillars of the villa Jeanneret-Perret represent more than just a static necessity. They are an additional formal element, expressing the structure of the building and at the same time allowing the complex organisation of the inner spaces; which is different from just leaving functional liberty in the disposition of the inner partitions. In 1919 Jeanneret himself wrote in the description prepared in order to sell the villa:

"The massive construction of the villa regards only the external walls and four internal pillars of 50x60 centimetres. The remaining part is only formed by light separation-walls easy to move without generating important costs. [...] The building is able to support every additional weight one may desire if judged necessary, but good taste would command to leave everything as it is, seen that the proportions of every room have been studied carefully [...]."⁵³

The outside of the villa is characterised by the powerful articulation of the volumes. If a photograph of the front facade, taken by the architect himself, echoes, with its semicylindrical "apse", an earlier photograph taken by Jeanneret from St. Peter's in Rome, the back reveals again the influence German architecture had on him⁵⁴. In Neuhaus house in Berlin-Dahlem, close to Behrens' house Wiegand, Hermann Muthesius placed the entrance in a block added on the rear containing the staircase; a solution repeated by Jeanneret even choosing the same type of vertical windows (fig. 27). We have no proof that Jeanneret saw the Neuhaus house (he met Muthesius during a reception held in the German architect's house in Berlin-Zehlendorf in 1910)⁵⁵, but a photograph and plans

published in the review *Die Kunst* from 1911, which can still be seen in the library of the Ecole d'Art of La Chaux-de-Fonds, shows the similarity of the rear facades of the two buildings (fig. 28)⁵⁶. However, it is, again, a principle and not a form Jeanneret copied. Two photographs reveal Jeanneret's interest in this kind of L-shaped ground floor with an access tangential to the main body of the building: the first, probably taken in Bulgaria, shows a building with a laterally added wing into or through which the street passes (fig. 29); the second shows the terrace of the Villa d'Este in Tivoli, where the added mass has the form of a triumphal arch (fig. 30)⁵⁷.

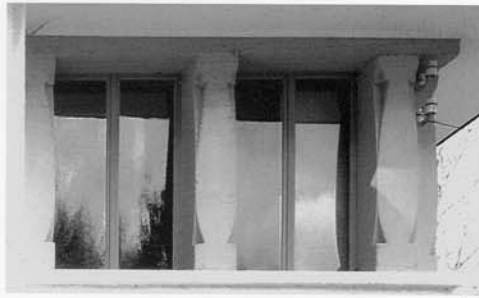
The facades of the villa reveal the same high density of architectural intentions.

Jeanneret synthesises the complexity of the adopted formal references in a postcard to William Ritter written in 1912:

"Reinforced concrete and orientalism are dominating, and the love for the new implying a very strong understanding of our ancestors, that's where my thoughts return to."⁵⁸

This disposition of the building, with its similarity to contemporary German architecture, showed, on one hand (to possible clients of Jeanneret, for example) an up-to-date and fashionable young architect, while on the other, to a cultivated visitor like William Ritter or to his former teacher, L'Eplattenier, it demonstrated the freshly acquired artistic culture of Jeanneret which he expressed through citations of vernacular or antique buildings to illustrate the timeless validity of the chosen forms. He further complicates the design by trying to interpret the ideas about a new "latin" style for the French speaking part of Switzerland, Alexandre Cingrya-Vaneyre formulated in his book *Les Entretiens de la villa du Rouet; essais dialogués sur les arts plastiques en Suisse romande* (1908). For this Swiss critic and writer "man more often transforms the country

quotidienne et renouvelée de cette ville, de cette province et de cette Suisse", letter to Auguste Perret, undated [1913], (FLC E1-11-69/72). —47 Cf. Giovanni Fanelli and Roberto Gargiani, *Perret e Le Corbusier. Confronti*, Laterza, Bari and Roma 1990, ill. 15-17. —48 Cf. Brooks, *Le Corbusier's Formative Years*, cit., p. 274. —49 Cf. Fanelli and Gargiani, *Perret e Le Corbusier. Confronti*, cit., p. 58. —50 Cf. Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 225. —51 Cf. Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 2, p. 93. —52 For the sketches of the churches cf. *ibidem*, Carnet 3, p. 53 and pp. 65-66. —53 "La construction massive de la maison ne comporte que les murs extérieurs et quatre piles intérieures de 50x60 cms. Tout le reste n'est formé que de cloisons légères pouvant être déplacées sans entraîner de frais importants. [...] L'immeuble peut supporter toutes les recharges qu'on voudra si on le juge nécessaire, mais le bon goût commanderait de laisser les choses en l'état, étant donné que les proportions de toutes les pièces ont été étudiées de très près [...]", letter "Vente de l'immeuble" (21.1.1919), Bibliothèque de la ville de La Chaux-de-Fonds. —54 Cf. von Moos and Rüegg, *Le Corbusier before Le Corbusier*, cit., p. 66, ill. 72-73. —55 Cf. Harold Allen Brooks, *Le Corbusier's Formative Years*, cit., pp. 220-221. —56 Cf. *Die Kunst, Monatsheft für freie und angewandte Kunst*, 1911, p. 22. —57 Cf. Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., pp. 190, 378. —58 "Le béton armé et l'orientalisme dominant, et l'amour du neuf impliquant la très forte compréhension des ancêtres, voilà où retournent mes pensées", letter to William Ritter, undated [1912], FLC, R3-18-238.



31



32



33

where he lives than the earth influences the people who inhabit it"⁵⁹. Therefore, following Cingrya-Vaneyre, the indication is to introduce foreign elements into one's own patria, especially if taken over from cultures impressed by a "Latin feeling", responsible for the diffusion of "classicism" in the Mediterranean area. Cingrya-Vaneyre justified his predilection for "Latin" cultures in reflections about the origins of art taking the racial thesis formulated fifty years earlier by the Comte de Gobineau as a model⁶⁰. More than just the re-use of Mediterranean motifs is welcome for a new "national" architecture: Cingrya-Vaneyre proposed also the invention of new ornaments inspired by local motifs –on condition that they are generated by a "classical feeling":

"At the museum of Athens there exists a fragment of the Parthenon's frieze showing a group of adolescents carrying big vases. [...] Couldn't we treat in the same way the oblique or vertical enlacing of an alpine caravan, with this nice repeated gesture of bodies leaning on picks and bending towards the slope [...]?"⁶¹

In the same way he suggested the forms of local fauna and flora be used to render "national" –as if by a "monogram" - this "classical architecture" desired for the "Suisse romande"⁶².

Jeanneret read Cingrya-Vaneyre for the first time in 1910 and met him in Geneva in 1916, even inviting his idol to La Chaux-de-Fonds⁶³. So the lizard-formed handle of the entrance-door of the villa Jeanneret-Perret could be interpreted as a "monogram", and the stylised bases and capitals of the concrete columns between the windows of the upper level as a classical interpretation of a well known "local" motif (fig. 31): their cubic forms re-presenting, in a new ideological context, ornaments based on the geometrical

abstraction of the local geological formations - an old idea taught by L'Eplattenier and the object of numerous formal exercises at the Ecole d'Art.

More significant are Jeanneret's reinterpretations of elements studied during his travels.

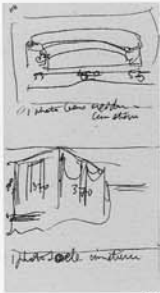
The windows of the upper floors, for example, have a common window sill running like a cornice round the entire building. On the rear of the building the horizontal level of this cornice changes to turn round the never executed staircase window –see the eastern facade (fig. 32)–. "Stepped" external mouldings are not foreign to contemporary architecture known by Jeanneret (see for example Lauweriks, Hoffmann or Seidl)⁶⁴, but he sketched them during his "Voyage d'Orient" annotating on the drawing of the side of the Suleymaniye mosque in Istanbul (fig. 33):

"Two returns of the cornices a and b, rich in happy solutions; 1:2. 2 is more overhanging than z; combination c and their opposites in contrast with a and b."⁶⁵

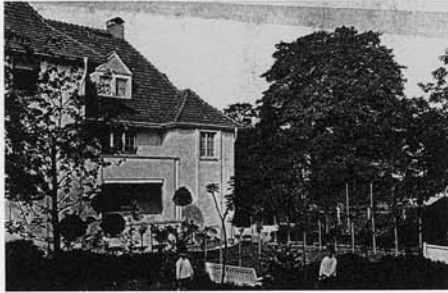
The same detail of a cornice bent twice through a right angle to reach a different level, with the annotation "drawn for this solution", is represented in another sketch made in Istanbul⁶⁶.

This motif, studied on examples of Ottoman architecture but of Byzantine origin (an atectonic use of the antique entablature), was perfectly suited to a cultivated citation, like the angular three-quarter columns that characterise the corners of the villa which derive originally from antique Egyptian architecture, but sketched by Jeanneret in Istanbul as well as in Pompeii⁶⁷. The drawing of the "Tomb of the Garlands" in Pompeii (fig. 34) –showing corners underlined by half-columns and significant for its

–59 Cf. Alexandre Cingrya-Vaneyre, *Les entretiens de la villa du Rouet*, A. Jullien, Genève 1908, p. 98. The same idea is expressed in a passage underlined by Jeanneret: "[...] il faut bien dire que tout ce qui existe dans notre pays y fut importé quelque jour de l'étranger. La vigne de nos côtes, les châtaigner [...]", cf. *ibidem*, p. 303. –60 Cf. Brooks, *Le Corbusier's Formative Years*, cit., pp. 237-238. –61 "Il existe au musée d'Athènes un fragment des frises du Parthénon qui représente une suite d'adolescents portant de gros vases. [...] Ne pourrions-nous pas traiter de sorte l'encordage oblique ou vertical d'une caravane alpine, avec ce joli geste répété des corps appuyés sur la pique et penchés du côté de la pente [...]?", Cingrya-Vaneyre, *Les entretiens de la villa du Rouet*, cit., p. 274. –62 *Ibidem*, p. 343. –63 Cf. Brooks, *Le Corbusier's Formative Years*, cit., p. 411. –64 Jeanneret visited probably in 1911, together with the architect, the houses of J.L.M. Lauweriks under construction in Hagen, cf. Nic Tummers, *Der Hagener Impuls. Das Werk von J.L.M. Lauweriks und sein Einfluss auf die Architektur und Formgebung um 1910*, Linnepe, Hagen 1972, pp. 46-49. Josef Hoffmann used "stepped" cornices in his Palais Stoclet in Brussels (1906) and Emanuel Seidl, admired by Jeanneret for his villa Brakel in Munich, in his Bischoff house in Leoni, cf. *Moderne Bauformen*, 2, 1905, p. 127. –65 "2 retours de corniches a et b, riches en heureuses solutions; 1:2, 2 est plus saillant que z; combinaison c et leur opposition en contraste a et b", Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 287. On a sketch Jeanneret made of the Serrail in Istanbul he marked the continuous window sill drawing also its section, similar to the one used on his parents' villa, cf. Gresleri, *Le Corbusier. Voyage d'Orient, Carnets*, cit., Carnet 1, pp. 74-75. –66 *Ibidem*, Carnet 2, p. 95. –67 Cf. Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., pp. 278, 290 (Istanbul); Gresleri, *Le Corbusier. Voyage d'Orient, Carnets*, cit., Carnet 4, p. 114.



34



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31. Villa Jeanneret-Perret, detail of the window of the upper floor (by author, 2000)

32. Villa Jeanneret-Perret, east facade (by author, 2000)

33. Sketch of the Süleymaniye Mosque, Istanbul. July/August 1911 (FLC 2378)

34. Sketch of the "Tomb of the Garlands", Pompeii. October 1911 (*Voyage d'Orient*, "Carnet" 4, p. 114)

35. Postcard of the Pützer House, Darmstadt (Bibliothèque de La ville de la Chaux-de-Fonds)

proportions repeated in the villa— recalls the cubic basement of the monument *Hommage à la République* by L'Eplattenier, inaugurated in Jeanneret's presence in September 1910 in La Chaux-de-Fonds⁶⁸. The choice to reinforce visually the corners of a cubic volume with angular mouldings, as Josef Hoffmann did on his *Palais Stoklet* in Brussels, and as also shown on a postcard bought by Jeanneret in 1911 of a recent house in Darmstadt (fig. 35), is again justified through examples of ancient architecture⁶⁹.

The facades of the villa are, like the rooms, dimensioned to respect certain proportions. Already in the *The Grammar of Ornament* by Owen Jones (1856/1865) — a rich compendium of ornaments from different styles and periods, "bible" for L'Eplattenier's teaching at the *Ecole d'Art*— Jeanneret could have read⁷⁰:

"The most beautiful proportions will be the one most difficult to be discovered by eye."⁷¹

The proportions suggested by Jones are not the "simple" ratios 1:2, 1:3 and 3:4 but more "subtle" ones, like 5:8 (instead of 4:8), 3:7 (instead of 3:6), 3:8 (instead of 3:9) and 3:5 (instead of 3:4).

Jeanneret used these "subtle" proportions on elements of the facades clearly defined by edges or elements jutting out (figs. 36a, b): the adjoined mass containing the "enormous" window on the east facade is proportioned with the ratio 11:12 (with an approximation of only 0.8 centimetres), the west prospect with the ratio 4:7 (exact), the facade-panel in front of the entrance of the north prospect with the ratio 5:6 (exact), the vertical windows on the south and west-facades with the ratio 4:9 (exact)⁷².

He also used the "simple" ratios, but only where "difficult to be

discovered by eye" (figs. 37a, b): the height of the south facade, taken from the upper edge of the terrace-wall to the gutter, is exactly half as long as the entire facade, the semi-cylindrical bay of the west facade is — like the added mass of the staircase well on the north facade — proportioned with the ratio 3:4 (with an approximation of only 1.3 centimetres regarding its height from the level of the outstanding floor to the gutter).

Jeanneret arranged the individual elements composing the facades with the same care for subtle visual effects. The south facade (fig. 38) looks apparently perfectly symmetrical, but an asymmetrically disposed oval window on the basement echoes an additional pillar on the right corner of the continuous window of the upper floor. The rear (fig. 27) of the villa is characterised by two asymmetrically disposed surfaces, each of them having its own strong symmetry, broken only by a small, rather than large, window on the mass containing the entrance and the staircase. The east and the west facades each include a mass jutting out, perfectly symmetrical in itself, but disposed in an asymmetrical over-all design. In 1916 Heinrich Tessenow would find a happy formulation for this kind of balancing masses and symmetries writing in *Hausbau und dergleichen* that symmetry, which governs the elementary forms of regularity, appears in the end best "the more difficult it is to recognise its axes"⁷³.

These aesthetic principles, descendants of the "ponderation and balance of masses" and the "irregular symmetry" of the English Picturesque of the 18th century and re-elaborated in the writings of Viollet-Le-Duc, Auguste Choisy or Camillo Sitte, were completely absorbed by the German architects admired by Jeanneret:

—68 Jeanneret indicates on his sketch the measures of the tomb with 320x370x300 cm, which corresponds in plan to the ratio 7:8 with an approximation of 3.8 cm, *ibidem*, p. 114. See also a photograph of the tomb in Gresleri, *Le Corbusier. Viaggio in Oriente*, cit., p. 358. For the monument "Hommage à la République" cf. Brooks, *Le Corbusier's Formative Years*, cit., p. 228. —69 Following the positive judgement expressed by Osthaus, Jeanneret tries to contact Hoffmann while travelling through Vienna in Mai 1911, cf. Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 2, pp. 122-125. The postcard shows the Pützer house in Darmstadt without mentioning its architect (Bibliothèque de la ville de La Chaux-de-Fonds). —70 For the importance of Owen Jones, known in its French translation, *Grammaire de l'ornement*, Paris 1865 (2), cf. Brooks, *Le Corbusier's Formative Years*, cit., p. 29. —71 "Les proportions le plus belles seront celles que l'œil aura le plus de difficulté à découvrir", Jones, *Grammaire de l'ornement*, cit., p. 6. —72 Again our considerations are based on the measures indicated on the plan-set dated March/April. The only missing measure is the difference between the level of the ground-floor inside and outside. Our reconstruction of the proportions is therefore based on the hypothesis that the step as drawn in the plan between inside and outside was projected with a height of 20 cm, adding 15 cm to reach the slightly lower outside level on the northern and western prospect. The result is a height of 6.00 m for the southern elevation (6.04 m measured) from the level of the terrace-wall to the gutter of the roof and a height of 6.15 m for the northern and western elevation from the level of the outside-floor to the gutter of the roof.—73 Cf. Marco De Michelis, *Heinrich Tessenow*, Electa, Milano 1991, p. 105.



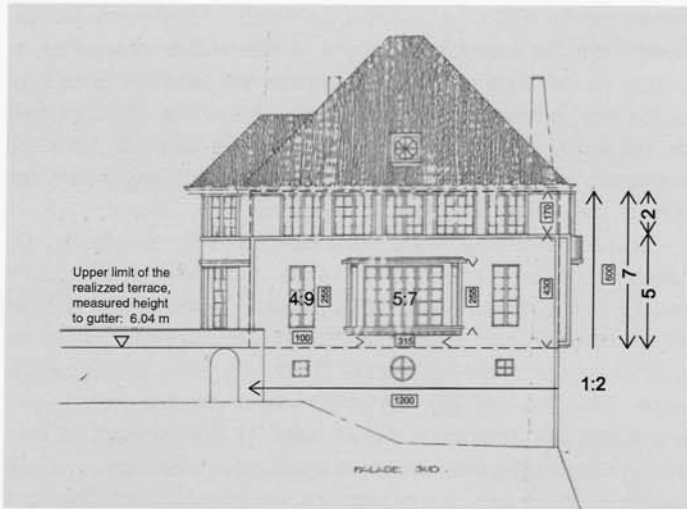
38



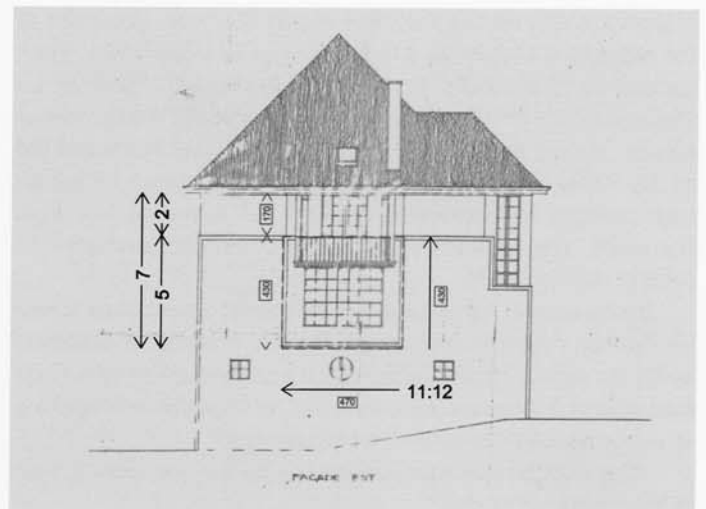
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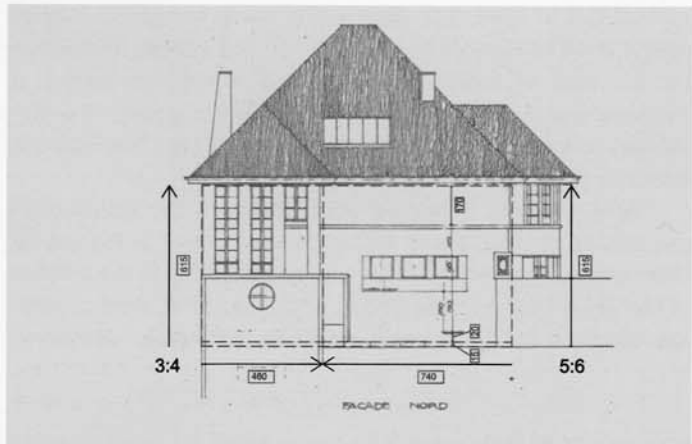
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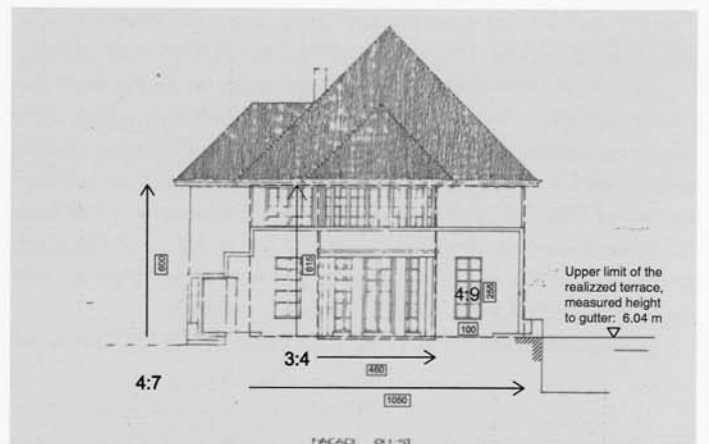
36a



37a



36b



37b

-74 For the influence of the "picturesque" on Viollet-le-Duc, Auguste Choisy, Camillo Sitte, Le Corbusier and Frank Lloyd Wright see Richard A. Etlin, *Frank Lloyd Wright and Le Corbusier: The Romantic Legacy*, Manchester University Press, Manchester and New York 1994, particularly pp. 76-149. -75 About Victor Cousin cf. Paul Venable Turner, *La formation de Le Corbusier. Idealisme et mouvement moderne*, Cahors 1987, pp. 90-91. -76 For the house sketched in Munich cf. Greslier, *Le Corbusier. Viaggio in Oriente*, cit., p. 29; for Istanbul cf. *ibidem*, p. 281; for the Parthenon cf. Brooks, *Le Corbusier's Formative Years*, cit.

36. a, b. Villa Jeanneret-Perret.

Interpretation of the measures indicated on the elevations from March/April 1912 (original blueprints at the Bibliothèque de la ville de La Chaux-de-Fonds)

37. a, b. Villa Jeanneret-Perret.

Interpretation of the measures indicated on the elevations from March/April 1912 (original blueprints at the Bibliothèque de la ville de La Chaux-de-Fonds)

38. Villa Jeanneret-Perret, south facade (by author, 2000)

39. Peter Behrens, Cuno house, Eppenhäuser near Hagen, 1910 (from *Dekorative Kunst*, 1910)

40. "Cette solution curieuse à cause de a<b". Sketch of a house in Istanbul. July/August 1911 (FLC 6111)

Theodor Fischer, Hermann Muthesius, Richard Riemerschmidt and Peter Behrens⁷⁴. In the already mentioned Cuno house, for example, additional windows in the lower part of the facade help to balance the asymmetry of the basement while a small additional window on the upper floor animates the strong axial symmetry of this part of the facade (fig. 39). That the balance reached in a composition based on the contraposition of "variety" and "unity" should be "the principle of beauty", is also discussed in *Du vrai, du beau et du bien*, a theoretical book by Victor Cousin about art which Jeanneret bought in 1910⁷⁵.

But again significant are the examples in which Jeanneret studied these principles: in Munich he sketched a building from the Biedermeier period where he noted the asymmetrical disposition of the windows; in Istanbul, an anonymous wooden house to observe an asymmetry in an apparently perfectly symmetrical building (fig. 40); in Athens, the Parthenon to show the non-correspondence of the columns and the caissons of the ceiling and in Pompeii the House of the Tragic Poet to underline an asymmetrical but aligned (with the columns) position of the pool of the impluvio⁷⁶.

The disposition of the stylised "Doric" columns of the continuous window of the upper floor of the villa is a further measure of Jeanneret's ambition to create within the continuity of the "eternal principles" he tried to find in antique art. The design of these windows went through several versions, one showing two openings obstructed by masonry because of load carried in this position by the two trusses of the roof. The final realisation in reinforced concrete allowed complete liberty in the positioning of the columns, since the continuous lintel became strong enough to carry the load of the roof⁷⁷. The dimensions of the columns and openings reveal a particularity not immediately perceptible to eye: the last two open-

ings at both the extremities are 5 centimetres shorter than the others. This "angular contraction", since Vitruvius a continuously discussed particularity of the Doric temple (even mentioned in Charles Blanc's *Grammaire des arts du dessin* (1867), repeatedly studied by Jeanneret)⁷⁸ and annotated as "typical" on Jeanneret's sketch of the temple of Jupiter in Pompeii, shows how seriously he took William Ritter's advice to "do it in such a way that one would remember that you have been on the Acropolis"⁷⁹.

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p. 284, fig. 204; for Pompeii cf. Gresleri, *Le Corbusier. Voyage d'Orient. Carnets*, cit., Carnet 4, p. 87. —⁷⁷ The trusses are not supported by the four inner pillars. —⁷⁸ Charles Blanc, *Grammaire des arts du dessin*, Paris 1867 (1), IMB, Bayeux 2000 (2), pp. 171-172. On Blanc's importance for Jeanneret cf. Brooks, *Le Corbusier's Formative Years*, cit., p. 97 and p. 123. —⁷⁹ "Vous m'aviez dit: Faites qu'on se souvienne que vous êtes allé à L'Acropole. Ô aiguillonneur que vous êtes, et ironiste! Le sang et la chair sous ma peau, le savent et s'en souviennent", letter to William Ritter, 18.03.1912, FLC R3-18-163/169.