

Universidades Lusíada

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The Corbusian suspended garden : a fragment of nature converted into architecture

<http://hdl.handle.net/11067/1098>

Metadados

Data de Publicação

2014

Resumo

In Le Corbusier's work it is possible to tie the projects to common factors. One of these is the series of residential single-family homes and multiple families homes or apartments, which share one element of formal spatial function: the suspended garden. These elements act as an air capsule that transforms the limit of the façade, by dilating the transition between the public and the private, interior and exterior, architecture and nature. In this paper I refer to Le Corbusier in relation to t...

Tipo

bookPart

Esta página foi gerada automaticamente em 2024-05-14T06:00:41Z com informação proveniente do Repositório

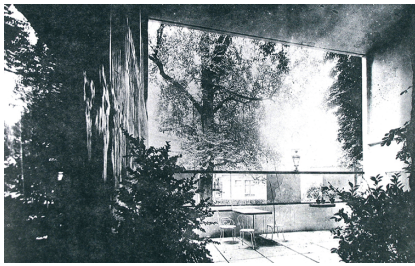


Fig.1 - L'Esprit Nouveau pavilion, suspended garden.

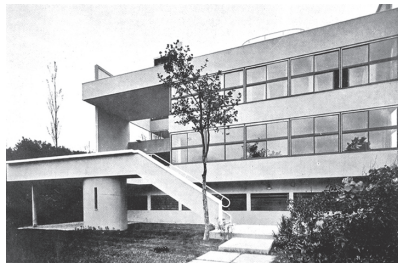


Fig.2a e 2b - Stein-de Monzie house and Savoye house, suspended garden and surrounding park.

THE CORBUSIAN SUSPENDED GARDEN: A FRAGMENT OF NATURE CONVERTED INTO ARCHITECTURE. MARÍA CANDELA SUÁREZ / PhD CITAD Center of Research in Territory, Architecture and Design

Key-words: Le Corbusier; Nature; Suspended garden; genesis.

In the work of Le Corbusier we see a family of projects that begin with something in common: the suspended garden. The Meyer and Hutheesing-Shodhan houses (objects of study of author's doctoral thesis) form a family with: the Immeuble-villas (1922-25) and their two direct descendents (L'Esprit Nouveau pavilion, and the suburban houses, 1925); the single-family houses, Stein-de Monzie (1927), Ocampo (1928) and Savoy (1929). I also added the Princesse de Polignac (1926) and Chimanbhai houses (1952-55); some apartments in the Wanner building (1928-29, including some small cells with garden that to my understanding, are the minimum expression of the type); some apartments from the Cooperative Village (1924-38); and the Immeuble-villas included on the first version of the Unité d'Habitation at Marseille (1945). The suspended gardens in those projects act as an air capsule that transform the façade limit, dilating the transition between the private and the public, inside and outside, architecture and Nature. Le Corbusier describes the atmosphere of the suspended garden this way (fig.1):

Le soleil pénètre partout, l'air aussi. Le jardin est dallé de briques rouges, ses murs tapissés de lierre et de clématites ; des okubas, des fusains, des lauriers, des thuyas, font des massifs dans des cuves importantes de ciment ou dans des pots ; des fleurs de saison égayent : véritable jardin d'appartement d'entretien facile. La table y est dressée à l'abri des pluies. On mange, on cause, on se repose à l'air.

However the clarity used by Le Corbusier to describe the atmosphere of the space is contraposed by ambiguity that he himself uses to describe the status of the suspended garden in each house. This ambiguity suggests that the combination of house and suspended garden is not a formula that can be directly applied in all situations, but it "appears" as a solution in some particular moment of the creative process.

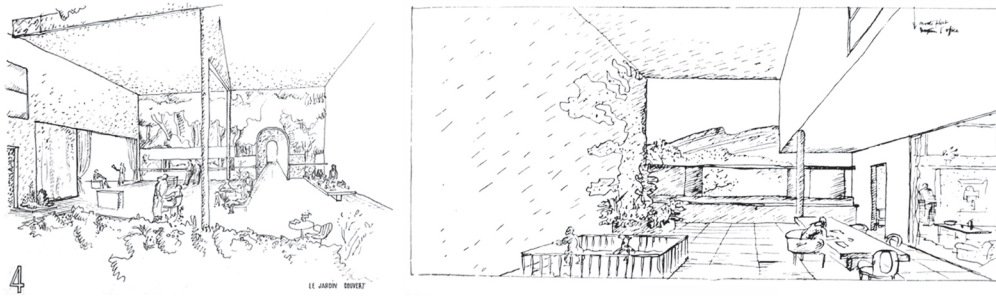


Fig.3a e 3b - Meyer house and Wanner building, visual and / or physical conduit of suspended garden to the surroundings.

The description under one photograph of the villa Stein-de Monzie (fig.2a), in *Oeuvre-Complete 1929-35*, indicates that the suspended garden is not the real garden of the house; it is an artificial garden which one has to traverse to arrive at the real garden. However, a fragment of the text that accompanied the presentation of the villa Savoye (fig.2b) in the same publication proposes an inverse reading: Si l'on est debout dans l'herbe, on ne voit pas très loin l'étendue. D'ailleurs, l'herbe est malsaine, humide, etc... pour y habiter ; par conséquent, le véritable jardin de la maison ne sera pas sur le sol, mais au-dessus du sol, à trois mètres cinquante : ce sera le jardin suspendu dont le sol est sec et salubre, et c'est de ce sol qu'on verra bien tout le paysage, beaucoup mieux que si l'on était resté en bas. Dans nos climats tempérés, avec pluies fréquentes, il est utile d'avoir un jardin dont le sol soit sec instantanément.

Even if this is contradictory, both descriptions have a commonality, that the terrain is located on the 0.00 level. I think that the fact that the suspended garden of the single-family house (fig. 3a) is in contact with the natural soil at the base of the house modifies (or could even multiply) the functions that the same suspended garden has in the apartments of the collective buildings (fig. 3b). In relation with the ground where the single-family house is located, the suspended garden gets converted in the ambiguous space in relation to its surroundings. It cannot be counted as exterior or interior. The suspended garden becomes a space that can be interior and exterior at the same time, a visual transition space, and more than that, a functional transition space. The suspended garden of the single-family houses is a visual and physical conduit from the interior to the exterior. Alternatively, the suspended garden of the apartments is a visual connection, and at the same time, a physical limitation, the unbroken frontier between the interior and exterior intrinsic to the house and the other space, which is the collective space.

The Genesis of Le Corbusier's Suspended gardens

How does Le Corbusier create a suspended garden? Once again, his travel to the Orient in 1911, results in clarification of interpretations of the concrete aspects of Le Corbusier's work.

The Balkan houses, for example, manifest Le Corbusier's interest in the relation of those houses with private patios closed to the gaze of passers-by with blind walls. Le Corbusier qualified this situation as a "nice coexistence between humanity and Nature".

In the Balkan houses, as in the Cartusian cells (fig. 4a), we realize that the garden is always at the ground level or maybe raised a little,

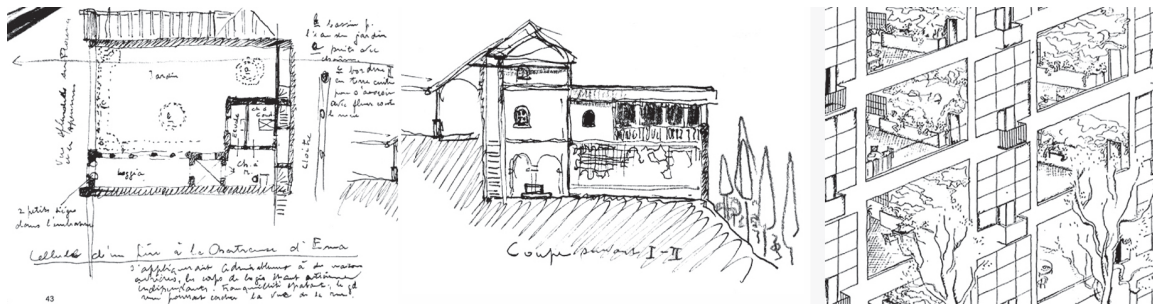


Fig.4a - Emma Cartusian Monastery. Typical cell, Le Corbusier's plan and section. Fig. 4b. Immeuble-villas, stocked suspended gardens.

and doesn't have any roof other than the sky, which makes the visual connection vertical. In the Immeuble-villas (fig. 4b), placed one on top of the other, the gardens located at ground level are consequently suspended in relation to the street. That could be the genesis for Le Corbusier to design suspended gardens in the later single-family houses. By other side, the natural stacking of apartments results in suspended gardens which end up covered by the apartment above like a seed pod, an "air capsule" limited by five of six faces which reduces (but does not eliminate) the vertical view and strengthens the horizontal view. The concept of "suspended garden" and "encapsulated garden" comes from Le Corbusier.

In the single-family houses from the 1920s that I mentioned at the beginning of this article, Le Corbusier keeps the suspended character of the garden. For this reason, he has to raise the place of social activities to the next higher level, which results in a scheme of the *hôtel particulier* from the beginning of the century.¹ The inversion of the location of public and private activities also required a transformation of the roof, and we call that the *toit-jardin*:

Le jardin de toiture, c'est le grand divertissement de la maison. Et dorénavant, par jeu de conséquence, le plan changera, sous le toit-terrasse. On logera les domestiques en bas (ils seront plus près de leur liberté si tenacement exigée). Les chambres à coucher seront à l'entresol, et la réception sera tout près du toit, en haut de la maison, le plus loin du bruit de la rue, tout à fait à l'abri des regards du passant.²

Le Corbusier's preference for situating social areas of the houses on a level elevated above the ground is verified in all the single-family residences from the 1920s, and consolidated in the 1940s, when he promotes the qualities of the *cité jardin verticale*. In Le Corbusier's opinion, the human eye is the entry door for architectonic perceptions and it should be sited at 1.6 meters above ground level.³ That is why the visual cone of a man who lives in a *cité jardin verticale* will be broader than that of one who lives in a *cité jardin horizontale*. I have to add that the suspended garden of the Meyer house, like all the rest of the houses from the 1920s, is materialized by an extraction from the main prism. This would be seen clearly in the second project of Meyer's house (fig. 5a). We should ask if the same extraction generates the suspended garden in the 1920s, and generates as well the Indian suspended garden, in the 1950s (fig.5b). The response is NO.

The suspended encapsulated gardens from Hutheesing-Shodhan and Chimanbhai houses, two projects that have included suspended gardens from the beginning, gave birth from two additions.

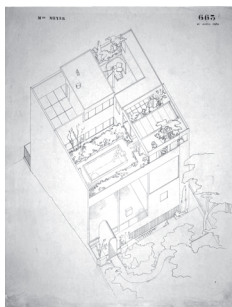


Fig. 5a - Meyer house, "first project", volume (FLC 31525). **Fig. 5b** - Hutheesing-Shodhan house, suspended garden.

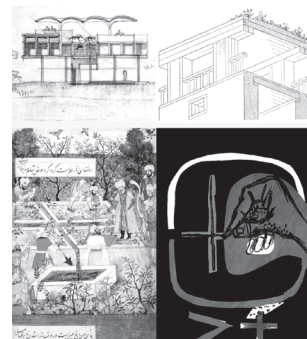


Fig. 6a Hutheesing-Shodhan house, façade with parasol roof analysis (FLC 6655).

Fig. 6b. Auguste Choisy, double terrace system at Assyrian houses.

Fig. 6c. Pairidaeza, "Babur supervising the laying out of the Garden of Fidelity".

Fig. 6d Le Poème de l'angle droit, page. 151.



The first addition is where Le Corbusier superimposed a parasol over a toit-jardin (fig. 6a) to insulate the house from the intense heat (proposals that are at the same time the decomposition of the system of double terraces of Assyrian houses, described by Auguste Choisy in his *Histoire de l'Architecture*, fig. 6b). The second addition occurs in the elevated platform that makes the suspended garden of the Hutheesing-Shodhan house (fig. 6c). The private apartments are placed with apparent freedom, like pavilions in a Persian garden. But this freedom is just apparent. Two perpendicular axes, present in the Paradise scheme (a Persian garden surrounded by walls, an image of the paradise promised in the Koran, fig. 6d), which corresponds in their position to Le Corbusier's "ninety degree angle" – present on his *Poème De l'Angle Droit* – determine the position of the apartment blocks. That is why Le Corbusier rethinks the suspended garden from the 1920s in an Indian style.

Characteristics of Le Corbusier's Suspended Gardens

The projects that make up the series of the suspended garden houses, analyzed in the PhD thesis, illustrate in a synthetic way some characteristics of Le Corbusier's suspended garden.

The two-story that is included in the little apartments of the Wanner Building (fig. 7a). In a letter from Le Corbusier to Wanner, Le Corbusier underlined the two-story as the main characteristic of the apartments. : "[...] de petits appartements à une hauteur d'étage, qui tous malgré cela auront des jardins suspendus à 2 hauteurs d'étages, ce qui est indispensable".⁴

In their own way the suspended gardens of Le Corbusier are defined by their hermatisme (controlled accessibility), hermetic in the same way the conditions of the Immeuble-Villas are reproduced in the suburban house outside Paris (fig. 7b). However, instead of being located in an ample space which gives the option of larger expansion of the house toward the exterior, the suspended garden keeps its enclosed perimeter, inaccessible, maintaining the visual connection in a unidirectional way, as the Immeuble-villas apartments do. Stein-de Monzie house, in an intermediate stage (fig. 7c), is organized longitudinally and terminates with a lateral suspended garden, cutting off the possibility of lateral expansion. Walls on two faces enclose the suspended garden, although it could have been left open.

Ocampo House (fig. 7d), however, is an exemple of the four-sided shape, where Le Corbusier inserted the suspended garden, using

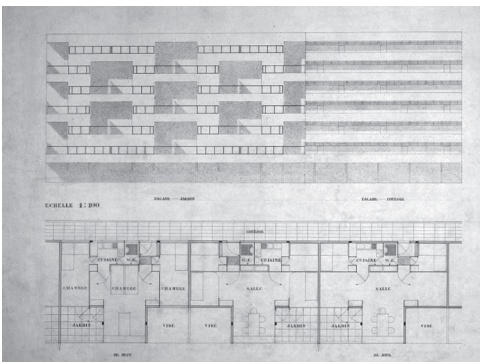


Fig.7a - Wanner building, apartment "3CH M" (FLC 19391).

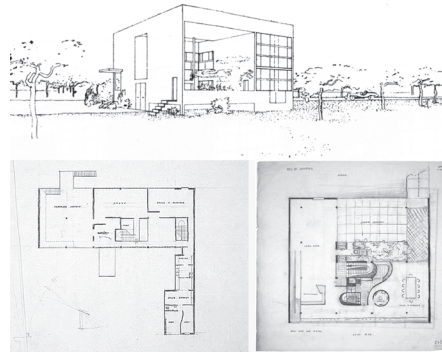


Fig.7b - Suburban house, rear axonometric. **Fig.7c** - Stein-de Monzie house, main floor plan with suspended garden (FLC 10409). **Fig.7d** - Ocampo house, main floor plan (FLC 24232).

graphic or spatial strategies such as interruption of one of the sides of the building or modification of the section of the building, preserving the four-sided shape.

One Interpretation of Le Corbusier's Suspended Garden

For now, we have spoken of some tangible projects and Le Corbusier's tangible suspended gardens. But the Pairidaeza previously mentioned at Hutheesing-Shodhan house, immerses us in a vast unknown realm. This allows us to remove the veil over other characteristics of Le Corbusier's suspended gardens, and to confirm some of the characteristics already mentioned.

Let's go back to the Balkan houses seen by Le Corbusier his way to the Orient. Guiliano Gresleri defined the patios of Balkan house as "prisoners of architecture," but Le Corbusier seemed to defend those patios of Balkan houses saying: "prisons, it's true, but prisons of bellydancers." In his thoughts, Le Corbusier can no longer associate the gardens of these houses with the ones he saw during his visit to the Cartusian monastery in Ema:

Chaque maison a ainsi sa cour et l'intimité y est aussi parfaite que dans ces jardins des pères de la Chartreuse d'Ema où nous nous sentions [...] envahis par le spleen. La beauté, la joie, la sérénité se concentrent ici, et un large porche en plein cintre, fermé d'un huis vernis de rouge ou de vert, ouvre sur le vaste dehors !⁵

It is without doubt that the Cartusian cells were interpreted numerous times as the generators of the idea of the apartments in "L" shape of the Immeuble-villas. In my opinion, Le Corbusier's interest is concentrated once again in this interior/exterior relationship. For Le Corbusier, this does not mean a special fluidity but articulation between architectonic and natural volumes.

Equally relevant is the mention of the "terrestrial paradise" that Le Corbusier associated with the Cartusian cells, or the terrestrial paradise painted by Poussin (fig. 8a) that Le Corbusier published in L'Esprit Nouveau, or the terrestrial paradise portrayed in a painting by André Bauchant (fig. 8b) that Le Corbusier bought from his friend.

The idea of terrestrial paradise has been always in front of me, but I have not been conscious of its relevancy until I found in the archives of the Fondation Le Corbusier some unpublished drawings that attracted my attention. Le Corbusier extracted them in 1915 for his book La construction des villes, from some books in the Bibliothèque Nationale de France where I began my search. This



Fig. 8a - "Paradis terrestre", from Nicolas Poussin. **Fig. 8b** - Le Corbusier, P. Jeanneret and A. Bauchant, in front of "Adam et Eve" picture, Bauchant work.

search through the *L'art des jardins* (by Georges Riat), and *Les jardins de France* (de Henri Stein) led me directly to the theme of the medieval enclosed garden

In its geometry, this garden has always been a square space surrounded by walls, accessible by a narrow door, located in a level space outside the boundaries of the house to which belongs, as generator of these opposites: earth/sky, vertical/horizontal, light/shadow, inside/outside, limited/unlimited, scale of nature/scale of the dwelling.

One of Le Corbusier's drawings reproduced the well-known miniature of the *Roman de la Rose*, pointed out by Le Corbusier as "le jardin du paradis," even though Henri Stein published it as "le verger de déduit". The second drawing reproduced one of the miniatures from the *Décameron* from which Georges Riat had removed the personages. Both stories, like the rest of literature, painting, and medieval tapestries, portray the medieval enclosed garden as an ideal scene to develop stories of courtly love, beautiful allegories, fortunetelling, heroes and villains. From these profound symbolic structures, medieval enclosed garden is a "jardin d'amour" ("garden of love").

Sealed tight, the four sided-shape, and symbolic meaning. The medieval enclosed garden and the suspended garden share two more characteristics. A part of the conceptual reasons for being enclosed, the medieval enclosed garden adds other functions: it affords protection from incursions by animals and humans – it must protect from wild nature and society which is often violent: "[...] le jardin de plaisance y apparaît donc comme une portion de forêt domestiquée".⁶

The medieval enclosed garden is a piece of nature, but it is a controlled nature, dominated, geometricized, and conditioned for man's personal use. Can we found the equivalence between the medieval nature and Le Corbusier's antagonistic nature, and from which he tried to protect, many centuries later, the inhabitants of his purist villas? Le Corbusier wrote:

Dans la nature chaotique, l'homme pour sa sécurité se crée une ambiance, une zone de protection qui soit en accord avec ce qu'il est et avec ce qu'il pense [...] Libre, l'homme tend à la pure géométrie. Il fait alors ce qu'on appelle de l'ordre.

L'homme sape et hache dans la nature. Il s'oppose à elle, la combat, s'y installe. Travail puéril et [cependant] magnifique.⁷

It is inevitable to discover that all the sacred or profane description of the medieval enclosed garden is equally valid to illustrate the suspended gardens from the single-family houses of Le Corbusier:

Le plaisir du jardin vient de la régularité de son ordonnancement alliée à la diversité des sensations qu'il procure. Le regard y saisit

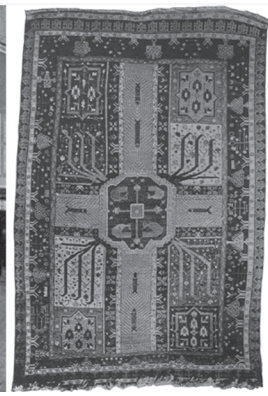


Fig.9c - Savoye house, living & suspended garden photo. **Fig.9d** - Carpet with an enclosed garden – or pairidaeza – representation.

des espaces limités, sans jeux de perspective [ni ouvertures sur de vastes horizons]. L'on ne cherche pas à intégrer le jardin dans le paysage : son caractère fortement architectural en fait plutôt une chambre de verdure au sens propre du terme, un prolongement de la demeure [...]⁸

From these and other definitions of the medieval enclosed garden another characteristic appears, which is the conception as a patio room, the *chambre d'été* (summer-room). Because of its strongly architectural character, the medieval enclosed garden is a room impregnated of vegetation, and in the proper term, an extension of the dwelling. Isn't this the way Le Corbusier conceived the suspended gardens?

For example, let's take a look at the living-room of the second project at the Meyer house (fig. 9a) with one of the suspended garden made for the Stein-de Monzie house (fig. 9b): the scene is the same. The only difference is in the first drawing where the floor is covered with carpets and the second where the floor is covered with gardeners. The same thing happened with Savoy house: the interior room (the living room, fig. 9c) has the carpet, and the exterior room (the suspended garden) has the gardeners. The double-entendre carpet-gardener is, for some reason, the decomposition of the Persian carpet (fig. 9d), that carpet which the owners of the Persian gardens had woven to bring summer inside the houses in winter, thereby bringing indoors the four rivers, the trees and the summer pavilions.

So let's return to the medieval enclosed garden. Courtier garden, the medieval enclosed garden could be understood from a second symbolic structure, the "garden of paradise," a representation of the Garden of Eden, the garden of delight, surrounded by a wall with a single door (protected by angels to keep mankind from reentry after the expulsion.)

The garden originated for the nostalgia of man for an earthly paradise, from which he was expelled after eating of the Apple of Knowledge of Good and Evil. At the same time, it is a "refuge for the dreams," because with good conduct, man aspires to gain entry to the Heavenly Paradise.

For example, knowing that the perforation in the roof of the suspended garden from the L'Esprit Nouveau pavilion? (fig. 10a) is due to a major force – an existing tree that should be kept – the truth is that the circular perforation, cohabits with the four-sided shape of the suspended garden. In summary, the suspended garden could represent the terrain of paradise, however, the roof perforation and the vertical axiality of the tree, which protrudes, could be interpreted as the heavenly paradise. The sacred allusion was not planned

by Le Corbusier, but cannot be avoided. Virgin Mary's representation in the medieval enclosed garden (fig. 10b), which makes a symbolic reference to her chastity and fecundity, could have been found in the elevated capsule (floating in between small perforations, reminders of sky and stars) that protects the Virgin Mary in Ronchamps church (fig. 10c-d). In this case, we need to ask if we have found one metaphorical medieval enclosed garden in Ronchamps or in Le Corbusier's terms a "suspended garden."

References:

1 Monique Eleb, *L'invention de l'habitation moderne*. Paris 1880-1914. Paris, Bruxelles: Hazan et Archives d'architecture moderne, 1995.

2 "The roof garden is the grand diversion of the house. From now on, as a consequence, the plan changes under the roof garden. The domestic servants will dwell below (they will be closer to the freedom they hold so tenaciously). The sleeping rooms will be in the middle levels and the foyer close to the roof in the upper level of the house, as far as possible from the noise of the street, and entirely inaccessible to the gaze of the peasants." (Le Corbusier, "Un plan nouveau", *Art et industrie*, avril 1926, pp. 7-8).

3 Le Corbusier, *La maison des hommes*. Paris: Librairie Plon, 1942.

4 "[. . .] small apartments from one level of height which will get suspended gardens of double height level which is indispensable." (FLC H2- 18-45, 27-11-1928).

5 "Each house has its own patio (where the intimacy is almost perfect like those gardens of the fathers of the Chartreuse d'Ema where we felt [. . .] invaded by melancholy. The beauty, the joy, the serenity are concentrated there, and a wide porch on the rooftop, enclosed by a red or green door, open to the vast exterior." (Le Corbusier, *Le voyage d'Orient*. Paris: Forces Vives, 1967, p. 21).

6 "[. . .] the recreational garden appears here as a portion of domesticated forest." (Élisabeth Antoine, "Des choses qui peuvent être faites pour la délectation [...] des cours et vergers", AAVV, *Sur la terre comme au ciel. Jardins d'Occident à la fin du Moyen Âge*. Paris: Éditions de la Réunion des musées nationaux, 2002, p. 143).

7 "In this chaotic nature, man create an ambience of security, a zone of protection which agrees with what he is and what he thinks [. . .] Free, mankind tends toward pure geometry. It is necessary then to call it order. In Nature, mankind digs and destroys. Man op-

poses Nature, combats it, he installs himself in it. A very dirty work, and [however] magnificent” (Le Corbusier-Saugnier, “L’Ordre”, L’Esprit Nouveau n. 18, novembre 1923).

8 “The pleasure of the garden comes from the regularity of the order, tied to the diversity of sensations it brings [. . .] It doesn’t wish to involve itself in its surroundings: its character is strongly architectural but it converts the space of an indoor garden, in the proper sense of the term, into a prolongation of the dwelling [. . .]” (Élisabeth Antoine, op. cit).